

ベトナム国  
クアンニン省人民委員会

ベトナム国  
クアンニン省ハロン湾地域の  
グリーン成長推進プロジェクト  
(詳細計画策定調査支援)

業務完了報告書

平成 28 年 9 月  
(2016 年)

独立行政法人  
国際協力機構 (JICA)

日本工営株式会社  
(公財) 国際湖沼環境委員会

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クアンニン省人民委員会

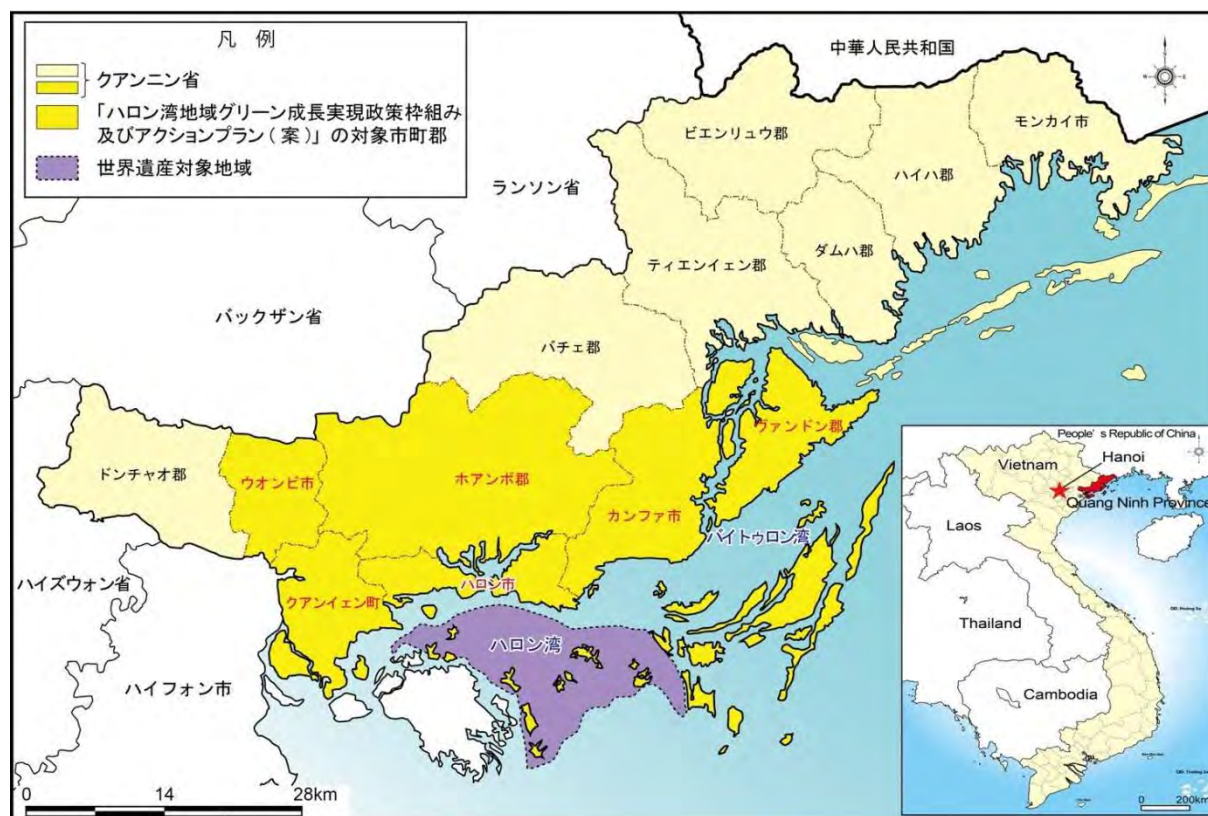
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業務対象地域図

## 対象市町郡の面積、人口及び特徴

市町郡	面積 (km <sup>2</sup> )	人口(2014) (千人)	特徴
ハロン市	272.0	232.0	ハロン市はクアンニン省の政治、経済、文化の中心であり、経済及び観光の面でハノイ市及びハイフォン市と強い繋がりを持つ。同市はクアンニン省の観光の中心であるハロン湾の北に位置する。省の社会経済開発マスタープランでは、ハロン市を中心としてクアンニン省を発展させていく方向性が明記されている。
カンファ市	343.2	186.0	カンファ市はクアンニン省の2番目に大きい都市であり、昔から省の鉱業及び発電の中心としての機能を果たしている。カンファ市は、炭鉱のみならず建設資材や木材加工のための森林など工業発展のための豊富な資源を有する。また、同市は洞窟や観光活動のための貴重な水域を有するバトゥロン湾に面している。2020年までに、近代化及び持続可能な環境の達成を通して、鉱業及び発電セクターにおけるグリーン産業サービス都市になることを目指している。
ヴァンドン郡	553.2	43.0	首相決定 No.1296/QĐ-TTg(2009年8月19日)によりヴァンドン郡はベトナム北東部における重要な海外交易窓口の一つと位置付けられ、ヴァンドン郡全体が経済特区に指定されている。
ホアンボ郡	844.6	50.4	ホアンボ郡はハロン湾の内湾に面し、マングローブ林が散見される。省の社会経済開発マスタープランでは、ホアンボ郡での工業サービス及び農業分野にてグリーン成長と持続可能な発展が示されている。
クアンイエン町	314.2	134.2	クアンイエン町はハロン湾西部に位置し、ベトナムの沿岸経済ベルトの北部重要経済地域である。省の社会経済開発マスタープランでは、クアンイエン町が自然資源の有効活用によるグリーン都市コンセプトのモデル地域として発展することが方針として示されている。
ウオンピ市	256.3	113.3	ウオンピ市はハノイ市、ハイフォン市及びハロン市を結ぶ国道18号線に面している。同市は石炭火力発電が有名である。また、省の社会経済開発マスタープランでは、ウオンピ市が文化的、歴史的、資源を活用した観光振興の中心として発展することが方針として示されている。

出典: Socio-economic Development Master Plans to 2020, vision to 2030 of Quang Ninh Province, Quang Ninh Statistical Yearbook 2014

クアンニン省ハロン湾地域のグリーン成長推進プロジェクト  
（詳細計画策定調査支援）

## 業務完了報告書

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## 略語表

ADEREE	再生可能エネルギー開発・エネルギー効率化庁
DARD	農業農村開発局
DCST	文化スポーツ観光局
DOC	建設局
DOF	財務局
DOIT	産業貿易局
DONRE	天然資源環境局
DOST	科学技術局
DOT	運輸局
DPI	計画投資局
DT	観光局
EPF	環境保全基金
ESCO	エネルギー・サービス・カンパニー
EVN	ベトナム電力公社
GGAP	グリーン成長アクションプラン
GHG	温室効果ガス
GOV	ベトナム政府
HAB	有害藻類ブルーム
HBMD	ハロン湾管理局
ILEC	（公財）国際湖沼環境委員会
JET	JICA 専門家チーム
JICA	国際協力機構
JOGMEC	（独）石油天然ガス・金属鉱物資源機構
LED	発光ダイオード
MICE	会議、インセンティブ、協議会、展示会マネージャー
MPI	計画投資省
NGGS	国家グリーン成長戦略
OCOP	一村一品
PD	プロジェクト・デザイン
PDM	プロジェクト・デザイン・マトリックス
PMU	プロジェクト実施機関
PO	実行計画
PPC	省人民委員会
QCVN	国家技術基準
QN	クアンニン省
R/D	協議議事録
SME	中小企業
StC	ステアリングコミッティ
TSS	総浮遊物質量
VINACOMIN	ベトナム石炭鉱物産業グループ

## パート I 詳細計画策定調査結果

## 第I-1章 序論

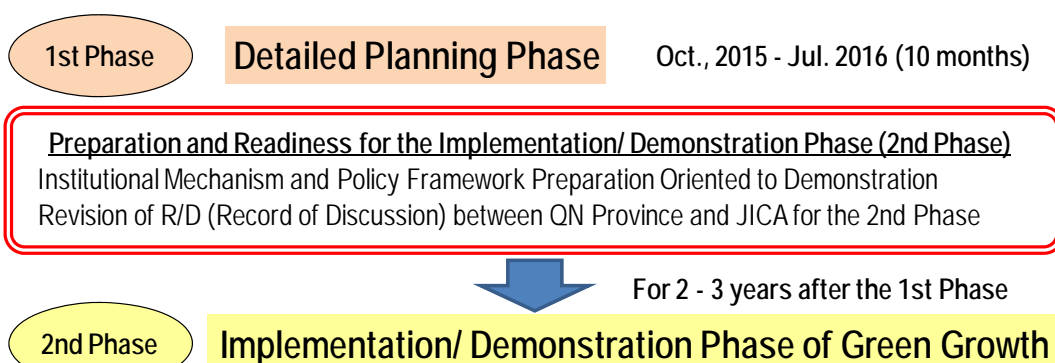
### I-1.1 本業務の背景

ベトナム政府は、2012年に低炭素と資源利用の効率化を標榜した2011～2020年の新たな国家開発戦略として「国家グリーン成長戦略」(National Green Growth Strategy: NGGS)を首相決定した。NGGSに従い、クアンニン省人民委員会(PPC)は、NGGS実施のためのクアンニン省グリーン成長戦略アクションプラン(2016-2020)を2014年7月9日に決定No.3741として承認した(その後、決定No.3741/KH-UBNDは、2015年11月16日付けで決定No.6970/KH-UBNDに改定された)。

ベトナム政府は我が国に対し、決定No.3741に基づくクアンニン省グリーン成長アクションプラン(GGAP)の実行に不可欠な政策・制度の構築と強化のため、技術協力プロジェクトを要請した。これを受け、国際協力機構(JICA)とクアンニン省PPCは、2015年6月12日に「クアンニン省ハロン湾地域のグリーン成長推進プロジェクト(本プロジェクト)」に係る討議議事録(オリジナルR/D)を締結した。

### I-1.2 本プロジェクトのフェーズ分け

本プロジェクトは下図のとおり2段階の構成となっている。すなわち、i) ハロン湾地域でのグリーン成長推進に資する試行の準備を進める詳細計画段階(約10ヵ月間)と、ii) 詳細計画段階の後、グリーン成長推進の試行の実施と制度構築・普及活動を進める実施段階(実施フェーズ)、である。



出典：JICA 専門家チーム

図 I-1.1 本プロジェクトのフェーズ分け

### I-1.3 本業務（第1フェーズ）の目的と範囲

2015年6月12日に合意されたオリジナルR/Dに基づくプロジェクトデザインは、下表のとおりである。同R/Dに従い、一連の活動をプロジェクト第1フェーズ(本フェーズ)として実施した。この活動経過及び成果に基づき、本フェーズの最終段階では、後述する『PDM案及びPO案、プロジェクト詳細計画(案)、並びに変更R/D案の作成支援』の節、及び添付資料I-7に示すとおり、プロジェクトデザインは一部変更された。

表 I-1.1 2015年6月12日署名のオリジナル R/D に基づくプロジェクトデザイン

【プロジェクト目標】ハロン湾地域において、重点産業部門での環境的に持続可能な政策の実施、及び観光業の成長を通じ、グリーン成長が促進される。	
【成果 1】 既存のクアンニン省グリーン成長アクションプランの精緻化により、ハロン湾地域でのグリーン成長実現のための政策枠組み及び優先アクションプランが策定される。	<ul style="list-style-type: none"> <li>1.1 既存のグリーン成長の事例や知見をレビューし、クアンニン省に適用可能な教訓を抽出する。</li> <li>1.2 クアンニン省及びベトナムの既存の関連政策・計画・制度・財政状況・組織体制をレビューし、ハロン湾地域でのグリーン成長実現にかかるニーズとギャップを分析する。</li> <li>1.3 クアンニン省における重点的な経済産業部門等（工業、運輸交通、廃棄物、農業、水資源、下水等）の環境パフォーマンス（エネルギー消費効率、資源利用効率、炭素排出量等）の迅速評価を行う。</li> <li>1.4 クアンニン省の関連行政部局・民間企業・市民に対し、グリーン成長に関する理解と能力を強化するためのセミナーやワークショップを実施する。</li> <li>1.5 ステークホルダー間の調整に必要な横断的ワーキンググループなどの組織体制を整備する。</li> <li>1.6 環境パフォーマンス評価とステークホルダー協議に基づき、クアンニン省人民委員会に対し、ハロン湾地域におけるグリーン成長のための財政的に持続可能な政策枠組み（案）を提言する。同枠組みには、グリーン成長の定義、到達目標、指標、組織体制、規制型・インセンティブ構築型の政策ツール候補、必要な資金・資源動員、モニタリング評価方法、ロードマップを含むものとする。</li> </ul>
【成果 2】 選定された重点工業部門において、環境・財政的観点から持続可能な施策が企画され、試行的に実施される。	<ul style="list-style-type: none"> <li>2.1 優先産業部門を特定し、環境パフォーマンスと事業収益性を改善するための技術導入、人的資源、財政ツールから成るパイロット施策・モデルを提案する。</li> <li>2.2 優先産業部門につき、組織体制や政策ツールを起案し制度化する。</li> <li>2.3 優先産業部門において、選定されたパイロット施策・モデルを試行的に実施し、デモンストレーション及びモニタリングを行う。</li> </ul>
【成果 3】 持続可能な観光業の成長のための施策が試行的に実施される。	<ul style="list-style-type: none"> <li>3.1 観光業の開発機会と障壁をレビューし、グリーン成長の観点から優先的課題を特定する。</li> <li>3.2 ハロン市及びハロン湾地域における観光関連施設及び活動の環境パフォーマンスを評価する。</li> <li>3.3 上記3.2に基づき、ハロン湾地域の観光インフラ及び活動を改善するための政策・アクションを提言する。</li> <li>3.4 いくつかの地域や団体において、選定されたパイロット施策・モデルを試行的に実施し、デモンストレーション及びモニタリングを行う。</li> </ul>

出典：Record of Discussions on Project for Institutional Development for Green Growth Implementation and Strengthening of Environmental Management System Towards Sustainable Conservation for the Halong Bay in the Socialist Republic of Vietnam, June, 2015

本業務（第1フェーズ）は、クアンニン省ハロン湾地域におけるグリーン成長の試行に寄与する技術協力の提供に向け、必要な情報の収集と分析、第2フェーズで実施するデモンストレーション活動内容の検討、及び JICA と先方カウンターパート機関によるプロジェクトデザイン案修正の支援、を目的とする。

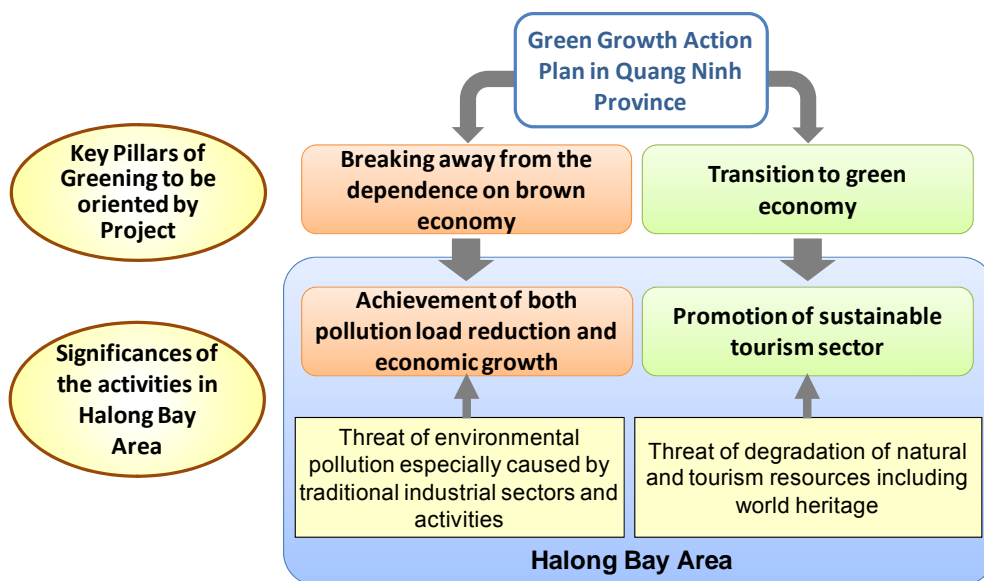
本フェーズでは、第2フェーズ準備に向けて、省 GGAP に基づき、ハロン湾地域でのグリーン成長推進の試行に必要な既存制度の改善や、追加的或いは新たな制度の暫定的な構築に係るクアンニン省への技術移転・指導を提供した。従い、本フェーズにおいてもオリジナル R/D に示される活動の一部を実施している。具体的には、成果1に係る活動 1-1～1-6、成果2に係る活動 2-1 と 2-2、成果3に係る活動 3-1 と 3-2、である。

また、上記活動を通じた本フェーズでの到達点は、以下のとおり総括できる。

- グリーン成長の既存事例や一般的概念について、セミナーやワークショップ、インテンシブコンサルテーション等を通じ、カウンターパートや関連部局・機関の理解が深まった。また、ハロン湾地域でのグリーン成長推進のため、我が国琵琶湖モデルが応用可能であり、クアンニン省の既存政策や上位計画等の各種施策を、琵琶湖モデル同様、グリーン成長という統一概念のもとに有機的に繋げて取り組むことが有効との共通認識が醸成された。
- クアンニン省の主要産業部門の現況把握と環境パフォーマンス評価、及びグリーン成長推進に向けた解決課題の分析を行った。この結果と、クアンニン省 GGAP の方向性や主要上位計画の政策・施策の整理結果を踏まえ、優先産業部門の優先アクションプラン（案）が提示された。
- 優先アクションプラン（案）のうち、第2フェーズで取り組むべき5つのパイロット活動を抽出し、それぞれの実行計画（案）を策定した。各実行計画には、ステークホルダー間の調整や活動推進に必要な制度・組織体制、インセンティブ構築型の活動アプローチ、必要な財政・資金措置、活動スケジュール等を含めた。
- ハロン湾地域及びクアンニン省でのグリーン成長推進に係る制度や組織の構築・改善を図るため、優先的に構築を図るべき制度・組織について整理し、それらについて実施フェーズでのパイロット活動で構築を目指す枠組みを設定した。
- i)実施フェーズでのパイロット活動の推進、ii)プロジェクト終了後のクアンニン省によるグリーン成長推進の施策展開、及び iii)ハロン湾地域への琵琶湖モデル応用と長期的な我が国との協力関係構築、のため、滋賀県の行政・民間を含めた継続的な助言と関与が有効と判断されたことから、連携体制の構築を図った。

#### I-1.4 本プロジェクトの全体概念

クアンニン省 GGAP は、後述するパート II の『クアンニン省グリーン成長アクションプラン』の節に示すとおり、2020 年に向けて様々な分野での活動を網羅している。このうち、本プロジェクトでは、先方からの要請書、オリジナル R/D、及び省社会経済開発マスタープランに示されているビジョンに基づき、主として、1)産業部門の環境負荷低減と成長の両立による「環境汚染型経済への依存からの脱却」、2)ハロン湾地域の資源を活用した持続的観光業の促進による「環境配慮型経済活動への転換」、についてグリーン成長推進を試行し、制度構築や普及活動に資する能力強化を図る。下図に本プロジェクトの概念を示す。



出典： JICA 専門家チーム

図 I-1.2 本プロジェクトの全体概念

## 第I-2章 詳細計画策定調査の実施内容及び結果

### I-2.1 詳細計画策定調査の全体プロセス

本フェーズ（詳細計画策定調査フェーズ）の全体プロセスは以下のとおりである。

- ワークプランの作成 (I-2.2)
- グリーン成長の概念や既存活動事例のレビュー (I-2.3)
- クアンニン省のグリーン成長関連行政に係る基本情報の収集、及びニーズ・ギャップ分析 (I-2.4)
- 詳細計画策定調査に係る実施体制の構築 (I-2.5)
- クアンニン省及びハロン湾地域の主要セクターに係る現況把握と分析、及び環境パフォーマンス評価 (I-2.6)
- グリーン成長に係るステークホルダー間での検討・合意形成、及びセミナー・ワークショップ・研修の実施 (I-2.7)
- 優先産業部門の選定、及びハロン湾地域グリーン成長実現のための優先アクションプラン（案）の作成 (I-2.8)
- 本プロジェクト実施フェーズ（第2フェーズ）の実施体制の検討 (I-2.9)
- 選定された優先産業部門でショートリストされた優先アクション実施のための制度提案 (I-2.10)
- ハロン湾地域の観光セクターの現況把握と分析、及び優先アクション (I-2.11)
- 本プロジェクト実施フェーズで実施するパイロット活動 (I-2.12)
- PDM 案及び PO 案、プロジェクト詳細計画（案）、並びに変更 R/D 案の作成支援 (I-2.13)
- 機構本部ミッションチームとクアンニン省の協議支援 (I-2.14)

下表に、本フェーズにおける専門家チームの派遣実績、及び主要活動の実施状況を示す。



表 I-2.1 専門家チーム派遣実績及び主要活動の実施状況

No.	Position	Name	JFY 2015												Man Month		
			9	10	11	12	1	2	3	4	5	6	7	8	9	VN	JP
Work in Vietnam	1	Chief Advisor/ Policy for Green Growth/ Regional Development Planning			■	■	■	■	■	■	■	■	■	■			4.80
	2	Deputy Chief Advisor/ Environmental Measures for Industry			■	■	■	■	■	■	■	■	■	■			5.33
	3	Promotion for Sustainable Tourism Development			■	■	■	■	■	■	■	■	■	■			4.03
	4	Water Environment Improvement			■	■	■	■	■	■	■	■	■	■			2.73
	5	Policy for Cooperative Mechanism among Organizations/ Coordinator			■	■	■	■	■	■	■	■	■	■			3.57
	6	Evaluation and Analysis												■			0.37
	7	Energy Management/ Energy Saving												■			0.67
	8	Ecotourism												■			0.67
Sub Total (Work in Vietnam)																22.17	
Work in Japan	1	Chief Advisor/ Policy for Green Growth/ Regional Development Planning		□				□	□			□		□			1.15
	2	Deputy Chief Advisor/ Environmental Measures for Industry		□				□	□			□					0.35
	3	Promotion for Sustainable Tourism Development		□				□	□			□					0.45
	4	Water Environment Improvement						□				□					0.60
	5	Policy for Cooperative Mechanism among Organizations/ Coordinator															0.00
Sub Total (Work in Japan)																2.55	
■ : Work in Vietnam □ : Work in Japan ◻ : Work in Japan (Study Tour)			Report		Work Plan		Progress Report							Final Report			
			Workshop (WS), Seminar, Meeting		WS		Intensive Consultation		Study Tour in Japan		S/C		Meeting (JICA Mission)			24.72	

出典： JICA 専門家チーム

## I-2.2 ワークプランの作成

クアンニン省の各種マスタープランやグリーン成長アクションプラン等を参照しつつ、2015年10月にワークプラン（案）を作成した。その後、プロジェクト実施機関（PMU）、ステアリングコミッティ（StC）メンバー、地元自治体、その他関連機関との協議を通じ、2015年12月にワークプランを最終化した。

## I-2.3 グリーン成長の概念や既存活動事例のレビュー

国際機関等により提案されているグリーン成長の概念や考え方を整理した。また、ベトナム内外のグリーン成長に関する既存の活動事例を収集・整理した。これらの既存の知見を分析し、クアンニン省でのグリーン成長政策の実践に際して参照すべき教訓や留意点を抽出した。レビュー結果を以下にまとめる。

### I-2.3.1 グリーン成長に関する一般的な概念と知見のレビュー

#### I-2.3.1.1 グリーン成長とは？

一般的に、これまで経済成長は環境に影響を与えてきたと言われており、現在は環境影響が経済成長を脅かす段階に達したと考えられている。このような状況を打開するために、「グリーン成長」の概念が提唱された。OECDと世界銀行は「グリーン成長」の概念を以下のとおりとしている。

- グリーン成長とは、健全な社会経済状態の維持に必要な資源や環境サービスを継続的に提供する自然の状態を維持しつつ、経済成長及び開発促進を図る概念である。<sup>1</sup>
- グリーン成長は、持続可能な成長と相反する概念ではない。グリーン成長とは、経済と環境を相反的に捉えず、逆に相互依存関係を強化するものである。つまり

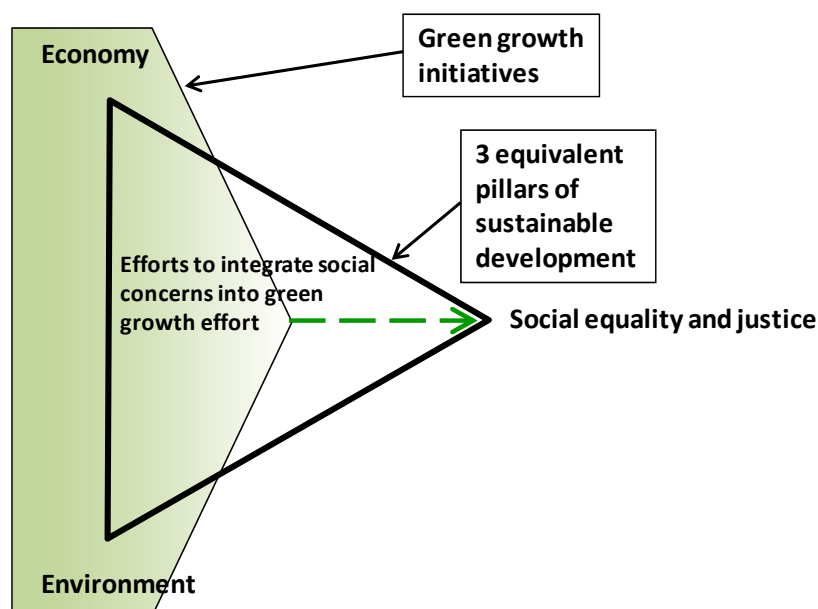
<sup>1</sup> Towards green growth: A summary for policy makers (2011) OECD

グリーン成長政策とは、経済と環境の相補性を高めることで、新たな経済成長の源とする政策である。<sup>2</sup>

- グリーン成長とは、自然資源の有効利用、汚染と環境影響の最小化、自然災害への耐性確保、及び環境管理と自然災害防止に係る自然資源の役割の見直しと強化、を意味する。<sup>3</sup>

#### I-2.3.1.2 持続可能な発展の一部としてのグリーン成長<sup>4</sup>

グリーン成長は、持続可能な発展の3つの柱のうち2つの側面、すなわち経済の効率化と環境保全に着目している。持続可能な発展の第3の柱である社会的平等性には直接は関与しない。グリーン成長は持続可能な発展にとって代わるものではなく、その一要素として理解されるべき概念である。但し、グリーン成長の推進が副次的に社会的平等性の促進に寄与する事も暗示する。以下の図は、グリーン成長が主に経済及び環境に焦点を当て、併せて社会的平等性を実現する政策を補完的に促進する概念を示している。一方、グリーン成長の概念に、社会的平等性に係る概念が直接的に含まれない点が課題である、との指摘もある。



出典：OECD Green Growth Studies: Green Growth in Cities (2013) OECD

図 I-2.1 持続可能な発展の一部としてのグリーン成長

#### I-2.3.1.3 世界銀行が提唱するグリーン成長

世界銀行もグリーン成長を持続可能な発展を実現するためのツールと認識している。持続可能ではない成長パターンからの脱却、或いは、不可逆的な環境影響の回避による持続可能な発展の実現に必要な方向性を提示するものと位置づけている。

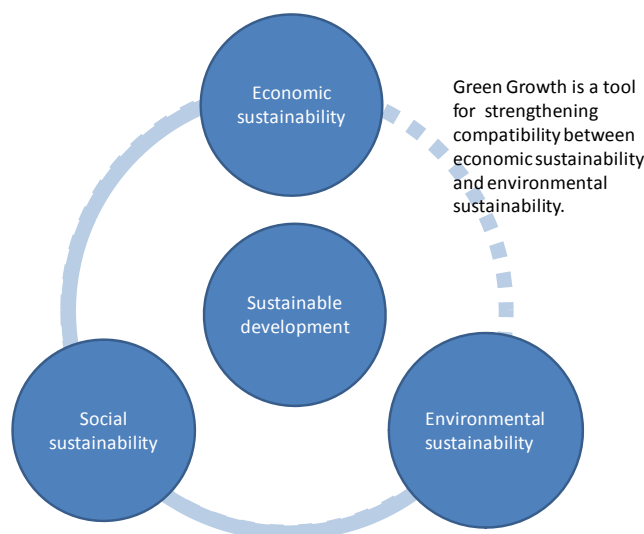
グリーン成長実現のためには、経済成長の施策と合わせ、汚染の要因となる産業活動の改善やエネルギー政策への助成といった環境面の施策が必要となる。世界銀行は「包括的グリーン成長」という概念を提唱している。この概念を実現するための方策として、以下の三つの戦略を示している。

<sup>2</sup> Cities and Green Growth: A Conceptual Framework (2011) OECD

<sup>3</sup> Inclusive Green Growth - the pathway to sustainable development (2012) World Bank

<sup>4</sup> OECD Green Growth Studies: Green Growth in Cities (2013) OECD

- 地域便益の最大化と膠着化回避に貢献する国レベルの戦略をその国の状況に応じて策定する。最適な施策は、国ごとの組織制度のキャパシティ、透明性、説明責任能力、及び市民社会の成熟度といった様々な要素によって異なる。
- 政策立案者、消費者及び民間セクターによる効果的かつ持続可能な意思決定を促進する。汚染に対する課金やその他の市場的手段は、インセンティブ向上や技術革新への刺激として重要である。また、補完的施策の展開が、個人の望ましい行動を引き出し、民間セクターの力を活用するために必要となる。
- 革新的な財政ツールを活用しつつ、資本投資のニーズに対応する。財源不足に対し、グリーン分野投資への民間セクターの役割を強化するため、国内または多国間による財政制度を早急に整備・機能させる必要がある。また、中小企業への融資促進のためには、官民連携体制の構築が必須となる。



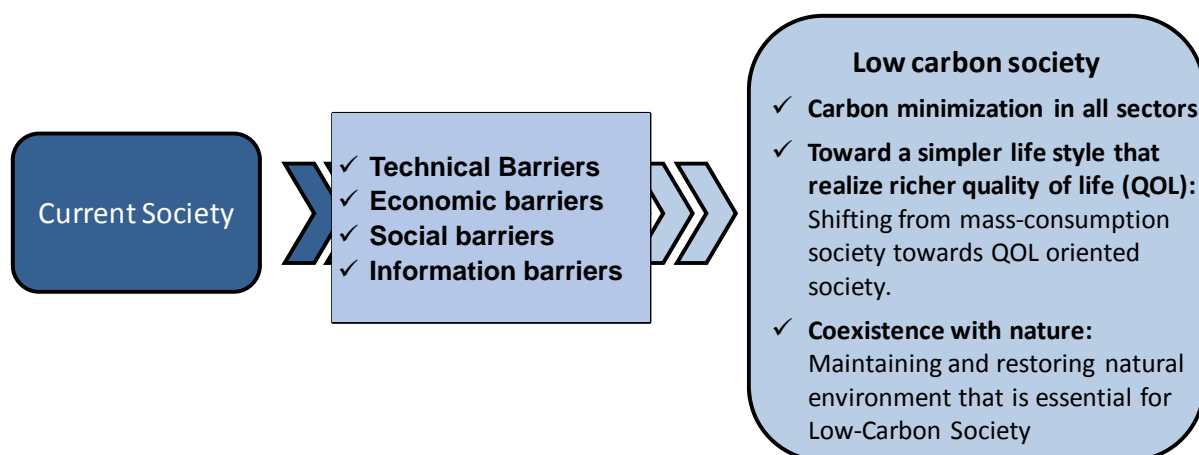
出典: *Inclusive Green Growth - the pathway to sustainable development* (2012、世界銀行)に基づき JICA 専門家チーム作成

図 I-2.2 世界銀行が提唱する持続的成長概念に対するグリーン成長の位置付け

#### I-2.3.1.4 グリーン成長と低炭素型社会<sup>5</sup>

IPCC 第四次評価報告書(2007)では、気候変動とその影響について、気候変動要因と共に説明されている。また、将来的に予測される気候変動とその影響に対し、適応策と緩和策が示されている。2007年、日本政府は、2050年に向け、温室効果ガス排出量を半減するための重要政策の一つとして、「低炭素社会の構築」を掲げた。環境省は、低炭素社会構築のための基本政策として、(a) 全セクターの炭素排出量最小化、(b) より豊かな社会の実現に向けたシンプルライフスタイルへの移行、及び (c) 自然との共存、を提案している。併せて、低炭素社会構築には (a) 技術の障壁、(b) 経済の障壁、(c) 社会の障壁、(d) 情報の障壁、の4つを克服する必要があるとしている。

<sup>5</sup> Building a Low Carbon Society (2007) Ministry of Environment, Japan



出典：Building a Low Carbon Society (2007、環境省)

図 I-2.3 低炭素社会構築に向けた原則及び障壁

### I-2.3.1.5 日本の環境省によるグリーン成長の解釈<sup>6</sup>

環境省は、OECD の定義を参考に、グリーン成長達成のための重要政策として以下を掲げている。

- エネルギー消費削減及び汚染負荷排出削減と合わせた生産性の改善
- 環境問題解決に資する新技術の適用
- 環境にやさしい製品や活動が有利となる市場の創出
- 環境管理及び自然資源管理への投資を促す政策の堅持
- 自然資源価値の変動を制御することによる経済の安定化
- 自然資源の有限性に配慮した持続可能な発展の追求
- 生物多様性の劣化による不可逆的影響のリスク低減

### I-2.3.2 諸外国のグリーン成長に係る取組事例と教訓

#### I-2.3.2.1 諸外国のグリーン成長に係る取組事例

##### (1) 全般

現在、多くの国々においてグリーン成長の概念が適用されつつあり、グリーン成長計画/プロジェクトを通して得られた経験の共有メカニズムも構築されつつある。ハロン湾地域で参考になり得るグリーン成長取組事例を下表に示す。

表 I-2.2 諸外国でのグリーン成長取組事例

トピック	国	経験
グリーン成長へのリーダーシップ	メキシコ	フェリペ・カルデロン大統領は気候変動に係る行動及び法令計画作成において大きな役割を担った。メキシコ南部を襲った洪水は、民衆の行動への要望に繋がり、問題に対する関心を高めた。これを機に、同大統領は環境及び気候変動への対応について個人的及び政治的に強く決意した。
複合的なグリーン成長ビジョン	日本	「グリーン」、「生活」、「農業」、「中小企業 (SME)」を戦略の4つの重要政策とした。理念は次の通りである。「活力ある適応可能な社会経済の形成し、エネルギー制約及び高齢化社会の世界に向けたモデル解決策を試行する。そして、新たな成長の利益を享受するために、地元農業によって支えられる個人及び事業者から成る地元コミュニティを構築する。」

<sup>6</sup> <https://www.env.go.jp/policy/hakusyo/zu/h24/html/hj12010102.html>

トピック	国	経験
都市のブランド化	シンガポール	2002年のヨハネスブルグで開催された持続可能な開発にかかる世界サミットにて、シンガポール国内初のグリーン計画に取り掛かった。その後3年毎に見直し、改善を行ってきた（MEWR、2006）。都市の生活の質及び資源の安全への配慮、さらには投資を惹きつけるためのクリーンでグリーンなイメージを維持する計画である。計画は、規制及び基準、価格システム、デモンストレーションプログラム、消費者行動改革キャンペーン、情報管理及びその他の政策を含み、大気質、気候変動、水、廃棄物、自然保護及び福祉について対応する。
改革への合意	オランダ	オランダでは、企業、研究機関、大学及び政府が改革の刺激及び競争の改善のために合意を形成した。これらの合意によって、セクターを越えた研究課題が設定され、参画者への研究開発にかかる資金及び人材の投資が約束され、手段、計画、対策、目標が明示された。政府は、次の9つのセクターにこの合意を適用した。農業、園芸、先端技術、エネルギー、ロジスティック、生産業、生命科学及び健康、科学及び水である。
プロジェクトのパイロット地域の選定	モロッコ	再生可能エネルギーの開発及び省エネルギーのための国家機関（ADEREE）は、エネルギー依存からの脱却及び2020年の国家エネルギー目標（ADEREE、2012）に資する地方レベルでの再生可能エネルギー使用の増加などの長期的な目標を含む Jiha Tinou パイロットプロジェクト（2012-2014）を始動した。これまでの再生可能エネルギー開発への関与などの基準よりパイロットプログラムへの提案書に基づき3つの自治体が選定された。

出典： “Green Growth in Practice Lessons from Country Experiences Executive Summary” (Green Growth Best Practice)を参考に JICA 専門家チーム作成

## (2) 都市におけるグリーン成長の取り組み事例

2011年及び2012年に、OECDは都市のグリーン成長政策について、パリ市、シカゴ市、ストックホルム市、及び北九州市の4市を対象としてレビューを行った。レビューにより得られた情報のうち、ストックホルム市、シカゴ市、及び北九州市の情報の一部を以下に要約する。

### 1) ストックホルム<sup>7</sup>

ストックホルム市はスウェーデンの首都で、2014年の人口は91万人とノルディック地域で最も人口の多い都市である。同市は、成長政策と環境影響低減政策の両立に成功した、ヨーロッパで最初のグリーン首都のモデルとして認知されている。同市のビジョンは、成長のための重要な要素として、環境と持続的成長への配慮を明確に提示しており、都市圏での交通混雑緩和、再生エネルギーを活用した地域暖房、エコ地区の設立等のグッドプラクティスがみられる。同市が掲げる様々な政策を以下に示す。

表 I-2.3 ストックホルム市の政策

Factor	Remarkable Item
Land use	<ul style="list-style-type: none"> <li>- Develop “nodes”, as presented in the City of Stockholm and County of Stockholm land-use plans.</li> <li>- Develop strategic links of urban area to avoid sprawl of land use.</li> <li>- Establish the eco-districts promoting eco-technologies for reaching energy-efficiency and waste-reduction.</li> <li>- Develop attractive parks and green spaces.</li> </ul>
Transport	<ul style="list-style-type: none"> <li>- Collect congestion charges to promote residents to use of public transportation.</li> <li>- Promote introduction of hybrid or electric vehicles.</li> </ul>
Buildings:	<ul style="list-style-type: none"> <li>- Facilitate energy efficiency retrofits by private property owners.</li> <li>- Share information on energy efficiency activity to find potential customers on energy efficiency retrofits.</li> </ul>
Waste	<ul style="list-style-type: none"> <li>- Conduct segregation of recyclable waste at not waste collection point, but each household.</li> <li>- Conduct pilot programs for composting.</li> <li>- Operate waste incinerators for solid waste disposal.</li> </ul>
Energy	<ul style="list-style-type: none"> <li>- Increase the share of renewable energy including biofuels for heating.</li> <li>- Better use of heat pumps and by reducing energy losses.</li> <li>- Integrate local geothermal heat system with wider usage of renewable energy sources.</li> </ul>
Water	<ul style="list-style-type: none"> <li>- Promote adaptation of advanced technology for water quality management.</li> </ul>

出典： <http://international.stockholm.se/globalassets/ovriga-bilder-och-filer/green-growth-in-stockholm.pdf>

<sup>7</sup> <http://international.stockholm.se/globalassets/ovriga-bilder-och-filer/green-growth-in-stockholm.pdf>

## 2) シカゴ<sup>8</sup>

シカゴ市は米国イリノイ州に位置し、人口約 27 万人の都市である。同市は、持続的な発展のための目標達成を図る持続性委員会を有し、市長が議長を務め、各部署の長が委員となっている。都市の持続性確保のための政策は、「持続的なシカゴ行動計画」として取りまとめられている。

同計画は、(1) 経済発展と雇用創出、(2) 省エネ及びクリーンエネルギー、(3) 交通オプション、(4) 上水及び廃水、(5) 公園、公共空地、安全な食品、(6) 廃棄物・リサイクル、(7) 気候変動、の 7 つの分野で、24 の目標を設定している。各分野の目標及び主な政策を下表に示す。

表 I-2.4 持続的なシカゴ行動計画の目標と主な政策

Category	Goal	Policy
Economic development and job creating	- Establish Chicago as a Hub for the Growing Sustainable Economy	- Increase investment and research through activities including a Chicago clean tech summit. - Recruit companies and individuals with the most innovative clean energy and sustainability solutions to Chicago. - Increase demand for sustainable products and approaches by adopting a green procurement policy.
	- Accelerate the Economy in Chicago by Assisting People and Companies in Adopting Sustainable Practices	- Support sustainability and green building education for the public through programming at the Chicago Center for Green Technology and other partnerships.
Energy efficiency and clean energy	- Improve city wide energy efficiency by 5%	- Support and advance the installation of smart meters in Chicago's businesses and households. - Double the number of low energy electron diffraction (LEED)-certified buildings.
	- Improve overall energy efficiency in municipal buildings by 10%	- Target 10 million square feet of municipal buildings for energy reduction of 20%. - Achieve at least 10% improvement in energy efficiency in all CPS school operations, targeting a 50% school participation rate through the shared energy savings program. - Double the number of LEED-certified public buildings.
	- Create an additional 20MW of Renewable Energy, Consistent with the Illinois Renewable Portfolio Standard	- Install 10 MW of renewable energy on City properties. - Explore locally-produced, renewable energy opportunities as part of new approaches to procuring power.
Transportation options	- Increase average daily transit ridership	- Launch Bus Rapid Transit with a pilot route on Jeffery Corridor and a full route downtown. - Implement a travel demand management program to connect people with commuting options.
	- Accelerate transit-oriented development around transit stations	- Amend the Chicago Zoning Ordinance by adding a definition for Transit Oriented Development to enable and encourage more development near transit stations.
	- Make Chicago the most bike and pedestrian friendly city in the country	- Launch a bike sharing system with 4,000 bicycles and 400 stations. - Release a pedestrian master plan to improve health and safety. - Enhance, adopt and use the revised Complete Streets Guidelines to ensure enjoyable, safe, attractive, pedestrian friendly streets.
	- Improve freight movement and accelerate high-speed passenger rail projects	- Identify additional available funding sources and work with CREATE partners to apply for grants, as appropriate
	- Advance sustainability leadership at Chicago's Airports	- Advance strategies to reduce airport energy consumption by 15%, divert 50% of airport waste, and maintain a fleet with 20% low-emission vehicles and develop innovative approaches to airport operations. - Promote partnership opportunities to support innovations in aviation.

<sup>8</sup> <http://www.cityofchicago.org/content/dam/city/progs/env/SustainableChicago2015.pdf>

Category	Goal	Policy
	- Strengthen the infrastructure to advance vehicle efficiency	- Achieve a taxi fleet comprised of 75% - 80% hybrid or compressed natural gas vehicles. - Encourage the use of clean fuels, clean vehicle technologies
	- Reduce municipal fossil fuel consumption by 10%	- Replace 3% of on-road fleet vehicles with green fleet annually. - Reduce the energy intensity of Chicago Transit Authority rail service by 12% from 2011 levels.
Water and wastewater	- Decrease water use by 2% (14,000,000 gallons / day) annually	- Pilot water reduction programs and technologies at City-owned facilities. - Launch a water conservation strategic plan.
	- Enhance storm water management to reduce sewer overflows and basement flooding	- Create a comprehensive green infrastructure plan that is embedded in the capital budgeting process. - Increase opportunities to return rainwater to Lake Michigan.
	- Transform the Chicago River into our second waterfront	- Create new recreational opportunities along the river. - Collaborate with key stakeholders to advance Chicago River revitalization efforts.
	- Protect water quality and enhance access to Lake Michigan	- Use the latest technology to provide faster, more accurate information about beach water quality to the public. - Reduce salt usage in all snow removal programs.
Parks, open space and healthy food	- Increase the number of public spaces and parks accessible for Chicagoans	- Invest in innovative new public spaces. - Increase the number and varieties of programs for residents through the Chicago Park District, community groups and other partnerships.
	- Increase options for accessing local or healthy food in every neighborhood	- Encourage more individual production of healthy food on public and private spaces.
	- Improve and protect Chicago's natural assets and biodiversity	- Continue to enforce the terrestrial and aquatic invasive species ordinance
Waste and recycling	- Increase the number of public spaces and parks accessible for Chicagoans	- Expand the Blue Cart Recycling program to all 600,000 City-collected households. - Improve policies to promote recycling, composting, and building material re-use.
	- Increase access to recycling and improve policies to promote waste reduction and re-use	- Use some materials with recycled content in every construction project.
Climate change	- Reduce carbon emissions from all sectors	- Partner with universities to use Chicago as a laboratory for climate research, and data gathering. - Increase community engagement to make Chicago more sustainable.
	- Improve local air quality by accelerating greenhouse gas emissions	- Implement the Chicago Clean Diesel Contracting Ordinance's Clean Fleet Score and ban high polluting equipment and vehicles on City projects starting in 2014.
	- Protect the city and its residents by preparing for changes in the climate	- Prepare the infrastructure for climate change by reducing the urban heat island effect, managing flooding from high intensity storm events, and strengthening resiliency to extreme weather.

出典： <http://www.cityofchicago.org/content/dam/city/progs/env/SustainableChicago2015.pdf>

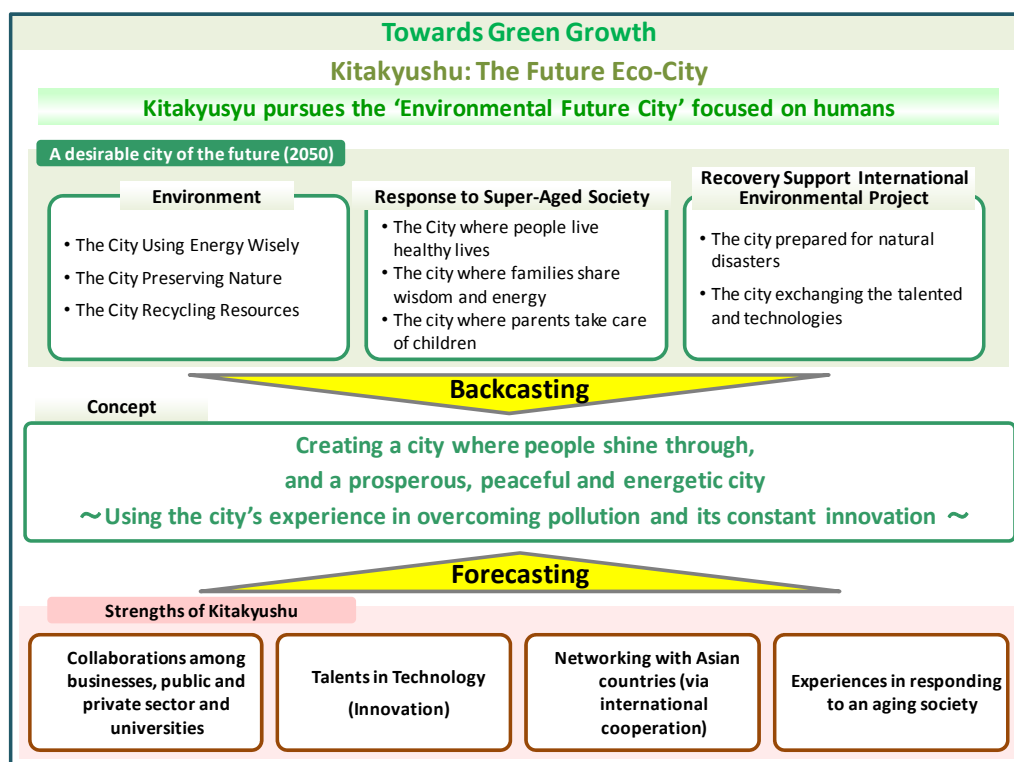
### 3) 北九州<sup>9</sup>

北九州市は、人口約 96 万人の都市であり、1960 年代に深刻な環境汚染の影響を被った経験を有する。同市では、主婦が主体となった地域住民が市及び地方行政、民間企業に改善行動を促す運動を展開した。その結果、民間企業は、北九州市が設定した基準を達成するためより高度な技術を自身の工場に採用した。また、下水処理施設等のインフラ整備が進んだ。移転や操業中止となった企業は一つもなく、環境の改善を伴った経済活動の発展が維持された。この成功事例により、世銀は北九州市を持続的発展のモデルと位置付けた。

北九州市は、リサイクル社会の構築を図ると共に日本で初めてエコタウン事業を行った都市である。同事業により、現在、日本で最大のエコ工業団地が実現している。北九州市は、低炭素社会構築のための「エコモデル都市」としても選定されている。「エ

<sup>9</sup> [http://www.asiangreencamp.net/pdf/kitakyushu-model/kitakyushu\\_story.pdf](http://www.asiangreencamp.net/pdf/kitakyushu-model/kitakyushu_story.pdf)

「エコモデル都市」の概念を下図に示す。同モデルは、北九州市の公害克服と先進的な技術導入の経験を活用して、望ましい都市の構築を目指すものである。その全体目標として、「人が輝く、賑わい・安らぎ・活力のある都市づくり」を掲げている。

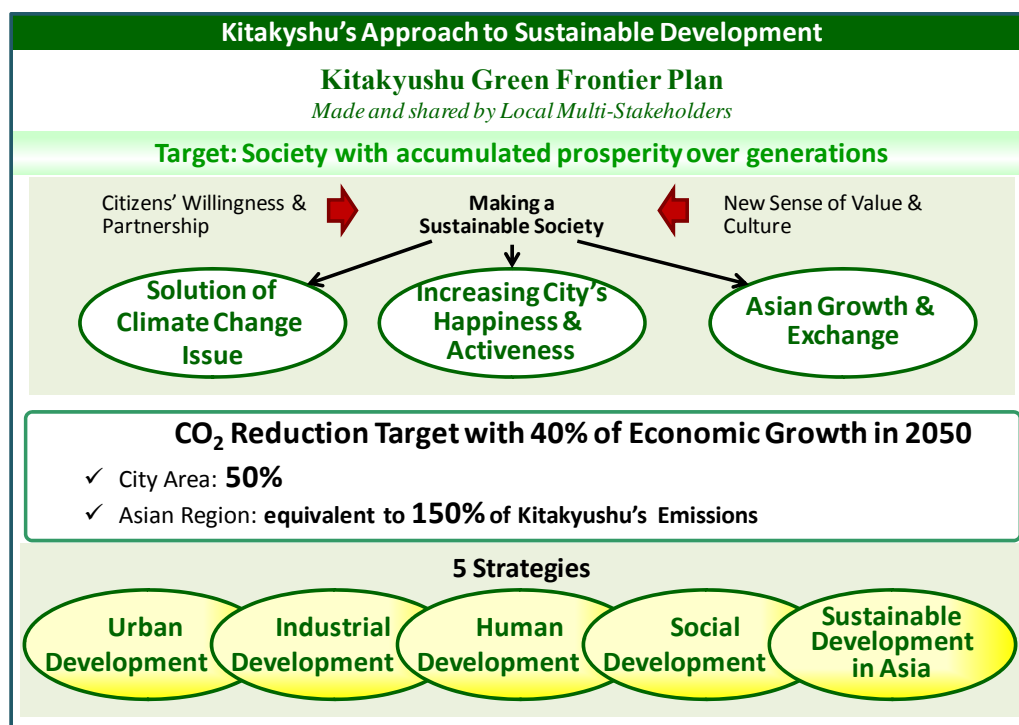


出典： <http://apcs.city.fukuoka.lg.jp/en/download/mayor/pdf/3.%20Kitakyushu%2010ME.pdf>

図 I-2.4 北九州市のエコモデル都市の概念

また、北九州市は「グリーンフロンティア計画」を策定し、低炭素社会の構築、世代を超えた豊かな生活の実現、及び環境管理と経済発展の調和を目指している。これらの概念を下図に、また持続的社會構築に向けた5つの戦略を下表にそれぞれ示す。





出典: [http://www.uncrd.or.jp/content/documents/141SMT%20-%20P12\\_3\\_Case%20Study\\_Kitakyushu.pdf](http://www.uncrd.or.jp/content/documents/141SMT%20-%20P12_3_Case%20Study_Kitakyushu.pdf)

図 I-2.5 北九州市のグリーンフロンティア計画の概念

表 I-2.5 北九州市グリーンフロンティア計画の戦略

Category	Strategy
Urban Development	<ul style="list-style-type: none"> <li>- Integrated local energy system with 30% reduction of CO<sub>2</sub></li> <li>- Development of smart community</li> <li>- Development of zero emission town development</li> </ul>
Industrial Development	<ul style="list-style-type: none"> <li>- Adaptation of products and services with low CO<sub>2</sub> emission</li> <li>- Innovating of production process with energy saving measures</li> </ul>
Human Development	<ul style="list-style-type: none"> <li>- Organizing and operating of Kitakyushu Education for Sustainable Development (ESD) Council consisting of local communities, NPOs, schools, museums, research institutes private enterprises and mass medias</li> </ul>
Social Development	<ul style="list-style-type: none"> <li>- Conducting actions toward comfortable and low emission society, such as awareness raising by a event named "Eco-life stage" and promoting of eco-lifestyle</li> <li>- Managing environment by Kitakyushu Environmental Council</li> <li>- Providing subsidy for technological research and development</li> <li>- Eco-point system for reducing waste and CO<sub>2</sub></li> </ul>
Sustainable Development in Asia	<ul style="list-style-type: none"> <li>- Conducting active international cooperation such as pollution reduction, solid waste management improvement, water supply improvement, and low carbon society development in Asian countries</li> </ul>

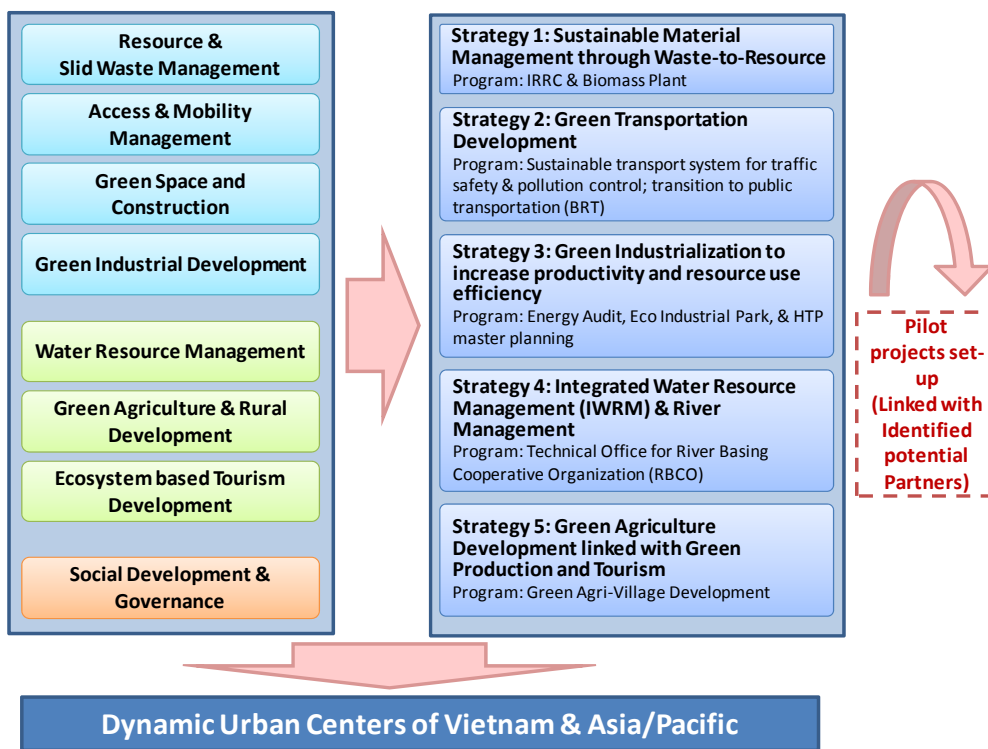
出典: [http://www.uncrd.or.jp/content/documents/141SMT%20-%20P12\\_3\\_Case%20Study\\_Kitakyushu.pdf](http://www.uncrd.or.jp/content/documents/141SMT%20-%20P12_3_Case%20Study_Kitakyushu.pdf)

### I-2.3.2.2 ベトナムにおけるグリーン成長の事例

ベトナム国内の地方省や市でもグリーン成長の概念が適用されつつあり、これらの取り組み事例を以下にまとめた。

#### (1) ダナン市

ダナン市は、下図に示すグリーン成長戦略イニシアティブを策定している。同イニシアティブは、(a) 廃棄物の資源化による持続的な資源管理、(b) グリーン交通の促進、(c) 生産性の向上と資源利用の効率化によるグリーン産業の実現、(d) 統合的な水資源管理及び流域管理、(e) グリーンな生産品及び観光をリンクしたグリーン農業の促進、の5つの戦略を掲げている。



出典 : [http://2014excom.citynet-ap.org/wp-content/uploads/2014/12/4.2-Green-Cities-Session-NGUYEN-QUANG\\_Green-Cities-development-in-Vietnam.pdf](http://2014excom.citynet-ap.org/wp-content/uploads/2014/12/4.2-Green-Cities-Session-NGUYEN-QUANG_Green-Cities-development-in-Vietnam.pdf)

図 I-2.6 ダナン市のグリーン成長戦略イニシアティブ

(2) ハイフォン市

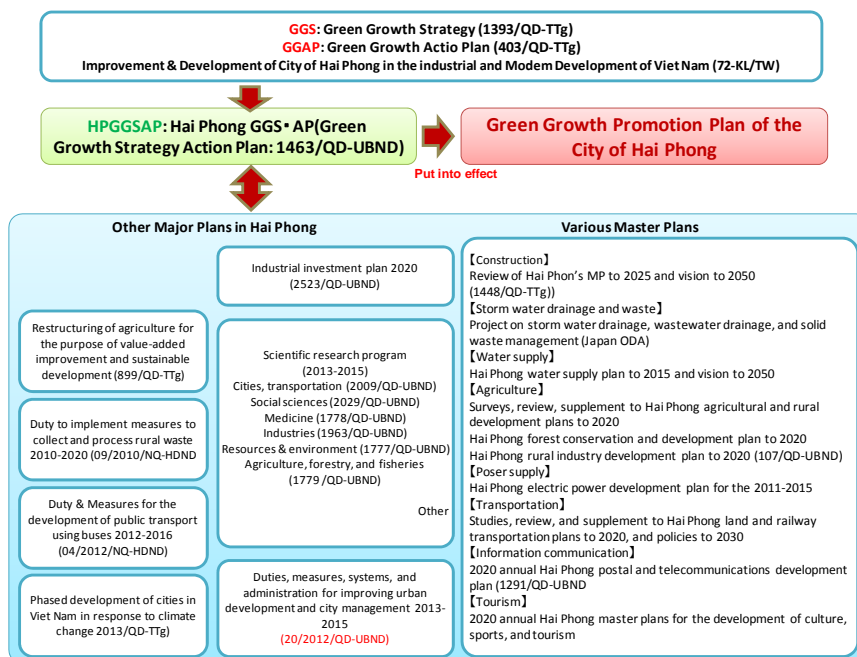
ハイフォン市は、「ハイフォン市グリーン成長行動計画(HPGGSAP)」を策定し、いくつかの政策を推進している。計画策定及び実施のため、ハイフォン市は前節に示したグリーン成長に係る北九州市の経験及びアプローチを参考としている。



出典: Green Growth Promotion Plan of the City of Hai Phong

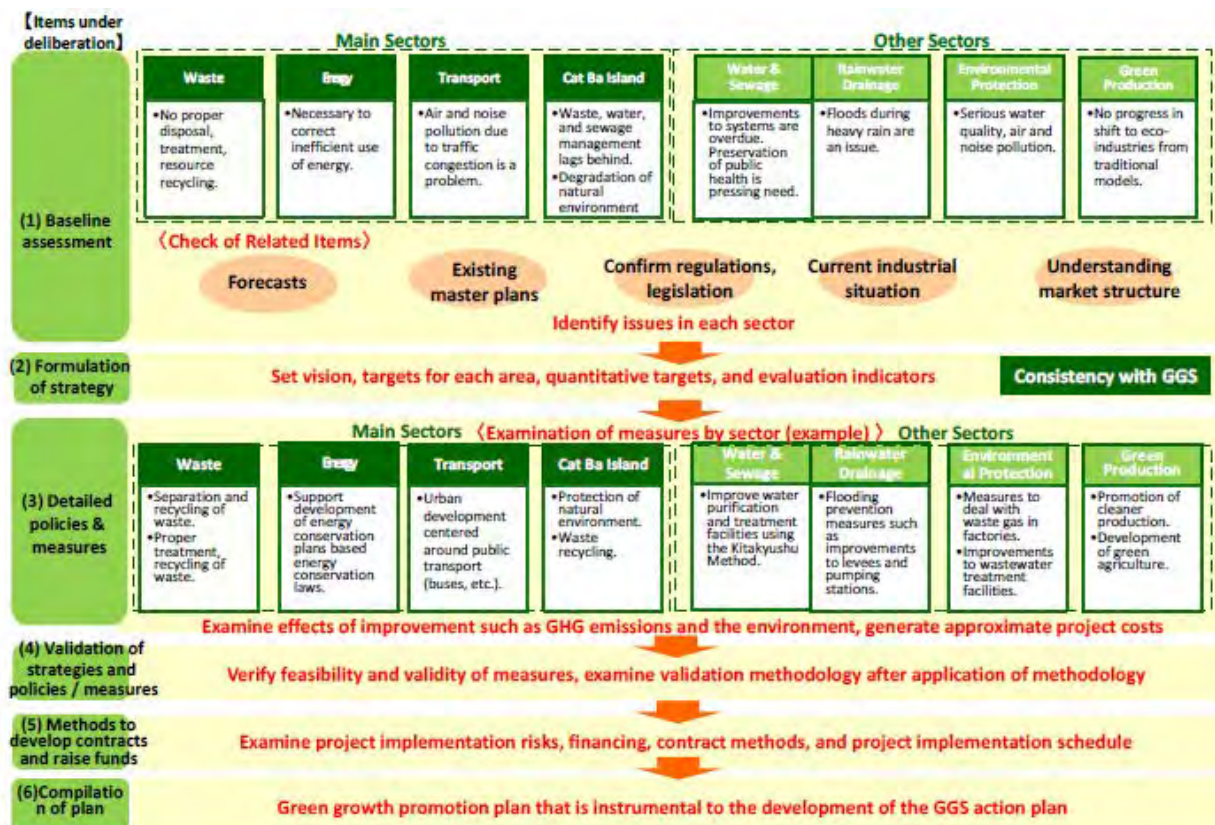
図 I-2.7 グリーンなハイフォン市形成のための行動概念図

ハイフォン市グリーン成長行動計画は、下図に示す通り、ベトナムの国家グリーン成長戦略及び既存のマスタープランを踏まえ作成された。同計画は、廃棄物管理、省エネ、交通改善、及びカットバ島での自然資源の適正管理を対象としている。



出典: Green Growth Promotion Plan of the City of Hai Phong

図 I-2.8 ハイフォン市グリーン成長行動計画の法的位置付け



出典: Green Growth Promotion Plan of the City of Hai Phong

図 I-2.9 ハイフォン市グリーン成長計画の作成過程

### I-2.3.3 グリーン成長に活用できる知見と教訓

諸外国及びベトナム国内の他都市の関連活動を踏まえ、グリーン成長促進施策実施に際しての知見と教訓を整理した。整理結果を下表に示す。

表 I-2.6 グリーン成長促進施策実施に際しての知見と教訓

項目	確認された事例	知見と教訓
対象セクターの選定	<ul style="list-style-type: none"> <li>- 各都市の事例をみると、水環境管理、省エネ、廃棄物管理、交通といった活動が比較的多く掲げられており、地域の特性に応じて、農業、土地利用、雇用といった項目の活動も提案、実施されている。</li> <li>- メキシコの事例では大統領のリーダーシップが施策推進に重要な役割を果たした。</li> <li>- 日本は、グリーン成長ビジョンとして、複合的な政策を提案・実施している。</li> </ul>	グリーン成長に関連する主要セクターを含むと共に、地域の特徴を踏まえ、対象セクターを選定する必要がある。
リーダーシップの確保	<ul style="list-style-type: none"> <li>- メキシコの事例では大統領のリーダーシップが施策推進に重要な役割を果たした。</li> <li>- シガゴ市は、市長が持続的な発展のための目標達成を図る持続性委員会の委員長を務めている。</li> <li>- オランダは施策実施に際し、企業、研究機関、大学及び政府が改革の刺激及び競争の改善のために合意を形成した。</li> </ul>	政策意思決定者のグリーン成長促進に関わるコミットメントが重要であると共に、政策意思決定者に対するグリーン成長政策実施のための支援体制を確立する事が望まれる。
関係ステークホルダー巻き込みのための手段の確保	<ul style="list-style-type: none"> <li>- シンガポールは、グリーン成長に関わり都市のブランド化を図り、関係者にグリーン成長施策をアピールし施策を実施した。</li> <li>- 北九州市は、低炭素社会構築のための「エコモデル都市」として選定されて行政施策を実施している。</li> </ul>	関係ステークホルダーのグリーン成長促進政策への理解のためには、スローガンやブランド化といった手段も有効である。
地域への裨益	<ul style="list-style-type: none"> <li>- 北九州市は「人が輝く、賑わい・安らぎ・活力のある都市づくり」を掲げ、多様なステークホルダーへの裨益を目指している。</li> </ul>	グリーン成長の効果は地域の多様なステークホルダーに波及する事が望まれる。
新規技術の導入	<ul style="list-style-type: none"> <li>- オランダは、セクターを越えた研究課題が設定され、参画者への研究開発にかかる資金及び人材の確保を図り技術革新を目指している。</li> <li>- 北九州市はアジア地域のグリーン成長促進を図るために技術移転を図る目標を掲げている。</li> </ul>	グリーン成長は技術的なイノベーションを内包した形で実施される。

出典: JICA 専門家チーム

### I-2.3.4 クアンニン省のグリーン成長に活用できる知見と教訓

諸外国及びベトナム国内の他都市の関連活動を踏まえ、クアンニン省のグリーン成長に活用できる知見と教訓を整理した。整理結果を下表に示す。

表 I-2.7 クアンニン省のグリーン成長に活用できる知見と教訓

項目	知見と教訓	ハロン湾地域での適用
対象セクターの選定	グリーン成長に関連する主要セクターを含むと共に、地域の特徴を踏まえ、対象セクターを選定する必要がある。	<ul style="list-style-type: none"> <li>- ハロン湾地域においては、観光産業が重要な産業セクターであり、その振興と環境への配慮について取り組む必要がある。</li> <li>- ハロン湾地域の水域は、世界遺産地域として保全すべき自然資源であるだけでなく、観光業や水産業等を営むために活用される資源である。クアンニン省及びハロン市を含めた地方自治体はハロン湾の水域の環境保全を重要と考え行政施策を実施している。グリーン成長コンセプトの導入により、それら行政施策の強化に寄与することが望まれる。</li> <li>- 省エネ促進はグリーン成長に関わる主要な施策の一つであり、本事業でもその取り組みについて検討する必要がある。</li> </ul>
リーダーシップの確保	政策意思決定者のグリーン成長促進に関わるコミットが重要であると共に、政策意思決定者に対するグリーン成長政策実施のための支援体制を確立する事が望まれる。	<ul style="list-style-type: none"> <li>- クアンニン省におけるグリーン成長の円滑な実施のためには、人民委員会のコミットが必須である。</li> <li>- 現在、クアンニン省は中央政府と強固なつながりを有している。従って、MPI を中心とした中央政府と、より活発な意見交換を行い必要に応じた支援を要請することが望まれる。</li> </ul>
関係ステークホルダー巻き込みのための手段の確保	関係ステークホルダーのグリーン成長促進政策への理解のためには、スローガンやブランド化といった手段も有効である。	<ul style="list-style-type: none"> <li>- ハロン市を主としたハロン地域のクリーン及びグリーンな都市としてのブランド化は、地域のグリーン成長促進に寄与すると考えられる。</li> <li>- 関係ステークホルダーに対する省 GGAP や関連マスタープランの施策の内容と実施状況周知のための手段を確保する必要がある。</li> </ul>
地域への裨益	グリーン成長の効果は地域の多様なステークホルダーに波及する事が望まれる。	<ul style="list-style-type: none"> <li>- ハロン湾地域では、大企業のみならず中小企業が存在している。従って、グリーン成長に係る活動はそのような中小企業でも展開される事が望まれる。</li> <li>- 多様なステークホルダーに働きかけるための手段を確保する必要がある。</li> </ul>
新規技術の導入	グリーン成長は技術的なイノベーションを内包した形で実施される。	<ul style="list-style-type: none"> <li>- 身近な事例として、ハイフォン市はグリーン成長に係る活動実施のため北九州市の経験を活用している。クアンニン省もグリーン成長実施のため、活用可能な他国の事例を活用することが望まれる。</li> </ul>

出典: JICA 専門家チーム

#### I-2.4 クアンニン省のグリーン成長関連行政に係る基本情報の収集、及びニーズ・ギャップ分析

クアンニン省のグリーン成長政策及び関連行政の評価に必要な基本情報を収集した。収集した情報は、i)省のグリーン成長に関連する経済状況、ii)国家グリーン成長戦略や省グリーン成長アクションプランを含む上位計画や基本戦略、iii)主要セクターの省マスタープラン、iv)省のグリーン成長実施に係る行政・制度の状況、v)省の財政や基金の状況、の観点から、ニーズやギャップを分析した。

これらの調査・分析結果は、主要なファインディングや優先課題の整理とあわせ、本報告書のパート II にとりまとめた。

#### I-2.5 詳細計画策定調査に係る実施体制の構築

本フェーズの開始時点で、プロジェクトステアリングコミッティ (StC) 及び PMU がクアンニン省 PPC の下に設置された。2015 年 10 月時点のメンバーリストを添付資料 I-1 に示す。

また、本フェーズの活動期間中は、議論となるトピックに応じ、省内関連部局、地元自治体、民間セクターを含む関連団体等の参加を得つつ、インテンシブコンサルテーションを適宜企画・実施した。

### I-2.6 クアンニン省及びハロン湾地域の主要セクターに係る現況把握と分析、及び環境パフォーマンス評価

クアンニン省及びハロン湾地域の主要セクター（工業、運輸交通、廃棄物、農業、水資源、下水等）に関し、環境管理や規制の施行状況及びモニタリング活動について調査した。また、環境パフォーマンス、エネルギー消費効率、温室効果ガス排出量などについて迅速評価を実施した。これらの結果は、所見とともに本報告書のパート II にとりまとめた。

### I-2.7 グリーン成長に係るステークホルダー間での検討・合意形成、及びセミナー・ワークショップ・研修の実施

調査結果及びファイナディングに基づき、グリーン成長実施に向けた優先課題の抽出と、本プロジェクト実施フェーズ（第2フェーズ）で優先的に取り組むべき活動の検討のため、様々な協議・コンサルテーションの場を用意し、ステークホルダー間での合意形成を図った。トレーニングやワークショップも含め、本フェーズで取り組まれた主たる協議・コンサルテーション活動を以下にまとめた。

#### I-2.7.1 週例会議

本フェーズ期間中、PMU のイニシアティブの下、週例会議が開催された。会議は隔週ベースを原則としたが、必要に応じてアドホックにも開催した。会議では、i)本プロジェクトの円滑な運営、ii)省政府内外ステークホルダーのプロジェクト活動への参加促進、iii)プロジェクト運営上の課題確認と解決方策の検討、等について、PMU 及び専門家チームで協議した。

#### I-2.7.2 キックオフ会議及び StC 会議

本フェーズの節目には、下表のとおり、クアンニン省 PPC の副委員長のイニシアティブの下、キックオフ会議及び StC 会議が開催された。各会議の会議内容、出席者等の詳細は、添付資料 I-2 にとりまとめた。

表 I-2.8 キックオフ会議及び StC 会議

Meeting and Date	Main Agenda
Kick-off Meeting 30th October 2015	<ul style="list-style-type: none"> <li>- Put remarks of launching the Project</li> <li>- Confirm the organizational structure to conduct the activities of Detailed Planning Phase</li> <li>- Present and discuss the draft work plan of Detailed Planning Phase</li> </ul>
1st StC Meeting 21st March 2016	<ul style="list-style-type: none"> <li>- Present the progress of the activities at the mid term of Detailed Planning Phase, and share the progress report</li> <li>- Confirm the candidate topics selected for pilot activities in the 2nd phase (Implementation Phase) of the Project with sharing the selection process</li> <li>- Discuss on outline of candidate pilot activities and schedule of improvement of institutional development/improvement</li> <li>- Introduce experiences and knowledge of Shiga prefecture and Lake Biwa contributing to implementation of the Project.</li> </ul>
2nd StC Meeting 22nd June 2016	<ul style="list-style-type: none"> <li>- Present and discuss the overall Project structure and draft outlines of five (5) selected topics as pilot activities to be conducted in the 2nd phase</li> <li>- Present and discuss the Project Design Matrix (PDM) and Plan of Operation (PO) for the 2nd phase</li> <li>- Present and discuss the readiness for the 2nd phase, including institutional development/improvement, expected schedule of readiness, etc.</li> </ul>

出典: JICA 専門家チーム

### I-2.7.3 インテンシブコンサルテーション

クアンニン省グリーン成長実施の優先アクションプランと、本プロジェクト第2フェーズ（実施フェーズ）の実行計画を短期間で集中的に検討・協議するため、一連のインテンシブコンサルテーションをPMU、専門家チーム、クアンニン省の主要関連部局及びハロン湾地域の関連機関・団体と共に実施した。

各コンサルテーションでは、専門家チームより、日本の経験、滋賀県及び琵琶湖での活動及び教訓、その他の事例について情報提供を行い、その後、参加者によるフリーディスカッションを行った。コンサルテーションの参加者は、集中的な議論を行うため、行政職員や関連団体のキーパーソンとした。

PMUと専門家チームは、下表のとおり本フェーズで計26回のインテンシブコンサルテーションを開催した。各コンサルテーションの内容、参加者等の詳細は、添付資料I-3にとりまとめた。なお、全てのコンサルテーションを通して述べ191人のC/Pが会議に参加し協議を行った。

表 I-2.9 本フェーズで実施したインテンシブコンサルテーション

Intensive Consultation Conducted	Date & Participated Department	Result
Intensive Consultation No.1 (combined with Weekly meeting No.6) Overall process to prepare the 2nd phase	- 10th Dec. 2015 (Thu) - PMU, JET (6 persons: except JET the same applies hereafter)	Holding Intensive Consultation was announced and a content of it was explained by JET.
Intensive Consultation No.2 Group 1 on Environmental Management and Group 2 on Energy Management and Saving	- 16th Dec. 2015 (Wed) - PMU, DONRE, DOIT, JET (6 persons)	Main topic was ESCO and PMU and JET discussed how to establish institutional mechanism to implement GG activities.
Intensive Consultation No.3 Group 6 on Environmental Education and Awareness	- 16th Dec. 2015 (Wed) - PMU, DONRE, HBMD, Halong Ass for Env. Education, JET (7 persons)	Activities for raising awareness in Shiga prefecture were introduced and some ideas for raising awareness such as Eco-label, environmental protection guide book, 3R, ecotourism, TV program, exhibition in Quang Ninh museum etc. were suggested by PMU.
Intensive Consultation No.4 Group 3&4 on Tourism Sector	- 29th Dec. 2015 (Tue) - PMU, DCST, Tourism Ass., Halong Ass for Env. Education, JET (7 persons)	Indochina Junk and Saigon tourist company provide tour to floating village and craft village successfully. JET was recommended to visit them and know their information and successful experience.
Intensive Consultation No.5 Group 5 on Agriculture Sector	- 30th Dec. 2015 (Wed) - PMU, DARD, Science and Technology Union, JET (5 persons)	Problems of conducting green label package, mangrove development and food security were provided by DARD. Application of concept of SATOYAMA was suggested by PMU.
Intensive Consultation No.6 Long List Preparation and Discussion The 1st draft of long list	- 4th Jan. 2016 (Wed) - PMU, JET (8 persons)	Integration of some long list, additional comment, screening of topic etc. were discussed to prepare long list.
Intensive Consultation No.7 Long List Preparation and Discussion (2nd session) Discussion on the comments from related departments on the 1st draft of the long list	- 13th Jan. 2016 (Wed) - PMU, JET (7 persons)	Comments from some departments were reviewed and JET confirmed that JICA will only support Quang Ninh Province with mechanism and technology, not facilities or infrastructures.
Intensive Consultation No.8 Long List Preparation and Discussion (3rd session) Sharing the TV meeting result in JICA	- 15th Jan. 2016 (Fri) - PMU, JET (5 persons)	Results of meeting with JICA such as application of Lake Biwa model to Quang Ninh Green Growth, making slogan, clear criteria of screening topics were shared.
Intensive Consultation No.9	- 19th Jan. 2016 (Tue)	PMU proposed some criteria to select pilot

Intensive Consultation Conducted	Date & Participated Department	Result
Discussion on Criteria for selecting pilot activities	- PMU, JET (7 persons)	activities such as appropriateness to legal documents, effectiveness to economic, social and political benefits etc. and explained procedure of discussion of document in PPC's meeting.
Intensive Consultation No.10 Discussion on existing fund mechanism	- 20th Jan. 2016 (Wed) - PMU, DOST, DONRE, JET (8 persons)	Function and requirement of application of Environmental protection fund and Science and Technology fund are explained by PMU. Establishment of new fund is proposed because of difficulties to use these funds for Green Growth activities.
Intensive Consultation No.11 Discussion on ESCO activities	- 21st Jan. 2016 (Thu) - PMU, DOST, JET (10 persons)	Concept of ESCO was explained by JET and enriched PMU's understanding of it. There is ability to conduct ESCO activity to PPC building.
Intensive Consultation No.12 Discussion on replacing engines and usage of BDF for tourist boats	- 25th Jan. 2016 (Mon) - PMU, DOT, JET (1 person)	There is good ability to implement BDF activity. 3 decisions related to management of tourism Boat are introduced by DOT.
Intensive Consultation No.13 Discussion on pilot activities in tourism sector	- 25th Jan. 2016 (Mon) - PMU, DCST, JET (1 person)	Criteria to select priority actions and pilot activity were suggested by JET and these were agreed by DCST.
Intensive Consultation No.14 Discussion on pilot activities for the implementation phase	- 18th (Thu) & 19th Feb. 2016 (Fri) - PMU, JET (6 & 7 persons)	PMU suggested to keep 7 nominated topics in the pilot activities (6 topics as listed in the material for Intensive Consultation No. 14, plus topic 1A-2 (for industrial zone). However, depending on requirement and possible resources, clarification was needed on the extend of the support, and number of topics would be decided after consultation with JICA.
Intensive Consultation No.15 Discussion on Possible Pilot Activity: Enhancement of Environment Management Capacity in Industrial Zone and Economic Zone	- 1st Mar. 2016 (Tue) - PMU, DONRE, QEZA, Quang Yen PC, DOIT, HBMD, JET (18 persons)	Policies for environment management section of industrial zone and responsible organization for enhancement of environment management capacity were introduced.
Intensive Consultation No.16 Discussion on Promotion of ecotourism using cultural/historical assets in Halong Area / Improvement of Tourist Information (TIC, website, map and event calendar, etc.)	- 3rd Mar. 2016 (Thu) - PMU, Information and Communication Department, Quang Yen PC, Uong Bi PC, Van Don District PC, Indochina Junk, Halong city PC, HBMD, JET (22 persons)	Improvement of tourism information was agreed and recognized as important matter. The idea of application of eco label to tourism site was suggested.
Intensive Consultation No.17 Discussion on Promotion of recycling agricultural waste and resource circulation in household / small - scale activities	- 4th Mar. 2016 (Fri) - PMU, DOST, DONRE, JET (9 persons)	Relevant projects and decision with agriculture waste in Quang Ninh province were introduced.
Intensive Consultation No.18 Discussion on Regular publication of environmental report (White book)	- 8th Mar. 2016 (Tue) - PMU, CONREM, Uong Bi PC, Quang Yen PC, Halong PC, Van Don PC, DCST, QEZA, HBMD, DONRE, JET (16 persons)	Ideas for making white book were given. Use of 5-year-report of environment monitoring and of data of monitoring station was suggested.. Scope to be covered by white book was discussed.
Intensive Consultation No.19 Discussion on Enhancement of Provincial Funding Mechanism for Environmental Management and Green Growth	- 11th Mar. 2016 (Fri) - PMU, DOF, DOIT, DONRE, JET (8 persons)	Existing fund and annual expenditure for environmental management were clarified. The way to apply for using state budget and 3 funds of environment protection were explained.
Intensive Consultation No.20 Discussion on Promotion of incentive such as ESCO project for energy saving and management	- 14th Mar. 2016 (Mon) - PMU, NIRAS, DOIT, DOC, QEZA, JET (10 persons)	ESCO was introduced and explained by a national expert. Decision related to implementation of ESCO was also introduced. To consider and select appropriate sector for ESCO was recognized as the first step.
Intensive Consultation No.21	- 20th Apr. 2016 (Wed)	Support of activities such as branding for



Intensive Consultation Conducted	Date & Participated Department	Result
Discussion on Pilot Activities for Tourism Sector	- PMU, Information and Communication Department, Quang Yen Town PC, DCST, HBMD, Quang Ninh Tourism Association, JET (9 persons)	enterprises; implementation of Halong Smile Code of Conduct; introduction of local products (OCOP) and training for tourist narrators were suggested.
Intensive Consultation No.22 Discussion on Pilot Activity for Tourism Sector	- 26th May 2016 (Thu) - PMU, Tourism Association, Quang Yen PC, HBMD, Tourism Department, JET (8 persons)	As preparation for pilot activity for tourism sector, DMA was introduced
Intensive Consultation No.23 Discussion on Implementation Plan of Pilot Activity on Enhancement of provincial funding and financial mechanism for Environmental Management and Green Growth	- 1st Jun. 2016 (Wed) - PMU, DOIT, DONRE, JET (10 persons)	Necessity of survey on wastewater source and financial incentive of enterprises in Halong bay area were pointed out in order to apply fund.. It was recognized that sufficient discussion with Cai Lan Industrial Park would be needed.
Intensive Consultation No.24 Discussion on Proposed Implementation Plan for Pilot Project of Energy Efficient Measures	- 2nd Jun. 2016 (Thu) - PMU, DOC, DOIT, QEZA, JET (6 persons)	PPC's new building which was under construction was suggested as one of the conceivable target to apply energy saving measures. However, PPC could not give financial support. It was recognized that sufficient discussion on financial support would be needed.
Intensive Consultation No.25 Discussion on Enhancement of Water Environment Management Capacity by Controlling Direct Load of Wastewater Pollution on the bay	- 3rd Jun. 2016 (Fri) - PMU, DOST, DARD, DONRE, JET (6 persons)	Information of bio-toilet and feeding fishery waste were given. It was suggested that pilot activities should cover such steps as waste, composting and distribution of products in order to involve all concerned entities.
Intensive Consultation No.26 Discussion on Awareness Raising for Contribution to Green Growth Implementation with Regular Publishing of Environmental Report (White Book)	- 13th Jun. 2016 (Mon) - PMU, CONREM, QN Youth Union, DOIT, DOT, DONRE, JET (16 persons)	Concept of "Raising awareness" should be included in scope of white book. Responsible department would be selected based on contents. If environment would be main topic, DONRE should be responsible department. If green growth and sustainable development would be main topic, DPI should be responsible department.

出典: JICA 専門家チーム

#### I-2.7.4 テクニカルワークショップ

インテンシブコンサルテーションは、本プロジェクトの実施・運営に直接関わる PMU や主要関連部局、団体等を対象に、優先アクションプランや実施フェーズのデザインを検討するために開催した。一方、本プロジェクトの全体計画や実施フェーズの概要、本プロジェクトに応用可能な日本の知見などについては、広くステークホルダーに共有することが望ましいと判断された。そのため、2015年11月17日に、ハロン市バイチャイ地区のホテルにてテクニカルワークショップを開催し、73名の参加を得た。概要は下表に示すとおりである。

表 I-2.10 テクニカルワークショップ（2015年11月17日開催）

Item	Description
Objective	<ul style="list-style-type: none"> <li>- Present green growth action plan (GGAP) in Quang Ninh Province</li> <li>- Present the final work plan of the Project</li> <li>- Present experience on water environmental management and challenge on international cooperation by private sector in Shiga Prefecture</li> <li>- Present experience water environmental protection with integrated administrative polices under the “Lake Biwa Approach”</li> <li>- Discuss toward demonstration of green growth strategy in Halong Bay area under the Project</li> </ul>
Participants	<ul style="list-style-type: none"> <li>- Related departments of Quang Ninh province: DPI, DONRE, DOF, DOIT, DCST, DOC, DOT, DARD, Economic Zone Management Board (EMB), etc.</li> <li>- Representative of local administration in Halong Bay area: Halong City, Cam Pha City, Van Don District, Hoanh Bo District, Quang Yen Town, HBMD</li> <li>- Cooperative and private sector organization: Quang Ninh woman association, Provincial Youth Union, Association of Science and Technology, IPA, EVN, VINACOMIN, private sectors (cement, mining, foreign companies), etc.</li> <li>- Central administration body: MPI, MOC (JICA Advisor), VAST</li> <li>- Shiga Prefecture, JICA Vietnam</li> </ul>

出典: JICA 専門家チーム

## I-2.7.5 個別トレーニング

## (1) 滋賀県によるトレーニングの提供

本フェーズの節目において、下表のとおり滋賀県による技術移転・トレーニングを提供した。各トレーニング資料は添付資料 I-4 にとりまとめた。

表 I-2.11 滋賀県によるトレーニングの概要

Opportunity	Title, Major Contents and Presenter
Technical Workshop on 17th Nov. 2015	<ol style="list-style-type: none"> <li>1) Experience of Shiga on Water Environment Conservation “Possibility of Technical Cooperation of Shiga Prefecture” <ul style="list-style-type: none"> <li>- Introduction of Shiga Prefecture and Biwa Lake</li> <li>- International cooperation of Shiga Prefecture and private sectors of Shiga</li> <li>- Policies and activities of water quality conservation of Biwa Lake</li> </ul> </li> <li>* Presented by Sewerage division, Department of Biwa Lake and Environment, Shiga Prefecture</li> <li>2) Water Conservation Measures of Biwa Lake <ul style="list-style-type: none"> <li>- General introduction of Biwa Lake and its basin</li> <li>- History of water pollution of Biwa Lake and experiences of combating against the pollution</li> <li>- Policy framework and administrative measures of Shiga for environmental management of Biwa Lake</li> <li>- A series of master plans of Biwa Lake including Mother Lake 21, for environmental management as well as socio-economic activities by wise use of the lake resources</li> </ul> </li> <li>* Presented by International Lake Environment Committee</li> </ol>
1st StC Meeting on 21st Mar. 2016	<ol style="list-style-type: none"> <li>1) Experience and Administrative Measures of Shiga on Water Quality Conservation in Lake Biwa <ul style="list-style-type: none"> <li>- Example of Plans for Water Quality Conservation of Lake Biwa in Shiga, such as Mother Lake 21 Plan</li> <li>- Environment White Book in Shiga (Pollution White Book)</li> <li>- Introduction of Lake Biwa Environmental Research Institute</li> </ul> </li> <li>* Presented by Senior Technical Director, Department of Biwa Lake and Environment, Shiga Prefecture</li> <li>2) Industry Development Measures by Shiga Prefectural Government <ul style="list-style-type: none"> <li>- Industries in Shiga</li> <li>- Shiga’s industry development policy</li> <li>- Practice: Water Environment Business</li> <li>- Practice : Tourism</li> </ul> </li> <li>* Presented by Commerce and Industry Policy Division, Department of Commerce, Industry, Tourism and Labor, Shiga Prefecture</li> </ol>

出典: JICA 専門家チーム

## (2) 本邦及び滋賀県への招聘

### 1) 背景と目的

2015年10月より本プロジェクト第2フェーズに向けて、クアンニン省 DPI や関連部局とグリーン成長に資する制度・体制構築について検討・協議を行ってきた。クアンニン省は、日本の知見の活用を強く要望しており、特に地域振興と自然資源管理の総合的な政策を展開している滋賀県での取組みについて、その活用に強い関心を示してきた。従い、滋賀県での現場視察や県行政職員及び関係者との直接の意見交換の場の提供が、クアンニン省グリーン成長推進の後押しになる判断され、本邦招聘が実施された。

本邦招聘の目的は、クアンニン省のグリーン成長推進を主導する政府要職職員が、本プロジェクトの実施に参考となる滋賀県の地域資源管理とこれを活用した地域振興の総合的な政策に係る知見を得ることとした。

### 2) クアンニン省からの本邦招聘参加者

下表の通り、クアンニン省 PPC 副委員長を始め、StC の主要メンバー（関連部局の局長及び副局長クラス）及び PMU の主要メンバーの計 12 名を招聘した。

表 I-2.12 本邦招聘参加者

No.	氏名	役職	所属
1	Mr. Dang Huy Hau ダン・フイ・ハウ	Standing Vice-chairman 副委員長	Quang Ninh Province People's Committee クアンニン省人民委員会
2	Mr. Nguyen Van Minh グエン・ヴァン・ミン	Director 局長	Dept. of Planning and Investment 計画投資局
3	Mr. Ho Quang Huy ホ・クワン・フイ	Vice Chairman 副委員長	Halong City People's Committee ハロン市人民委員会
4	Mr. Pham Van Cuong ファム・ヴァン・クオン	Vice Director 副局長	Dept. of Natural Resources and Environment 天然資源環境局
5	Mr. Trinh Dang Thanh チン・ダン・タイン	Vice Director 副局長	Dept. of Culture, Sport and Tourism 文化スポーツ観光局
6	Mr. Pham Quang Thai ファム・クワン・タイ	Vice Director 副局長	Dept. of Industry and Trade 産業経済局
7	Mr. Hoang Danh Son ホアン・ダン・ソン	Vice Director 副局長	Dept. of Planning and Investment 計画投資局
8	Mr. Pham Hong Bien ファム・ホン・ビエン	Head of Foreign Economic Relation Division 海外経済関係課 課長	Dept. of Planning and Investment 計画投資局
9	Mr. Ta Thien Hy タ・ティエン・ヒイ	Head of Culture-Society Division 文化社会課 課長	Dept. of Planning and Investment 計画投資局
10	Mr. Tran Thanh Phong チャン・タイン・フォン	Head of Sectoral Economy Division 部門別経済課 課長	Dept. of Planning and Investment 計画投資局
11	Mr. Nguyen Duc Hoa グエン・ドゥック・ホア	Head of Administrative Division 事務課 課長	Dept. of Planning and Investment 計画投資局
12	Mr. Bui Tuan Anh ブイ・トゥアン・アイン	Deputy Head of General and Planning Management Division 総合計画管理課 課長補佐	Dept. of Planning and Investment 計画投資局

出典: JICA 専門家チーム

### 3) スケジュール

本邦招聘は、下表のプログラムにて、2016年4月22日から28日にかけて実施した。

表 I-2.13 本邦招聘スケジュール

日程	プログラム内容
4月22日(金)	JICA 本部表敬訪問 国土交通省表敬訪問
4月23日(土)	東京都内視察
4月24日(日)	京都市内視察
4月25日(月)	オリエンテーション、滋賀県の紹介
	滋賀県行政施策の歴史及び現状(1)
	しが水環境ビジネス推進フォーラムメンバー企業による事業紹介
	食品系企業の環境管理・排水処理事例の見学 工業団地の環境管理事例の見学
4月26日(火)	針江生水の郷見学
	琵琶湖観光船のクルージング体験と竹生島視察 博物館展示事例の見学
4月27日(水)	流域下水道処理施設の見学
	滋賀県行政施策の歴史及び現状(2)
	滋賀県知事表敬訪問
	琵琶湖環境科学研究センターの見学 今後のアクションプランの協議
4月28日(木)	帰国

出典: JICA 専門家チーム

## 4) 主要プログラムの概要

本邦招聘のプログラムは、i)琵琶湖モデルに基づく滋賀県の環境管理行政・観光振興政策の理解、ii)環境管理に係る行政機関や事業場の運営状況の理解、iii)企業及び工業団地の環境ビジネスや環境管理の実施状況の理解、iv)観光関連事業者による観光振興と環境管理施策の実施状況の理解、の4つのテーマで構成された。概要を下表に示す。

表 I-2.14 本邦招聘プログラムの概要

Theme	Title of Program	Contents of Program
Understanding administrative measures on environment management and tourism development with Lake Biwa Model in Shiga prefecture	Lecture on history and current administrative measures on environmental management and economic development policy by Shiga prefecture (1)	Problems, solution, and measures provided in Lake Biwa were explained by Environmental Policy Division, Department of Lake Biwa and the Environment, Shiga Prefecture Government.
	Lecture on history and current administrative measures on environmental management and economic development policy by Shiga prefecture (2)	Current state and problems of forest in Shiga prefecture, regulation on forest development, master plan, and tax were explained by Forest Policy Division. Installation of cooperation fee to enter mountain was explained with experience of natural rehabilitation in Mt. Ibuki by Natural Environment Conservation Division. Regulation on environmentally friendly agriculture promotion, certification of environmentally friendly agriculture production, and payment for environment services in agriculture were explained by Food Brand Promotion Division.
Observation of operation status of governmental-relevant organization and public facilities for environment management	Visiting of waste water treatment facility	Konan-Chubu Water Reclamation Plant has the largest service area in Shiga prefecture and advanced treatment facility to remove Phosphorus and Nitrogen. Sewage treatment flow was explained and treatment facility were introduced.
	Visiting of local environmental research institute	Explanation of mandate of the center and contents of research were given and facility and equipment were introduced in Lake Biwa Environmental Research Institute.
Discussion on development of environment business and implementation of environment management by private enterprises and industrial parks	Introduction of environmental business promotion by Shiga Water Environment Business Forum	Technology and activities as applicable to green growth policy in Quang Ninh province were introduced by 7 enterprises which are member of Shiga Water Environment Business Forum.
	Observation of wastewater	Outline of factory, wastewater treatment plant and its capacity,

Theme	Title of Program	Contents of Program
	management facility and learning of environmental management system in beverage industry	and recycle of waste (3R) were explained and wastewater treatment facilities were introduced in Kirin Beverage Company.
	Learning of environment management system in industrial park	Organization structure and activities of environment management were explained and wastewater management center was introduced in Konan industrial park.
Discussion with tourism business enterprises on how to harmonize tourism promotion and environmental management	Visiting of local community adapting "Satoyama" concept	Domestic water system called "Kabata" with usage of spring water, irrigation canal which carp lives, and public light powered by hydroelectric power were introduced by local guide in Harieshonzunosato.
	Boat tour to Chikubu Island in the Lake Biwa	Chikubu Island cruising was conducted and Chikubu Island shrine was visited. Japanese spiritual sightseeing spot was introduced and sightseeing as foreign tourist was experienced.
	Learning example of display in museum	Technology of Yanmar was introduced through hands-on display such as getting on and operating cultivator, boat, and shovel car in Yanmar museum.

出典: JICA 専門家チーム

## 5) 得られた知見

本邦招聘を通じ、民間セクターや住民などを巻き込み、産官学民を挙げて琵琶湖の環境保全に取り組んだ歴史と、琵琶湖を地域経済の成長の核と位置付けた滋賀県の取り組みについて、理解を深めることができた。

また、琵琶湖に係る滋賀県の長年に亘る政策と取り組みは、大きく以下のような段階を経て現在に至っており、琵琶湖モデルとして知られている。この全体像をクアンニン省参加者が理解したことで、省がグリーン成長推進を目指す上での短期的、中期的及び長期的な展望を得ることができた。

### 【琵琶湖モデルとして知られる滋賀県の政策・取り組み経緯】

- 高度経済成長の中での、水需要の増大と急激な水質悪化への対処（第1段階）
- 水質保全や自然環境保全を含めた総合的な水環境管理・水域管理の取り組み（第2段階）
- 総合的な水環境・水域管理と、地域経済活動や地域社会の発展に資する水域・資源活用の両立（第3段階）

なお、国土交通省下水道部訪問時には、今後実施予定のハロン市水環境改善事業（円借款事業）を通じ、ベトナム国及びクアンニン省の一層の発展に寄与すべく、両政府の協力継続が確認された。また、滋賀県流域下水道処理施設の見学では、琵琶湖の水環境の保全・管理のため流域レベルでの下水道事業の必要性・有効性を理解した。本邦招聘参加者より PPC に提出された本邦招聘についてのレポートは添付資料 I-5 にとりまとめた。

### (3) クアンニン省主催のトレーニングワークショップ

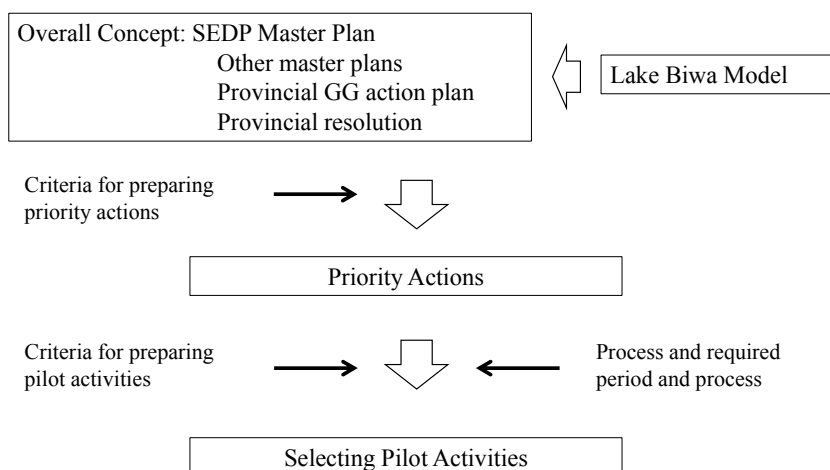
クアンニン省は、2016年5月18日に、省内の全地方自治体におけるグリーン成長推進の関連部局を対象として、i)行政職員へのグリーン成長に係る啓発と知見の共有、ii)省グリーン成長アクションプランの効果的実施に向けた意見交換、を目的に、トレーニングワークショップを開催した。同ワークショップは、i)グリーン成長の概念と重要性に係る一般事項、ii)諸外国や国内地方省・市でのグリーン成長取り組み事例、iii)国家グリーン成長戦略及び省グリーン成長アクションプランの概要、iv)クアンニン省及びハロン湾地域でのグリーン成長推進に係る JICA 専門家チームから提言、の4つのパートより構成された。この際、専門家チームからは、本プロジェクトの概要説明

に加え、グリーン成長に関して国際機関が提示する概念、ハロン湾地域に応用可能な琵琶湖モデルの知見、を紹介した。専門家チームの発表資料は添付資料 I-4 にとりまとめた。

## I-2.8 優先産業部門の選定、及びハロン湾地域グリーン成長実現のための優先アクションプラン（案）の作成

グリーン成長に係る既存知見のレビュー結果、及び国家グリーン成長戦略や省 GGAP に示される目標・指標に基づき、優先産業部門を選定した。選定の考え方として、省 GGAP 及び省社会経済開発計画で標榜する、i)産業部門の環境負荷軽減（伝統的産業部門のグリーン化）と、ii)サービスセクターを経済成長のエンジンとする構造転換（ブラウン経済からグリーン経済への転換）、にアラインすることを条件とした。その結果、i)産業環境管理・環境対策、ii)省エネ及びエネルギー管理、iii)観光セクター、iv)農業・漁業、v)環境教育及び啓発普及、の5分野を選定した。

選定された優先産業部門ごとに、グリーン成長推進の優先アクション、及び本プロジェクトの実施フェーズで取り組むべき優先活動を検討・選定した。検討・選定のプロセスは下図に示すとおりであり、その結果は、本報告書のパート II にとりまとめた。



出典: JICA 専門家チーム

図 I-2.10 優先アクション及び優先活動選定の全体プロセス

なお、上記選定プロセスでは、「琵琶湖モデル」形成の経緯と概念を参照している。その背景と理由は以下のとおりである。

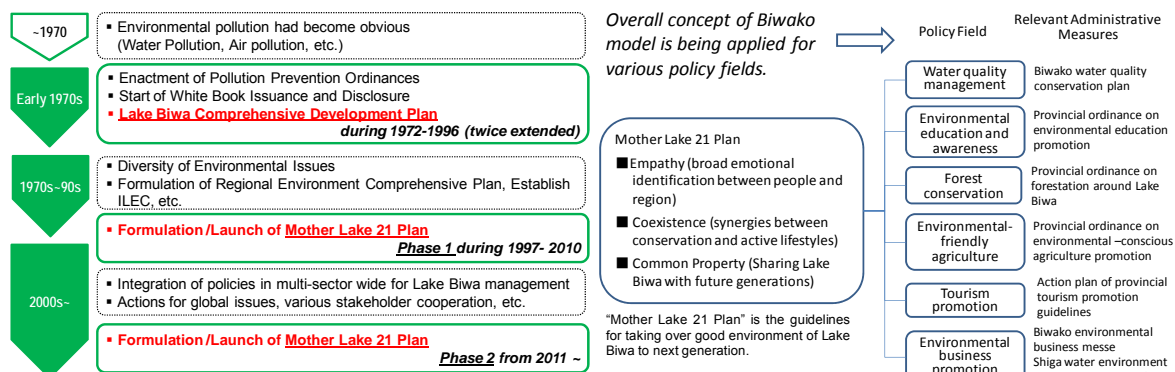
クアンニン省のグリーン成長推進、及び GGAP の優先アクションの検討や本プロジェクト実施フェーズで取り組むべき優先活動の選定には、対象セクター・分野やその施策を有機的に繋ぐ共通概念を設定することが有効と考えられる。

本プロジェクトの起源は、ハロン湾を中心とした地域の様々なリソースの持続的活用と保全に発している。これは、ハロン湾地域の適切な水域環境管理、及び水域に支えられた社会経済開発、を結び付けて同時に実現するという意図である。

滋賀県に位置する琵琶湖は、i)人口増加と工業化・産業化により琵琶湖の水質汚濁の問題解決に長く取り組んだ経験を有する、ii)水域資源の持続的開発・活用と、県内の地域振興の相乗効果を実現している我が国のシンボリック水域である、等の観点から、ハロン湾地域との類似性が高いと考えられる。

琵琶湖を巡る滋賀県の取り組みの歴史的経緯、及び現在の取り組み状況を、概念図として下図にまとめた。これに示唆されるとおり、滋賀県の取り組みは、水質汚濁対策

等の琵琶湖水域管理という枠組みから、現在は、琵琶湖を中心とした地域管理・振興を俯瞰し、各種政策分野を有機的に繋ぐ「マザーレイク 21」という概念に発展している（琵琶湖モデル）。



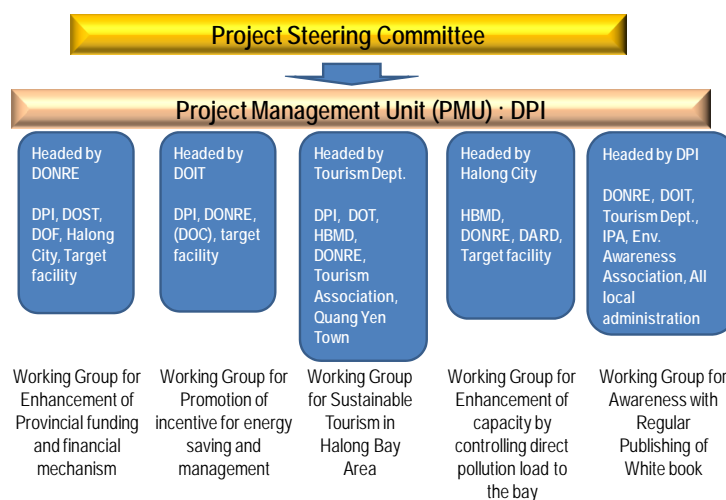
出典：JICA 専門家チーム

図 I-2.11 琵琶湖を巡る滋賀県の取り組み経緯とマザーレイク 21（琵琶湖モデル）

このように、琵琶湖モデルとは、総合的水質・水域管理と地域社会・経済発展の調和・両立に到達する経緯を含めた概念である。ハロン湾地域においても、水域を中核に据えた様々な政策分野と、これらに係る各種施策を繋ぐ統一概念（Umbrella Concept）の適用は極めて有用である。従い、琵琶湖モデルがカバーしている政策分野、及び各分野での様々な施策と、このような政策・施策構造に至る経緯を参考に、ハロン湾地域でのグリーン成長推進に向けた優先分野・優先アクションの選定を進めた。

### I-2.9 本プロジェクト実施フェーズ（第2フェーズ）の実施体制の検討

本プロジェクト実施フェーズ（第2フェーズ）の実施体制を検討した。下図のとおり、StC及びPMUは、第1フェーズに引き続き、プロジェクト全体を運営・管理する。また、パイロット活動のトピックごとに、ワーキンググループを設置する。第2フェーズの実施体制の詳細は、本報告書のパートIIにとりまとめた。



出典：JICA 専門家チーム

図 I-2.12 本プロジェクト実施フェーズの実施体制

### I-2.10 選定された優先産業部門でショートリストされた優先アクション実施のための制度提案

グリーン成長に係る優先アクション実施のための制度を検討し、優先産業部門として選定された 5 分野の中で、本プロジェクトで試行する分野について以下を提案した。これらの制度は、本プロジェクトの実施フェーズでの取り組み成果を踏まえて最終化されることを想定している。

- クアンニン省グリーン成長白書を継続して発行する制度及び組織
- 環境管理活動及び省エネ活動を進めるための金融、資金メカニズム及び組織
- 観光情報の発信、更新及びマーケティングを行うための制度及び組織
- クアンイエン町でエコツーリズムを振興するための制度及び組織
- 省エネ及び持続的な観光活動を進めるためのラベリング制度及び組織

また、上記制度の構築のため、本プロジェクト実施フェーズ（第 2 フェーズ）でのパイロット活動実施に必要な制度準備（案）は下表のとおり提案された。

表 I-2.15 第 2 フェーズへの制度準備（案）

- |  |
|--|
| <ul style="list-style-type: none"> <li>a. Set organization structure and assign required human resource for conducting pilot activities</li> <li>b. Allocate budget for conducting pilot activities</li> <li>c. Agree implementation plans of pilot activities</li> <li>d. Commit implementation of specific activities such as;               <ul style="list-style-type: none"> <li>- Conduct trial funding with examination for improvement of usability of existing fund,</li> <li>- Provide trial subsidy for energy efficiency,</li> <li>- Establishment of Destination Marketing Agency ,</li> <li>- Operate trial green label system, and</li> <li>- Publish Halong Bay Area green growth white book</li> </ul> </li> <li>a. Commit preparation of regulation and organization for post project phase by the end of Phase 2</li> </ul> |
|--|

出典: JICA 専門家チーム

上記の実施フェーズに向けた制度準備（案）は、2016 年 6 月 22 日のステアリングコミッティ会議で議論・確認され、7 月 13 日に署名されたミニッツに反映されている。

### I-2.11 ハロン湾地域の観光セクターの現況把握と分析、及び優先アクションプラン

DCST 等関連機関へのヒアリング、2020 年の観光マスタープラン及びその他既存資料のレビューを通して、ハロン湾地域での観光に関連した産業活動や関連施設等を把握した。観光セクターの現況把握や観光が地域に及ぼす効果・インパクトを、需要・供給の両サイドから調査した。需要サイドについては、観光ガイドブック（Lonely Planet, Routard 等）、SNS（trip Advisor, Travel Fish 等）、ブログ等を検討した。供給サイドについては、主要な観光プロバイダーへの質問票による聞き取り調査を実施した。

さらに、観光業の環境負荷を算定するために、ホテルや観光船業者へのインタビュー・質問票調査を実施し、既存資料のデータ等と合わせ、環境パフォーマンス・持続可能性等の課題を明らかにした。

これらのレビュー結果から分析された観光セクターの課題をふまえ、省グリーンアクションプラン、社会経済開発計画、観光マスタープラン等に基づき、優先アクション



を検討した。観光セクターの現況及び課題分析、優先アクション等は、本報告書のパートIIにとりまとめた。

### I-2.12 本プロジェクト実施フェーズで実施するパイロット活動

これまでの調査及び分析結果を踏まえ、本プロジェクト第2フェーズ(実施フェーズ)で試行するパイロット活動を選定した。選定にあたっては、第2フェーズの期間、及び日本側・ベトナム側のインプット等を考慮した。

最終的に5つのパイロット活動が選定された。これらの選定プロセス、選定クライテリア、及び各パイロット活動の実行計画(IP)は、本報告書のパートIIにとりまとめた。各パイロット活動の概要を下表に示す。

表 I-2.16 環境管理及びグリーン成長に係る省レベルの基金及び財政メカニズム強化に資するパイロット活動概要

セクター	環境管理セクター
パイロット活動名称	環境管理及びグリーン成長に係る省レベルの基金及び財政メカニズム強化
担当・実施機関	天然資源環境局(DONRE)、科学技術局(DOST)、財務局(DOF)、経済管理委員会、計画投資局(DPI)
関連機関/組織	現地関連民間企業及び本邦企業
概略	グリーン成長促進を図るために、重点産業部門による排水管理施策改善を誘導するための行政による財政メカニズムを強化する必要がある。現在、クアンニン省は環境管理及び経済成長をサポートする基金を有する。これらの基金利用を促進するために、既存基金活用を望む企業等と連携し、既存基金システムのレビュー結果に基づいた既存基金への応募プロセスの改善とその試行を行う。また、試行による経験を踏まえ基金活用促進に必要な施策を検討、提案する。 併せて、グリーン成長促進のためには、省予算や関連制度に基づく予算の確保も必要であることから、予算措置プログラム策定のため、重点産業分野の中から工業団地等、排水管理強化の必要な対象を選定し、環境管理強化に必要な活動内容の整理結果を踏まえ、活動実施に必要な予算措置実現のための政策を人民委員会(PPC)に提出し、承認を受ける。

出典: JICA 専門家チーム

表 I-2.17 ESCO 及び補助金等の省エネ/エネルギー管理に係るインセンティブ促進に資するパイロット活動概要

セクター	省エネ及びエネルギー管理
パイロット活動名称	ESCO 及び補助金等の省エネ/エネルギー管理に係るインセンティブ促進
担当・実施機関	産業貿易局(DOIT)、計画投資局(DPI)、建設局(DOC)、天然資源環境局(DONRE)
関連機関/組織	現地関連民間企業及び本邦企業
概略	クアンニン省は、省エネルギー効率及び省エネプログラム 2016-2020 に係る Decision 708/2016/QD-UBND を交付した。本決定は、工業企業、庁舎、運輸、公共照明、及び農業セクターなどを対象とし、国家電気開発マスタープラン (decision 1208/QD-TTg dated 21/7/2011) によるエネルギー需要予測と比較して総エネルギー消費量の 8~10%の削減を目標としている。ハロン湾地域では、中小企業を含む工場、政府庁舎や公共照明等が主な省エネ対象適用対象になると予想される。 本パイロット活動では、詳細計画調査段階で実現可能性があると判断した、上記対象に対する省エネ活動試行に利用可能な財源オプション(優先的融資、補助金、ESCO 事業)を用いた省エネ機器の導入可能性について、セメント製造業者、ホテル、政府庁舎等の対象を想定し検討を行い、一部について機器の導入を図る。また、パイロット活動で得られた経験、教訓を活用し、プロジェクト終了後に省エネ活動実施に活用可能な資金確保のための制度、及び制度を運用する組織について提案を取り纏め、人民委員会(PPC)に提出し、承認を受ける。併せて、省エネ活動の促進に資するインセンティブの一環として、ラベリング制度(グリーンラベル)の設計と試行を行う。

出典: JICA 専門家チーム

表 I-2.18 ハロン湾地域の持続的観光振興に係るパイロット活動概要

セクター	観光
パイロット活動名称	持続可能な観光振興 (観光情報の改善、クアンイエンにおけるエコツーリズムの促進及びブルーセイル認証の導入)
担当・実施機関	観光局(Department of Tourism)、計画投資局(DPI)、交通局(DOT)、天然資源環境局(DONRE)、ハロン湾観光管理部、観光協会、クアンイエン町
関連機関/組織	観光産業、運輸業者、博物館及び公園、文化的及び歴史的場所、協同組合、コミュニティ、研究者、個人など観光関連ステークホルダー、及び日本の観光企業
概略	ハロン湾には、国内外から年間約 250 万人 (2015) の旅行者が来訪する。ハロン湾地域の観光情報の提供は様々な所で行われているが、連携や協力がなされていない。観光局及び HBMD はそれぞれ別々に観光情報センターを運営している。さらに、観光情報資料やツールはハロン湾地域への観光客にとって必要かつ便利情報が含まれておらず、活用できるものはほとんどない。結果として、観光客は他の観光地や市内の名所へ行く機会を逸している。観光情報提供及び発信を改善することによって、観光客はより多くの興味深い場所を訪れる事が可能になると共に、クアンニン省の観光収入増加が期待できることから、パイロット活動では、ハロン湾地域全域に寄与する観光情報提供及び発信の改善に係る活動を実施する。また、観光の多様化と持続性強化のため、パイロットエコツアールートを開発をクアンイエン町で試行する。併せて、世界遺産地域での観光活動による負荷低減やハロン市のグリーンな都市としてのブランド化への寄与が期待される、環境配慮型の観光船の運航に寄与するグリーンラベル（ブルーセイル認証）制度運用のための活動を実施する。

出典: JICA 専門家チーム

表 I-2.19 湾内直接負荷削減に係る能力強化に資するパイロット活動概要

セクター	環境管理セクター
パイロット活動名称	湾内直接負荷管理による水環境管理能力強化
担当・実施機関	ハロン市、ハロン湾観光管理部、天然資源環境局(DONRE)、農業農村開発局(DARD)、交通局(DOT)
関連機関/組織	パイロット活動対象地域の地元当局、地元関連企業、本邦企業
概略	ハロン湾における経済活動による直接負荷、特に船舶からの排水や水産養殖業による水質への影響はより注意深く規制すべきである。2015 年より、クアンニン省は観光船からの排水や廃棄物の排出などについて規制を強化した。また、2016 年に環境配慮型水産養殖業推進のための基本計画案を策定している。未処理の漁業廃棄物の投棄も規制及び管理を改善すべきであり、可能な手段の一つとして、漁業廃棄物のリサイクルが挙げられる。このような管理施策の推進に寄与する先進技術の導入が望まれている。本パイロット活動は、これらの活動強化に係る活動を新規技術の試験的導入と技術導入のためのインセンティブメカニズム（グリーンラベル）の検討と併せ実施する。

出典: JICA 専門家チーム

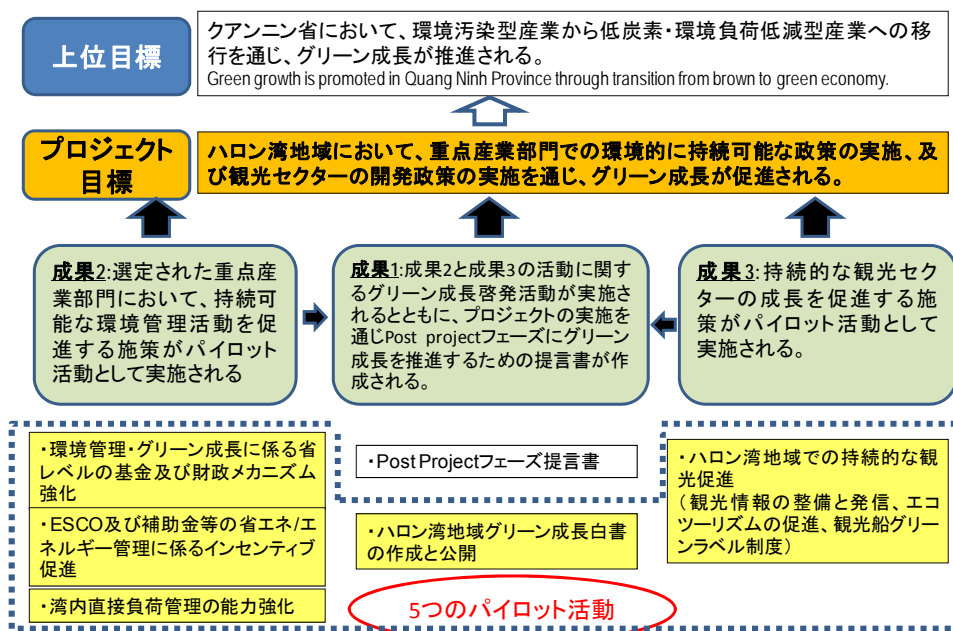
表 I-2.20 ハロン湾地域グリーン成長白書の定期的な作成と公開による啓発活動に係るパイロット活動概要

セクター	環境啓発及び教育セクター
パイロット活動名称	ハロン湾地域グリーン成長白書の定期的な公開による啓発活動
担当・実施機関	計画投資局(DPI)、交通局(DOT)、商工局(DOIT)、天然資源環境局(DONRE)、観光局(Department of Tourism)、ハロン環境教育・啓発協会、地方自治体
関連機関/組織	関連企業、教育局、投資促進委員会(IPA)、情報局
概略	クアンニン省における環境負荷低減や観光セクター発展の促進によるグリーン成長継続のためには、様々なステークホルダーが汚染低減及び観光セクターの発展に係る行政手段の正確な進捗状況及び効果、あるいは観光資源としての地域資源の状態を理解し、連携することが必要である。地方行政によるグリーン成長白書の公開は、関連ステークホルダー内で情報を正確に理解するための一手段として有効である。 クアンニン省では、DONRE は PPC に省環境モニタリングレポートを毎年、省環境ステータスレポートを 5 年毎にそれぞれ提出している。報告書には環境負荷低減の達成手段についての検討など有用な情報が含まれている。グリーン成長白書作成の際に、本レポートを活用することにより、関連ステークホルダーの環境現況の正確な理解及びグリーン成長実施に必要な活動の検討に効果があると考えられる。

出典: JICA 専門家チーム

### I-2.13 PDM 案及び PO 案、プロジェクト詳細計画（案）、並びに変更 R/D 案の作成支援

これまでの活動を踏まえ、本プロジェクト第2フェーズのPDM案及びPO案を作成した。PDM/PO案に基づき、JICA ミッション及びクアンニン省のミニッツ協議・締結に向け、変更R/D案を検討した。第2フェーズのプロジェクト詳細計画（案）は以下のとおりである。なお、PDM/PO案は添付資料I-6にとりまとめた。



出典: JICA 専門家チーム

図 I-2.13 プロジェクト全体構成（第2フェーズ）

#### (1) 第2フェーズ（実施フェーズ）のプロジェクトデザイン概要

【案件名】クアンニン省ハロン湾地域のグリーン成長推進プロジェクト（実施フェーズ）

【事業期間】2016年～2018年（3年間）

【プロジェクト対象地域】クアンニン省ハロン湾地域（ハロン市、カンファ市、ヴァンドン郡、ホアンボ郡、クアンイェン町、ウオンビ市を含む地域）

【カウンターパート機関】クアンニン省人民委員会（PPC）及び計画投資局（DPI）

【協力機関・団体】天然資源環境局（DONRE）、産業貿易局（DOIT）、観光局（DT）、科学技術局（DOST）、農業地方開発局（DARD）、建設局（DOC）、運輸局（DOT）、ハロン湾地域の6つの地方自治体、ハロン湾管理局（HBMD）、観光協会、ハロン環境教育・啓発協会、その他関連組織・団体

##### 1) 上位目標

クアンニン省において、環境汚染型産業から低炭素・環境負荷低減型産業への移行を通じ、グリーン成長が推進される。

【指標】

－ クアンニン省グリーン成長白書が継続して発行される。

- プロジェクトで確立された選定された重点産業分野の環境管理活動に係る制度及び組織を通じ、クアンニン省内で合計 10 件以上の省レベルの基金/財政メカニズム活動、省エネ活動、直接負荷軽減活動が実施される。
- プロジェクトで確立された観光分野の制度及び組織を通じ、クアンニン省内で 2 件以上のエコツアープログラムとその観光情報が開発・整備され提供される。

## 2) プロジェクト目標

ハロン湾地域において、重点産業部門での環境的に持続可能な政策の実施、及び観光セクターの開発政策の実施を通じ、グリーン成長が促進される。

### 【指標】

- グリーン成長の促進に必要な以下の制度及び組織がクアンニン省によって承認される。
  - クアンニン省グリーン成長白書を継続して発行する制度及び組織。
  - 環境管理活動及び省エネ活動を進めるための金融、資金メカニズム及び組織。
  - 観光情報の発信、更新及びマーケティングを行うための制度及び組織。
  - クアンイェン町でエコツーリズムを振興するための制度及び組織。
  - 省エネ及び持続的な観光活動を進めるためのラベリング制度及び組織。
- Post Project フェーズ提言書がクアンニン省に提出される。

## 3) 成果

### 【成果 1】

成果 2 と成果 3 の活動に関するグリーン成長啓発活動が実施されるとともに、プロジェクトの実施を通じ Post project フェーズにグリーン成長を推進するための提言書が作成される。

### 【指標】

- 実施したグリーン成長実現施策の試行内容及び啓発活動を記録したハロン湾地域グリーン成長白書が毎年 1 回作成、公開される。
- クアンニン省グリーン成長白書を作成、公開するための制度及び組織が形成・確立され文書化される。
- プロジェクト終了後のグリーン成長推進に係る Post Project フェーズ提言書が作成される。

### 【成果 2】

選定された重点産業部門において、持続可能な環境管理活動を促進する施策がパイロット活動として実施される。

### 【指標】

- 選定された重点産業部門において、合計 5 件以上の環境管理活動（省レベルの基金/財政メカニズム強化、省エネ/エネルギー管理、湾内直接負荷削減）が実施される。
- 選定された重点産業部門において、環境管理活動を行うための省レベルの基金/財政メカニズムや省エネの推進、また省エネ/エネルギー管理を推進するための省レベルのグリーンラベルに関し、制度及び組織が形成・確立され文書化される。

**【成果 3】**

持続的な観光セクターの成長を促進する施策がパイロット活動として実施される。

**【指標】**

- 6 点以上の観光情報資料や観光促進ツールが開発され、観光情報センター及び観光ウェブサイトを通じ観光客に活用される。
- クアンイェン町において 2 件以上のエコツアープログラムが開発・提供され、参加者数がプロジェクト最後の一年間において 5,000 人以上になる。
- 10 隻以上の観光船が観光船グリーンラベル（Blue Sail Certificate）を取得する。
- 観光情報の発信、更新及びマーケティング、クアンイェン町におけるエコツーリズムの振興と省レベルの観光船グリーンラベル（Blue Sail Certificate）に関し、制度及び組織が形成・確立され文書化される。

**4) 前提条件**

プロジェクトの実施に係る承認文書がクアンニン省から JICA ベトナム事務所に発出される。

**5) 外部条件**

- クアンニン省のグリーン成長戦略推進の方針が変更されない。
- 経済危機等、活動に関連する民間セクターの活動を阻害するような社会情勢の変化が無い。
- 観光資源に打撃を与える自然災害が発生しない。
- 観光業の促進を阻害する世界情勢の変化や伝染病リスクが増加しない。

**(2) 投入****1) 日本側**

【JICA 専門家】 i) 総括/グリーン成長、ii) 産業環境管理、iii) 汚染源対策・処理、iv) 省エネルギー/エネルギー管理、v) 環境政策/水環境管理、vi) 財政メカニズム、vii) 持続可能な観光振興、viii) エコツーリズム、ix) 住民啓発/業務調整

【研修】 本邦研修、第三国研修、又は国内研修

【その他】 パイロット活動に必要な資機材、その他費用

**2) ベトナム側**

- カウンターパートの配置
- 事務所スペース
- プロジェクト期間中のカウンターパート機関の必要経費
- プロジェクトで調達した資機材のうち、所有権がクアンニン省となる資機材の維持管理費用

**(3) 滋賀県からの運営指導内容及び連携内容（案）**

本プロジェクトでは、琵琶湖モデルをはじめとした滋賀県の経験・知見を活かすことが、第 2 フェーズの効果的な実施とクアンニン省のグリーン成長実現に有効と考えられる。滋賀県からの運営指導内容（案）として以下が期待される。

表 I-2.21 滋賀県の運営指導及び連携（案）

活動内容(案)		滋賀県との連携内容(案)	関係部局等
ハロン湾地域のグリーン成長関連活動推進に係る提言書		- 琵琶湖モデルを参考としたハロン湾地域の様々な関係者が参加した環境配慮・経済活動両立のための活動計画策定支援	琵琶湖環境部
		- 琵琶湖環境科学センター運用の経験を活用した将来的なハロン湾の現状把握機能強化に関する提言作成支援	琵琶湖環境部 琵琶湖環境科学センター
パイロット活動	環境管理及びグリーン成長に係る省レベルの基金及び財政メカニズム強化	- 「水・環境ソリューションハブ（WES Hub）」の一環としての、水環境技術・ノウハウ提供活動 - 「淡海環境創造資金」、「小規模事業場排水処理施設整備資金」制度設立、運用の経験の提供 - 「しが水環境ビジネス推進フォーラム」との連携による情報交換	琵琶湖環境部 淡海環境保全財団 しが水環境ビジネス推進フォーラム
	ESCO 及び補助金等の省エネ/エネルギー管理に係るインセンティブ促進	- 滋賀県貸付融資制度（省エネ・再生エネルギー枠）の紹介 - 滋賀県グリーン入札制度の紹介	琵琶湖環境部
	持続可能な観光振興（観光情報の改善、クアンイエンにおけるエコツーリズムの促進及びブルーセイル認証の導入）	- 滋賀県の観光情報発信活動の紹介（「びわイチ」プロモート活動など） - 滋賀県でのエコツーリズム活動の紹介	商工観光労働部 エコツーリズム活動関連団体
	湾内直接負荷管理による水環境管理能力強化	- 「水・環境ソリューションハブ（WES Hub）」の一環としての、水環境技術・ノウハウ提供活動 - 「しが水環境ビジネス推進フォーラム」との連携による情報交換	琵琶湖環境部 淡海環境保全財団 しが水環境ビジネス推進フォーラム
	ハロン湾地域グリーン成長白書の定期的な公開による啓発活動	- 滋賀県環境白書作成・公開及び同白書を使用した啓発活動の経験、教訓の共有	琵琶湖環境部

出典: JICA 専門家チーム

## I-2.14 機構本部ミッションチームとクアンニン省の協議支援

JICA 地球環境部は、辻昌美国際協力専門員を団長とする詳細計画策定調査団を 2016 年 7 月 11 日から 15 日にクアンニン省へ派遣した。スケジュールを下表に示す。

Hau 副委員長が代表するクアンニン省 PPC と調査団は、本プロジェクトの第 2 フェーズの内容について協議し、2016 年 7 月 13 日にミニッツに署名した。署名済みミニッツは添付資料 I-7 に示すとおりである。

表 I-2.22 詳細計画策定調査団のスケジュール

Day	Date	Time	Description
1	2016/7/11 (Mon)	AM	Travel from Japan to Vietnam
		PM	Move to Halong, Visit to OCOP center in Dong Trieu Internal meeting with consultant team
2	2016/7/12 (Tue)	AM	Courtesy to Director of DPI Round-table meeting for confirming MM with DPI/PMU and StC members (DONRE, DOIT, Tourism Dept., Local Authorities, etc.)
		PM	Site visit to Cai Lan Industrial Zone Updating/ Finalizing the MM
3	2016/7/13 (Wed)	AM	Updating/ Finalizing the MM, Preparation for MM signing
		PM	Signing ceremony
4	2016/7/14 (Thu)	AM	Site visit to Tuan Chau Port and Halong bay tour
		PM	Move to Hanoi, Meeting with JICA Vietnam office
5	2016/7/15 (Fri)	AM	Meeting with JETRO Hanoi, Meeting with GGGI Leave Vietnam

出典: JICA 専門家チーム

## パート II      ハロン湾地域のグリーン成長促進のための優先アクション プラン案



## 第II-1章 序論

本報告書のパート II は、ハロン湾地域のグリーン成長促進のための優先アクションプラン案である。本優先アクションプランは、グリーン成長に係る様々な優先アクションのリストと、それらの優先アクションから選定された5つのパイロット活動で構成される。パイロット活動は、選定された重点産業部門に対する環境面、財政面での持続可能な政策の策定及び実施、及び持続的な観光セクターの成長を促進する開発施策のパイロット活動としての実施により、グリーン成長促進に必要な制度及び組織の構築を目的としている。

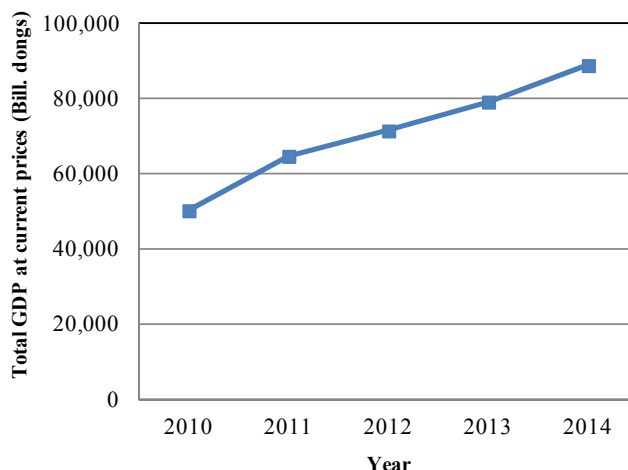
## 第II-2章 クアンニン省のグリーン成長政策・行政の現状と所見

### II-2.1 クアンニン省におけるグリーン成長政策実施の現状

#### II-2.1.1 グリーン成長に係る省の経済概観

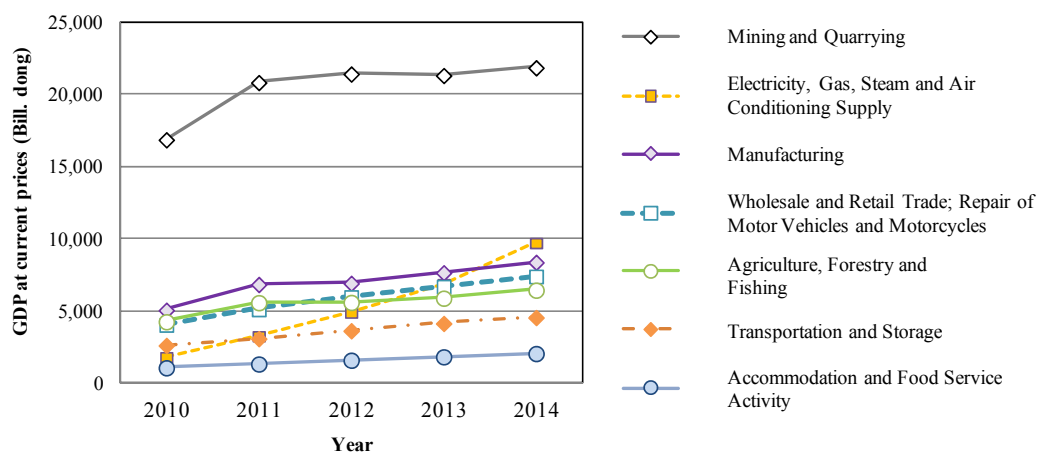
##### (1) 省 GDP

クアンニン省の GDP 経年推移を下図に示す。省 GDP のうち鉱業セクターが大部分を占めるが、近年、同セクターの成長率は鈍化している。



出典：クアンニン省統計書（2014）

図 II-2.1 クアンニン省の GDP 経年推移（2010 年～2014 年）



出典：クアンニン省統計書（2014）

図 II-2.2 クアンニン省の産業セクター別の GDP 経年推移（2010 年～2014 年）

**(2) GHG 排出状況**

クアンニン省グリーン成長アクションプラン（GGAP、2015年11月承認）では、下表のとおり GHG 排出量の現況（2015年時点）と2020年の予測が記載されており、2020年には、GHG 排出量が28百万トンに達するとされている。排出量が最も多いのは石炭産業であり、続いてセメント産業となっている。

表 II-2.1 省主要セクターでの温室効果ガス排出状況

Unit: 1,000 ton - CO<sub>2</sub>

Category	Sector	2015	2020
Indirect GHG emissions	Agriculture	705	719
	Forestry	3,529	3,731
	Industry and Construction	1,127	1,475
	Coal mining	16,333	16,709
	Cement industry	2,788	2,788
	Commerce and Service	95	125
	Consumption management	636	768
	Other activities	58	72
Direct GHG emissions	Road transportation	1,156	1,596
	Waterway transfers	116	160
Total		26,543	28,143

出典: Study Report: Development of Action Plan for Green Growth of Quang Ninh Province, MPI/ UNDP

**(3) エネルギー利用**

クアンニン省では、エネルギー消費量の大きい企業・事業所として98社が指定されている（首相決定 Decision No. 1535/QD-TTg, 2014年8月）。これらのリストは下表に示すとおりである。

表 II-2.2 ハロン湾地域でのエネルギー消費量の大きい企業・事業所

Field	Type of Activity	Number of Company	Energy Consumption (TOE)	Remark
Buildings	Hotel	2	2,147	
	Operation of offices	1	535	Halong City Management Board of Public Services
	General wholesale trading	1	501	
Industry	Production of electricity	4	2,067,514	3 power plants are operated by EVN, and 1 power plant is operated by VINACOMIN.
	Production of cement	4	608,213	
	Coal extraction and collection	24	416,544	18 companies belong to VINACOMIN
	Production of construction materials from clay	8	114,496	
	Production and canning of oil, animal fat, vegetable	1	10,319	
	Other industrial production	2	9,764	
	Shipbuilding and floating structures	1	3,177	
	Production of power transformers, distribution equipment and power control	1	2,183	
	Production of flour and flour products	1	2,090	
	Production of fiber	1	1,697	
	Manufacture of other chemical products not being categorized	1	1,599	
Manufacture of basic chemicals	1	1,536		

Field	Type of Activity	Number of Company	Energy Consumption (TOE)	Remark
	Exploiting, processing and supply of water	1	1,485	
	Production of non-ferrous and precious metals	1	1,358	
	Quarrying	1	1,142	
	Production of other products from plastic	1	1,096	
Transportation	Cargo transportation by other type of vehicles (except specialized vehicles)	10	41,453	
	River ports cargo loading and unloading	5	22,840	
	Inland waterway cargo transportation by motorized vehicles	2	4,309	
	Transport by bus	1	2,712	
	Cargo transportation by specialized vehicles	2	2,622	
	Cargo transportation by inland waterways motor vehicles	1	2,067	

注：TOE は、tonne of oil equivalent を示す。

出典：首相決定 Decision, No. 1535/QD-TTg (2014 年 8 月) より JICA 専門家チーム作成

### II-2.1.2 グリーン成長に関する省の政策実施状況

クアンニン省のグリーン成長に関連する主なマスタープランとして、「2020 年クアンニン省社会経済開発マスタープラン及び 2030 年ビジョン」が挙げられる。同プランでは、国家グリーン成長戦略に基づく持続的な社会経済開発を目指している。

省社会経済開発マスタープランは、「2020 年までに、クアンニン省は、サービス省を拡充し、国際観光ハブとしての機能、及びベトナム北部における先進的な社会経済インフラシステムを有する地域となる事を目指すと共に、貧困削減、環境保全を伴った持続的発展、及び人々の生活の向上を図る」を目的とし、観光業、製造業、鉱業、農林水産業、教育、健康保全、情報・通信、文化・スポーツ、農村部開発、防衛に関わる行政施策を提案している。

本目的に基づき、石炭産業に依存する「ブラウン経済」から、サービス産業を中心とした「グリーン経済」に、省の経済構造を転換していくことが重要とされており、鉱業部門を除く第二次産業及び第三次産業の成長、並びに鉱業部門の「クリーン化」を目指している。また、同プランでは、省のグリーン経済の実現のためには、持続可能な観光産業の促進と、グリーン農業の促進が重要とされている一方、鉱業部門を中心とした「ブラウン」産業が省全体 GDP に占める割合を減らしていく方向性が示されている。

本事業では、これら省社会経済開発マスタープランの目的を踏まえ、ハロン湾地域の観光業促進に寄与すると共に地域のハロン湾の世界遺産地域をはじめとする地域の自然資源の保全を図る施策を検討・実施する。

なお、昨年（2015 年）には、上述の省社会経済開発マスタープランの目的に沿って、省 GGAP が策定された。現在、省ではこの GGAP で提案された各種施策の具体化と、これを推進するための制度改善・構築を検討している。

## II-2.2 上位計画と本プロジェクトの方向性

### II-2.2.1 ベトナム国家グリーン成長戦略

ベトナムは迅速且つ持続可能な発展のため、近代的な工業国家を目指した 2020 年までの社会経済開発計画を実施中である。持続的発展を実現するため、ベトナム政府は 2004 年に「ベトナム国アジェンダ 21」を発効すると共に国家持続的開発委員会を設立した。加えて、ベトナム政府は、気候変動対策に係る取組みを開始するため、「気候変動対策に係る国家目標プログラム(NTP-RCC)」を 2008 年に策定した。しかし、近年の急速な経済成長によりこれらの政策に掲げられた目標の達成が困難となったことから、経済活動をより環境に配慮したものに構造転換する必要性に迫られた。このような背景を踏まえ、ベトナム政府は MPI の主導により、2012 年 9 月 25 日に、首相決定 No. 1393/QD-TTg として「国家グリーン成長戦略(NGGS)」を施行した。

NGGS では GHG 排出削減・吸収を通じ、自然資源価値の向上と低炭素社会を実現させることでグリーン成長を達成するとしている。この目標の下、i) GHG 排出負荷の低減と、クリーンかつ再生可能なエネルギー利用の推進、ii) 生産活動のグリーン化、iii) ライフスタイルのグリーン化及び持続可能な消費の推進、の 3 つの戦略的タスクと、17 のソリューションを設定している。それぞれのタスクには以下の指標が設定されている。

- 戦略的タスク 1 [2020 まで]: 2010 年と比較し 8~10 %の GHG 排出量削減、単位 GDP あたり年間 1~1.5 %のエネルギー消費量削減、BAU に対しエネルギー消費での 10~20 %の GHG 排出量削減（自助努力による 10 %の削減及び国際支援による 10 %の削減）。
- 戦略的タスク 1 [2030 まで]: 年間 1.5~2 %の GHG 排出量削減、BAU に対しエネルギー消費での 20~30 %の GHG 排出量削減（自助努力による 20 %の削減及び国際支援による 10 %の削減）。
- 戦略的タスク 2 [2020 まで]: 高度技術又はグリーン技術を活用した生産の GDP に占める割合 42~45 %、製造/商業施設の基準達成率 80 %、クリーン技術申請率 50 %、環境保全もしくは天然資源管理に資する投資額の GDP に占める割合 3~4 %。
- 戦略的タスク 3 [2020 まで]: 規制基準を満たす下水道・下水処理を有する都市の割合（グレード III の 60 %、グレード IV、V 及びクラフトヴィレッジの 40 %）、全ての汚染地域における環境改善、大中規模都市における公共交通機関の利用率 35~45 %、都市緑化基準を満たす大中規模都市の割合 50 %、固形廃棄物の収集率・処理率の政府目標の達成。

### II-2.2.2 ベトナム国家グリーン成長戦略アクションプラン

ベトナム国家グリーン成長戦略アクションプラン 2014~2020 (NGGAP) が Decision No.403/QD-TTg にて、2014 年 3 月 20 日に承認された。NGGAP では 4 つのテーマを設定し、23 の優先活動を含む 66 の活動から構成される。下表に示す通り、優先活動は主に制度設立、地方レベルのグリーン成長アクションプランの策定、生産活動のグリーン化促進、などである。NGGAP のテーマとグループ及び優先活動を以下に示す。

表 II-2.3 NGGAP のテーマとグループ及びその活動

Theme	Group	No. of Activity (No. of Prioritized Activity)
Theme1: Setting up institutions and formulating green growth action plans at the local level	Institutional set-up	5 (4)
	Formulation of local GGAPs	3 (1)
Theme2: Reducing the intensity of GHG emissions and promoting the use of clean and renewable sources of energy	Implementing efficient and effective use of energy and reducing GHG emission in some energy consuming industrial sectors	8 (2)
	Implementing efficient and effective use of energy and reducing GHG emission in the transportation sector	3 (0)
	Changing cultivation techniques and improving management to reduce GHG emission in agro- forestry and aquaculture	6 (0)
	Developing clean and renewable sources of energy	3 (0)
Theme3: Greening production	Review and recommend for revision of development strategies, master plans, plans and formulate the program to restructure the economy towards green growth	10 (9)
	Efficient and sustainable use of natural resources and develop green economic sectors	9 (5)
	Developing sustainable infrastructure	3 (0)
	Promote campaign on “Enterprises for Sustainable Development”, improving capacity and market to provide green technical and management services for green growth	3 (0)
Theme4: Greening lifestyle and promoting sustainable consumption	Develop green and sustainable urban areas	7 (0)
	Promoting green life style	7 (0)
Total		66 (21)

出典: Decision No.403/QĐ-TTg dated on 20th march, 2015 on Approval of the National Action plan on Green Growth in Vietnam for Period of 2014-2020

表 II-2.4 NGGAP の優先活動

Number	Priority Activity
1	Organize the Inter-ministerial Coordinating Board for VGGs.
2	Completing the institutional framework to enhance the economy restructuring process in accordance with VGGs.
3	Formulate the green growth financial policy framework.
4	Raising awareness and involving wide participation of all the people in VGGs implementation.
5	Review and revise the national energy strategy and policies to pursue green growth direction
6	Improve energy management capacity in industries and constructions
7	Formulate and implement policies that give priority to develop clean energy sources
8	Complete the legal foundation for clean air and conducting inventory and monitor GHG emission as well as managing GHG mitigation activities
9	Review and recommend for revision of socioeconomic development master plans under the light of sustainable development and formulate the project to restructure the economy towards green growth for the period 2014-2020.
10	Review and recommend for revision of sectoral development master plans under the light of sustainable development and formulate policy framework as well as green growth action plan for the industry sector in the period 2014-2020.
11	Review and recommend for revision of sectoral development master plans under the light of sustainable development and formulate policy framework as well as green growth action plan for the agriculture, forestry and aquaculture as well as rural development in the period 2014-2020.
12	Review and recommend for revision of sectoral development master plans under the light of sustainable development and formulate policy framework as well as green growth action plan for the transportation sector in the period 2014-2020
13	Review and recommend for revision of sectoral development master plans under the light of sustainable development and formulate policy framework as well as green growth action plan for the construction sector in the period 2014-2020.

Number	Priority Activity
14	Review and recommend for revision of sectoral development master plans under the light of sustainable development and formulate policy framework as well as green growth action plan for the natural resources and environment sectors in the period 2014-2020
15	Review development strategy and master plans for science and technology under the light of sustainable development and formulate policy framework and action plan for developing science and technology to meet the demand of the economy for green growth in the period 2014-2020
16	Improve the institutional arrangement and capacity of financial and credit activities of commercial banks to promote green growth/
17	Against land degradation and sustainably efficient use of land resources
18	Sustainably efficient use of water resources
19	Sustainably efficient use of minerals
20	Encouraging and supporting rapid development of eco-products manufacturing industries
21	Restoration and development of natural capital resources

出典: Decision No.403/QD-TTg dated on 20th march, 2015 on Approval of the National Action plan on Green Growth in Vietnam for Period of 2014-2020

ベトナム財務省では 2015 年 10 月 20 日に、2020 年までの NGGS 実施のための金融セクターアクションプラン（Decision No. 2138/QD-BTC）を發布した。NGGS の効果的な実施、グリーン成長への貢献、GHG 排出量の削減、エネルギー及び天然資源の有効利用と保全、及び生産活動、サービス、消費のグリーン化促進、を目標としている。金融セクターアクションプランの主なタスクを下表に示す。

表 II-2.5 金融セクターアクションプランのタスク

Major Tasks	Assigned Tasks
1. Design and finalization of financial policies related to promoting the implementation of green growth strategy	Development of green finance sector development orientation
	Promulgation of green procurement regulations, priorities for procurement and use of eco-labeled goods, recycle goods
	Review, amendment and supplement of the policy on management and utilization of State budget expenditures (including investment expenditures and regular expenditures) towards promoting green growth
	Balancing the State budget in terms of changing tax policy and expenditure budget for green growth.
	Review, amendment and supplement of tax policy and environmental protection fees
	Review of commitments for international integration and research on international green financial cooperation trend
2. Review and finalization of green development policy for market varieties	Review and proposal of amendments and supplement of pricing policy for some commodities (gas, oil, electricity, and water) to encourage efficient use of energy and natural resources, and development of green manufacturing industry services and consumption.
	Mobilization of foreign resources to implement the tasks related to environmental issues and climate change, green growth
	Development and finalization of financial policy framework for the development of green financial markets and green capital financial products
	Research on feasibility of insurance products for compensation liability for environmental damages
3. Review and improvement of credit policies and support of the State	Review, amendment and supplement of import and export tax policy
	Review and proposal of amendments and supplement of policy for State's supports on credit, interest
4. Organization of the propagation and raising awareness for implementation of green fiscal policy	Propagation and raising awareness for greening production, lifestyle and sustainable consumption.

出典: Decision No. 2138/QD-BTC on promulgation on finance sectors action plan on implementation of the green growth national strategy to 2020 dated on 20th October, 2015

### II-2.2.3 クアンニン省グリーン成長アクションプラン

#### (1) 概要

2015 年 11 月 16 日、クアンニン省 PPC は省での NGGS 実施のため、2016 年から 2020 年を計画対象期間としたクアンニン省グリーン成長アクションプラン（GGAP）；

Decision No. 6970/ KH-UBND) を承認した。MPI 及び UNDP は、クアンニン省とダラット市をベトナムにおけるグリーン成長実現のパイオニア地方都市と位置づけ、省 GGAP 策定を含めた支援を提供している。

GGAP の目的は、持続可能な経済開発、資源利用効率の改善、及び低炭素経済に向けた GHG 排出量削減、である。この GGAP の中でクアンニン省は、環境保全・管理の実現を通じ、ベトナムでの NGGS 目標達成の牽引役となるべく努力することをコミットしている。

GGAP では NGGS に合わせ、以下の 3 つのタスクを規定している。

- i) 温室効果ガス排出量の削減
- ii) 生産活動のグリーン化
- iii) ライフスタイルのグリーン化と持続可能な消費の促進

## (2) GGAP の設定指標

GGAP では 3 つの主なタスクについてそれぞれ以下の指標を設定している。

### i) GHG 排出量の削減

二酸化炭素換算で排出量を 2020 年までに 702 万トン削減。これは 2010 年と比較して 22.5%の削減に相当する。

- エネルギーセクターより二酸化炭素換算でおよそ 301 万トン削減
- 農林業並びに土地利用変化により二酸化炭素換算でおよそ 210 万トン削減
- 産業業での削減として、省内 2 か所のセメント工場の生産拡大計画の中止を検討。これにより二酸化炭素換算で 191 万トンもしくはそれ以上の削減を見込む。

### ii) 生産活動のグリーン化

- a) 全ての工業団地及び工業クラスターで中央集中廃水処理システムを設置、b) 全ての新規商業施設や事業場について環境規制基準を満たす廃水処理施設の設置。
- a) 80%の事業場・企業が環境基準を達成、b) 50%の事業場・企業がクリーン技術を導入。
- 省内の全ての新規事業で深刻な環境汚染を発生させない。
- 省内事業者の 50%が環境管理認証（ISO14001 の承認）を取得。

### iii) ライフスタイルのグリーン化及び持続可能な消費の促進

- グレード III 以上の都市の 60%、及びグレード IV、V の都市及びクラフトヴィレッジの 40%が、基準を満たす下水道・下水処理システムを設置。
- 全ての都市地域での都市緑化基準の達成。
- a) 都市域での都市ごみ収集・処理率 100%、b) 農村域及びクラフトヴィレッジでの都市ごみ収集・処理率 80%、c) 医療廃棄物の収集・処理率 100%、d)回収した有価物のリサイクル・加工率 30%とそのためリサイクル産業振興。
- 大中規模都市での公共交通機関利用率 35～45%。
- 省内森林被覆率 55%



### (3) GGAP で設定されたソリューション

GGAP では、様々なソリューションとそれを実現するための活動を、i) 啓発、ii) キャパシティ開発と制度整備、iii) GHG 排出削減、iv) 生産活動のグリーン化、及び v) ライフスタイルのグリーン化と持続可能な消費の促進、の 5 つのグループに分類している。

それぞれのグループには様々なソリューションが提案されているが、このうち本プロジェクトに関連するキーワードを以下にまとめた。

グループ i) 太陽光活用への啓発活動、環境保全型のアプローチを採用している企業活動及び観光のイメージアップ、エネルギー消費削減運動、水/電力/紙の節約、一村一品運動の推進、グリーン製品のブランド化。

グループ ii) IPA の運営改善と効率性向上、観光/水産業/エコ農業での人材育成、ISO14000 取得奨励、ISO50001 取得奨励、環境チェック及びインスペクション能力、環境保全基金（EPF）の効果的運用

グループ iii) 森林/マングローブ管理、CO<sub>2</sub> 吸収源及び REDD+、化石燃料消費の削減、農村における再生可能エネルギー利用の促進、グリーン農業（灌漑効率向上、N<sub>2</sub>O 含有の小さい肥料の適用、動物の飼料となる副産物/廃棄物の活用、有機肥料の使用促進など）、公共交通機関及び貨物輸送における生物燃料促進、観光地でのトラム導入、バイオガス利用、レンガ工場の改善（老朽化した施設の取り壊し、熱回収、排出及び環境汚染の低減）、セメント/火力発電での施設運転や製造プロセスの改善による燃料消費量の低減、セメント/火力発電所での環境モニタリングシステム導入や有害廃棄物管理への投資。

グループ iv) 鉱業/火力発電/造船/建設資材産業におけるクリーン技術の導入促進、都市域外への環境汚染施設の移転、ハイテク農業の導入、居住地や観光地での環境汚染低減とモニタリング、固形廃棄物の分別と有価物の加工、鉱業の持続的且つ環境調和型操業に資する技術の導入、医療廃棄物処理、資源キャパシティを考慮した漁業技術の開発、鉱山及び炭鉱廃棄物処分場における土壌侵食管理と緑化、3R 推進

グループ v): 効果的な土地利用計画と適用、居住地区/農業地域からの環境リスク地区の隔離（鉱山、有害廃棄物処分場など）、市場/観光船の安全に係る投資と規制、水資源もしくは上水源の保護、食の安全、都市域の緑化もしくは水辺環境創出。

### (4) GGAP 実施のフォーカルポイント

フォーカルポイントとして DPI が任命され、PPC と調整しつつ関係機関との協力体制を統括する。DOF は GGAP 実施のための予算計画策定と配分、資金調達の提案等を通じて DPI と協調することとなっている。

### (5) GGAP で設定された優先プログラム及びプロジェクト

省 GGAP では、10 の優先プログラム・プロジェクト、想定予算額やクアンニン省が提案する財源候補を以下のとおり整理している。

表 II-2.6 GGAP の優先プログラム及びプロジェクト

No	Program/ Project	Estimated Budget (mill. VND)	Candidate Source of Budget proposed by Quang Ninh Province
1	Equip with waste heat recovery system for cement plants	201,600	Enterprises
2	Project on green growth promotion in Ha Long Bay Area	97,060	JICA
3	Project on Investment to develop tourism infrastructure serving sustainable development	945,000	ADB
4	Project on Protection and development of forest period 2016-2020	168,000	Env.protection fees WB, GIZ, JICA
5	Project on Construction of wastewater and solid waste treatment systems in Van Don Economic Zone	421,400	ADB, Belgium, JICA
6	Construction of domestic and industrial wastewater treatment plants for three localities: Halong, Hoanh Bo, Cam Pha	8,500,000	ADB, Belgium, JICA
7	Development of renewable energy in Quang Ninh	85,000	JICA, GIZ
8	Strengthening state management to support the development of the private sector in technology improvement to reduce CO2 emissions	120,000	WB, UNDP
9	Strengthen policies on renewable energy and energy efficiency, promote low emission and sustainable development	85,000	USAID, WB
10	Project on technical assistance and awareness to promote 3R activities (Reduce, Reuse and Recycle) and improvement of solid waste management system	150,000	KOICA, GIZ

出典: Decision No. 6970/ KH-UBND on plan for implementation of national strategy on green growth of Quang Ninh Province period 2016 – 2020, dated on 16th November 2015.

## (6) GGAP に係る所見

JET による GGAP への所見は以下のとおりである。

- GGAP 実施の進捗確認のための指標とモニタリング方法の改善
- 5 つのグループで規定された指標と、Annex1 に示される指標の相互関係の整理及び一貫性の確保
- 優先プログラム/プロジェクトの資金源・資金調達に係る実現可能性の検討
- 省内関連部局、及び自治体等関連機関の権限と役割の明確化

なお、本 GGAP (Decision No. 6970/ KH-UBND、2015 年 11 月 16 日承認) により、2014 年 7 月 9 日に承認された Decision No. 3741/ KH-UBND による省のアクションプランは無効となっている。

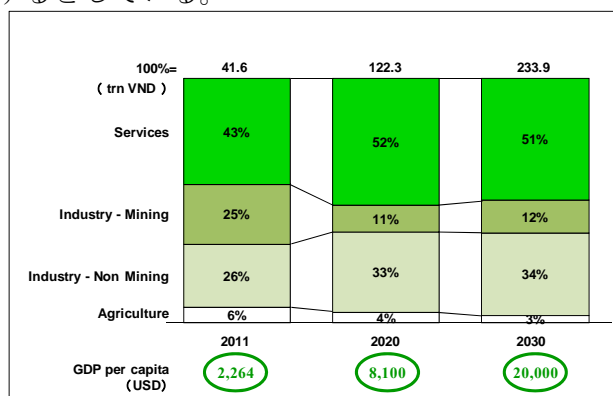
### II-2.2.4 グリーン成長に関連するクアンニン省のマスタープラン

クアンニン省のグリーン成長に関連する主なマスタープランを下記に示す。

- 2020 年クアンニン省社会経済開発マスタープラン及び 2030 年ビジョン (Decision No. 2622/ QD- TTg、2013 年 12 月 31 日)
- 2020 年クアンニン省環境計画マスタープラン及び 2030 年ビジョン (Decision No. 1799/ QD-UBND、2014 年 8 月 18 日)
- 2020 年までのクアンニン省観光マスタープラン及び 2030 年ビジョン (Decision No. 1418/ QD-UBND、2014 年 7 月 4 日)

クアンニン省社会経済開発マスタープランでは、サービス部門の経済開発に力を入れることを表明し (下図参照)、UNESCO 世界遺産の一つであるハロン湾及びバイトゥロン湾国立公園の環境の保護と持続的利用の促進を掲げている。また、近代的なサービス産業を育成するとともに、中国との協調と国境安定化への貢献及び国際観光のハ

ブを目指している。特に、観光業を中心とするサービス産業の成長によりグリーン経済への転換を加速するとしている。



出典: *Socio-Economic Development Master Plan for Quang Ninh Province to 2020, with Vision towards 2030*

図 II-2.3 クアンニン省社会経済開発計画に示される目標

各マスタープランの指標及び目標を以下に示す。

表 II-2.7 クアンニン省の主なマスタープランに示される指標/目標

#### 社会経済開発マスタープラン 2013

Item	2011 (current)	2015 (target)	2020 (target)
<b>Economic development</b>			
Average growth rate of GDP	12.0% (2006-11)	9.5%-10.5% (2011-15)	14%-15% (2016-20)
Economic structure Services/ Industry and Construction/ Agriculture	36.9%/56.9%/6.2%	45.0%-45.5%/ 49.0%-49.5%/ 5.0%-5.5%	51%-52%/ 45%-46%/ 3% - 4%
Average GDP per capita	1,861 USD (2010)	3,600 USD - 4,000 USD	8,000USD - 8,500USD 20,000 USD (2030)
<b>Social development</b>			
Skilled labor (%)	38	73	89
Poor households (%)	N.A.	1.1% (2011-2015)	0.7% (2016-2020)
Children fully immunize (%)	N.A.	95	98
People with health insurance (%)	N.A.	80	90
Doctors/ten thousand people	7.5 (2010)	10.5	12.0
Underweight malnutrition rate of children under 5 years old (%)	N.A.	<15	<12
<b>Environmental protection</b>			
Forest coverage (%)	51.0	53.5	55
Elasticity ratio of electricity supply growth over GDP	N.A.	2.0	1.0
Proportion of rural population using clean water (%)	N.A.	95	98
<b>Tourism</b>			
Domestic arrivals (million)	4.2	N.A.	6.7
International arrivals (mill.)	2.2	N.A.	3.8
Tourism Revenue (mill. USD)	N.A.	N.A.	1,500

## 環境計画 2014

## (1) 水環境管理

Year	Status
2013 (current)	1) 41% of urban wastewater in Halong City is treated in wastewater treatment plants before discharge. 2) In other urban area except for Halong City, there is no centralized wastewater treatment plant. 3) 74% of coal mining wastewater is treated to satisfy the effluent standards, same level as the developed country effluent standards.
2020 (target)	1) 20% of urban wastewater in Quang Ninh Province is treated in wastewater treatment plants before discharge. 2) 70% of urban wastewater in Halong City is treated in wastewater treatment plants before discharge. 3) 33% of urban wastewater in Ha Long Bay area is treated in wastewater treatment plants before discharge. 4) 70% of rural wastewater is treated to satisfy the effluent standards, same level as the developed country effluent standards. 5) 100% of industrial wastewater is treated to satisfy the effluent standards, same level as the developed country effluent standards. 6) 100% of thermal power plant wastewater is treated to satisfy the effluent standards, same level as the developed country effluent standards. 7) 100% of coal mining wastewater is treated to satisfy the effluent standards, same level as the developed country effluent standards. 8) Measures to treat tourism boat wastewater are actualized.
2030 (target)	1) 100% of urban wastewater in Quang Ninh Province is treated in wastewater treatment plants before discharge. 2) 100% of rural wastewater is treated to satisfy the effluent standards, same level as the developed country effluent standards. 3) 100% of tourism boat wastewater is treated to satisfy the effluent standards, same level as the developed country effluent standards.

## (2) 大気質管理

Target to be achieved are designed to meet the environmental standard of TSP and PM10 in all areas of Quang Ninh by 2020.

\*\* Percentage of air quality standard achievement in 2012, under one-hour measurement, was 59%.

## (3) 固形廃棄物の管理

Year	3R and Waste Segregation	Industrial Solid Waste
2012 (current)	61% of total solid waste is collected.	N.A.
2020 (target)	3R activities of households shall be started, and recycling centers shall be constructed in Halong City and the coastal areas of Halong Bay. 90% of the total urban domestic solid waste shall be collected and treated safely, 75-80% of which should be recycled, reused, used for energy renewal, or produced as organic manure.	90% of non-hazardous industrial solid waste and 70% of hazardous waste shall be collected and treated, in which 75% shall be reused and recycled.
2030 (target)	The 3R activities of households shall be started in all districts of Quang Ninh Province. The construction of recycling centers and composting plants in all the districts shall be completed and their operations started. 100% percent of the total urban domestic solid waste shall be collected and treated safely, 90% of which should be recycled, reused, used for energy renewal, or produced as organic manure.	100% of non-hazardous industrial solid waste shall be collected and treated by 2025.

## (4) 森林管理

No	Indicator	Agency	Target toward 2020
1	Forest cover	DARD	55%
2	Establishment of concentration forest production area	DARD	150,000ha (pit prop/chip) 20,000ha (special forestry product)
3	Improvement of cultural, historical and tourism area	DARD	1.5-2 million trees planted
		DCST	Not deteriorated than 2010
4	Production forest improvement (forest cover increase)	DARD	224,300ha (84.7%)
5	Protection forest improvement (forest cover increase)	DARD	116,700ha (85.6%)
6	Special-use forest improvement (forest cover increase)	DARD	24,950ha (96.0%)
7	Area of certified forest	DARD	67,290ha (30% of production forest)
8	Chain of Custody (CoC) Certification	DARD	More than 3 organizations
9	Area of mangrove	DARD	3,000ha is planted 30% of protection mangrove forest is rehabilitated
10	Area of sea grass beds	DONRE	Not lower than in 2010
11	Area of coral reefs	DONRE	Not lower than in 2010
12	Improvement of protected areas	DONRE	Expansion (2), New establishment (5)
13	Rehabilitation of coal mining areas	DONRE	N.A.

No	Indicator	Agency	Target toward 2020
		VINAC OMN	
14	Conservation measures are planned and implemented for 12 Critically Endangered (CR) species	DONRE	12 CR species
15	Number of extinct, rare and precious species	DONRE	Zero
16	Number of precious and valuable genes lost	DONRE	No higher than 2010
17	Natural heritage sites, landscapes, and beauty spots	DCST	Less deteriorated than in 2010
18	Cases of losing biosafety due to genetically-modified organisms	DOH	None
19	Number of exotic species and their harmfulness	DONRE	Not higher than in 2010
20	Natural ecosystems of national and international significance improved for better resistance and adaptability to climate change	DONRE	Up by 70% as compared in 2010
21	Aqua product resources in sea waters near the coast	DARD	Not lower than 2010

### (5) 生物多様性の保全

No.	Indicator	Agencies	Target toward 2020
1	Aquatic resources of coastal areas	DARD	70% increase compare to total production of 2010
2	Area of natural forests	DARD	Not lower
3	Area of mangrove	DARD	3,000ha is planted 10% of protection mangrove forest is rehabilitated
4	Area of sea grass beds	DONRE	Not lower than in 2010
5	Area of coral reefs	DONRE	Not lower than in 2010
6	Number of endangered, rare and precious species	DONRE	Zero
7	Number of extinct, rare and precious species	DONRE	None
8	Number of precious and valuable genes lost	DONRE	Not higher than in 2010
9	Natural heritage sites, landscapes, and beauty spots	DCST	Less deteriorated than in 2010
10	Cases of losing bio-safety due to genetically-modified organisms	DOH	None
11	Number of invasive alien species and their harmfulness	DONRE	Not higher than in 2010
12	Natural ecosystems of national and international significance improved for better resistance and adaptability to climate change	DONRE	Up by 60% as compared in 2010

### (6) 観光マスタープラン 2014

Year	Item	Spend (\$/day)	Spend (\$/visit)	Average stay (days)	Visitors (M/y)	Revenue (M \$/y)	Contribution to GDP	Employments (indirect)
2012 (current)	International	55	55	1.0	2.6	144	-	-
	Domestic	30	14	0.5	4.4	60	-	-
	Total	39	29	0.7	7.0	205	5% (GDP:2.15B)	25,000 (1,500)
2020 (target)	International	100	170	1.7	7.5	1,262	-	-
	Domestic	35	35	1.0	8.0	281	-	-
	Total	66	100	1.3	15.5	1,543	10% (GDP:6.3B)	62,000 (85,000)

#### II-2.2.5 本プロジェクトの方向性

先に整理したとおり、ベトナム国及びクアンニン省のグリーン成長の枠組みは、上位計画やセクター計画で位置づけられた様々な政策・施策・事業等のうち、グリーン成長の概念の下で取り組むべき事項を有機的に関連づけて推進していくものと言える。従い、本プロジェクトで取り組む2つの柱（産業部門の環境負荷軽減と、サービスセクターへの経済構造転換）に照らし、クアンニン省の主要計画である社会経済開発計画、環境保全計画、観光マスタープランの各種政策・施策のうち、グリーン成長の枠組みに合致するものを、優先アクションの基本と位置づける。また、優先部門・優先アクションの選定や、本プロジェクトの実施フェーズで試行する優先活動（パイロット

ト活動)の検討にあたっては、パート I で述べた琵琶湖モデルのハロン湾地域への応用を念頭に、それぞれがグリーン成長推進に向けて有機的に繋がるよう配慮した。

## II-2.3 クアンニン省のグリーン成長実施体制

### II-2.3.1 グリーン成長のための組織

2014年12月30日、Decision No. 3281が承認され、クアンニン省におけるNGGS実施のための省グリーン成長ステアリング・コミッティ（省ステアリングコミッティ）が2014年～2020年の期間で設立された。その構成を下表に示す。

表 II-2.8 省ステアリングコミッティの構成

The Provincial Steering Committee	
Head	Mr. Dang Huy Hau, Vice Chairman of Quang Ninh PPC
Deputy Head	DPI
	DOF
	DONRE
	DOIT
	DARD
Committee's commissioners	DOT
	DOC
	DOST
	Department of Home Affairs
	DOH
	DOET
	DOLISA
	DOCI
	DCST
	DFA
	Economic Zone Management Board
	Statistics Bureau
	HBMD
	Investment Promotion and Support Agency
	New Rural Committee
	Vietnam Fatherland Front of Quang Ninh Province
	Provincial Farmers Association
	Provincial Women's Union
	Provincial Ho Chi Minh Communist Youth Union
	Provincial Union of Science and Technology
	Radio and TV of Quang Ninh
	Newspapers of Quang Ninh
	Business Association of Quang Ninh
	VINACOALMIN
	Northeast Corporation
	Power Company of Quang Ninh
	People's Committees of Districts, Towns and Cities of the Province

出典: Decision No. 3281/QD-UBND

省ステアリングコミッティメンバーの職務は委員長（人民委員会副議長）が決定し、事務局はDPIの中に設置されている。コミッティメンバーには、省内各部局の副局長が指名されている。コミッティの決定事項は、各部局の既存の体制とマンドートの中で実施することとなっている。

ステアリング・コミッティを構成する各部局及びハロン市等の地方自治体はグリーン成長推進に係る部門を有している。関連部門の役割を添付資料 II-2 に、また関連機関の組織図を添付資料 II-3 に示す。

### II-2.3.2 グリーン成長に関する省の予算状況

クアンニン省の支出の状況を下表に示す。2014年で総支出額は約23兆ベトナムドンとなっている。

表 II-2.9 クアンニン省の年間支出額

Unit: million VND

Year	2010	2011	2012	2013	2014
Total Expenditure	13,255,967	19,286,028	22,343,792	24,213,207	23,135,413
Expenditure of development Investment	4,761,108	5,886,243	5,592,215	5,598,132	4,944,383
Spending on defense	120,582	191,879	164,102	177,316	177,578
Spending on securities			79,610	80,885	80,527
Spending on education, training and vocational training	1,304,894	1,710,524	2,358,212	2,484,475	2,564,700
Spending on health, population and family planning	405,401	558,589	941,957	846,783	737,649
Spending on science and technology	18,699	28,200	55,861	60,530	38,202
Spending on culture and information	67,511	124,970	105,028	119,181	168,588
Spending on broadcasting, television and mass media	33,119	64,812	79,794	69,138	60,096
Spending on physical training and sports	45,608	48,315	70,767	73,084	76,908
Spending on social securities	145,472	297,326	345,148	364,579	512,982
Spending on economic activities	409,472	710,889	998,757	993,191	835,267
Spending on administrative management, Party, unions	808,440	1,318,356	1,736,299	1,784,244	1,710,141
Subsidy for policy commodities	5,722	4,967	5,850	5,662	
Other expenditure out of budget	46,124	102,100	116,213	100,711	109,535
Additional expenditure for financial reserves	1,600	1,600	1,600	1,600	1,600
Expenditure for resource transference	2,563,849	4,164,662	4,303,518	5,425,362	6,075,015

注: Sum amount of breakdown is not equal to total expenditure amount.

出典: Quang Ninh Statistical Year Book 2014

クアンニン省のグリーン成長関連政策実施に係る2014年の支出額及び2015年の予算額を下表に示す。

表 II-2.10 グリーン成長政策に係る2014年の予算支出実績及び2015年の予算編成

No.	Policies related to Green Growth	2014 thousand VND	2015 thousand VND
1	Expenditure to environment activities	629,464	493,294
2	Investment projects for Environment remedy (from source of Env. Protection fee)	167,300	248,656
3	Investment projects on Halong Bay (from source of Halong Bay visiting tickets)	190,000	175,000
4	Projects on forest recovery and sustainable management	1,600	1,488
5	Projects for Environment protection in Halong Bay	1,000	4,500
6	Program of forest protection and development	27,000	30,000
7	Investment for handling of environment pollution in 8 communes of Ha Nam area, Quang Yen Town	50,000	50,000
8	Interior display in Museum - Library of Quang Ninh Province	160,000	10,000
9	Gallery exhibits and contents in Museum - Library of Quang Ninh Province	24,000	90,000
10	Palace of Planning, Exhibition Fairs of Quang Ninh Province	122,900	400,000
11	Investment of equipment to enhance scientific research capacity serving biodiversity conservation in Bai Tu Long National Park		4,538
12	Technical Assistance Project for Green Growth Promotion in Halong Bay area, Quang Ninh Province (Phase 1)		2,998

出典: DOF 資料より JICA 専門家チーム作成

### II-2.3.3 MPI-UNDP 調査報告書での活動・プロジェクトと予算計画

MPI-UNDP 調査の報告書では、GHG 排出量削減やグリーン成長に向けた20の優先プログラム・プロジェクトがリスト化されている。同リストでは、省予算、民間資金、

ベトナム電力公社（EVN）の3種類が資金源として挙げられているが、そのほとんど（20のプログラム・プロジェクトのうち17）が自治体予算である。

表 II-2.11 GHG 排出量削減のためのタスク/プロジェクトとその予算源

No.	Title of task, project	Budget (thousand VND)	Budget source
1	Using biofuels in public passenger transport	50,000,000.00	Local budget
2	Using biofuels in transportation of goods	80,000,000.00	Local budget
3	Developing means of public passenger transport system	1,399,440,000.00	Local budget
4	Supporting the installation of high-performance air conditioner	348,153,251.67	Local budget
5	Supporting the installation of high-performance refrigerator	50,055,443.08	Local budget
6	Building Energy Management System	15,000,000.00	Enterprises' budget
7	Equipping high-performance transformers for power grid	700,000,000.00	EVN
8	The Tourist Information Points and street lighting using solar energy	42,000,000.00	Local budget
9	Equipping waste heat recovery system for cement factory	201,600,000.00	Enterprises' budget
10	Supporting the installation of high-performance air conditioner	255,150,000.00	Local budget
11	Replacing handcraft brickyard by continuous kiln	7,976,822.78	Local budget
12	Optimal use and replace fertilizer in rice cultivation	5,215.13	Local budget
13	Saving and controlling the irrigation in rice paddy	15,598.82	Local budget
14	Development of special-use forest	76,670,890.57	Local budget
15	Development of protection forest	431,935,558.19	Local budget
16	Converting unused land into special use forest land	260,266.24	Local budget
17	Development of production forest	1,249,022,912.44	Local budget
18	Converting unused land into protection forest land	17,022,379.11	Local budget
19	Converting unused land into production forest land	36,979,465.38	Local budget
20	Using biogas for livestock	309,240,000.00	Local budget

出典: Green Growth Master Plan of Quang Ninh province by QNPPC and UNDP

#### II-2.3.4 クアンニン省の既存基金

現在、クアンニン省にはグリーン成長に関連する活動に活用可能な基金として以下のものがある。

##### (1) 環境保全基金

2010年7月8日に Decision No.2061/QD-UBND が承認され、クアンニン環境保全基金が設立された（基金総額 200 億ベトナムドン）。自然資源管理や生物多様性の保全、環境汚染の防止や環境事故の対応・修復、環境保全及び改善などに資するプログラム、プロジェクトや活動への支援に供される。基金の目的は、(a) 自然資源及び生物多様性の保全、(b) 環境汚染の防止、(c) 環境汚染及び環境事故による影響の改善、のためのプログラム、事業、活動への財政的な支援を行う事である。現在の基金の活動は、(a) 閉鉱山の環境修復のための資金の徴収及びデポジット、(b) 環境管理活動へのローンの付与、(c) 必要に応じた特別事業への資金供与、の3点である。このうち主なものは、閉鉱山の環境修復のための資金の徴収及びデポジットである。これらの資金は鉱業者より徴収される。環境管理活動へのローンの付与については、国の環境保全基金の規定に基づき、1事業につき最大50億ベトナムドンを最長5年間の返済期間で貸与する事が可能である。これまでの実績は、Viet Long 投資建設株式会社に対する廃棄物処理及び再資源化プラント建設のためのローン付与の1件のみとなっている。

##### (2) 社会インフラの開発促進のための基金

2015年8月20日、Decision No.2433/2015/QD-UBND によって、教育、職業訓練、保険衛生、文化、スポーツ、司法の分野での社会的活動・貢献への支援政策が承認された。これは、首相決定に基づく省内の貧困地域で、地域社会の発展に寄与するプロジェク



トやインフラ整備を計画する投資家に対し、資金面の支援を提供することで投資家にインセンティブを与える制度である。

### (3) 農業投資基金

2015年4月21日、Decision No.1066/2015/QD-UBNDによって、2017年までのクアンニン省での農業分野への投資促進を意図するインセンティブ制度が承認された。これは、民間企業による農業及び農村への投資推進を意図した Decree 210/2013/ND-CP（2013年12月19日首相承認）への追加的インセンティブに係る制度である。

### (4) 科学技術基金

2015年5月7日に、Decision No.1023/QD-UBNDによって、クアンニン科学技術発展基金が設立された。優先産業分野における新技術や先端技術の研究開発、部品加工・組み立て技術の高度化や改善の研究開発、などのプロジェクトの一部または全ての費用を支援するものである。当基金は常時1,000億ドンの資金を有しているが、2015年より、特定の企業へのみ資金提供することとなり、現在、省内で5つの企業が選定されている。当基金を活用したプロジェクトは下表に示すとおりである。

表 II-2.12 科学技術基金によるプロジェクト

Name of Project	Amount of Loan (VND)
"Application of science and technology to produce mushrooms, vegetables and other agricultural products of high economic value in VietGAP direction in Cong Hoa Ward, Quang Yen Town"	7,097,000
Planting and development of purple Morinda medicinal plants (Morinda officinalis How) in Ba Che District"	6,500,000
"Application of advanced technology to produce household ceramics of high quality in Mao Khe – Dong Trieu"	1,583,000
"Production Line for Biological Tablets (wood pellet) in Tan Binh commune, Dam Ha district"	9,250,000

出典: DOST

## II-2.4 グリーン成長のための政策・制度上の課題と所見

これまでの調査から、グリーン成長に係る省での政策・制度上の課題、所見を以下にまとめる。

### II-2.4.1 グリーン成長への理解

- グリーン成長を進めるための取組・活動に係る共通認識を醸成する。

クアンニン省にはグリーン成長アクションプランがあり、グリーン成長の方針は明確に示されている。しかしながら、ステークホルダーが想定するグリーン成長推進の取組は様々であり、また多様な意見を持っている。グリーン成長を進めるための活動・取組について、関係者間での共通認識を醸成する必要がある。

### II-2.4.2 法令面

- グリーン成長に資する提案プロジェクトに応じ、制度を整備又は改善すべきである。
- グリーン成長アクションプランの実行状況のモニタリング及び評価方法を確立すべきである。

クアンニン省にはグリーン成長アクションプランがあり、グリーン成長の方針は明確に示されている。一方、グリーン成長に資する取組や活動を推進するためには、法制度の整備、もしくは既存制度の改訂・改善が必要である。また、取組・活動を円滑か

つ効率的に実施するためには、これらをモニタリングし評価する方法を確立する必要がある。

### II-2.4.3 制度面

- グリーン成長アクションプラン実施のための省ステアリングコミッティが設立されたが、PPCのイニシアティブの下で、関連組織間での情報共有や連携・協調を促進するメカニズムの強化が必要である。
- グリーン成長実現に向けた、省関連部局と地方自治体の役割分担が不明確である。
- 地域住民、或いは青年団や婦人会などの市民組織といったステークホルダー間の協力メカニズムの強化が必要である。
- 省内各部局は、グリーン成長実施に係る主管セクションを定めているが、主としてリエゾン機能のみであり、専従職員は配置されていない。

クアンニン省はグリーン成長に係る省ステアリングコミッティを発足させたところであり、今後、各種の取組・活動推進のため、関連組織の横断的協力が重要となってくる。

### II-2.4.4 財政・資金面

- グリーン成長に関する新たな活動推進のため、特別予算化等を検討すべきである。
- クアンニン省でのグリーン成長実施の予算措置は、既存の予算枠組みの中で対応している。今後、グリーン成長実施を積極的に進めるための新たな活動が提案されていくことが予想されるため、これに応じた新たな予算枠や財源の確保が重要になる。

## 第II-3章 ハロン湾地域主要セクターの現状と所見

### II-3.1 プロジェクト対象地域の特徴

#### II-3.1.1 クアンニン省の経済及び産業状況概観

ハロン湾地域の各行政区域の人口及び面積を下表に示す。2014年のハロン湾地域の人口は、75万9千人である。ハロン市の人口は23万2千人と6つの行政区域の中で最も多い。

表 II-3.1 ハロン湾地域の行政区域の人口と面積

Cities / District	Area (km <sup>2</sup> )	Population (Person)
Halong City	272.0	232,000
Cam Pha City	343.2	186,000
Van Don District	553.2	43,000
Hoanh Bo District	844.6	50,400
Quang Yen Town	314.2	134,200
Uong Bi City	256.3	113,300

出典: Quang Ninh Statistical Yearbook 2014

産業別の総産出額を下表に示す。鉱業の産出額が最も大きいですが、総産出額に占める割合は、2010年の64%から2014年で51%と低くなってきている。主な製造業は食品加工業と非金属鉱物加工業となっている。

表 II-3.2 クアンニン省の産業別総産出額（現在の貨幣価値による金額）

Unit: Billion dong

Industrial Activity	2010	2014
<b>TOTAL</b>	<b>79,261</b>	<b>128,172</b>
<b>Mining and quarrying</b>	<b>51,821</b>	<b>66,966</b>
Mining of coal and lignite	50,871	65,906
Extraction of crude petroleum and natural gas	-	-
Mining of metal ores	4	114
Other mining and quarrying	433	538
Mining support service activity	513	408
<b>Manufacturing</b>	<b>23,293</b>	<b>39,882</b>
Manufacture of food products	7,672	8,290
Manufacture of beverages	397	811
Manufacture of tobacco products	-	-
Manufacture of textiles	651	8,211
Manufacture of wearing apparel	157	269
Manufacture of leather and related products	272	481
Manufacture of wood and of products of wood and cork (except furniture)	624	1,654
Manufacture of paper and paper products	91	319
Printing and reproduction of recorded media	74	83
Manufacture of coke and refined petroleum products	71	266
Manufacture of chemicals and chemical products	488	554
Manufacture of pharmaceutical, medicinal chemical and botanical products	-	9
Manufacture of rubber and plastics products	544	409
Manufacture of other non-metallic mineral products	6,842	9,171
Manufacture of basic metals	771	1,325
Manufacture of fabricated metal products (except machinery and equipment)	1,049	2,793
Manufacture of computer, electronic and optical products	-	-
Manufacture of electrical equipment	1,042	1,245
Manufacture of machinery and equipment n.e.c	70	323
Manufacture of motor vehicles; trailers and semi-trailers	287	353
Manufacture of other transport equipment	1,509	2,101

Industrial Activity	2010	2014
Manufacture of furniture	320	406
Other manufacturing	332	600
Repair and installation of machinery and equipment	30	209
<b>Electricity, gas, team and air conditioning supply</b>	<b>3,815</b>	<b>20,215</b>
Electricity, gas, steam and air conditioning supply	3,815	20,215
<b>Water supply, sewerage, waste management and remediation activity</b>	<b>332</b>	<b>1,109</b>
Water collection, treatment and supply	176	371
Sewerage and sewer treatment activity	23	421
Water collection, treatment and disposal activity; materials recovery	133	317
Remediation activity and other waste management services	-	-

出典: Quang Ninh Statistical Year Book in 2014

### II-3.1.2 ハロン湾地域のクアンニン省での位置付け

#### (1) 省の経済開発・発展の中心地域

ハロン湾地域はクアンニン省の経済の中心であり、経済発展の先導地域となっている。ハロン市及びカンファ市は、省の重要な工業及び商業の中心で、鉱業に加え、造船、建材業、火力発電、水産加工業などが発達している。2014年のハロン市のGDPは約30兆ドンと推計されている。2020年クアンニン省社会経済開発マスタープランによると、ハロン湾地域開発の基本方針は「1つの中心地区と2つの躍進を促す地域を有する複数の開発ルート」で構成される。本方針は、クアンニン省のベトナム北部経済重要地域(NKER)及び紅河デルタ地域における機能を考慮し、省の各地区の影響力を強化するためにの連携及び開発の一貫性を確保する事が期待されている。ハロン市は「1つの中心地区」にあたり、「2つの躍進を促す地域」は、ハロン市の発展を支援する西部地区と東部地区として位置付けられている。

#### (2) 省の主要観光地域

観光はクアンニン省の重要セクターであり、今後の経済成長の柱である。クアンニン省は、ハロン湾地域に代表される自然的・文化的価値の高い観光資源を有している。ハロン湾及びバイトゥロン湾は、特徴的な地質・地形から、最重要の観光資源であり、クアンニン省の観光主要ゾーンとして認知されている。ハロン湾はユネスコ世界遺産の地として、特有のブランド化が進み、「世界の新・自然七不思議」の一つにも上げられている。バイトゥロン湾は未だ発展途上であるが、ポテンシャルの高い原生の観光資源と言える。また、文化的価値の高い観光資源としては、Tran Nhan Tong王が1299年に禅寺を建立し、ベトナムの仏教の中心地となっているイェントウが上げられる。

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### II-3.1.3 ハロン湾の水環境の状況

ハロン湾の水質状況及び水環境の現状は以下のとおりであり、いくつかの課題に分類される。その特徴を捉えて発生源等への的確な対応を図ることが必要である。

#### (1) 有機汚濁及び衛生（指標：COD, 大腸菌群）

ハロン湾管理局作成の2014年版環境報告書によれば、ベトナムにおけるCODの沿岸域環境基準(QCVN10:2008/BTNMT) 3mg/lが適用される観測地点のCOD平均値は8.45mg/lと大幅に超過している。また、ハロン市街地の沿岸ではCODは20mg/lを超える測定値となっており極端に有機汚濁が進行していると考えられ、海岸沿いの市街地の汚濁源からの寄与率が高いことを示している。

また、衛生に係る指標項目である大腸菌群数についてはハロン市沿岸およびヴァンドン港の地点で沿岸域の環境基準(QCVN10:2008/BTNMT)である1,000MPN/100mlを超

<sup>10</sup> <http://www.thanhniennews.com/travel/yen-tu-the-home-of-vietnams-hero-kingturnedbuddha-28866.html>

過している一方で、沖合や島嶼部の地点においては低い値を示した。しかしながら、ハロン湾での観光アクティビティの一つである海水浴場としての水質を考えると、日本の環境省の判定基準である水質 AA（糞便性大腸菌が不検出）、水質 A：（同 100 個/100ml）との比較・確認が必要である。

所見と課題を以下にまとめる。

- ハロン市の廃水処理のカバーエリアは 30%であるため、海岸沿いの市街地および流域のほとんどの家庭生活廃水が未処理で放流されている。
- 工場・事業場廃水については、法令による廃水監視（環境チェック）および立ち入り検査が実施されている。しかし、その質・量ともに十分でなく、改善勧告等の行政措置件数もあまり確認されなかった。主要工場から提出された環境報告書を調査したところ、自主検査結果においても、廃水基準違反企業が多くみられた。総じて、廃水規制が有効に機能して工場・事業場廃水が改善傾向にあるとは言い難い。

### (2) 富栄養化（指標：全窒素（T-N）、全りん（T-P））

T-N、T-P に関する QCVN は設定されていない。しかしハロン湾でのこれら栄養塩濃度は、T-N の平均値 10.38mg/l、旧市街沖で最大値 32.37mg/l、T-P は平均値が 0.22mg/l、市街地沖で最大値 0.71mg/l と極めて高い値となっており、富栄養化が進行している。

トンキン湾西海岸では 2002 年及び 2008 年に *Ceratium furca* による赤潮発生が記録された。カットバ島周辺では 2011 年及び 2012 年に少なくとも 5 回の赤潮が発生して多額の漁業被害が出ている。2013 年の調査結果では、栄養塩（NO<sub>3</sub>、NH<sub>4</sub>、PO<sub>4</sub>）濃度が 2005 年から 2012 年の間に約 2~4 倍に増加していることが報告された。このように、栄養塩濃度レベルの現状を見ると、ハロン湾においても HAB (hazardous algae bloom) イベントがいつ発生してもおかしくない状況と考えられる。

所見と課題を以下にまとめる。

- 発生源は有機汚濁の発生源と同様である。加えて、窒素やりんを多く含む i) 畜産系の廃水・廃棄物、ii) 農地での化学肥料等の施肥と水域への流亡実態、に注目する必要がある。
- 近年増加しているエビ・貝・魚類の養殖活動により、高い栄養塩負荷による直接インパクトにも注目する必要がある。

### (3) シルト等の濁り（指標：透明度、濁度、TSS）

透明度は QCVN の項目には設定されていないが、生態学的にも、また観光客への第一印象形成の観点でも重要である。測定地点の平均値は 2012 年 1.95m、2013 年 2.1m、2014 年 1.4m となっており、市街地の海岸沿いでは 1m 以下の地点も見られる。我々の 2015 年 12 月 20 日でのバイチャイからクアンイェンの 5 地点の測定結果でも平均値 1.12m で、船舶の航行でのシルトが舞い上がる水域もあった。これは、日本の水浴場水質判定基準の水質 AA および水質 A の「全透または 1m 以上」を十分には満足していない。

TSS については保護水域内のみに沿岸域環境基準(QCVN10:2008/BTNMT)の 50mg/l が適用されている。2014 年の調査結果では最も有名な観光スポット Thien Cung Dau Go では 69.85mg/l と基準を超過していた。

ハロン湾観光としての海水浴の観点、或いは保護水域東部や南部に分布する貴重なサンゴ礁の生態系保全の観点、いずれからも現状の濁りは危機的であると言える。また、現行の基準値 50mg/l そのものの妥当性についても検討が必要と考えられる。

所見と課題を以下にまとめる。

- 流入河川からの土砂、シルトの流入への配慮・検討
- 港湾周辺の埋め立て工事、その他の建設工事や開発行為への配慮・検討
- 船舶航行による巻き上がりへの配慮・検討

#### (4) 油分（指標：油分）

環境基準は保護区域内では不検出、それ以外の水域は 0.2mg/l 以下となっている。2014 年の測定結果では、ハロン湾の保護水域のすべての地点で油分が検出されており（0.03～0.47mg/l）、その他の水域では、ほとんどの地点で基準を超過している（0.13～1.08mg/l）。平均値の最近 3 か年（2012～2014 年）の変化では 0.02、0.042、0.32mg/l となっており、2014 年に急激に上昇している。油分は水生生物に影響を与えるとともに景観を損ね、また油膜の存在により海水浴が不適となる。

所見と課題を以下にまとめる。

- 次に上げる事項の配慮・検討。i) 港湾域の石油関連事業場廃水、ii) 油の漏えい事故、iii) 船舶からのビルジ排出、iv) 海岸のホテル・レストラン、商店、民家からの排出、v) 河川からの油分流入。

#### (5) 重金属（指標：Fe、Zn、Mn 等）

保護水域外ではヴァンドン地域のいくつかの地点で鉄（Fe）およびマンガン（Mn）の環境基準（それぞれ 0.3mg/l および 0.1mg/l 以下）を超過していた。保護水域内では Fe が 3 地点、亜鉛（Zn）が 2 地点で環境基準（それぞれ 0.1mg/l および 0.05mg/l 以下）を超過していた。

所見と課題を以下にまとめる。

- Fe/Mn 汚染は石炭鉱山での活動が主な原因と考えられる。現在採掘中の鉱山にあつては徐々に採掘方法や鉱山廃水処理の改善が進められているところであるが、各所に堆積した採鉱廃棄物が大雨に伴い流亡することも依然としてある。採掘跡地や法面等の緑化が大きな課題となる。

### II-3.1.4 ハロン湾地域での環境管理活動

#### (1) 廃水及び廃棄物管理

##### (a) 廃水処理

##### (i) 都市下水処理

ハロン湾地域には、下表に示す通り 5 か所の下水処理場があり、その全てはハロン市内である。

表 II-3.3 ハロン湾地域の既存下水処理施設

Location / City	Treatment Capacity (m <sup>3</sup> /day)
Bai Chay / Ha Long City	3,500
Ha Khanh / Ha Long City	7,200
Vung Dang Urban Area / Ha Long City	2,000
Coc 5 – Coc 8 Urban Area / Ha Long City	1,200
	1,200
Total	15,100

出典: Socio-Economic Development Master Plan for Quang Ninh Province to 2020, with Vision towards 2030

## (ii) 鉱山廃水処理

クアンニン省での石炭生産量は国全体の約 90%を占め、本プロジェクト地域は、カンファ市を始め省内でも最大の石炭生産地帯である。石炭産業はクアンニン省の主要な経済活動の一つであり、GDP の多くを占め、省政府の歳入にとっても重要である。一方、採鉱活動による環境悪化や健康への脅威も増大しつつある。水環境面では、表流水及び沿岸域への最大の汚染源は産業部門であり、特に鉱業および水産加工業からの廃水による寄与が高い。

VINACOMIN 及び関連企業は、貯炭場や鉱山廃棄物処分場からの雨水廃水を、産業廃水や浸出水と別系統で処理・排出することを当面の目標としている。特に、環境保全上特別な配慮が必要とされる地区・流域では、このシステム構築を優先的に進めるとしている。

## (b) 廃棄物管理の現状

## (i) 分別と収集

都市廃棄物の収集は、廃棄物量の増加、廃棄物管理に係る意識の欠如、インフラ整備や人的リソースの不足といった要因により困難が生じている。殆どの都市廃棄物は分別されていないことがリサイクル活動を困難にしている。

## (ii) 処理

収集された都市ごみは、下表に示すとおり、衛生埋立処分場か、悪臭や浸出水対策が不十分なオープンダンピング処分場のいずれかで処分されている。ハロン湾地域の 6 か所の埋立処分場のうち（下表参照）、2 か所は ODA（DANIDA）の支援によって浸出水処理施設が導入され、覆土が施された。また、新たに 2014 年からウオンビ市の Khe Giang 地区（約 120,000m<sup>2</sup>）に、埋立処分場と関連施設（浸出水処理施設を含む）の建設が始められている。

表 II-3.4 ハロン湾地域の埋立処分場

No.	Name	Location	Capacity ton/day
1	Ha Khau	Ha Khau Ward, Halong City	30
2	Deo Sen	Ha Khanh Ward, Halong City	200
3	Quang hanh	Quang Hanh Ward, Cam Pha City	50
4	Van Yen	Van Yen, Van Don District	1.6
5	Troi Township	Troi Township, Hoanh Bo District	13
6	Cong Hoa	Cong Hoa, Quang Yen Town	37.7

出典：Regional Plan for Solid Waste Management to 2020

## (c) リサイクル、再利用

現在、クアンニン省には 2015 年時点で稼働中のコンポスト施設は無い。DONRE はウオンビ市の Thanh Son 区にごみの分別、収集、加工を含む試験的な 3R 活動の実施を予定している。有機物のコンポスト施設は、ウオンビ市 Thuong Yen Cong コミューンにある Khe Giang 埋立処分場内に建設予定である。2018 年にはこのパイロット活動の経験を活用して、ウオンビ市の他地区や、ハロン市及びモンカイ市などその他の地方自治体にも活動を展開する予定である。

個人（インフォーマル）リサイクル業者は、プラスチックや金属などの有価物を、家庭や企業、或いはごみ置き場から直接回収している。また、一部の地域では、家庭や企業からのごみを直接回収業者のカートに排出する時間制収集システムを採用している。

#### (d) 有害廃棄物処理

有害廃棄物処理に関しては、2011年から2015年にかけて、736の廃棄物排出者がDONREによって有害廃棄物排出者として登録された。2011年から2014年の間に廃棄された有害廃棄物は少なくとも平均で年間約8,500トンであり、主に廃油、廃鉛蓄電池及び廃自動車のブレーキパッドである。

現在、クアンニン省には有害廃棄物処理施設が1か所ある。加えて、鉱業界は2013年に有害廃棄物処理場施設を独自に整備した。施設はカンファ市のHuy Duongコミュニティにあり、石炭採鉱及び石炭精錬工程から発生する全ての有害廃棄物を処理する。

医療廃棄物は一般ごみと有害（感染性）廃棄物に分別され、一般ごみは他の都市ごみと同じく青色の袋で収集され、埋立処分される。有害（感染性）廃棄物は発生源で焼却処理される。

#### (2) 啓発活動

近年の環境保全に係るハロン湾地域での意識啓発活動のうち、特筆すべき事項は、環境保全・教育ハロン協会（Halong Association for Environmental Protection and Education）の発足である。協会はNo. 1918/QD-UBNDによって2015年7月に発足し、DONRE及びその他の省内関係部局、クアンニン青年団、など環境教育及び環境管理に携わる組織や団体で構成される。協会が計画している主要な活動を以下にまとめた。

- 環境保全に係る教育、意識啓発及びコミュニケーションに係る事業の提案。
- 十代の若者や市民を対象とした「グリーンハロン」のための意識啓発活動の提案。
- 学生や若者を対象としたビーチ清掃キャンペーンの実施、
- 世界遺産の価値と環境保全の重要性を学ぶ10歳未満の子供を対象としたハロン湾エコボートの提案。
- ラオスのHuay Xai、Luang Prahang、Xayaburiの3省の青年団と連携した「遺産旅行（Heritage journeys）」研究プログラム実施に向けた関連機関との調整。
- グリーン農業生産プログラムへの参加、及び「一村一品（One Community, One Product（OCOP））」活動の推進。

なお、下図に示すとおり、2016年1月10日には協会の最初の活動として、Toan Chau港での清掃キャンペーンが地元学生によって実施された。



出典：JICA 専門家チーム

図 II-3.1 Toan Chau 港での地元学生による清掃キャンペーン



## II-3.2 産業部門の現状

### II-3.2.1 第二次産業の現状

#### (1) 炭鉱及び石炭精製

クアンニン省には約 30 の鉱山があり、2014 年には 4,200 万トンの石炭を精製している。VINACOMIN によると、2020 年には約 5,900~6,400 万トンの石炭精製を計画している。現在、2020 年炭鉱部門マスタープラン 2030 年ビジョンを策定中である。2018 年までにすべての露天掘り鉱山は閉鎖される予定であったが、計画見直しにより一部の露天掘り鉱山は 2018 年以降も操業が継続されることとなった。例えば、ドンチウ〜ウオンビ地域の露天掘りは 2020 年まで、ホンガイ〜カンファ地域は 2030 年まで継続する予定である。ハロン湾地域の鉱山を以下に示す。

表 II-3.5 ハロン湾地域の鉱山

No.	Name of Mining Site	Open mine / underground mine	Location	Area	Capacity in 2015 (tons of raw coal)	Exploitation Time as per Exploitation Permit	Operation
			City/Town/ District	(km <sup>2</sup> )			Status
1	Giap Khau - Suoi Lai: Coal bed 7, 8, 9, 10, 11	Underground mine	Ha Khanh ward, Halong City	1.700	319,000	End of 2020	In operation
2	Suoi Lai: Coal bed 14	Underground mine	Ha Khanh ward, Halong City	0.339	286,000	2019/6/17	In operation
3	Binh Minh Coal Mine: elevation below -72	Underground mine	Ha Khanh ward, Halong City	1.227	1,369,000		In operation
4	Suoi Lai 917: Coal bed 14 (adjusted under permit No. 357 concerning extension to September 2012; adjusted expansion under permit No. 143 of January 2013, add coal bed 13)	Open mine	Ha Khanh ward, Halong City	1.441	1,365,000	2019/1/2	In operation
5	North Vang Danh - Suoi Lai: Coal bed 13, 14	Underground mine	Ha Khanh ward, Halong City	0.600	147,000	End of 2016	In operation
6	West Da Mai Mine: Coal bed 11, 11B	Underground mine		0.480	-	End of 2014	Exploitation Permit expired, extension procedures in process
7	West Khe Sim mine: Coal bed IA-IV	Open mine		0.140	-	2014/6/28	Exploitation Permit expired, extension procedures in process
8	Nui Beo mine	Open mine	Ha Tu ward, Ha Phong ward, Ha Trung ward, Halong City	4.056	873,000	3 years (26/6/2017)	In operation
9	Ha Lam mine: Coal bed 14 10(7),11(8),13(9),14(10)	Underground mine	Ha Lam ward, Ha Trung ward, Halong City	6.030	2,400,000	2025/11/28	In operation

No.	Name of Mining Site	Open mine / underground mine	Location	Area	Capacity in 2015 (tons of raw coal)	Exploitation Time as per Exploitation Permit	Operation
			City/Town/ District	(km <sup>2</sup> )			Status
10	Area II, coal bed 11, Ha Lam ward, Ha Trung ward - Halong City	Open mine	Ha Lam ward, Ha Trung ward, Halong City	0.5305	180,000	5 years (17/7/2019)	In operation
11	Ha Lam mine: 10(7),11(8),13(9),14( 10)	Open mine + Underground Mine	Ha Lam ward, Ha Trung ward, Halong City	5.7900	1,150,000	Open Mine to end of 2010; Underground mine to end of 2015	Stopped
12	Ha tu mine	Open mine	Ha tu ward, Halong City	3.450	1,411,000	4 years (end of 2018)	
13	East of Vang Danh mine	Underground mine	Trung Vuong Ward, Uong Bi City	0.308	100,000	2015/12/31	
14	Uong Thuong Area	Underground mine	Trung Vuong Ward, Uong Bi City	1.322	500,000	2022/2/13	
15	Flat Mine area, Nam Mau	Underground mine	Thuong Yen Cong Commune, Uong Bi City	2.210	900,000	End of June/2017	In operation
16	Pit mining Area, Nam Mau	Underground mine	Thuong Yen Cong Commune, Uong Bi City	3.770	2,500,000	End of 2025	In operation
17	Pit mine, Vang Danh	Underground mine	Vang Danh Ward, Uong Bi City	5.000	900,000	End of 2029	In operation
18	Flat mine, Canh Ga Area, Vang Danh	Underground mine	Vang Danh Ward, Uong Bi City	3.410	170,000	06 years (2020)	In operation
19	Flat mine, Center area, Vang Danh	Underground mine	Vang Danh Ward, Uong Bi City	6.410	544,000	06 years (2020)	In operation
20	Exposed seam mining, Canh Ga	Open mine	Vang Danh Ward, Uong Bi City	0.768		2020/1/5	In operation
21	Mines of Vang Danh	Underground mine	Vang Danh Ward, Uong Bi City	9.350	1,500,000	2039/1/2	Preparation for mining
22	Pit mine, Canh Ga, Vang Danh	Underground mine	Vang Danh Ward, Uong Bi City	3.900	1,500,000	End of 2029	In operation
23	Center area of Vang Danh	Underground mine	Vang Danh Ward, Uong Bi City	5.000	1,275,000	15 years (2029)	In operation
24	Dong Vong Coal mine, seam 6,7,8	Underground mine	Tan Dan Com. Of Hoanh Bo Dis.&Vang Danh Ward, Uong Bi City	8.658	500,000	End of 2025	In operation
25	Tan Dan Coal mine, North of Dong Vong	Underground mine	Tan Dan Commune, Hoanh Bo District	3.525	126,000	End of 2016	In operation
26	Dan Chu Coal mine	Underground mine	Quang La Commune, Hoanh Bo District	0.630	100,000	8 years (end of 2016)	In operation

No.	Name of Mining Site	Open mine / underground mine	Location	Area	Capacity in 2015 (tons of raw coal)	Exploitation Time as per Exploitation Permit	Operation
			City/Town/ District	(km <sup>2</sup> )			Status
27	Quang La Coal mine	Underground mine	Quang La Commune, Hoanh Bo District	1.050	150,000	12 years (end of 2020)	In operation
28	Hoa Binh Mine	Underground mine	Hoa Binh Commune, Hoanh Bo District	2.36	130,000	End of 2018	In operation
29	North Coc 6 Coal Mine	Underground mine	Mong Duong Ward, Cam Pha City	1.700	700,000	End of 2025	In operation
30	Ha Rang Coal mine	Underground mine	Quang Hanh Ward, Cam Pha City	3.940	600,000	End of 2019	In operation
31	West of Da Mai mine	Underground mine		0.480		End of 2014	Exploitation Permit expired, extension procedures in process
32	West of Khe Sim	Underground mine		0.140		End of 2014	Exploitation Permit expired.
33	Nga Hai Coal Mine	Underground mine	Khe Sim Village, Duong Huy Commune, Cam Pha City	13.760	1,500,000	End of 2025	In operation
34	Coal Seam V4...7A Nga Hai Coal Mine	Underground mine	Khe Sim Village, Duong Huy Commune, Cam Pha City	8.295	382,000		No exploitation
35	Opencast Coal Mine Project	Open mining	Khe Sim Village, Duong Huy Commune, Cam Pha City	13.600	200,000	End of 2019	(Under process of mining permit application)
36	Khe Tam Coal Mine, Seam 3, 3a ...15	Underground mine			2,500,000	2025	
37	Khe Tam Coal Mine, Seam 6 to 16	Open mining			450,000	2023	
38	Khe Cham II Mine	Open mining	Cam Tay & Mong Duong Wards, Cam Pha City	3.000	2,500,000	9 years (26/6/2023)	In operation
39	Lo Tri Coal Mine	Underground mine	Cam Tay&Cam Dong Wards, Cam Pha City	1.130	1,500,000		In operation
40	Yen Ngua Coal Mine	Underground mine	Cam Tay&Cam Dong Wards, Cam Pha City	0.620	0		In operation
41	Lo Tri Coal Mine (Project - Under process of mining permit application)	Underground mine	Cam Tay&Cam Dong Wards, Cam Pha City				Exploitation permission not yet available
42	Deo Nai Mine	Open mining	Cam Pha City	6.060	2,500,000	End of 2025	In operation
43	Cao Son Mine	Open mining	Mong Duong Ward, Cam Pha City	4.870	3,500,000	End of 2022	

No.	Name of Mining Site	Open mine / underground mine	Location	Area	Capacity in 2015 (tons of raw coal)	Exploitation Time as per Exploitation Permit	Operation
			City/Town/ District	(km <sup>2</sup> )			Status
44	Coc 6 Coal Mine	Open mining	Cam Phu Ward, Cam Pha City	5.350	3,500,000	End of 2025	In operation
45	Center area and Northeastern area of Mong Duong Mine	Underground mine	Mong Duong Ward, Cam Pha City	8.750	2,000,000	19 years	In operation
46	Seam 8, Area 2 of Northeastern area of Mong Duong Mine	Open mining	Mong Duong Ward, Cam Pha City	0.784	150,000	5 years (end of 2018)	In operation
47	Seam I.12; II.11 of Mong Duong Mine	Open mining	Mong Duong Ward, Cam Pha City	2.070	109,000	2015/12/31	2nd extension of permit in progress
48	Khe Cham III Mine	Underground mine	Mong Duong Ward, Cam Pha City	2.700	2,500,000	End of 2025	
49	Khe Cham I Mine	Underground mine	Mong Duong Ward, Cam Pha City	4.100	1,000,000	Dec.2018	
50	South Khe Tam Mine	Underground mine	Duong Huy Commune, Cam Pha City	1.970	600,000		In operation
51	Khe Hum Seam Mine	Open mining	Ha Phong Ward, Halong City	0.467	160,000	2016/6/30	In operation
52	East Da Mai Mine	Open mining	Mong Duong Ward, Cam Pha City	1.727	1,289,000	9 years (2023)	In operation
53	Northeast Khe Tam Mine	Open mining	Duong Huy Commune, Cam Pha City	0.470	119,000	2016/5/12	In operation
54	Northeast Khe Cham Mine	Open mining	Mong Duong Ward, Cam Pha City	1.000	50,000	9 years (2017)	In operation
55	Northeast Nga Hai Mine	Underground mine	Duong Huy Commune, Cam Pha City	2.060	300,000	End of 2016	In operation
56	Southeast of Khe Tam Mine	Underground mine		1.710	Basic construction	9 years (2023)	In operation
57	Seam G, West of Khe Sim Mine	Open mining	Cam Pha City	0.920		End of 2016	In operation
58	West Lo Tri Mine	Open mining	Cam Pha City	0.570	100,000	2 years (17/11/2016 )	In operation
59	Seam 9, North Quang Loi Mine	Open mining	Cua Ong Ward, Cam Pha City	1.520	340,000	Open Mine: 9 years (end of 2017) Underground mine: End of 2015.	In operation
60	Seam 6; 9 Northeast of Coc Sau, Chemical Store Mine	Underground mine	Coc 6, Cua Ong Ward, Cam Pha City	0.230	84,000	Seam 6: 7 years Seam 9: 2 years	In operation
61	South Khe Tam Mine	Open mining	Duong Huy Commune, Cam Pha City	0.550	160,000	3 years (Permit expired)	Stopped

出典: DONRE

## (a) 廃水処理

現在、43 か所の廃水処理施設が稼働しており、5 か所が建設中である。2016 年には処理能力は年間 1 億 m<sup>3</sup> 以上になる見込みである。

## (b) 廃棄物処理

VINACOMIN は 2013 年カンファ市に有害廃棄物処理施設を建設した。一方、鉍山から排出される一般廃棄物は、地元の環境衛生企業と契約し、収集・処分されている。

## (c) 鉍山閉鎖跡地の再利用

Nui Beo 露天鉍山は 2018 までに閉山予定であり、VINACOMIN は跡地をスポーツセンターや緑地、居住地として再開発する予定である。

## (d) 温室効果ガスの削減

VINACOMIN によると、温室効果ガス削減のため次の対策を実施している。

- 坑道を支える梁（木材）の使用量を、石炭生産量 1,000 トンあたり 45～50 m<sup>3</sup> から 14.1 m<sup>3</sup> まで低減
- 事業場内の輸送を、車両からコンベヤ網に変更
- 電気施設へのソフトスターター導入による省電力化
- 合計 800ha の鉍山廃棄物処分場に植林を実施。代償植林活動も実施されている。例えば、森林地域 120 ha での鉍山開発の代償として、他地区での同等面積の森林再生事業を実施している。

## (e) 国際協力

VINACOMIN によると、諸外国との協力を通じ下表に示す環境管理関連活動を実施している。

表 II-3.6 鉍業での環境管理関連活動に係る諸外国との協力

Name of Organization	Duration of Cooperation	Field of Cooperation	Budget
National Corporation of Oil, Gas and Metal of Japan (JOGMEC)	2013 - 2015	Testing of green covering to landfill site by spraying equipment of plant, grass seeds for Deo Nai Coal mine (Cam Pha), Nui Beo mine (Hon Gai)	USD 50,000-
Germany Association of Mining and Environmental Research (RAME)	2005 - 2015	Environmental protection for Vang Danh Coal mine (Uong Bi), Nui Beo mine (Hon Gai) in the following fields; - Treatment of coal mine wastewater, - Stabilizing and green covering the coal mine waste landfill sites, - Minimize dust, and - Environmental friendly Land use planning after mining finishes.	USD 820,000-
Korean Corporations for Mine Environment Rehabilitation (MIRECO)	2011 - 2015	Environmental protection for Deo Nai Coal mine (Cam Pha), Trang Khe mine (Dong Trieu) in the following fields; - Human resources training, - Treatment of wastewater from mines, and - Green covering the coal mine waste landfill sites.	USD 180,000-

出典：VINACOMIN 資料より JICA 専門家チーム作成

**(2) セメント産業**

ハロン湾地域では、下表に示す4つのセメント工場がある。

表 II-3.7 ハロン湾地域におけるセメント工場

No.	Name	Location	Amount of Production
1	Cam Pha Cement Plant	Cam Thach ward, Cam Pha City	Capacity of 2.3 mil.ton/year
2	Ha Long Cement Plant	Le Loi commune, Hoanh Bo district	Capacity of 2.1 mil.ton/year
3	Thang Long Cement Plant	Le Loi commune, Hoanh Bo district	Capacity of 2.3 mil.ton/year
4	Lam Thach Cement Plant	Phuong Nam commune, Uong Bi city	Capacity of 1 mil.ton/year

出典: DOIT

**(3) その他の産業**

ハロン湾地域ではその他の産業として、石灰生産、紙・パルプ製造、食品・飲料製造などがある。これらの主な企業を下表に示す。

表 II-3.8 ハロン湾地域における鉱業及びセメント業以外の主な企業

Industrial Sector	Name	Location	Amount of Production
Lime Production	Huong Hai Lime production Plant	Le Loi commune, Hoanh Bo district	Capacity of 980,000tons/year (under construction, planned in operation in 2016)
Paper and Pulp Production Industry	Tan Viet Hung JSC	Viet Hung ward, Halong City	2,800 – 3,500 tons of paper/year
	Halong Production and Trade JSC	Ba Che and Tien Yen districts	5,500 – 6,000 tons of paper/year
Food and Beverage	Halong Beer and Soft drink JSC	Yet Kieu ward, Halong City	Production of bottled beer, gas bear
	Quang Ninh Mineral water Trade and Services One member Co. Ltd.	Bai Chay ward, Halong City	Production of carbonated soft drinks, mineral water and purified water
	Dong Bac Sabeco JSC (Sai Gon Beer)	Cai Lan Industrial Zone – Halong city	Production and business on Beer
	Branch of international trade and services JSC of hypermarkets Haiphong Big C	Big C supermarket Halong, Hong Hai ward, Halong City	Production of products of bread, pastries
Food and Beverage	Duc Trong private enterprise	No. 127, Group 1, Area 1, Hung Thang Ward, Halong City	Production of Ba Kick Wine
	Thank Xuan Ba Kich wine production facility- Thanh Xuan Vocational Training Center Private Enterprise	Group 4, Area 4, Troi town, Hoanh Bo District	Manual production of wine (Ba Kich wine)
	Thang Long Beer Enterprise	Group 1, Area 1, Yen Thanh Ward, Uong Bi City	Production of apricot wine, fruit juice
	Quang Vinh apricot wine production facility	Nam Mau 2 village, Thuong Yen Cong commune, Uong Bi City	Manual production of wine (3,000 litter/year)
	NGK Construction, beer and wine production JSC	Km 4, Cam Thuy ward, Cam Pha City	Carbeco gas beer, Ba kich wine
	Thanh Ngoc livestock Co. Ltd.	Dong Coi village, Cong Hoa commune, Cam Pha city	Calabash wine

出典: DOIT

**(4) 工業団地及び経済特区**

現在、下表の工業団地が稼働中又は計画中である。それぞれの工業団地には管理組合があり、各団地内の環境管理を担当している。

カイラン工業団地はクアンニン省で初めての工業団地であり、2003年より集中廃水処理施設を運転している。カイラン工業団地管理組合によると、処理施設はリハビリの

必要があるもののそのための予算が確保できていない。工業団地と入居企業は年4回環境モニタリング活動を行っているが、ISO等の明確な環境管理システムはない。なお、団地内の省エネ実現のため、2016年からLEDの導入を計画している。クアンニン省により工業団地のグリーン化に資する支援が望まれる。また、同工業団地は第二期の拡張（215.3ha）を予定している。用地取得は終了済みで、拡張に関わるインフラ整備計画を2016年8月末にクアンニン省人民委員会に提出予定であり、承認を得次第、着工する予定であるが承認取得時期は未定である。

新たな経済特区として、ヴァンドン経済特区が計画されており、ハロン湾地域の主要な経済発展の中心となることが期待されている。この新経済特区を今後、クアンニン省グリーン成長のシンボルと位置づけることも考え得る。

表 II-3.9 ハロン湾地域の工業団地

Category	Name of Industrial Zone	Area (ha)	Location	Business Sector
Existing Industrial Zone	Cai Lan Industrial Zone	305.2	Bai Chay Ward, Halong City	Engineering production and assembly, furniture production, container production, shipbuilding, school appliances and toys production, electric equipment production, electronic assembly, textile, packaging material production.
	Viet Hung Industrial Zone	300.9	Viet Hung Ward, Halong City	Mechanical Engineering and assembly, production of interior furniture; agricultural and fishery production; consumption goods.
	Dong Mai Industrial Zone	160	Quang Yen Town	Mechanical engineering, transportation equipment, construction material, interior decoration.
Under Construction	Phuong Nam Industrial Zone	709.01	Phuong Dong Ward, Phuong Nam District, Uong Bi City	Mechanically engineered/assembled, refrigeration/electronics, appliance, handicraft, postharvest processing, garment and textile, consumption goods
	Hoanh Bo Industrial Zone	681	Hai Yen Ward, Hoanh Bo District	Refrigeration and electronic production, construction materials, consumer goods, furniture and interior decoration, agricultural, forestry and fishery product processing
Planned Industrial Zone	Cam Pha Industrial Zone Supporting Coal Sector	400	Investment study is being conducted by VINACOMIN	Machine building and maintenance of equipment for coal industry Machine building of equipment for construction activities.
	Dam Nha Mac Service Industrial Zone	3,710	1,500 ha of industrial land, planning is being prepared by the QEZA and relevant bodies	Establish multifunctional industry-service zone, combine with new satellite urban to create an architectural complex
	Quan Trieu Industrial Zone	150	Waiting for investment	Beverage and alcohol industry, consumption goods and agricultural product processing, mechanical engineering, construction material, good processing and packaging production.

出典：Socio-Economic Development Master Plan for Quang Ninh Province to 2020, with Vision towards 2030

表 II-3.10 ハロン湾地域で計画中の経済特区

No.	Economic Zone	Area (ha)	Location	Function	Status
1	Van Don Economic Zone	217,133	Van Don District including 1 town and 11 communes of more than 600 islands in Bai Tu Long Bay	High quality sea-island ecological tourism center; high quality service center, sea and air transportation center in Northeast Vietnam. One of the driving forces for important economic zones in Northern Vietnam.	Construction planning of Van Don Economic Zone to 2020, Vision up to 2030 was approved by the Prime Minister in Decision No. 1296/QD-TTg, dated 19 August 2009.

出典：Socio-Economic Development Master Plan for Quang Ninh Province to 2020, with Vision towards 2030

## (6) クラフトヴィレッジ

クラフトヴィレッジのリストを下表に示す。これらのクラフトヴィレッジの環境管理は、省の DONRE ではなく市・郡・町の DONRE が担当する。そのため、省の DONRE には情報がなく、現状は把握できていない。

表 II-3.11 ハロン湾地域のクラフトヴィレッジ

No.	Name of villages	City/Town/District	Type of product	Number of manufactories/ Total households in village	Decision of recognition	Commune/ Ward
I	Recognised craft village					
1	Cong Muong wooden ship making	Quang Yen	Small scale industry Woodwork	130/409	2867/QD-UBND 17/11/2015	Phong Hai
2	Hung Hoc fishing equipment knitting	Quang Yen	Small scale industry Woodwork	245/448	2867/QD-UBND 17/11/2015	Nam Hoa
II	Recognised traditional industry					
1	Do Chanh wooden ship making	Quang Yen	Small scale industry Woodwork	80/400	2867/QD-UBND 17/11/2015	Nam Hoa
2	“Bun” making (A type of rice noodle)	Quang Yen	Agro-forestry processing	30	275/QD-UBND 17/11/2015	Hiep Hoa
3	Lime water dumplings making (A type of traditional cake – Banh gio)	Quang Yen	Agro-forestry processing	930/1377	276/QD-UBND 17/11/2015	Phong Coc
III	Some other craft villages					
1	Aquaculture	Van Don	Agro-forestry processing	-	-	
2	Pearl culture	Van Don	Decoration	-	-	
3	Art coal production	Cam Pha, Ha Long	Decoration	-	-	
4	Ship building and repairing	Quang Yen	Small scale industry Woodwork	-	-	Ha An
5	Flower planting	Hoanh Bo	Agro-forestry processing	-	-	Troi
6	Cua Van fishing village	Ha Long	Agricultural materials production	-	-	Hung Thang
7	“Nuoc mam” (fish sauce) production	Van Don	Agro-forestry processing	-	-	Cai Rong
8	Fishing net knitting	Quang Yen	Agricultural materials production	-	-	Tan An
9	“Bau” wine production	Hoanh Bo	Agro-forestry processing	-	-	Bang Ca
10	Wine making from apricot	Uong Bi	Agro-forestry processing	-	-	

出典: DARD

## II-3.2.2 農業及び漁業の現状

クアンニン省社会経済開発マスタープランによると、農業セクターの GDP はクアンニン省全体の 6.1%を占める。2020 年までの計画期間では、省内の農業セクターの成



長率を約 8%/年としている一方、2020 年以降は成長率が 4%/年程度に低下すると予想している。

農業生産に適した土地資源が限られていることから、農業セクターの平均成長率は低くなっている。また、農業の集約化は十分進んでおらず、集約農業の技術レベルも低いいため、深刻な作物被害や家畜の疫病を引き起こすケースもある。

クアンニン省の畜産業の自給率はわずか 60%であるなど、一般に省内の農業生産は省の需要を満たしておらず、特にハロン湾地域内ではその傾向が顕著である。そのため、不足分は他省からの供給・調達に頼っている。2014 年の米の収穫量及び作付面積、家畜頭数を下表に示す。

表 II-3.12 2014 年の米の収穫量及び作付面積、家畜頭数

	米の収穫量 (千 t)	米の作付面積 (千 ha)	牛 (千頭)	豚 (千頭)	鶏 (千羽)
ハロン市	3.0	0.7	0.5	14.3	36.3
カンファ市	1.5	0.4	0.9	25.4	98.6
ヴァンドン市	3.1	0.9	0.4	10.1	69.2
ホアンボ市	9.9	2.4	1.7	19.5	172.2
クアンイェン町	56.1	9.9	4.4	55.9	408.1
ウオンビ市	13.2	2.6	1.9	12.0	132.2

出典：Quang Ninh Statistical Yearbook 2014

一方、地元農産物には強みを持つものもあり、「Quang Yen の安全野菜」、「Quang Yen の蟹」、「清潔な Tan An の卵」、「花の地域ホアンボ」、「アメリカナミガイ (tu hai) を含む特産海産物」、「ヴァンドンの特産海産物（環節動物）」などである。この中には、ハイテク技術を適用した産物もあり、市場でも流通している。

ベトナム国政府は、農業セクターの持続的成長・発展に係る Decision No. 899/QD-TTg を 2013 年 6 月 10 日に発布し、MARD を中心に農業セクターの再構築を実施している。クアンニン省では DARD が「農業の価値を高めるための農業改革及び 2020 年クアンニン省持続可能な開発と 2030 年ビジョン」を Decision No. 1396/QD-UBND として発布し（2015 年 5 月 25 日）、これに基づき、農業セクターの再構築に向けた以下の取組を進めている。

- 安全と環境に配慮した養殖の推進による漁業の発展
- 放牧から集約的畜産への転換
- 高度科学技術の適用加速
- 有機農業の推進
- 民間セクターからの投資促進

DARD によると、クリーン農業生産と観光振興を繋ぐ有機農業の促進に、現在注力している。

漁業や養殖は、ハロン、ヴァンドン及びクアンイェン等で盛んであり、エビ、イカや、汽水域・淡水域も含む魚類が水揚げの中心である。ハロン湾地域の 2011 年の水揚げ量は 45,300 トン（省全体の 52.9%）、うち養殖は 16,300 トン（省全体の 55.8%）、漁業は 29,000 トン（省全体の 51.7%）である。クアンイェン町の水揚げ量が最も大きく（19,900 トン、省全体の 23.2%以上）、養殖だけでも省の生産量の 29.7%（8,800 トン）を誇る。一方、沿岸漁業では、ヴァンドン郡が 13,200 トンの水揚げ量であり、省全体の約 23.6%を占める。

ヴァンドン郡の沿岸にはエビ、イカ、カニ、真珠貝、アワビなどの多種類かつ高価な漁業資源が豊富である。小規模な漁業は古くから営まれていたが、組織的な沿岸漁業、生簀養殖、遠洋漁業などは1995年頃から始められた。2000年に3,500トンだった漁獲高は2011年には18,800トンまでになっている。

多様な海産物があり、かつ旅行者の消費や対外輸出ニーズが高いハロン市でも、漁業は盛んである。Halong市人民委員会は、Dai Yen区及びViet Hung区南部を農林水産業の重点開発地区としている。

なお、カンファ市には50km以上の海岸線があるが、漁業はあまり盛んではなく、漁獲高も相対的に低い。

### II-3.2.3 運輸セクターの現状

クアンニン省は18号、10号、4B号、18C号、279号といった主要幹線道路を有し、ハノイ市やハイフォン市と地理的に接続が良好な地域である。

一方、省内やハロン湾地域内の移動は、主に陸路であり、河川や海上の水運利用はあまり発達していない。クアンニン省の統計年鑑によると、2005年から2010年は陸路による移動が80%以上（2009年82%に達し、全体1,700万人の移動者のうち1,400万人）であり、内陸水路及び海上移動は300万人でわずか17.6%であった。クアンニン省の内陸運輸・交通網は近年急速に整備され、クアンニン省への国内外旅行者のニーズに応えるのみならず、地元住民の域内移動の活性化に寄与している。2017年6月には、現在建設中のハイフォン-ハロン道路（全長約25km）が開通予定である。本高速道路が開通すると、工業団地への企業誘致、及びハロン湾地域の観光客の増加といった効果が期待されている。

貨物輸送は陸路に加え、内陸水運や海上輸送も利用されている。海上輸送網は3つの大型港湾（カイラン港、カンファ港、Van Hoa～Mui Chua港）や内陸の埠頭部で構成され、機能性も一定程度高く、地方への石炭や物資輸送に貢献している。

他方、クアンニン省の鉄道路線（Dong Trieu郡Kep～ハロン線）を活用した旅客移動は主要ではない。空路は、小規模ヘリポート以外に空港がないため、一般利用はなく、主にハロン湾の空中からの観光か、或いは国境防衛のための利用に留まる。

近年の省の急速な社会経済発展に伴い、交通インフラ整備のスピードも上がっている。特に道路網の整備が進むにつれ、自動車交通量の急激な増加が見られ、2009年の統計年鑑によるとクアンニン省の登録車両増加率は2005年から2009年の期間で8.8%である。

## II-3.3 観光部門

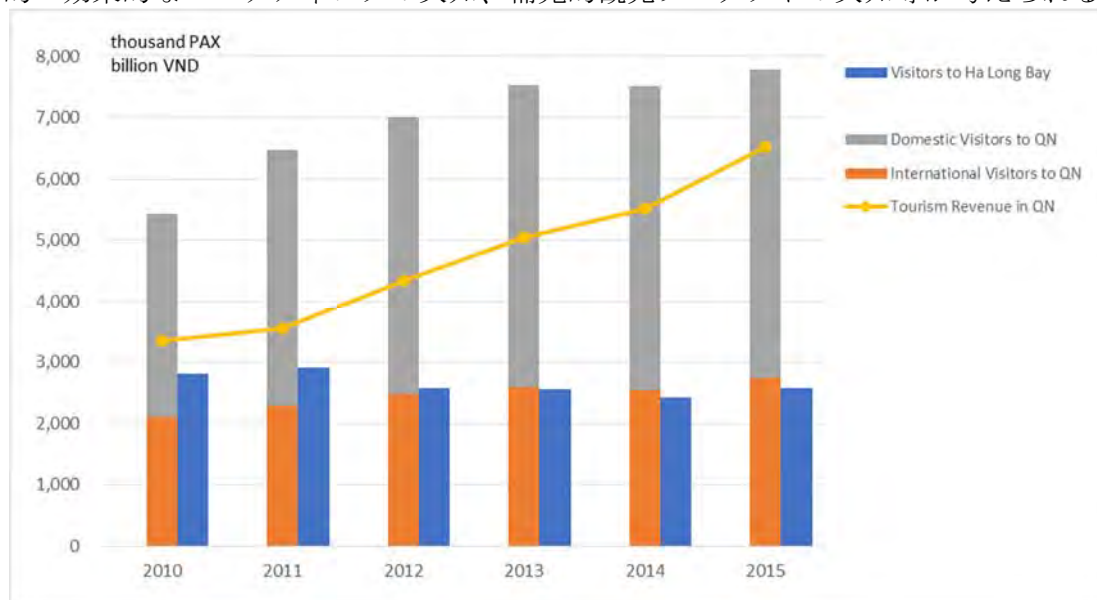
### II-3.3.1 観光部門の現状

#### (1) 需要

観光局（Tourism Department）の観光ビジネス課は、主要観光サイトの訪問客数、ホテル及びナイトクルーズ船の宿泊客数・宿泊数、旅行会社手配客数、警察へ報告された宿泊客の国籍から、観光業統計を作成している。訪問客は、宿泊の際にパスポートや身分証を示す以外、クアンニン省内を自由に移動できることから、統計には推計値が含まれるものの、クアンニン省の観光の現状と課題は推察可能である。

## 1) 訪問客数

クアンニン省への訪問客数は、2010年の540万人から2015年の780万人と増加傾向にある。このうち、外国人訪問客は35%前後と安定している<sup>11</sup>。一方、ハロン湾への訪問客数は、横ばい傾向にある。このことからハロン湾における観光活動は飽和状態に達していることを推測できる。理由としては、ハノイ周辺の他の観光地の存在（例えば、新たに世界遺産に登録されハロン湾に類似の景観を有するチャンアン）、ハロン湾はクリーンでないという風評（例えば、TripAdvisor等の旅行SNSでの評価）、魅力的・効果的なマーケティングの欠如、補完的観光プロダクトの欠如等が考えられる。



出典：Tourism Department

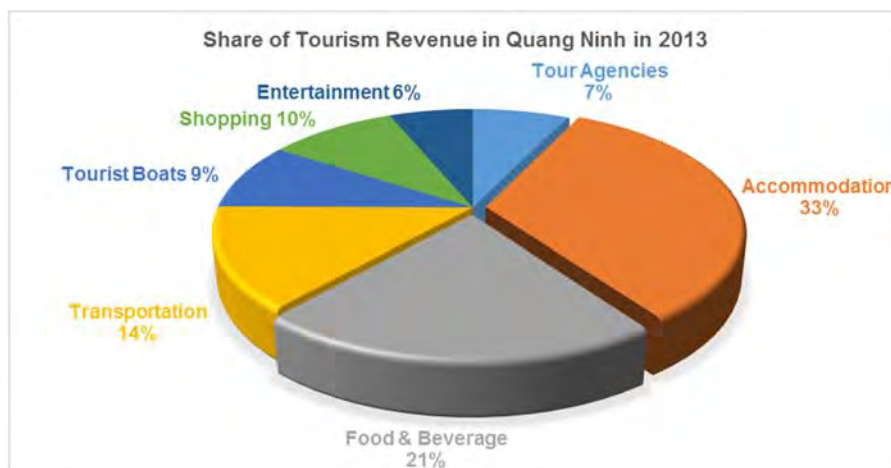
図 II-3.2 訪問客数と観光収入の推移

クアンニン省への訪問客数の増加に伴い、観光収入も増加してきた。観光収入は、ホテル、観光船、旅行会社、登録レストラン等の省内の観光産業の収入の積み上げで推計されている。クアンニン省の2015年の観光収入は6兆5,250億VNDと推計され、省内GDPの約5%を占める。訪問客一人あたりに換算すると観光収入は84万VND（約38USD）となる<sup>12</sup>。この極めて低い単価には様々な解釈があり得るが、クアンニン省が訪問客をより長く滞在するような工夫ができれば、観光収入及び観光単価の増加が期待できると思われる。

下図は2013年のクアンニン省全体の観光収入の内訳を示している。宿泊と飲食による収入が過半の観光収入を生み出している。

<sup>11</sup> 2015年は、合計7,768,000人の訪問客の内、2,760,000人が外国人訪問客であった。

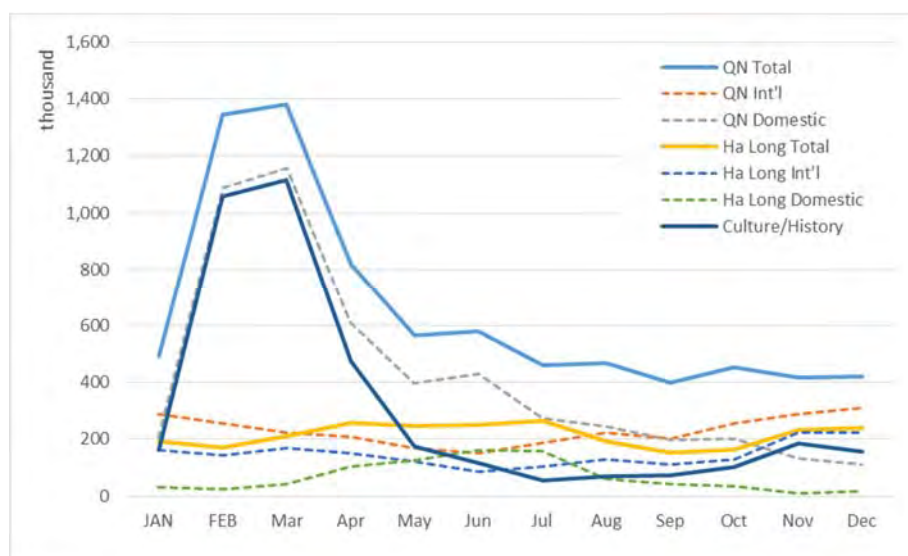
<sup>12</sup> ハロン湾に限った2015年の観光収入は全体の約65%の4兆2,500億VNDと推計される。従って、訪問客一人あたりの観光収入は166万VND（約75USD）と計算される。一方、2015年のハノイの観光収入は55兆5,390億VNDで一人あたりの観光収入は280万VNDと計算される。これはクアンニン省の3.3倍、ハロンの1.7倍に相当する。



出典: Tourism Department

図 II-3.3 クアンニン省の観光収入の内訳（2013年）

下図は、クアンニン省全体、ハロン湾観光、文化・歴史観光（Yen Tu 寺院が大半を占める）への、2015年における月別訪問客数の推移を示している。



出典: Tourism Department

図 II-3.4 月別訪問客数の推移（2015年）

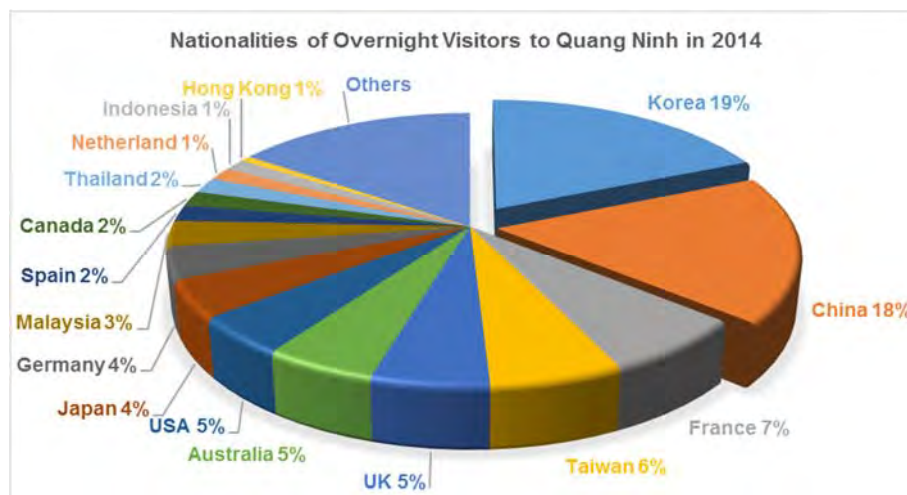
クアンニン省全体では、ベトナム正月の2月頃にYen Tu寺院に参拝する訪問客が極端に多いことが特徴である。ハロン湾観光に関しては、外国人訪問客がやや減少する6月前後には、国内訪問客が増えることにより、年間を通し、訪問客数が概ね安定していることがわかる。ハロン湾での観光客数の季節的変動が比較的小さいことは、安定した観光産業の成長の観点からは長所である。

クアンニン省観光マスタープランによれば、2012年における省内4つの観光目的地（ハロン、ウオンビ、ヴァンドン、モンカイ）の各々の訪問客数は、310万人、250万人、50万人、60万人であった。この客数比率は、ハロンとYen Tu寺院のあるウオンビの2ヶ所が主要な観光目的地であることを示している。2012年の合計訪問客数は700万人であったことから、4つの目的地以外の訪問客数はわずか20万人と極めて少ない。

## 2) 訪問客セグメント

外国人訪問客の大半はハロン湾のみを訪れ、クアンニン省内の他の地域を訪れる外国人は稀である。

クアンニン省の訪問客の中で、クルーズ船またはホテルに宿泊する客のみの国籍が把握されている。概して、欧米の訪問客はクルーズ船に泊まり、アジア人の訪問客は陸上のホテルに宿泊する傾向がある。下図は、2014年における宿泊を伴う訪問客の国籍分布を示している。韓国からの訪問客が全体の19%とトップで、中国18%、フランス7%、台湾6%、英国、オーストラリア、米国が共に5%、日本とドイツが4%となっている。



出典：Tourism Department

図 II-3.5 宿泊を伴う訪問客の国籍分布

但し、約半数を占める日帰り客の国籍を把握することが困難なため、上図は、クアンニン省の訪問客全体の正しい国籍分布を表してはいない点に注意が必要である。一般に、特に欧米、日本等から個人旅行者（FIT）は、ハノイから日帰りでハロン湾を訪れることが知られている。一方、韓国や中国からの団体訪問客は、ハロンの陸上のホテルに一泊することが知られている。従って、実際の国籍分布は、上の分布図とは多少異なることになる。

## (2) 供給

## 1) 観光資源

クアンニン省には、自然、文化・歴史<sup>13</sup>、都市観光の3つの主要な分類にわたり、多様な有形無形の観光資源が散在している。しかし、ハロン湾に代表される自然資源のみが外国人訪問客をひきつけている<sup>14</sup>。Yen Tu 寺院を含む文化・歴史、都市観光には、主に国内訪問客と地域住民が訪れている。



Cities/Towns	Cultural/Historical Sites	Natural Sites
4. Uong Bi City	1. Yen Duk Village	3. Yen Trung Lake
9. Ha Long City	2. Yen Tu Relic	6. Lung Xanh Waterfall
13. Van Don Subtown	5. Ba Vang Pagoda	11. Bai Tu Long Bay
16. Tien Yen Subtown	7. Bach Dang Stockyard	14. Bai Dai Beach
17. Mong Cai City	8. Tran Hung Dao Temple	18. Binh Ngoc Beach
	10. Tran Quoc Nghien Temple	21. Tra Co Beach
	12. Cua Ong Pagoda	22. Ha Long Bay
	15. Cai Ban Pagoda	
	19. Tra Co Commune House	
	20. Tra Co Church	

出典：Provincial Tourism Development Master Plan towards 2020, with a Vision towards 2030

図 II-3.6 観光資源の分布

<sup>13</sup> クアンニン省には、仏塔、寺院、廟、天然記念物を含む 600 以上の文化・歴史史跡がある。その内、64 の史跡は国レベルの史跡に指定されている。加えて、省内にはいくつかの温泉が湧いている。

<sup>14</sup> 2014 年、ハロン湾には 150 万人の外国人が訪れ、90 万人の国内観光客が訪れた。同年、文化・歴史サイトには、合計で 330 万人が訪れた。

## 2) 観光プロダクト

ハロン湾を訪れるツアーにおいても、観光プロダクトは、日帰りか宿泊を伴う遊覧クルーズが中心である。ハロン湾での海水浴、カヤック等の観光プロダクトはあるものの、クルーズの補完的ないしは追加的な活動に留まっており、それらが主たる訪問目的になるには至っていない。ハロン湾の水上村は人気の観光アトラクションのひとつであるが、政府の陸上への住民（水上村民）移転政策によって、伝統的な漁民文化の真正性は消滅の危機にある。

Yen Tu 寺院は、年間数百万人の国内訪問客が訪れてはいるものの、現地に外国語での解説等がなく、貴重な文化財は十分に活用されていない。ハロン湾の後背地には、緑の山々、湖があるにも関わらず、内陸のエコツーリズムは開発されていない。

Dong Trieu にある Yen Duk 村は、典型的な農村観光地として Indochina Junk 社により、ハロン湾観光の補完的観光プロダクトとして開発された。同社のツアーでは、クルーズ客をハノイに送り返す際に、その村に立ち寄る。Yen Duk 村には、大半が外国人の年間 25,000 人の訪問客があり、その内 120 人前後がその村に 1~2 泊する。訪問客は、水上人形劇、伝統家屋と生活、田植えや魚とり等を体験できる。Yen Duk 村での観光体験は、訪問客に満足感を与えている。また、クアンニン省で、一村一品（OCOP）運動<sup>15</sup>が展開されているが、これまでのところ、OCOP は観光と効果的に連携されていない。

クアンニン省は民間財閥 Vin グループによる、ハロン市 Bach Dang 地区のハロン公園を「ハロンフラワー公園」として拡充計画を承認している。同公園拡充工事は現在実施中で、2017 年中の開園を目指している。公園には、植物の展示ゾーンや花園といった施設と共にアミューズメント施設を建設し、新たな観光客の呼び込みを目指している。

## 3) 宿泊施設

クアンニン省には 2 つのタイプの宿泊施設がある。ひとつは陸上のホテルで、もうひとつはハロン湾のクルーズ船である。

陸上のホテルについて、クアンニン省には中級ホテルから安宿が需要に比べて過剰にある。他方、高級ホテルは数えるほどしかない。2011 年、ホテルの総客室数は 15,000 室（星無しホテルを含む）に達していた。一方、同年の年間客室稼働率は、クアンニン省への大量の訪問客にも関わらず、58%と低率に留まっている。

表 II-3.13 陸上のホテル数と客室数

Category	Hotels	Percentage	Rooms	Percentage	Average Rooms
5 Star	4	2.68%	505	6.85%	126
4 Star	18	12.08%	2,478	33.60%	137
3 Star	13	8.72%	954	12.94%	73
2 Star	51	34.23%	1,933	26.21%	38
1 Star	63	42.28%	1,504	20.40%	24
Total	149	100.00%	7,374	100.00%	-

出典: Tourism Department, 2015 年 10 月

ベトナム政府観光局（VNAT）によれば、全国の格付け別の平均客室数（2013 年）は、5 つ星ホテル 243、4 つ星ホテル 113、3 つ星ホテル 60 であった。5 つ星ホテルを除く

<sup>15</sup> クアンニン省の OCOP は、日本の一村一品とタイの OTOP に倣い 2013 年に設立された。製品は、食品、飲料、薬草類、織物、装飾品、土産物の 6 種類に分類される。食品、飲料、織物、土産物が観光との連携の可能性が高く、特にハロン湾特産の海産物は、上手に紹介されれば、より多くの訪問客の誘致に寄与できるであろう。

ば、クアンニン省のホテルは全国平均よりも少し大きい。これは、ハロン湾のホテルが個人客よりも、団体客を主な顧客としていることに因ると思われる。

下表は、旅行者の間で頻繁に使われる SNS の TripAdvisor において「ブティックホテル<sup>16</sup>」と分類されるホテルの数を示している（2016年1月）。ベトナムでは、ブティックホテルがハノイに集中しており、ホイアンが続くことがわかる。

表 II-3.14 ベトナム各地のブティックホテルの数

Ranking	Location	Number of Boutique Hotels
1	Hanoi	44
2	Hoi An	23
3	Ho Chi Minh City	19
4	Hue	6
5	Sapa	5
6	Phan Thiet	4
7	Phu Quoc Island	3
8	Nha Trang	2
8	Da Nang	2
8	Dalat	2
8	Can Tho	2
12	Ha Long (Quang Ninh)	1
12	Ninh Binh	1
-	Vung Tau	0
-	Duong Dong	0
-	Haiphong	0
-	Cat Ba	0

出典: TripAdvisor, January 2016

ASEAN 加盟 10ヶ国は、環境に優しい観光とエネルギー消費の削減を目的として、2007年、ASEAN グリーンホテルスタンダードを制定・批准している。2014年、ベトナムでは10件のホテルが ASEAN グリーンホテルの資格を獲得したが、現在までクアンニン省ではこれを取得したホテルはない。ASEAN グリーンホテルの認証は、隔年での受付・審査に加え、政府観光局（VNAT）の組織する審査委員会のハンドリングの制約から、少数に制限されてきた。ハロン湾のホテルは、主たる顧客が団体客であり、ASEAN グリーンホテルによるブランディングが、あまりプロモーションに影響しないことから、応募に意欲的ではなかった。もし、主たる顧客が個人客であったならば、ブランディングはより重要であったであろう。

#### 4) 観光船

観光船は、ハロン湾の訪問者にとって世界遺産サイトを鑑賞するための重要な手段である。Tourism Department によると、2015年10月時点で、宿泊設備のない日帰りクルーズ船が301隻、宿泊設備の備わったクルーズ船が167隻登録されている。

<sup>16</sup> ブティックホテルとは、小規模なデラックスホテルを言う。従って、富裕な個人旅行者がこの分類のホテルを選ぶ傾向がある。



表 II-3.15 観光船

Items	Day Cruise Boats	Overnight Cruise Boats
Number of Companies	166	52
Number of Boats	301	167
Number of Rooms	-	1,824
Number of Beds	-	3,735

出典: Tourism Department, 2015 年 10 月

### 5) その他の観光施設

レストラン、娯楽施設、土産物店、ショッピングセンター等を含むその他観光施設は、海岸線に沿って広く分布している。しかし、大半は、国内訪問客と地元の住民を対象としている。

ハロン湾はベトナムでもトップの観光目的地のひとつであるにも関わらず、旅行者が頻繁にアクセスする SNS である TripAdvisor では、わずか数軒のレストランしか「旅行者が選んだベストレストラン」に選ばれておらず、最下位の 20 位である（2016 年 1 月時点）。この事実は、例えば、シーフードレストランやショッピングセンター等、既存の観光施設・サービスとハロン湾クルーズのより密接な関係づけの必要性を示唆している。

表 II-3.16 ベトナム各地のベストレストラン

Ranking	Location	Number of Best Restaurants
1	Ho Chi Minh City	2,284
2	Hanoi	1,536
3	Hoi An	559
4	Da Nang	371
5	Nha Trang	370
6	Hue	224
7	Phan Thiet	223
8	Dalat	181
9	Phu Quoc Island	154
10	Sapa	106
11	Vung Tau	95
12	Can Tho	71
13	Duong Dong	57
14	Hai Phong	51
15	Ninh Binh	39
16	Cat Ba	38
17	Quy Nhon	31
18	Buon Ma	27
19	Dong Hoi	26
20	Ha Long (Quang Ninh)	22

出典: TripAdvisor, January 2016

### 6) 観光人材

現在、ホテル、観光船、旅行代理店やオペレーター、登録レストランなどのクアンニン省の観光産業は、25,000 人の従業員を直接雇用している。石炭産業は 45,000 人を雇用していることから、観光セクターは依然として小さいことがわかる（社会経済開発マスタープラン）。

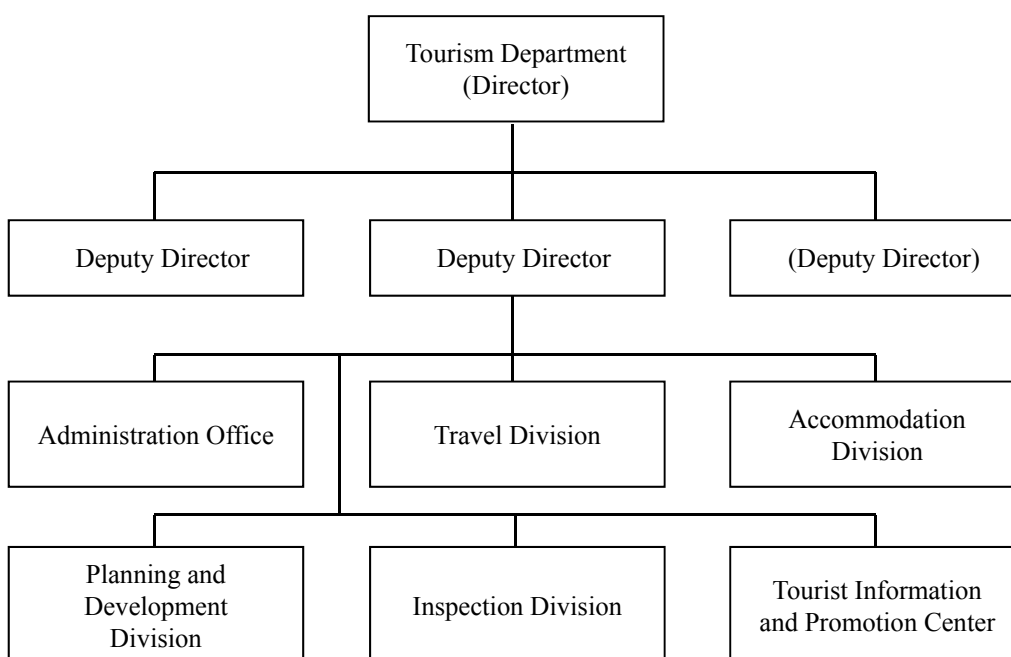
クアンニン省の観光人材の課題は、しばしばその質に言及される。観光人材全体のわずか40%のみが高等学校以上で、一応、フォーマルな観光教育を受けた経験を有している（観光マスタープラン）。

### (3) 組織と制度

#### 1) 観光局（Tourism Department）

クアンニン省観光局（Tourism Department）は、Decision No: 1270/2016 QDUBNにより、それまでの文化スポーツ観光局（DCST）から分離独立して2016年4月28日に設置された。省内の観光開発計画立案、マーケティング、観光と観光産業の管理を管轄する機関である。関連して、観光統計の集計、ハロン市の西部分に位置する Bay Chai 地区にある観光案内所での観光情報の提供も観光局の業務である。

観光局の職員数は36人である（2016年6月）。

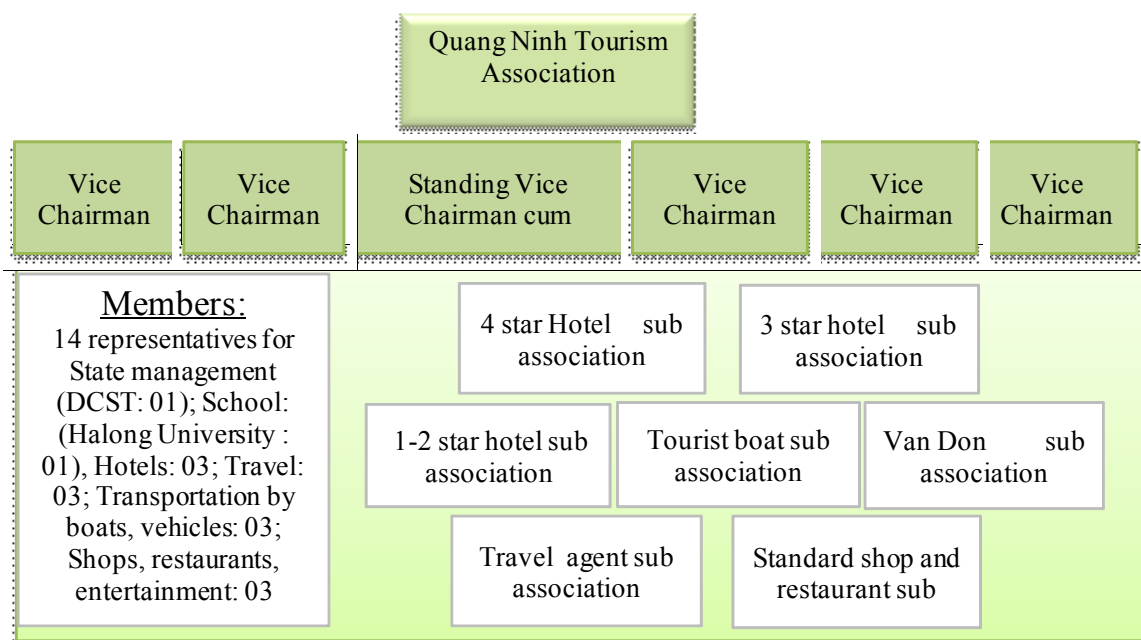


出典: Tourism Department

図 II-3.7 観光局組織図

#### 2) 観光協会

クアンニン省 PPC の下に、省内の観光産業が所属する観光協会が設置されている。観光協会には、ホテル協会、旅行代理店協会、レストラン協会、観光船協会等の分科会がある。



出典: Tourism Association

図 II-3.8 観光協会組織図

### 3) ハロン湾管理局 (HBMD)

ハロン湾管理局 (HBMD) は、文化スポーツ観光省、ユネスコ国内委員会、ハロン市 PC の下に設置された、ハロン湾世界遺産コアゾーンの管理を管轄する機関である。観光に関しては、HBMD は、Tuan Chau 観光船の乗場の世界遺産入域チケット売り場に近接した観光案内カウンターを運営している。しかし、提供されている観光情報はハロン湾内の情報に限られている。

HBMD には 378 人の職員がおり、訪問客の支払った入域料によって運営されている。2015 年には、全入域料収入 5,280 億 VND の内、950 億 VND (18%に相当) が HBMD の経常予算として配分された。残りの 82%は国庫に入り、管理計画に則ったハロン湾の保全管理プロジェクトの投資予算として使われる。過去には、Tien Cung 洞窟の船着場の整備等に使われている。

### (4) 観光マスタープラン 2020

2020 年クアンニン省観光マスタープラン 2030 年ビジョンが 2014 年に策定され、クアンニン省 PPC によって承認されている (Decision No: 1418/QD-UBND、2014 年 4 月 7 日)。

マスタープランは、2020 年までと 2030 年への展望を描いたクアンニン省全体の観光開発の方向性、ゴール、目的を設定し、人材、投資を含む観光関連の全ての資源を適切かつ組織的に動員する計画により示している。マスタープランには、省内の経済構造を「ブラウン」から「グリーン」へ移行することも強調されている。

#### 全体目標：

クアンニン省を、近代的な設備、質の高い多様で固有の観光プロダクト、強いブランディング、少数民族の生き生きとした文化、高い競争力等を備えることにより、2020 年までと 2030 年への展望を描いた社会経済開発マスタープラン (Decision No: 2622/QD-TTg dated 31/12/2013) に沿った、国際的な観光センター、国内における重要な観光ハブになるよう開発する。

**個別目標：**

1. 2020年までに、外国人400万人を含む1,050万人の訪問客を達成する。それにより、30兆VNDの観光収入、62,000人の直接雇用を創出する
2. 2030年には、外国人1,000万人を含む2,300万人の訪問客を達成する。それにより、130兆VNDの観光収入、120,000人の直接雇用を創出する
3. 省内の4つの主要観光ゾーン（ハロン、モンカイ-チャコ、バンドン-コトー、ウオンビ-ドンチオ-クアンイエン）の開発を完了する。
4. 2020年までに、ハロンを近代的で洗練された海洋観光都市に、ヴァンドン-コトーを質の高い国際海洋観光センターにする。2030年までにウオンビ-ドンチオ-クアンイエンを魅力的な文化と歴史観光のセンターにする

マスタープランは、現状分析に基づき、13の優先ソリューションを含む56のソリューションを提案している<sup>17</sup>。これらのソリューションは、以下の7つのグループに分類される。

1. マーケティング及びブランディング（DMAの設立等）
2. 新しい観光プロダクト（カジノ、ディスカウントショッピングセンター等）
3. インフラ及び交通網整備プロジェクト（高速道路、ヴァンドン空港等）
4. 観光施設プロジェクト（国際的なブランドをもつホテル等）
5. 人材育成プロジェクト（外国語ラーニングセンター等）
6. 環境保全プロジェクト（廃棄物管理等）
7. ガバナンスと組織間協力（PMO設立等）

これらのソリューションを詳細に検討した結果、56のソリューションの内、以下の8つのソリューションがグリーン成長の方向性と一致すると思われる。

1. No. 1：クアンニン省観光マーケティング機構（DMA）の設立（観光情報整備及びマーケティング活動の充実を含む）
2. No. 8：トレッキングルートの開発
3. No. 9：島のキャンピング場の整備
4. No. 32：観光船のルート管理
5. No. 33：観光船の運航数の規制
6. No. 34：観光サイトへの外国人観光客誘致
7. No. 47：観光船へのエコラベル付与
8. No. 48：廃棄物収集と処理についてのキャンペーン（優先）

<sup>17</sup> 56のソリューションズは表II-3.17に掲載する。

表 II-3.17 クアンニン省観光マスタープランの 56 プロジェクト

No.	Solutions
1. Marketing and Branding	
1.	<u>Establish a Quang Ninh Destination Marketing Agency (QNDMA) (Priority)</u>
2	Launch new digital tools
3	Develop key partnership
4	Create a slogan and logo for Quang Ninh
5	Build distinct identities for Quang Ninh's cities and villages
6	Develop year-round activities and a calendar of events
7	Publish "50 things to do in Quang Ninh" magazine
2. New Tourism Products	
8	Develop a network of hiking trails in the hill areas
9	Develop island camp sites
10	Facilitate establishment of business offering new tourism products
10a	Create the conditions needed to make Ha Long City to be a tourist center at night
11	Build a natural science eco-museum in Ha Long City
12	Partner with experienced tourism business to develop more cultural attractions
13	Enhance Quang Ninh Museum
14	<u>Engage a casino developer or consultant to develop a resort in Van Don District (Priority)</u>
15	Develop a series of world-class golf courses in Quang Ninh
16	Host an Asian Tour golf event in Quang Ninh by 2020
17	<u>Develop a discount luxury shopping complex (Priority)</u>
18	Longer itineraries
19	Host festivals
3. Infrastructure and Transportation	
20	Expand passenger port system in Van Don
21	Attract international cruise ship passengers
22	<u>Speed up projects to improve key highways (Priority)</u>
23	Improve bus service infrastructure
24	<u>Quang Ninh international airport in Van Don (Priority)</u>
25	Promoting charter flights
26	Hanoi – Ha Long/Van Don helicopter service
27	Seaplane service within Quang Ninh
4. Tourism Facility Projects	
28	Increase hotel supply
29	<u>Pursue partnership with international name brand hotels (Priority)</u>
30	Improve the quality and consistency of accommodation by improved rating system
31	<u>Eco-resort on other islands in Van Don (Priority)</u>
32	Develop a tour boat itinerary management system
33	Implement a cap for boats on Ha Long Bay and Bai Tu Long Bay
34	Make a key cultural tourist destinations more accessible to foreigners
35	Facilitate establishment of a cooking school and restaurant
36	Build centralized place to try local street foods
37	Menu translation service
38	Quang Ninh Kids: free tours form students learning English
39	Hotline sign updates
40	Food establishment safety rating
5. Building and Fostering Human Resources	
41	<u>Improve environmental regulation and enforcement (Priority)</u>
42	Sponsored tourism trainee internship
42a	Filling the gap in human resources for Quang Ninh tourism to 2020 and onwards
6. Environmental Protection	
43	<u>Improve environmental regulation and enforcement (Priority)</u>
44	<u>Increase waste management resources (Priority)</u>
45	Improve environmental regulation and enforcement
46	Information sharing for an environmental health check program
47	Promote the Blue Sail Eco-Label pilot program
48	<u>Enhance waste collection and disposal campaign (Priority)</u>
49	Incorporate Quang Ninh into Vietnam's regulations website
7. Governance and Cooperation	
50	Create a "One-Stop Shop" for approval for small tourism-related businesses
51	Encourage open visa policies for tourism industry staff of all kinds
52	<u>Develop a structured, proactive approach to deal with investors and entrepreneurs (Priority)</u>
53	<u>Better coordination across all involved parties regarding investments in tourism (Priority)</u>

No.	Solutions
8. Others	
54	Better weather forecast
55	Tourism statistics
56	Meetings, incentives, conventions, and exhibition (MICE) manager

出典: Provincial Tourism Development Master Plan towards 2020, with a Vision towards 2030

## (5) 所見

下表は、ハロンとベトナム国内の人気観光地との比較を示している。

表 II-3.18 ハロンと他の人気観光地との比較

	Visitors in 2015 in million (Total/Int'l)		Indicative Length of Stay	Boutique Hotels	Best Restaurants	Remarks
Ha Long Bay	2.6	1.7	1 to 2 days	1	22	WH
Hanoi	19.8	3.4	3 to 4 days	44	1,536	WH, IA
Ho Chi Minh	24.0	4.7	3 to 4 days	19	2,284	IA
Hue	3.1	1.0	2 to 3 days	6	224	WH
Hoi An	2.0	1.0	1 to 2 days	23	559	WH

注: WH: World Heritage, IA: International Airport

出典: Vietnam National Administration of Tourism (VNAT), TripAdvisor, January 2016

訪問客数が示すように、ハロンはベトナムで最も人気のある観光地のひとつであることは間違いないが、他の人気観光地に比べ、旅行者が選ぶベストレストランや富裕な個人客が好むブティックホテルの数が小さく、他の観光地と明らかな違いがある。ハロンへの訪問客は、ハロン湾の自然景観を堪能した後、町を散策すること、近隣の観光地を探访すること、特産のシーフードレストランで舌鼓を打つこともなく、宿泊拠点のハノイへ急いで戻ってしまう。一方、例えばホイアンでは、訪問客は、歴史地区の魅力的な小路の散策に、より多くの時間と金を費やしている。

ハロン湾の観光セクターの現状は、グリーン成長の観点からは、以下のように総括できる。

### 1) 強み

ハロン湾は、次の目的地を探す世界中の潜在的観光客の間に良く知れ渡っている。一方、2,000の島から成るハロン湾は、世界的な価値のある美しい自然景観を保っている。ハロン湾を訪れるための観光船は、概して良く組織され、必要な設備と器具を備えている。

また、ハロン湾周辺には文化観光とエコツーリズムに活用できる、豊かな自然、文化、歴史的な資源を備えている。

### 2) 弱み

ハロン湾への訪問客は、ほぼ世界遺産である自然景観の遊覧のみに留まっている。訪問客は、他の場所にある他の観光プロダクトを探访するため、滞在を延ばすことはない。マーケティングと観光プロダクトのネットワーク化の双方を強化する努力が必要である。

観光客の滞在を延ばすため、そしてリピーターを増やすためには観光プロダクトの多様化が必要であるが、ハロン湾のバッファゾーンにおける観光開発には、世界遺産の美しい自然景観の悪化を防止するための適切な手段が欠如しているように思われる。今のハロン湾への訪問客は、大規模な建設工事による埃と騒音に悩まされている。訪問客から伝えられる評判は、将来の訪問客数に影響するであろう。

### 3) 機会

観光客は、環境へのネガティブなインパクトに対し、ますます関心を持つようになってきている。エコツーリズム<sup>18</sup>は、観光活動の中でも最も成長著しい分野のひとつである。ハロン湾は、有名な美しい自然景観と多様な自然資源の恵みにより、エコツーリズムを推進するのに理想的なサイトとなり得る。

完成間近のハイフォン-ハロン高速道路の建設は、所要時間の短縮によりハノイからのアクセスの改善をもたらす。より多くの訪問客が期待される。

### 4) 脅威

ハロン湾への訪問客は、美しい自然景観の名声に引かれてやってくる。美しい自然景観には、2,000の島だけではなく、海水や周辺環境も含まれる。もし、海水が汚染され、バッファゾーンの観光開発が自然美を妨害するものであれば、ハロン湾の魅力は容易に消滅する。環境管理は、ハロン湾の持続的な観光開発にとって鍵である。

## (6) 観光セクターに係る省 GGAP 精緻化の提言

### 1) ハロン湾の水質汚染・廃棄物管理

観光マスタープランでは、ハロン湾の汚染・ゴミ管理が不十分であるため、世界遺産登録を取り消されかねないとの懸念が表明されている。優先アクションプラン案において、ハロン湾の汚染・ゴミ対策に係る活動を提案する。

### 2) 開発と環境保全のバランス

観光マスタープランでは、観光開発の課題として、「観光客の増大は環境に負荷を与えるものであり、持続可能な開発とエコツーリズムの促進によって、訪問者に満足を与えながら、環境に対する負の影響を減らすようにすべき」としている。優先アクションプラン案も開発と保全のバランスの取れた観光セクターの推進を図る事が期待される。

### 3) 環境に配慮した観光関連ビジネス・インセンティブ

観光セクターの政策について、社会・環境面に配慮した小規模で高品位な観光関連ビジネスの奨励インセンティブの欠如と必要性が指摘されている。優先アクションプラン案に本課題に取り組む活動を含める必要がある。

### 4) グリーン産業としての観光セクター奨励

観光セクターの見通しとして、「持続可能かつ専門的な方法による観光開発によって、観光セクターが GDP 成長に資すると共に、省で最も重要な産業になり、産業構造の再編、ならびに成長モデルの更新をもたらすことが期待される」と指摘されている。優先アクションプラン案においても、観光セクターの推進をグリーン産業への構造転換の原動力として、捉えなおす必要がある。

### 5) 観光を含むサービスセクターのタスクと目標

省 GGAP では「グリーン生産に係る主なタスクと目標」という項目があるが、GGAP 全体として観光を含むサービスセクターに関する政策がない。観光セクターについて、持続可能な観光資源管理やエコツーリズムなど、環境・景観保全面での活動を計画する。

<sup>18</sup> 世界観光機関（UNWTO）では、エコツーリズムを、自然及び社会・文化的環境へのネガティブな影響を最小にすると同時に、それを管理するホストコミュニティ、組織、行政へ、経済的便益をもたらすこと、代替えの雇用と収入をもたらすこと、地域住民と観光客の双方の自然と文化の保存に関する意識を高めることで、観光対象エリアの維持管理を支援する観光と定義している。

## 6) 観光セクターの持続的成長に係る評価基準

グリーン成長プログラムとプロジェクトの評価基準について、経済、社会、環境などすべての面での持続可能性を優先とあり、観光セクターについても省 GGAP 評価基準を定める。

## 7) 観光セクターでのバイオ燃料の利用拡大

省 GGAP では、温室効果ガス排出の削減のため、バイオ燃料の使用について言及している。優先アクションプラン案に、ハロン湾の観光船を含む観光セクターでの利用拡大を奨励する活動を含める。

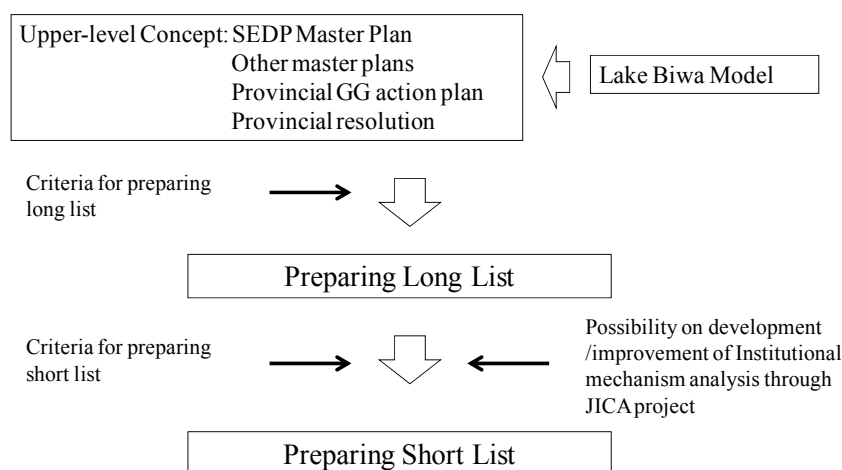


## 第II-4章 フェーズ2でのグリーン成長パイロット活動トピックの検討

### II-4.1 優先アクションプラン案の検討プロセス

#### II-4.1.1 全体プロセス

優先アクションプラン案検討の全体プロセスを以下に示す。優先アクションプラン案検討の基本的なアプローチは、クアンニン省の上位コンセプトに基づき定めた。併せて、II-2章に示した日本における自然資源のワイズユースと地域振興に係るアプローチである「琵琶湖モデル」を参考とする方針とした。併せて、既存の制度面に關わる課題を整理し、産業及び関連活動の現況を踏まえた環境パフォーマンス評価結果から、本事業で取り組むべき課題を整理した。これらの検討結果を踏まえ、PMU及びクアンニン省の関連機関とのインテンシブコンサルテーションにより、2016年4月までに優先アクションプラン案を策定した。



出典: JICA 専門家チーム

図 II-4.1 パイロット活動検討の全体プロセス

#### II-4.1.2 琵琶湖モデルの適用と対象セクターの選定

II-2章で述べた上位計画を踏まえ、パイロット活動選定のための基本的なアプローチを定めた。加えて、グリーン成長に係る効果的な活動を明らかとするために、「琵琶湖モデル」を参照し、クアンニン省のグリーン成長推進のための優先アクションとパイロット活動を選定する対象セクターを定めた。

#### II-4.1.3 制度面の課題の整理

II-2章に示したクアンニン省のグリーン成長政策・行政の現状を踏まえ、グリーン成長推進に關わる制度面の課題を整理した。

なお、既存制度メカニズムの課題解決に際しては、新たな法制度の施行に必要なプロセスを念頭に置く必要がある。一般的に新たな法制度の施行には以下のプロセスが必要である。

- (1) 上位法令および上位命令を踏まえ、立案すべき法文書（Decision や Circular など）のリスト化、及びリスト化された文書の施行に向けた年間計画の作成

- (2) 法文書のドラフト作成委員会の設置<sup>19</sup>
- (3) 関係部局による文書（ドラフト第1版）のレビュー
- (4) 文書（ドラフト第2版）の作成及び以下のプロセスによる審議
  - ワークショップ等による関連組織もしくは外部団内との協議（地方自治体、民間セクター、関連する協会/団体、大学、研究施設など）
  - ウェブサイト等での公開とドラフト文書に対するコメント聴取
- (5) 法務部による、関連上位法制度、上位の指示及びその他の法文書（Decision、Circulars）との整合性確認のための最終ドラフト文書のレビュー
- (6) PPCによる法文書の公告及び施行
- (7) 省共産党評議会による同意（財政や基金メカニズムに関する法文書の場合）
- (8) 国会による承認（税制に関する法文書の場合）

優先活動からパイロット活動を選定する際には、上記手段を踏まえ、実施フェーズで制度構築を図る際に必要となる期間についても留意した。

#### II-4.1.4 環境パフォーマンス評価

II-3章で示した主要な産業セクターの概況を踏まえ、各産業が環境に与える影響について検討する環境パフォーマンス評価を実施した。環境パフォーマンス評価結果を踏まえ、優先アクション及びパイロット活動の対象とする重点産業部門を選定した。

#### II-4.1.5 インテンシブコンサルテーションによる対象トピックの検討

グリーン成長促進を目的とした優先アクション案、及び実施フェーズのパイロット活動検討のため、一連のインテンシブコンサルテーションをPMU、専門家チーム、クアンニン省の主要関連部局及びハロン湾地域の関連機関と共に実施した。

2016年6月13日の時点で、パートIの表I-2.9に示したとおり、PMU及びJETが26回のコンサルテーションを計画・実施した。

### II-4.2 優先アクションの検討結果

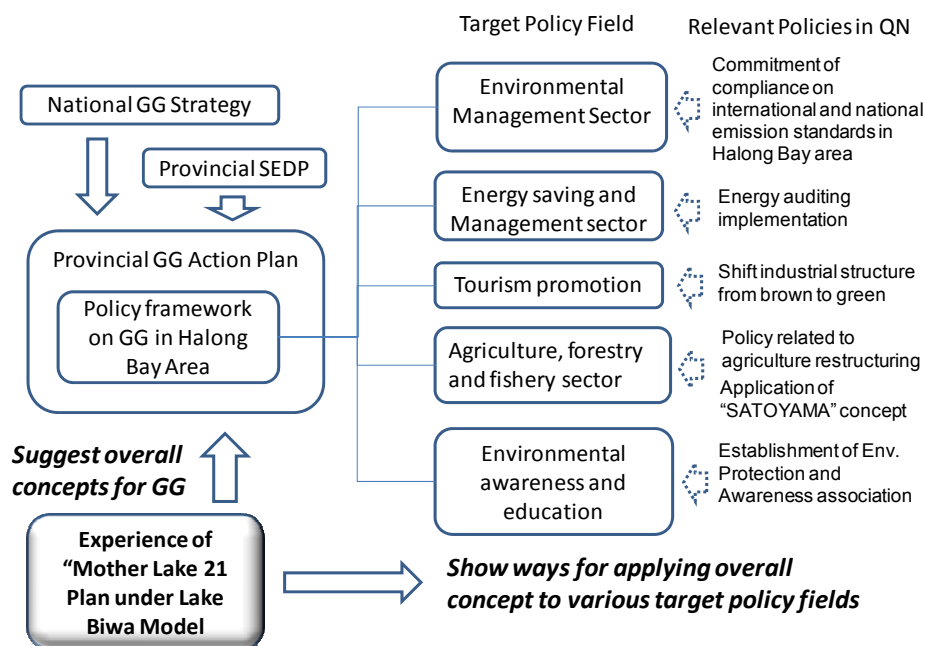
#### II-4.2.1 琵琶湖モデルの適用と対象セクターの選定

本プロジェクトの起源は、ハロン湾を中心とした地域の様々なリソースの持続的活用と保全に発している。これは、ハロン湾地域の適切な水域環境管理、及び水域に支えられた社会経済開発、を結び付けて同時に実現するという意図である。

従い、琵琶湖モデルで示唆されたとおり、水質汚濁対策等の琵琶湖水域管理という枠組みから、琵琶湖を中心とした地域管理・振興を俯瞰し、各種政策分野の有機的な枠組みへと発展する概念は、ハロン湾地域に適用可能である。

この琵琶湖モデルに見られる総合的水質・水域管理と、地域社会・経済発展の調和・両立を含めた概念に基づき、ハロン湾地域のグリーン成長推進を図る政策分野を、I-2.3.4節に示した対象セクター選定に関わる検討も踏まえ、(1) 環境管理、(2) 省エネルギー管理、(3) 観光業促進、(4) 農林水産業、(5) 環境教育・啓発、の5つのセクターとした。

<sup>19</sup> 委員会は、施行される法文書の内容に従ってその都度、関連部局代表者を人民委員会が選定し構成される。



出典: JICA 専門家チーム

図 II-4.2 ハロン湾地域への琵琶湖モデル適用によるグリーン成長コンセプト

#### II-4.2.2 制度面の課題の整理結果

II-2章に示したクアンニン省のグリーン成長政策・行政の現状、及びII-3章に示したハロン湾地域の主要セクターの現状を踏まえ、本事業で取り組むべき制度面の課題を前節で掲げた対象セクター毎に整理した。

##### (1) 環境管理セクター

II-2.2.3節に示すとおり、クアンニン省では生産活動のグリーン化を掲げ、第二次産業からの廃水処理の改善に関わる達成指標をいくつか掲げている。クアンニン省は、第二次産業からの廃水によるハロン湾への環境負荷の低減と、湾の環境改善のため、環境モニタリングや立入検査など汚染源に対する規制的アプローチ<sup>19</sup>の施策を長く続けている。一方で、II-3.1.3節に示すとおり、ハロン湾の水質は必ずしも改善傾向にあるとは言えない現状である。

この状況を改善するためには、従来の規制的アプローチの強化に加え、経済的アプローチや技術刷新アプローチといった他アプローチの積極的な推進の検討が必要となる。グリーン成長分野においては、経済的アプローチや技術刷新アプローチの推進に寄与する施策の実施が期待されるが、クアンニン省は、グリーン成長分野での環境管理関連の支出は表II-2.10に示すとおり省予算と比較すると比較的小額であり、これらを推進するための予算措置がなされていない。また、II-2.3.4節に示したとおり、既存の環境保全基金等の活用状況も十分と言えない。

省 GGAP は上記の他に工業団地の環境管理体制の強化やリサイクル活動促進といった活動の促進も掲げている。工業団地の管理活動の強化については、詳細計画調査時のカイラン工業団地への聞き取り調査結果を踏まえると、管理体制強化施策実施を妨げる要因として、予算確保が一つの障害となっている。リサイクル活動については、その促進のため省はプロジェクト実施を計画しているが、有価物を除くと地域的な分

<sup>19</sup> JICA 調査「ベトナム国河川流域水環境管理調査（2008年～2010年）」では、ベトナムでの水汚染抑制に活用できる行政施策を、規制的アプローチ、経済的アプローチ、技術刷新アプローチ、意識向上アプローチ、インフラストラクチャー開発アプローチ、に分類している。

別・回収システムが構築されていないため、持続的かつ広域的な活動の実施が困難な状態である。

## (2) 省エネ/エネルギー管理セクター

省 GGAP の 3 つの主要タスクの一つとして、温室効果ガス排出量の削減が掲げられており、グリーン成長推進の重要な指標となっている。温室効果ガス削減に寄与する省エネ/エネルギー管理に関わる活動については、現状で、ベトナムの制度に則った大規模エネルギー消費者に対するエネルギー診断活動が実施されている一方で、同診断結果に基づいた具体的な省エネ活動は活発に実施されていないのが現状である。

この理由の一つとして、現状で電力料金は比較的安価であり、省エネ活動の実施によるメリットが必ずしも明確でない中、企業が具体的な活動を実施するための動機付けを図る制度が無い事が要因と考えられる。また、活動を実施するための財源オプションに乏しく、活動に関わる財源確保が困難なことも重要な課題として挙げられる。省エネの実現には、生産工程や工場管理設備への新規技術導入検討も必要となるが、不慣れた技術を導入する事に対する動機付けを図る制度も不十分な状態である。

## (3) 観光セクター

省 GGAP 及び社会経済マスタープラン、観光マスタープランは、経済成長の原動力を、鉱業部門など伝統的な産業から、観光セクターを中心としたサービス部門へシフトすることを指向している。しかしながら、II-3.3.1 節に示すとおり、ハロン湾地域の観光客数はここ数年、横ばいの状態が続いており観光客一人当たりの支出額も低い状態である。

このような状況を改善するためには、世界遺産地域のみならず、ハロン湾地域の多様な既存観光資源のより積極的な活用を図る必要がある。そのための方策の一つとして、効果的な観光情報の発信が必要だが、現状ではハロン湾地域の観光情報資料やツールは乏しく、観光客にとって必要かつ便利な情報が欠如している。また、情報発信に関わる連携や協力もなされていない。結果として、観光客は他の観光地や市内の名所へ行く機会を逸しており、観光業の促進を妨げている状態である。

また、ハロン湾地域は世界遺産地域を有することから環境配慮型観光業の推進が期待されるが、省は観光船に対する規制強化といった施策を実施しているものの、観光活動をより環境配慮型に誘導するための施策や環境配慮型観光の代表と言えるエコツーリズム推進のための体制が構築されておらず経験に乏しい状態である。

## (4) 農林水産業セクター

農林水産業セクターのグリーン成長に関連する活動は、養殖業といったハロン湾地域の水環境に影響を与える活動の影響軽減化と生産性向上の両立や、観光業の促進にも寄与する安全な農産物、水産物及びこれらの加工品の提供、といった側面が考えられる。省 GGAP でもグリーン成長促進のソリューションとして、グリーンな農林水産業の促進を掲げている。加えて、省 GGAP は農林水産業への高度技術の採用を推奨しており、上記活動促進のために高度技術の導入は効果的な施策と考えられる。しかしながら、現在、本分野での高度技術導入を促進するための制度は整備されていない。

## (5) 環境教育・啓発セクター

クアンニン省は、II-3.1.4 節に示したとおり、環境保全・教育ハロン協会を設立し、同協会が実際に活動を開始するなど、環境教育・啓発活動を推進する意向が見られる。しかしながら、同協会の予算措置が不明確であるなど、積極的な環境教育・啓発セクターの活動推進を図るための体制は不十分である。また、グリーン成長の概念は、ハ

ロン湾地域の各自治体や住民の間では極めて新しいものであり、それに関連する教育・啓発活動を確実に実施し継続するための制度は整っていない。

### II-4.2.3 産業セクターの環境パフォーマンス

#### (1) エネルギー利用

2014年8月、首相決定 Decision No. 1535/QD-TTg により、ベトナム国内の大規模エネルギー消費者の指定条件が下記のように規定された。

- (a) オイル換算で年間 1,000 トン (1,000TOE) 以上のエネルギーを消費する製造業者、農業生産事業者、及び輸送業者。
- (b) オイル換算で年間 500 トン (500TOE) 以上のエネルギーを消費する事務所やその他施設。教育や医療関連施設、企業娯楽施設、スポーツ関連施設、ホテル、スーパーマーケット、レストラン、小売店などを含む。

上記要件によりハロン湾地域では 78 の事業所が大規模エネルギー消費者として指定された。下表に示すとおり、78 の事業所のうち主要なものは、火力発電、セメント工場、石炭関連産業である。なお、DOIT では、34 の事業所でエネルギー診断を実施しており、また、33 の事業所にはエネルギー管理者が配置されている。

表 II-4.1 ハロン湾地域の大規模エネルギー消費者

Field	Type of Activity	Number of Company	Energy Consumption (TOE)	Remark
Buildings	Hotel	2	2,147	
	Operation of offices	1	535	Halong City Management Board of Public Services
	General wholesale trading	1	501	
Industry	Production of electricity	4	2,067,514	3 power plants are operated by EVN, and 1 power plant is operated by VINACOMIN.
	Production of cement	4	608,213	
	Coal extraction and collection	24	416,544	18 companies belong to VINACOMIN
	Production of construction materials from clay	8	114,496	
	Production and canning of oil, animal fat, vegetable	1	10,319	
	Other industrial production	2	9,764	
	Shipbuilding and floating structures	1	3,177	
	Production of power transformers, distribution equipment and power control	1	2,183	
	Production of flour and flour products	1	2,090	
	Production of fiber	1	1,697	
	Manufacture of other chemical products not being categorised	1	1,599	
	Manufacture of basic chemicals	1	1,536	
	Exploiting, processing and supply of water	1	1,485	
	Production of non-ferrous and precious metals	1	1,358	
	Quarrying	1	1,142	
	Production of other products from plastic	1	1,096	

Field	Type of Activity	Number of Company	Energy Consumption (TOE)	Remark
Transportation	Cargo transportation by other type of vehicles (except specialized vehicles)	10	41,453	
	River ports cargo loading and unloading	5	22,840	
	Inland waterway cargo transportation by motorized vehicles	2	4,309	
	Transport by bus	1	2,712	
	Cargo transportation by specialized vehicles	2	2,622	
	Cargo transportation by inland waterways motor vehicles	1	2,067	

出典：Decision, No. 1535/QĐ-TTg in August 2014 に基づき JICA 専門家チーム作成

## (2) 温室効果ガス排出の現状

MPI-UNDP によるクアンニン省グリーン成長調査レポート（2015年11月）では、下表のとおり、現在の温室効果ガス排出量とその将来予測を推計している。

表 II-4.2 クアンニン省の主要セクターの温室効果ガス排出量

Unit: 1,000 ton

Category	Sector	2015	2020
Indirect GHG emissions	Agriculture	705	719
	Forestry	3,529	3,731
	Industry and Construction	1,127	1,475
	Coal mining	16,333	16,709
	Cement industry	2,788	2,788
	Commerce and Service	95	125
	Consumption management	636	768
	Other activities	58	72
Direct GHG emissions	Road transportation	1,156	1,596
	Waterway transfers	116	160
Total		26,543	28,143

出典：Study Report: Development of Action Plan for Green Growth of Quang Ninh Province, MPI/ UNDP

## (3) 廃水排出の状況

### 1) 第2次産業

ハロン湾地域の主要廃水量を下表に示す。鉱業及びセメント業で全体廃水量の80%以上を占めている。これらの産業を除いた場合、食品加工業、飲料製造業からの廃水が40%を占めている。

表 II-4.3 ハロン湾地域での主要発生源別廃水量

Category	Number of Main Facility	Amount of Wastewater (m <sup>3</sup> /day)						
		Total	Halon City	Cam Pha City	Van Don District	Hoanh Bo District	Quang Yen Town	Uong Bi City
Coal and mineral mining and processing (VINACOMIN Group)	32	62,608	17,200	22,700	8	5,500	0	17,200
Coal and mineral mining and processing (North-east company group)	9	19,200	1,900	17,300	-	-	-	-
Cargo port	3	1,600	1,600	-	-	-	-	-
Ship-building	1	1,200	1,200	-	-	-	-	-

Category	Number of Main Facility	Amount of Wastewater (m <sup>3</sup> /day)						
		Total	Halon City	Cam Pha City	Van Don District	Hoanh Bo District	Quang Yen Town	Uong Bi City
Industrial zone	4	1,027	750	0	0	37	240	0
Seafood and food processing / Beer and beverage producing	10	7,570	380	80	-	-	7,000	110
Petroleum	2	70	70	-	-	-	-	-
Cement	5	10,522	0	4,100	0	6,100	52	270
Other industry	31	6,407	7	4,200	20	1,400	470	310
Total	97	110,204	23,107	48,380	28	13,037	7,762	17,890

出典：DONRE 資料より JICA 専門家チーム作成

DONRE によると、汚染源管理の一環として実施している事業場への 2014 年・2015 年の環境チェック（インスペクションに類似の取組）では、対象事業場の 90%で廃水処理施設が確認されている。しかし前述のとおり、ハロン湾の水質は悪化傾向にあり、廃水処理施設が十分な能力を有していない、或いは適切な運転・管理がなされていない、などの課題がある事業場も一定程度存在する恐れ、改善・見直しが求められる可能性がある。

表 II-4.4 DONRE が環境チェックで確認した廃水処理施設を有する事業所数

Year	Number of Environmental Check	Facilities having WWTP	% of Facilities having WWTP
2014	58	52	90
2015	65	57	88

出典：DONRE 資料より JICA 専門家チーム作成

## 2) 養殖業

「クアンニン省漁業局マスタープラン案(2020年目標、2030年のビジョン提示)」(2016年)によれば、養殖業による排水は3,000m<sup>3</sup>/日以上排出されている。加えて、余剰の飼料が養殖池の底に10cm-30cm厚の底泥として体積している箇所があり、ハロン湾に影響を与えていると指摘されている。

## (4) 固形廃棄物

クアンニン省で発生する一般廃棄物の70%がハロン湾地域で発生している。ハロン湾地域の各自治体の収集率は、下表に示すとおり79%から96%となっている。

表 II-4.5 ハロン湾地域での一般廃棄物収集量と収集率

No.	Location	Collected Volume (tons/day)	Collection Rate (%)	Methods of treatment
1	Ha Long City	287	95	Sanitary burying
2	Cam Pha City	175	95	Sanitary burying
3	Uong Bi City	65	95	Sanitary burying
4	Quang Yen Town	45	88	Burying
5	Van Don District	19	79	Burying
6	Hoanh Bo District	25	96	Burying
	<b>Total</b>	<b>616</b>	-	-

出典：DONRE

2020年の収集廃棄物予測量を以下に示す。

表 II-4.6 ハロン湾地域廃棄物発生予測と収集率の目標

No.	Location	2020		
		Amount of generated SW (ton/year)	Amount of collected SW (ton/year)	Rate of collection (%)
1	Ha Long City	81,941	81,941	100
2	Cam Pha City	14,954	13,459	90
3	Uong Bi City	28,583	25,725	90
4	Quang Yen Town	2,491	2,118	85
5	Van Don District	4,037	3,633	90
6	Hoanh Bo District	12,812	10,890	85

出典: DONRE

医療廃棄物のうち、75%～90%は都市ごみ若しくは一般廃棄物と類似の性状であり、有害物質は含まれていない。残る10%～25%に有害廃棄物（感染性廃棄物）が含まれていると推測される。

2010年において、ハロン湾地域の工業団地から排出される産業廃棄物量は、クアンニン省全体の60%を占めていた。2030年までの産業廃棄物発生量予測を下表に示す。

表 II-4.7 2015年～2030年の産業廃棄物発生量予測

No.	Industrial Parks	Location	Amount of Solid waste generation (tons/year)		
			2015	2020	2030
1	Cai Lan IP	Halong City	32,000	32,000	32,000
2	Viet Hung IP	Halong City	22,000	25,000	32,000
3	Phuong Nam IP	Uong Bi City	53,000	61,000	76,000
4	Dong Mai IP	Quang Yen Town	12,000	13,000	17,000
5	Hoanh Bo IP	Hoanh Bo Dist.	51,000	58,000	73,000
6	Campha auxiliary coal sector IZ	Cam Pha City	30,000	34,000	43,000
7	Dam Nha Mac IZ	Quang Yen Town	113,000	129,000	162,000

出典: DONRE

## (5) 所見

上述の情報、及びII-3省に示したより整理した主要セクターの現況から、ハロン湾地域における産業セクターの環境パフォーマンスの整理結果を以下に示す。

表 II-4.8 産業セクターの環境パフォーマンス整理結果

業種	業種	特徴		
		廃水	エネルギー消費/ 温室効果ガス排出	廃棄物
製造業	鉱業	- 他業種と比較して最も多い。	- エネルギー消費量、温室効果ガス排出量とも、最も多い。	- 専用の処分場で処理される。
	食品加工業	- 鉱業、セメント加工業の次に廃水量が多い。 - 処理が不十分な場合、有機物、窒素、りんといったハロン湾で環境基準を超過している物質が高濃度で排出される可能性がある。	- 寄与は小さいと考えられる。	- 発生する産業廃棄物はリサイクルできる可能性があるが、その体制は構築されていない。



業種		特徴		
		廃水	エネルギー消費/ 温室効果ガス排出	廃棄物
製造業 (続き)	非金属加工業	- セメント加工業からの廃水量は大きい。但し、廃水の性質として、有機物、窒素、りんといったハロン湾で環境基準を超過している物質の濃度は高くないと考えられる。	- セメント加工業はエネルギー消費量、温室効果ガス排出量とも大きい。	-
	その他製造業	- 道路インフラ等の整備により、今後、企業誘致が活発となり、工業団地からの廃水量、廃棄物発生量やエネルギー消費量が増加する可能性がある。		
輸送業		-	- 貨物輸送業者に大規模エネルギー消費事業者が存在する。	-
サービス業	観光業	(注2)	- 大規模エネルギー事業者に指定されているホテルがある。	(注2)
農林水産業	養殖業	- 廃水や底泥悪化の影響が懸念されており、2016年にその運営改善を図るためのマスタープラン案が策定されている。	- 寄与は小さいと考えられる。	- 発生する産業廃棄物はリサイクルできる可能性があるが、その体制は構築されていない。

注1：製造業の業種は、表II-3.2で産出額の多い業種（鉱業、食品加工業、非金属鉱物化鉱業）を代表的な業種として個別に記載した。

注2：観光業の廃水、廃棄物に関する検討は次節に記載する。

出典: JICA 専門家チーム

鉱業部門は、廃水量、エネルギー消費量、環境負荷が比較的大きいと判断される省の経済発展の主要セクターであるとともに、ハロン湾等への環境負荷の寄与度も高い。しかし、同部門は中央からの管轄権限が強く、省政府からの行政的・誘導的関与は極めて限定的である。また、環境負荷軽減に寄与すると想定される様々な方策は、II-3.2.1節に示すとおり、諸外国ドナーによる支援を受けている状態である。従って本事業の優先アクション及びパイロット活動の対象としないこととする。

その他の主要な製造業のうち、セメント加工業からの廃水量は多いものの、その一般的性質をみると、II-3.1.3節に示したような有機物、窒素、りんといったハロン湾で環境基準を超過している物質の濃度は高くないと考えられる。一方で、エネルギーの大規模消費事業者であり温室効果ガス排出量も多いことから、省エネ/エネルギー管理関連の対象セクターになり得ると考えられる。

食品加工業も生産額が高い業種であるが、その廃水量は鉱業、セメント加工業の次に廃水量が多く、また、処理が不十分な場合、有機物、窒素、りんといったハロン湾で環境基準を超過している物質が高濃度で排出される可能性がある。

その他の製造業については、II-3.2.3節に示したハイフォン-ハノイ道路など、道路インフラ等の整備により、今後、企業誘致が活発となり、工業団地からの廃水量、廃棄物発生量やエネルギー消費量が増加する可能性がある。

観光業は次節でも検討を行うが、先に示したとおり、省GGAP及び社会経済マスタープラン、観光マスタープランで将来的な主要産業として位置づけられており、環境影響の増加の可能性もあることから、検討が必要である。

上述の検討結果を踏まえ、優先アクション及びパイロット活動を検討するうえでの重点産業部門は、将来にわたってクアンニン省にとって重要な産業としてプロジェクトにて選定されたものであり、工業団地、セメント加工業等の大規模エネルギー消費事業者、食品加工等が含まれるものとした。

## II-4.2.4 観光産業の環境パフォーマンス

### (1) 調査方法

観光関連産業による環境へのインパクトを把握する目的で、2015年11月～12月にかけて、質問票調査を実施した。

調査は、ハロン湾地域（ハロン、カンファ、ヴァンドン、ホアンボ、クアンイェン、ウオンビ）にあるホテル、レストラン、観光船を対象とした。調査対象とした施設数と得られた回答数を下表に示す。対象施設の母集団は以下の通りである。

- ホテル：主に DCST に観光用ホテルとして登録されているホテルを選定し、DPI によって登録されているホテル（開業されるホテルの全ては DPI によって登録される）を追加的に選定した。
- レストラン：DCST に観光用として登録されているレストランを全て選定し、DPI によって登録されているレストラン（開業されるホテルの全ては DPI によって登録される）を追加的に選定した。
- 観光船会社：ハロン湾地域の全ての観光船会社を選定した。

表 II-4.9 調査対象数と回答数

Items	Hotels	Restaurants	Tourist Boats
Number of Target Facilities	212	138	48
Obtained Responses	68	100	44
Valid Response Rate	32.1%	72.5%	91.7%

出典：JICA 専門家チーム

表 II-4.10 回答数の地域別分布

Items	Ha Long	Cam Pha	Van Don	Hoanh Bo	Quang Yen	Uong Bi	Total
Hotel	51	3	6	1	3	3	68
Restaurant	40	25	10	7	8	10	100
Tourist Boats	44	0	0	0	0	0	44
Total	135	28	16	8	11	13	212

出典：JICA 専門家チーム

### (2) 調査結果

#### 1) ホテル

ホテルからの回答で得られた2014年の年間平均宿泊客数を下表に示す。

表 II-4.11 ホテル格付け別の年間平均宿泊客数（2014）

Category	Responses	Average Number of Rooms	Average Number of Beds	Average annual Number of Guest-Nights in 2014	Average annual Number of Guests in 2014	Average Number of Staff in 2014
5 star	2	399	748	54,134	54,134	325
4 star	16	144	255	37,452	36,119	117
3 star	14	70	139	17,571	16,308	42
2 star and less	35	32	58	6,405	5,985	10

出典：JICA 専門家チーム

下表は、ホテルの格付け別に、2014年のエネルギーと水の年間平均消費量を示している。格付けの高いホテルほどエネルギーや水の消費量が多いことが明白である。

表 II-4.12 ホテル1件あたりのエネルギー・水年間平均消費量（2014）

Hotel Category	Electricity (Kwh)	Diesel Oil (Liter)	Heavy Oil (Liter)	Gas (m <sup>3</sup> )	Coal (Ton)	Water (m <sup>3</sup> )
5 star	3,365,916	48,303	0	38.4	172.0	58,081
4 star	835,670	13,280	10	29.5	48.5	23,196
3 star	213,192	932	53	30.2	8.1	13,605
2 star and less	66,565	137	21	1.4	17.3	2,319

出典：JICA 専門家チーム

特に、5つ星と4つ星ホテルの消費量が極めて高いが、これらのホテルは観光客だけではなく、地元住民によるセミナーやイベントの開催にも使われていることに注意が必要である。

下表は、宿泊客数に基づき、ホテルの宿泊客ひとりあたりのエネルギーと水の年間平均消費量を算出した結果を示している。

表 II-4.13 宿泊客一人あたりのエネルギー・水年間平均消費量（2014）

Hotel Category	Electricity (Kwh)	Diesel Oil (Liter)	Heavy Oil (ml)	Gas (Liter)	Coal (Kg)	Water (Liter)
5 star	62.18	0.89	0.00	355	3.18	1,073
4 star	23.14	0.37	0.28	249	1.34	621
3 star	13.07	0.06	3.25	596	0.50	834
2 star and less	11.15	0.02	3.46	71	2.89	390

出典：JICA 専門家チーム

下表は、ホテルの格付け別に、2014年の廃棄物の年間平均排出量を示している。

表 II-4.14 ホテル1件あたりの廃棄物年間平均排出量（2014）

Hotel Category	Average Kitchen Waste (Ton)	Average Total Recyclable Waste (Ton)	Average Total Miscellaneous Waste (Ton)
5 star	113.10	0.47	53.00
4 star	28.54	3.78	18.77
3 star	7.80	3.15	18.73
2 star and less	1.30	0.50	1.61

出典：JICA 専門家チーム

エネルギー消費量と同様に、格付けの高いホテルほどより多くの廃棄物を排出する傾向がある。

下表は、宿泊客数に基づき、ホテルの宿泊客ひとりあたりの廃棄物の年間平均排出量を算出した結果を示している。

表 II-4.15 宿泊客一人あたりの廃棄物年間平均排出量（2014）

Hotel Category	Average Kitchen Waste (Kg)	Average Total Recyclable Waste (Kg)	Average Total Miscellaneous Waste (Kg)
5 star	2.09	0.01	0.98
4 star	0.75	0.10	0.49
3 star	0.48	0.19	1.15
2 star and less	0.24	0.08	0.27

出典：JICA 専門家チーム

ホテル支配人への個別のインタビューによると、エネルギー消費と廃棄物排出量の削減のため、以下のような数々の手段が講じられている。

- 廃棄物の分別（生ごみ、リサイクル/有価物、一般ごみ）
- 生ごみを農家へ有償で売却（農家が支払うが契約ではなく名目的）

- 照明に LED を使用
- 冷暖房にヒートポンプを使用
- 3 層式の廃水処理設備（浄化槽）
- オイルトラップの設置
- 太陽熱温水システムの使用、その他

## 2) レストラン

下表に、レストランの地域別に、2014 年のエネルギーと水の年間平均消費量を示す。

表 II-4.16 レストラン 1 件あたりのエネルギー・水年間平均消費量（2014）

Restaurant Location	Electricity (Kwh)	Diesel Oil (Liter)	Heavy Oil (Liter)	Gas (m3)	Coal (Ton)	Water (m3)
Ha Long	87,517	94	0	11.8	0.2	3,628
Cam Pha	45,559	114	0	8.3	0.8	2,479
Uong Bi	56,917	71	0	8.1	0.2	3,643
Quang Yen	22,177	83	0	3.3	1.0	1,125
Hoanh Bo	16,404	62	0	3.8	2.3	830
Van Don	17,793	10	0	3.2	0.7	1,371

出典：JICA 専門家チーム

信頼性はそれほど高くないものの、調査チームにより年間の顧客数も聞き取った。下表に、聞き取り調査を基に算出した客一人あたりのエネルギーと水の年間平均消費量を示している。

表 II-4.17 レストラン客一人あたりのエネルギー・水年間平均消費量（2014）

Restaurant Location	Electricity (Kwh)	Diesel Oil (Liter)	Heavy Oil (Liter)	Gas (Liter)	Coal (Kg)	Water (Liter)
Ha Long	4.97	0.01	0	0.67	0.01	206
Cam Pha	2.29	5.75	0	0.41	0.04	125
Uong Bi	2.71	3.38	0	0.39	0.01	173
Quang Yen	2.16	8.04	0	0.32	0.10	110
Hoanh Bo	1.45	0.01	0	0.33	0.20	73
Van Don	1.06	0.59	0	0.19	0.04	82

出典：JICA 専門家チーム

表からは、ハロンのレストランが他の地区よりも 2～3 倍多くの電力を消費していることがわかる。ハロンのレストランは、水の消費量も多い。

下表は、レストランの地区別に、2014 年の廃棄物の年間平均排出量を示している。

表 II-4.18 レストラン 1 件あたりの廃棄物年間平均排出量（2014）

Restaurant Location	Average Kitchen Waste (Ton)	Average Total Recyclable Waste (Ton)	Average Total Recyclable Waste (Ton)
Ha Long	7.26	0.29	0.01
Cam Pha	5.23	0.23	0.01
Uong Bi	7.82	0.06	0.03
Quang Yen	2.07	0.20	0.21
Hoanh Bo	3.21	0.11	0.01
Van Don	4.08	0.07	0.01

出典：JICA 専門家チーム

結果は、ホテルに比べ、レストランの廃棄物排出量のはるかに少ないことを明示している。レストランの廃棄物に関しては、いずれの地域も、3 つ星ホテルとほぼ同じ量

の生ごみを排出している。しかし、リサイクル/有価物、一般ごみは、3星ホテルに比べてはるかに少ない。

レストランのマネージャーへの個別のインタビューによると、エネルギー消費や廃棄物排出を削減するため、以下のような手段が講じられている。以下の手段をレストランが実施している理由は、浄化槽設置といった規制に誘導されている活動と、収益を生む有価物のリサイクルといったインセンティブ効果によるものがある。

- 全てのレストランで、廃棄物の分別が行われている（生ごみ、リサイクル/有価物、一般ごみ）
- 農家による生ごみの回収
- リサイクル/有価物の廃品回収業者による収集
- 複数のレストランでは太陽熱温水器を使っている
- 複数のレストランでは有機肥料を作る個別コンポストを使っている
- 99%のレストランで3層式の浄化槽を備えている（その廃水は、下水道の整備状況に応じて、下水道への放流か、地下への直接浸透である）
- オイルトラップは12%のレストランにしか備わっていない（その他のレストランは人手で油を改修しているが、食器を洗った際の廃水から油分を取り除くことは困難である）
- 45%のレストランは、定期的に、規則に従った廃水の水質検査を専門機関に委託してモニタリング、報告している

### 3) 観光船

ハロン湾には2つの観光船の港がある（トゥアンチャウ、ビナシン）。42の観光船運航会社により、237隻分の有効回答を得た。その内、185隻は宿泊設備を備えたクルーズ船である。各社の観光船所有数は、1～20隻とばらつきがある。

表 II-4.19 観光船一隻あたりのエネルギー・水年間平均消費量（2014）

Diesel Oil (Liter)	Gas (m <sup>3</sup> )	Water Consumption (m <sup>3</sup> )
59.04	2.87	1,738

出典：JICA 専門家チーム

表 II-4.20 観光船の乗客一人あたりのエネルギー・水年間平均消費量（2014）

Diesel Oil (Liter)	Gas (m <sup>3</sup> )	Water Consumption (m <sup>3</sup> )
0.27	0.01	8.08

出典：JICA 専門家チーム

### (3) 所見

概して、観光部門に係る3つの業種では、ビジネス的にコストを抑えることができることから、3Rが広く実践されている。観光船運航会社は、収入の源であることから、海水をきれいに保つことに意欲的である。いくつかの観光船運航会社では、CSRの一環として浮遊ごみを回収している。また、宿泊を伴うクルーズ船の運営会社が、観光船の停泊地や海水浴やカヤック等の観光活動を顧客に提供するエリアといった自社

観光船の運行地域での清掃活動に投資している。インドチャイナジャンク社は、CSRの一環として社内で環境基金を設け、定期的な環境美化活動を行っている。

前述のホテル支配人に対するインタビュー結果など、調査結果は、観光産業が環境保全に対して積極的な姿勢を示していることを明確に示している。観光産業に対し、クアンニン省の環境保全と保全運動を主導できるよう、更なる優遇策を提供することを提言する。

#### II-4.2.5 本プロジェクトにおいて取り組むべき優先課題と対象

制度面の課題及び環境パフォーマンスの分析結果を踏まえ、優先アクション及びパイロット活動を検討する各セクターについて、本プロジェクトで取り組むべき優先課題、及び活動の対象を以下のとおり整理した。

表 II-4.21 本プロジェクトにおいて取り組むべき優先課題と対象

セクター	制度の優先課題	対 象
環境管理セクター	<ul style="list-style-type: none"> <li>- グリーン成長分野での環境管理推進のための予算措置が不十分</li> <li>- 既存の環境保全基金等の活用促進の制度が無い</li> <li>- リサイクル活動促進のための地域的な分別・回収システムが未構築</li> </ul>	重点産業部門として選定された工業団地や食品加工業等の製造業
省エネ/エネルギー管理セクター	<ul style="list-style-type: none"> <li>- 省エネ/エネルギー管理活動実施のための財源オプションに乏しい</li> <li>- 省エネ技術導入の動機付けを図る制度が不十分</li> </ul>	重点産業部門として選定された大規模エネルギー消費事業者
観光セクター	<ul style="list-style-type: none"> <li>- 効果的な観光情報の発信体制の不備</li> <li>- 環境配慮型の観光業誘導を図る制度が無い</li> <li>- エコツーリズム推進のための体制が未構築</li> </ul>	世界遺産地域で観光業を営む観光船、ハロン湾地域のホテル、レストラン等を主な対象とし、ハロン湾地域全域の観光業を対象。
農林水産業セクター	<ul style="list-style-type: none"> <li>- グリーンな農林水産業促進に効果的と考えられる高度技術導入促進のための制度が未整備</li> </ul>	ハロン湾地域の養殖業
環境教育・啓発セクター	<ul style="list-style-type: none"> <li>- グリーン成長に関連する教育・啓発活動を確実に実施し継続するための制度が未整備</li> </ul>	上述の各対象及び一般市民

出典：JICA 専門家チーム

#### II-4.2.6 優先アクション検討のための選定基準

上位計画を踏まえた優先アクションプラン検討に係る選定基準を、(a) クアンニン省のニーズとの整合性、(b) JICA プロジェクトとしての有効性、(c) 琵琶湖モデル及び日本の知識・経験の適用性、(d) パイロット活動候補としての実行可能性及び適用可能性、の4つの観点で設定した。

##### (a) クアンニン省のニーズとの整合性

提案される優先アクションは、クアンニン省におけるグリーン成長の実施に係る上位目標及び目的の達成、特に省グリーン成長アクションプランの目標達成への貢献が求められる。また、クアンニン省は優先アクションについて、詳細計画調査実施前に JICA と意見交換を行っている。これらを踏まえ、以下の選定基準を考慮した。

- 省グリーン成長アクションプランの指標への貢献度合い
- 制度メカニズムの改善/構築への貢献
- 2015年9月のクアンニン省 PPC と JICA 代表による協議内容との整合性

**(b) JICA プロジェクトとしての有効性**

優先アクションのいくつかはパイロット活動として選定され JICA 協力事業として実施されるため、JICA プロジェクトとしての有効性について優先アクション検討段階から考慮した。

- 日本の協力事業に係る既存/実施中のプロジェクトもしくは活動との連携の可能性 JICA による支援の有効性を示すことができ、かつ他ドナー支援との重複回避

**(c) 琵琶湖モデル及び日本の知識・経験の適用性**

II-4.1.2 節で述べたとおり、優先アクションの検討に際し、琵琶湖モデルコンセプトの適用を図ることとした。これらを踏まえ、以下の選定基準を考慮した。

- 日本の知識及び経験の活用、連携の可能性
- 2016 年 4 月の本邦招聘で学んだ事例のなかでクアンニン省に適用可能な内容

**(d) パイロット活動候補としての実行可能性及び適用可能性**

優先アクションのいくつかはパイロット活動として選定される。従って、提案される優先アクションについて、パイロット活動候補としての実行可能性及び適用可能性について優先アクション検討段階から考慮し、以下の選定基準を考慮した。

- JICA 技術協力プロジェクトとしての投入や規模の適切性、及びパイロット活動に参加する可能性のある政府機関以外のステークホルダーからの合意取得の難易度
- 活用可能な既存の制度メカニズムの有無、及び活動参加候補者の実施能力

**II-4.2.7 優先アクションのリスト**

ハロン湾地域のグリーン成長推進に係る優先アクションのリストを 2016 年 1 月～4 月にかけて作成した。優先アクションは、(a) 環境管理セクター、(b) 省エネルギー及びエネルギー管理セクター、(c) 観光セクター、(d) 農業、漁業セクター、(e) 環境教育及び啓発セクター、の 5 つのグループに分けて検討した。作成した優先アクションのリストを以下に示す。

表 II-4.22 (1) 環境管理に関わる優先アクションリスト

No.	Topic	Expected Outcomes/Benefit	Institutional Mechanism to be developed/improved			Tentative Key stakeholders	Remarks
			Policy, legislation, regulation	Organizational/budgetary preparedness	Monitoring and verification		
1A. Environment Management (integrated Approach)							
1A-1	Enhancement of provincial funding mechanism for environmental management - Funding allocation - Mechanism improvement for approaching the fund by enterprises.	- Enhancing supporting mechanism for environmental management including SME	- Existing funding mechanism should be improved. - Budget source should be secured. - Revising of criteria for existing fund based on GG strategy - Establishing new fund for promoting environmental management under GG strategy - Private sector's participation should be enhanced.	- Responsible organizations: managing existing fund such as DONRE and DOST - DPI is expected to consider new funding mechanism as necessary. - PPC's commitment is essential for securing budget source. - IPA's participation is recommended to promote private sector's participation	- Validity of usage of fund will be monitored by each organization managing the concerned fund - Overall status of usage of fund will be monitored by PPC.	PPC, DPI, DONRE, DOIT, etc	- Budgetary planning/ allocation or funding resource arrangement is to be carefully examined, considering the state budget limitation. ** Attention of this remark shall be paid on the other possible topics.
1A-2	Enhancement of environmental management capacity in industrial zone and economic zone	- Improvement of environmental management in industrial zone and economic zone as symbol of GG in QN province	- Regulation on requirement in environmental management of tenants for industrial zone and economic zone with intensive mechanism	- Responsible organizations: DPI, DONRE, DOIT, Industrial Zone Management Board and Economic Management Board	- The concerned Economic Zone Management Board will monitor progress of activity.	Economic Management Board, etc	- ISO 14000 / ISO 50000 series are key tools for improving environmental management. - Development of eco-industrial zone can be targeted.
1A-3	Development of platform for increasing social incentive mechanism for promoting environmental management	- Enhancing of social incentive mechanism for proceeding environmental management under GG strategy	- Preparing provincial decision for commending good practice of environmental management with incentive mechanism - Establishment of platform with participating various stakeholders	- Responsible organizations: DPI, steering committee of provincial GGAP, HBMD, EPE Ass., and other concerned organizations	- DPI, or nominated organization by DPI will monitor activities of platform.	DPI, etc	- Social or financial incentive mechanisms are recommended to be prepared for commended organizations.



No.	Topic	Expected Outcomes/Benefit	Institutional Mechanism to be developed/improved			Tentative Key stakeholders	Remarks
			Policy, legislation, regulation	Organizational/budgetary preparedness	Monitoring and verification		
1B. Water Environment Management (countermeasure on individual pollutant)							
1B-1	Implementation of treatment of wastewater from tourist boats by urban wastewater treatment system	- Reduction of impacts to Halong bay by wastewater from tourist boats	- Preparing decision for collecting wastewater from tourist boats	DOT, HBMD. Halong City	- DOT and Halong City	Halong City HBMD, etc	- To actualize the system, cooperation with JICA yen-loan project is required.
1B-2	Regulation and standardization of construction works at the city/ coastal area along the bay	- Reduction of pollution load and silting impact on the bay due to the construction activities	- Improvement/ Upgrade of existing policy and institutional mechanism - Enhancement of the monitoring along with the construction in align with the regulations	DOC, DPI, DOF (Cost bearing mechanism should be clarified among governmental bodies, a project executor, and a contractor)	- DOC - Project executor - Contractor	DPI, DOF, DONRE	
1B-3	Establishment of Halong Bay Environmental Science and Research Center	- Identifying required middle and long-term measures for water environmental management with integrated analysis of scientific information	- Prepare decision for establishing Halong Bay Environmental Science and Research Center	DONRE, HBMD, DOST	DONRE	DPI, DT	- This action was recommended through experience obtained in the tour in Japan.
1C. Solid Waste Management							
1C-1	Implementation of pilot activity of 3R at model area in Uong Bi City	- Developing good practice on 3R for expanding the activity in Quang Ninh province	- Agreement to implement 3R activities at model area in Uong Bi City	- DONRE, DOC, Uong Bi city	- DONRE and Uong Bi city	- DONRE and Uong Bi city, etc	- Japanese MSE may be able to cooperate with this activity. - Cooperation with activities related to agricultural sector can be examined. - Experiences of pilot activity is expected to transfer other areas such as Halong city.

出典: JICA 専門家チーム

表 II-4.22 (2) 省エネ及びエネルギー管理に関わる優先アクションリスト

No.	Topic	Expected Outcomes/Benefit	Institutional Mechanism to be developed/improved			Tentative Key stakeholders	Remarks
			Policy, legislation, regulation	Organizational/budgetary preparedness	Monitoring and verification		
2-1	Energy management and saving on large energy consumers	<ul style="list-style-type: none"> <li>- Developing administrative supporting procedure on energy saving in large energy consumers by consulting service</li> <li>- Improvement of energy efficiency in large energy consumers as well as enhancement of energy efficiency in small and medium enterprises</li> </ul>	<ul style="list-style-type: none"> <li>- Plan for detail analysis of energy auditing</li> <li>- Providing subsidy for introducing energy saving equipment as necessary</li> </ul>	<ul style="list-style-type: none"> <li>- DOIT is expected to enhance energy management and saving potential evaluation capacity.</li> </ul>	<ul style="list-style-type: none"> <li>- DOIT is in charge of progress monitoring.</li> <li>- DONRE is in charge of GHG emission reduction.</li> </ul>	DOIT, DONRE, etc	<ul style="list-style-type: none"> <li>- Japanese MRV technique and experience can be applied.</li> </ul>
2-2	Promotion of ESCO project for energy saving and management	<ul style="list-style-type: none"> <li>- Obtaining experience of ESCO project</li> <li>- Expand knowledge of ESCO project</li> </ul>	<ul style="list-style-type: none"> <li>- Training on providing knowledge of ESCO project</li> <li>- Administrative policy to enhance cooperation with ECC in other province and existing ESCO</li> </ul>	<ul style="list-style-type: none"> <li>- DOIT and DOST is expected to enhance knowledge on ESCO</li> </ul>	<ul style="list-style-type: none"> <li>- DOIT is in charge of progress monitoring.</li> <li>- DONRE is in charge of GHG emission reduction.</li> </ul>	DOIT, DOST, DONRE, etc	<ul style="list-style-type: none"> <li>- Vietnamese ESCO has experiences to introduce Japanese equipment for energy saving.</li> </ul>
2-3	Strengthening administrative capacity to support the development of the private sector in technology improvement to reduce CO <sub>2</sub> emissions	<ul style="list-style-type: none"> <li>- Increasing alternatives on energy management and saving</li> </ul>	<ul style="list-style-type: none"> <li>- Preparing database of energy saving technique and product supplied by private sector</li> <li>- Developing one-stop service on energy saving</li> </ul>	<ul style="list-style-type: none"> <li>- DOIT and DOST are recommended to cooperated for introducing advanced technology.</li> </ul>	<ul style="list-style-type: none"> <li>- DOIT monitor status of introducing technology</li> </ul>	DOIT, DOST, etc	<ul style="list-style-type: none"> <li>- Japanese products may be applied for energy saving</li> </ul>
2-4	Supporting the installation of high-performance air conditioner / refrigerator	<ul style="list-style-type: none"> <li>- Reducing GHG emission in area-wide level in urban area</li> </ul>	<ul style="list-style-type: none"> <li>- Developing incentive to introduce high-performance air conditioner / refrigerator</li> </ul>	<ul style="list-style-type: none"> <li>- Supporting mechanism for private sector to secure initial investment cost</li> </ul>	<ul style="list-style-type: none"> <li>- To be discussed</li> </ul>	- To be discussed	<ul style="list-style-type: none"> <li>- Target area and facilities should be identified.</li> </ul>

出典: JICA 専門家チーム

表 II-4.22 (3) 観光セクターに関わる優先アクションリスト

No.	Topic	Expected Outcomes/Benefit	Institutional Mechanism to be developed/improved			Tentative key stakeholders	Remarks
			Policy, legislation, regulation	Organizational/budgetary preparedness	Monitoring and verification		
3A. Greening of existing tourism industries							
3A-1	Application of “Green Lotus Hotel” and/or “ASEAN Green Hotel”	- Reduced energy consumption and waste generation	- Application procedure is to be clarified.	- Professional Affaires Div. of DCST is in charge.	- Inspectors must be appointed by DCST.	DCST, Hotel Association, etc.	- Being done by DCST. - Linkage with OCOP can be incorporated. - Concrete indicators can be developed based on the result of Environmental performance survey.
3A-2	Replacement of outdated diesel engines of tourist boats	- Reduced GHG emission and oil leakage	- Regulation inducing use of new engine is to be reviewed. - Incentive is to be provided.	- DOT is in charge for replacement	- DONRE is in charge of monitoring of GHG.	DOT, DONRE, DOF, DOIT, DCST, Boat Association, etc.	- Japanese supplier can be cooperated.
3A-3	Promotion of Bio-Diesel Fuel (BDF) for tourist boats	- Reduced usage of fossil fuel	- Regulation on usage of BDF for boats is to be developed.	- Subsidy for competitiveness of B5 or B10 price	- DOST is in charge of monitoring.	DOT, DOST, DCST, Boat Association, etc.	- Supply system of BDF is to be developed - JICA project for promoting BDF is on-going.
3B. Greening of Industries in Ha Long Bay Area by Promotion of Ecotourism							
3B-1	Promotion of community-based ecotourism in floating villages (Cong Dam, Cua Van, Vong Vieng)	- Disseminated Ha Long culture as a core attraction in QN	- Guidelines for community-based ecotourism are to be set up.	- Tourism Resource Development Div. of DCST is in charge.	- DCST in association with Boat Association is in charge of monitoring.	DCST, Boat Association, Operators, Community, etc.	- Local guides among villagers are to be trained. - Linkage with OCOP can be incorporated.
3B-2	Promotion of ecotourism using cultural/historical assets (Yen Tu, Uong Bi, Quang Yen)	- Diversified tourism products offered in QN enabling on-land tourism promotion	- Guidelines for cultural site development are to be set up.	- Tourism Resource Development Div. of DCST is in charge.	- DCST in association with TA Association is in charge of monitoring.	DCST, concerned districts, TA Association, Operators, Community, etc.	- Local guides among residents are to be trained. - Linkage with OCOP can be incorporated.
3B-3	Improvement of Tourist Information (TIC, website, map and event calendar, etc.)	- Motivated visitors to visit various tourist sites and use various services in QN	- Cooperation mechanism is to be established among DCST, HBMD and the private sector.	- Tourist Information Center of DCST is in charge.	- DCST in association with Tourism Association is in charge of monitoring.	DCST, HBMD, Tourism Association, etc.	- Calendar includes fauna flora, food, folklore, etc. - Linkage with OCOP can be incorporated. - Stable financial source derived from tourism revenue is to be established.

出典: JICA 専門家チーム

表 II-4.22 (4) 農業、漁業に関わる優先アクションリスト

No.	Topic	Expected Outcomes/Benefit	Institutional Mechanism to be developed/improved			Tentative Key stakeholders	Remarks
			Policy, legislation, regulation	Organizational/budgetary preparedness	Monitoring and verification		
<b>5A. Increasing green coverage</b>							
5A-1	Conservation and rehabilitation of mangrove forest	- Increasing forest coverage - GHG absorption	- Existing policies and regulation are to be improved.	- DARD is primarily in charge. DONRE is cooperating/ advisory.	- DARD is in charge of progress monitoring. - DONRE is in charge of GHG.	DARD, DONRE, concerned districts, etc	- Preparation for applying Ramsar Convention (Quang Yen) or ASEAN Park (Bai Tu Long) are conceivable. - Japanese “Satoyama” concept can be referred.
5A-2	Enhancement of reforestation management at closure mining area	- Increasing effectiveness of greening at closure mining area	- Existing policies on greening at closure mining area to be improved.	- DARD is primarily in charge. DONRE is cooperating/ advisory.	- DARD is in charge of progress monitoring.	DARD, DONRE, concerned districts, etc	- Relevant JICA project is on-going. - AFD plans to provide assistance on this topic. - Reuse plan of closure mining area should be considered,
<b>5B. Greening agriculture</b>							
5B-1	Greening fishery and aquaculture in the bay	- Reduction of impacts on the bay.	- Guidelines and technical instruction is to be prepared/ provided.	- Pilot group is to be organized for demonstration.	- DARD is primarily in charge.	DARD, DONRE, HBMD, etc	- Impact study on the bay would be necessary. - Japanese MSE can be cooperated.
5B-2	Green agriculture promotion by reducing/ eliminating chemical fertilizer and pesticide	- Enhancing awareness on safety food for both farmers and tourists - Branding procedure and certification system of the clean/ green OCOP products could be conceived.	- Regulation and incentives for farmers are to be developed. - Policy for linking agro-products and tourism are to be developed.	- DARD is in charge of promoting “food safety”. - Budgetary arrangement for incentive is needed.	- DARD is in charge of monitoring on progress and outcome.	DARD, DCST, concerned districts, farmers association and tourism association, etc	- Multi-sectorial cooperation is essential between agriculture and tourism. - Linkage with OCOP is conceivable.
<b>5C. Others</b>							
5C-1	Promotion of recycling agriculture waste and resource circulation in household-/small- scale activities	- Reduction of solid waste in agriculture.	- Guidelines and technical instruction is to be prepared/ provided.	- Pilot group by farmers is to be organized, for demonstrating and expanding the activities.	- DARD is primarily in charge, by collaboration with unions/ associations concerned.	DARD, concerned districts, Unions/ associations concerned. Experimental farmers group	- Incentive mechanism for experimental farmers would be necessary. - Japanese MSE can be cooperated.

出典: JICA 専門家チーム

表 II-4.22 (5) 環境教育及び啓発に関わる優先アクションリスト

No.	Topic	Expected Outcomes/Benefit	Institutional Mechanism to be developed/improved			Tentative Key stakeholders	Remarks
			Policy, legislation, regulation	Organizational/budgetary preparedness	Monitoring and verification		
6-1	Awareness for factories/buildings (hotel, restaurant, etc) in pilot areas of other groups	-Dissemination of outcomes of the Project on GG pilot/demo activities.	-Integration of information dissemination policy into institutional mechanism of other groups.	-Association of environment protection and education (EPE Ass.) is primarily in charge.	- EPE Ass in collaboration with depts. concerned.	EPE Ass., etc Dept. concerned to group 1 or 2 under GG pilot/demo activities.	- Linkage with Group 1 or 2
6-2	Regular publication of environmental monitoring report (White book)	-Awareness raising from “Why to protect” to “How to protect” -Information disclosure to the public on environmental status in the province will be enhanced.	-Policy on information disclosure is to be developed.	-DONRE is in charge of coordination. -Consistency on monitoring plan and budget allocation is to be secured between DONRE and HBMD	- DARD is primarily in charge, in coordination with HBMD and EPE Ass.	DONRE, DOET, EPE Ass., HBMD, etc	- Task force for white book publication would be needed to be organized under StC. - Experiences of Shiga prefecture can be applied.
6-3	Strengthening function and attractiveness of QN museum as operational base for environment protection propaganda	-Branding and acknowledging the QN museum.	-Existing institutional mechanism for operating museum is to be upgraded.	To be discussed.	To be discussed.	To be discussed.	- Experiences of Shiga prefecture can be applied.
6-4	Reciprocal education among the different factories/ establishments	-Learning good practice each other in industrial sector for pollution abatement and environmental management -Criteria for enterprises contributing to green growth by improvement of environmental management and pollution reduction		-Collaboration between DOIT and EPE association.	-DOIT is primarily in charge.	DOIT, EPA Ass., etc	- Integration into 6-1 topic would be more practical, e.g. pioneer factory/company in ISO 14001 - Experiences of Shiga prefecture can be applied. - Small and medium enterprises are considered as important targets

No.	Topic	Expected Outcomes/Benefit	Institutional Mechanism to be developed/improved			Tentative Key stakeholders	Remarks
			Policy, legislation, regulation	Organizational/budgetary preparedness	Monitoring and verification		
6-5	Development of slogan and new brand for eco-friendly Ha Long Bay tourism	- Increased awareness on Ha Long Bay tourism for both tourists and residents	- Cooperation mechanism is to be established.	- EPE Ass. - Tourist Information Center of DCST is in charge.	- EPE Ass in collaboration with DCST and Tourism Association	EPE Ass., concerned district, DCST, HBMD, Tourism Association etc.	- Collaboration with TIC for marketing. - Collaboration with Halong smile program
6-6	Strengthening communication on green growth associated with environmental protection activities for community people	- Increased awareness on environmental protection among villagers - Launching web-site for green growth	- Public awareness and training programs are to be developed.	- EPE Association is in charge.	- DONRE in association with EPE Ass	DONRE, DCST, EPE Association, etc.	- EPE Association is to provide training to villagers.
6-7	Establishment of Halong Bay Forum	- Increased awareness of local enterprises on environmental protection, cooperating with domestic and international relevant organizations	- Decision for establishment of Halong Bay Forum	- DOIT, DONRE	DOIT	DPI	- This action was recommended through experience obtained in the tour in Japan.

出典: JICA 専門家チーム

## II-4.2.8 パイロット活動の選定基準

本プロジェクトの実施フェーズで行うパイロット活動の選定基準を 2016 年 3 月に設定した。パイロット活動選定基準は、2016 年 1 月 19 日に実施した第 19 回インテンシブコンサルテーションを主とした C/P との協議により、ベトナムでのプロジェクト選定の経験も踏まえ定めた。優先アクションとして選定された各活動について、実施フェーズのパイロット活動としての(a) 適切性、(b) 優先度、(c) 効果、(d) 実効性、を検討する事とし、選定基準を整理した。

### (a) 適切性

- (i) 策定した優先アクションから選定された、または統合された活動であること
- (ii) 明確な指標を有し、省のグリーン成長アクションプラン達成への寄与度が高く明らかであること

高い	活動の目的の達成が、クアンニン省グリーン成長アクションプランの指標達成に直接貢献する。
中程度	活動の目的の達成が、クアンニン省グリーン成長アクションプランの指標達成に間接的に寄与する、またはグリーン成長に関連する省のマスタープランの目的達成に寄与する。
低い	活動の目的の達成と、クアンニン省グリーン成長アクションプランの指標、もしくはグリーン成長に関連する省のマスタープランの目的との関係が明確でない。

### (b) 優先度

- (i) グリーン成長に係る他の活動にも寄与する制度メカニズムの構築/改善に関連する活動であること

高い	活動による制度構築・改善がプロジェクト期間内に達成され、その効果が当該活動のみならず、グリーン成長に関連する他活動の推進にも貢献する。
中程度	活動による制度構築・改善が、プロジェクト期間内に達成され、その効果が当該活動の推進に貢献する。
低い	活動による制度構築・改善に時間を要し、プロジェクト終了後となる可能性がある。

- (ii) ステアリング・コミッティメンバーが優先的と判断した活動であること

高い	クアンニン省の既存政策との整合性が高い活動である。
中程度	本調査のインテンシブコンサルテーションで重要度が高いと認識された活動である。
低い	グリーン成長に関連する活動だが、プロジェクトでの実施についてステアリング・コミッティメンバーの理解を得るのが困難である。

### (c) 効果

- (i) 将来的に観光セクター及び環境分野への投資促進効果が期待できる活動であること

高い	活動による制度構築・改善により、将来的に省内の観光セクター及び環境分野への投資促進が期待できる。
中程度	活動による制度構築・改善により、将来的にハロン湾地域での観光セクター及び環境分野への投資促進が期待できる。
低い	活動による制度構築・改善の投資促進効果は、必ずしも観光セクター及び環境分野への投資促進に直結しない可能性がある。

- (ii) 地域の関係ステークホルダーへのデモンストレーション効果が高いこと

高い	活動の成果の一部が、本プロジェクトの第 1 フェーズ（詳細計画策定フェーズ）で関連ステークホルダーに認知される可能性がある。
中程度	活動の成果が、本プロジェクトの第 2 フェーズ（実施フェーズ）で関連ステークホルダーに認知される。
低い	活動の成果が、関連ステークホルダー認知されるのに時間を要し、プロジェクト期間後となる可能性がある。

## (d) 実効性

- (i) JICA 技術協力プロジェクトの投入及びプロジェクト期間で明確な成果が示されること

高い	活動による制度構築・改善の成果が第1フェーズで達成できる可能性がある。
中程度	活動による制度構築・改善の成果が第2フェーズで達成される。
低い	活動による制度構築・改善の成果を得るのに時間を要し、プロジェクト期間後となる可能性がある。

- (ii) 技術面から実効性を有すること

高い	活動実施のために導入の必要な技術について、ハロン湾地域で新たに適用可能なものが存在する。
中程度	活動実施のために導入する技術について、第2フェーズで技術指導等が必要である。または活動が既存の技術で活動実施が可能である。
低い	活動実施のために導入する技術について技術指導等に時間を要し、その導入がプロジェクト期間後となる可能性がある。

- (iii) 省の財政面から実効性を有すること

高い	既存の予算フレックワーク内で、活動に対する予算措置が十分可能である。
中程度	活動に対するクアンニン省の予算措置のために新たな手配が必要だが、第2フェーズに支障なく予算措置を行える可能性が高い。
低い	活動に対するクアンニン省の予算措置のために新たな手配が必要であり、その合意に時間を要する。

## II-4.2.9 パイロット活動の選定プロセス

上述した選定基準を用いて 2016 年 3 月～6 月にかけて実施フェーズで行うパイロット活動を選定した。選定プロセスは以下の手順で実施した。

- 「低い」と判断された選定基準を有する優先アクションはパイロット活動として選定しないこととした。
- 各セクターにおいて、「高い」と判断された選定基準の数が最も多い優先アクションをパイロット活動として選定した。

優先アクションの評価結果を以下に示す。

表 II-4.23 (1) 環境管理セクターの優先アクションからのパイロット活動候補の選定結果

Priority Action		Appropriate		Priority		Effectiveness		Feasibility		
		(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(iii)
1A-1	Enhancement of provincial funding mechanism for environmental management	OK	Med.	High	High	High	Med.	Med	Med.	Med.
1A-2	Enhancement of environmental management capacity in industrial zone and economic zone	OK	Med.	High	High	High	Med.	Med.	Med.	Med.
1A-3	Development of platform for increasing social incentive mechanism for promoting environmental management	OK	Med.	High	Low	Med.	Med.	Med.	Med.	Med.
1B-1	Implementation of treatment of wastewater from tourist boats by urban wastewater treatment system	OK	High	Low	Low	Low	Low	Med.	Low	Low
1B-2	Regulation and standardization of construction works at the city/coastal area along the bay	OK	Med.	Low	Med.	Low	Low	Med.	High	High
1B-3	Establishment of Halong Bay Environmental Science and Research Center	OK	Med.	Low	High	Low	Med.	Low	High	Low



Priority Action		Appropriate		Priority		Effectiveness		Feasibility		
		(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(iii)
1C-1	Implementation of pilot activity of 3R at model area in Uong Bi City	OK	<b>High</b>	Med.	Med.	<u>Low</u>	Med.	Med.	Med.	Med.

注: The priority action described in bold was selected as the candidate pilot activity.

“Appropriate”, “Priority”, “Effectiveness” and “Feasibility” mean the criteria for selecting pilot activity mentioned in the former section.

“**High**”, “Med.”, and “Low” mean the result of evaluation of each criteria, based on the condition explained in the former section.

出典: JICA 専門家チーム

表 II-4.23 (2) 省エネルギー/エネルギー管理セクターの優先アクションからのパイロット活動候補の選定結果

Priority Action		Appropriate		Priority		Effectiveness		Feasibility		
		(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(iii)
2-1	Energy management and saving on large energy consumers	OK	Med.	<u>Low</u>	<b>High</b>	<u>Low</u>	<u>Low</u>	<u>Low</u>	Med.	<u>Low</u>
2-2	<b>Promotion of incentive mechanism such as ESCO project for energy saving and management</b>	<b>OK</b>	Med.	<b>High</b>	<b>High</b>	<b>High</b>	Med.	Med.	Med.	Med.
2-3	Strengthening administrative capacity to support the development of the private sector in technology improvement to reduce CO <sub>2</sub> emissions	OK	Med.	Med.	<b>High</b>	<b>High</b>	<u>Low</u>	<u>Low</u>	Med.	Med.
2-4	Supporting the installation of high-performance air conditioner / refrigerator	OK	<b>High</b>	Med.	Med.	<u>Low</u>	Med.	Med.	<b>High</b>	<u>Low</u>

注: The priority action described in bold was selected as the candidate pilot activity.

“Appropriate”, “Priority”, “Effectiveness” and “Feasibility” mean the criteria for selecting pilot activity mentioned in the former section.

“**High**”, “Med.”, and “Low” mean the result of evaluation of each criteria, based on the condition explained in the former section.

出典: JICA 専門家チーム

表 II-4.23 (3) 観光セクターの優先アクションからのパイロット活動候補の選定結果

Priority Action		Appropriate		Priority		Effectiveness		Feasibility		
		(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(iii)
3A-1	Application of “Green Lotus Hotel” and/or “ASEAN Green Hotel”	OK	<b>High</b>	<u>Low</u>	Med.	Med.	<b>High</b>	Med.	<b>High</b>	Med.
3A-2	Replacement of outdated diesel engines of tourist boats	OK	<u>Low</u>	Med.	Med.	Med.	<b>High</b>	<u>Low</u>	<b>High</b>	<u>Low</u>
3A-3	Promotion of Bio-Diesel Fuel (BDF) for tourist boats	OK	Med.	Med.	Med.	Med.	Med.	<u>Low</u>	<b>High</b>	<u>Low</u>
3B-1	Promotion of community-based ecotourism in floating villages (Cong Dam, Cua Van, Vong Vieng)	OK	Med.	Med.	<u>Low</u>	Med.	Med.	Med.	Med.	<u>Low</u>
3B-2	<b>Promotion of ecotourism using cultural/historical assets (Yen Tu, Uong Bi, Quang Yen)</b>	<b>OK</b>	Med.	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>	Med.	Med.	Med.
3B-3	<b>Improvement of Tourist Information (TIC, website, map and event calendar, etc.)</b>	<b>OK</b>	Med.	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>	Med.	Med.	Med.

注: The priority action described in bold was selected as the candidate pilot activity.

“Appropriate”, “Priority”, “Effectiveness” and “Feasibility” mean the criteria for selecting pilot activity mentioned in the former section.

“**High**”, “Med.”, and “Low” mean the result of evaluation of each criteria, based on the condition explained in the former section.

出典: JICA 専門家チーム

表 II-4.23 (4) 農業、漁業セクターの優先アクションからのパイロット活動候補の選定結果

Priority Action		Appropriate		Priority		Effectiveness		Feasibility		
		(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(iii)
5A-1	Conservation and rehabilitation of mangrove forest	OK	High	Med.	High	Low	Low	Low	High	Med.
5A-2	Enhancement of reforestation management at closure mining area	OK	High	Med.	High	Low	Low	Med.	Low	Low
5B-1	Greening fishery and aquaculture in the bay	OK	Med.	Med.	High	Med.	Med.	Med.	Med.	Med.
5B-2	Green agriculture promotion by reducing/ eliminating chemical fertilizer and pesticide	OK	Med.	Med.	High	Med.	Low	Low	Low	Med.
<b>5C-1</b>	<b>Promotion of recycling agriculture waste and resource circulation in household- /small- scale activities</b>	<b>OK</b>	<b>High</b>	<b>Med.</b>	<b>High</b>	<b>High</b>	<b>Med.</b>	<b>Med.</b>	<b>Med.</b>	<b>Med.</b>

注: The priority action described in bold was selected as the candidate pilot activity.

“Appropriate”, “Priority”, “Effectiveness” and “Feasibility” mean the criteria for selecting pilot activity mentioned in the former section.

“High”, “Med.”, and “Low” mean the result of evaluation of each criteria, based on the condition explained in the former section.

出典: JICA 専門家チーム

表 II-4.23 (5) 環境教育、啓発セクターの優先アクションからのパイロット活動候補の選定結果

Priority Action		Appropriate		Priority		Effectiveness		Feasibility		
		(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(iii)
6-1	Awareness for factories/ buildings (hotel, restaurant, etc) in pilot areas of other groups	OK	Med.	Med.	Med.	Low	Low	Low	High	High
<b>6-2</b>	<b>Regular publication of environmental monitoring report (White book)</b>	<b>OK</b>	<b>Med.</b>	<b>High</b>	<b>High</b>	<b>High</b>	<b>Med.</b>	<b>Med.</b>	<b>Med.</b>	<b>Med.</b>
6-3	Strengthening function and attractiveness of QN museum as operational base for environment protection propaganda	OK	Low	Med.	Low	Low	Med.	Med.	Med.	Med.
6-4	Reciprocal education among the different factories/ establishments	OK	Med.	Med.	High	Med.	Low	Low	Med.	Med.
6-5	Development of slogan and new brand for eco-friendly Ha Long Bay tourism	OK	Med.	Med.	High	Low	Low	Med.	High	High
6-6	Strengthening communication on green growth associated with environmental protection activities for community people	OK	Med.	Med.	High	Low	Low	Low	High	High
6-7	Establishment of Halong Forum	OK	Med.	Med.	Med.	Low	Low	Low	Med.	Med.

注: The priority action described in bold was selected as the candidate pilot activity.

“Appropriate”, “Priority”, “Effectiveness” and “Feasibility” mean the criteria for selecting pilot activity mentioned in the former section.

“High”, “Med.”, and “Low” mean the result of evaluation of each criteria, based on the condition explained in the former section.

出典: JICA 専門家チーム

選定の結果、(i) 環境管理に係る省基金メカニズムの強化、(ii) 工業地区及び経済地区の環境管理能力強化、(iii) ESCO 事業等の省エネ/エネルギー管理に係るインセンティブメカニズムの推進、(iv) 文化/歴史遺産も活用したエコツーリズム促進（イェントウ

地区、ウンビ市、クアンイェン町）、(v) 観光情報の改善（TIC、ウェブサイト、地図及びカレンダー等）、(vi) 小規模/家庭レベルでの農業廃棄物リサイクル活動の推進、(vii) 環境モニタリングレポート（白書）の定期的発行、の7つの活動がパイロット活動候補として選定された。

その後、ステアリング・コミッティ会議にて実施フェーズでのパイロット活動最終化に向けた協議がなされ、以下の提案がなされた。

- 「環境管理に係る省基金メカニズムの強化」と「工業地区及び経済地区の環境管理能力強化」は統合できる。また、環境管理に係る財源メカニズムについての検討は、基金のみならず、省のその他の法的な財源の強化についても検討する必要がある。
- 「文化/歴史遺産も活用したエコツーリズム促進（イェントゥ地区、ウンビ市、クアンイェン町）」と「観光情報の改善（TIC、ウェブサイト、地図及びカレンダー等）」は統合できる。
- パイロット活動の一つは、湾への直接的な汚濁負荷の管理能力強化を目的とする事が望ましい。「小規模/家庭レベルでの農業廃棄物リサイクル活動の推進」の成果は、「湾への直接的な汚濁負荷の管理活動」の副次的な便益（例：リサイクル活動の促進）として得る事が可能である。
- 白書は環境モニタリング結果のみならず、汚濁源の状況やグリーン成長推進に係る活動の計画・実施状況も記載し、教育及び啓発活動のツールとして使用するべきである。

以上より、実施フェーズでのパイロット活動は、(i) 環境管理及びグリーン成長に係る省レベルの基金及び財政メカニズム強化、(ii) ESCO 及び補助金等の省エネ/エネルギー管理に係るインセンティブ促進、(iii) 持続可能な観光振興（観光情報の改善、クアンイェンにおけるエコツーリズムの促進及びブルーセイル認証の導入）、(iv) 湾内直接負荷管理による水環境管理能力強化、(v) ハロン湾地域グリーン成長白書の定期的な公開による啓発活動、として最終化された。各パイロット活動の実行計画は添付資料 II-1 に示す。

表 II-4.24 環境管理及びグリーン成長に係る省レベルの基金及び財政メカニズム強化に資するパイロット活動概要

セクター	環境管理セクター
パイロット活動名称	環境管理及びグリーン成長に係る省レベルの基金及び財政メカニズム強化
担当・実施機関	天然資源環境局(DONRE)、科学技術局(DOST)、財務局(DOF)、経済管理委員会、計画投資局(DPI)
関連機関/組織	現地関連民間企業及び本邦企業
概略	グリーン成長促進を図るために、重点産業部門による排水管理施策改善を誘導するための行政による財政メカニズムを強化する必要がある。現在、クアンニン省は環境管理及び経済成長をサポートする基金を有する。これらの基金利用を促進するために、既存基金活用を望む企業等と連携し、既存基金システムのレビュー結果に基づいた既存基金への応募プロセスの改善とその試行を行う。また、試行による経験を踏まえ基金活用促進に必要な施策を検討、提案する。併せて、グリーン成長促進のためには、省予算や関連制度に基づく予算の確保も必要であることから、予算措置プログラム策定のため、重点産業分野の中から工業団地等、排水管理強化の必要な対象を選定し、環境管理強化に必要な活動内容の整理結果を踏まえ、活動実施に必要な予算措置実現のための政策を人民委員会(PPC)に提出し、承認を受ける。

出典: JICA 専門家チーム

表 II-4.25 ESCO 及び補助金等の省エネ/エネルギー管理に係るインセンティブ促進に資するパイロット活動概要

セクター	省エネ及びエネルギー管理
パイロット活動名称	ESCO 及び補助金等の省エネ/エネルギー管理に係るインセンティブ促進
担当・実施機関	産業貿易局(DOIT)、計画投資局(DPI)、建設局(DOC)、天然資源環境局(DONRE)
関連機関/組織	現地関連民間企業及び本邦企業
概略	クアンニン省は、省エネルギー効率及び省エネプログラム 2016-2020 に係る Decision 708/2016/QD-UBND を交付した。本決定は、工業企業、庁舎、運輸、公共照明、及び農業セクターなどを対象とし、国家電気開発マスタープラン（decision 1208/QD-TTg dated 21/7/2011）によるエネルギー需要予測と比較して総エネルギー消費量の 8～10% の削減を目標としている。ハロン湾地域では、中小企業を含む工場、政府庁舎や公共照明等が主な省エネ対象適用対象になると予想される。 本パイロット活動では、詳細計画調査段階で実現可能性があると判断した、上記対象に対する省エネ活動試行に利用可能な財源オプション(優先的融資、補助金、ESCO 事業)を用いた省エネ機器の導入可能性について、セメント製造業者、ホテル、政府庁舎等の対象を想定し検討を行い、一部について機器の導入を図る。また、パイロット活動で得られた経験、教訓を活用し、プロジェクト終了後に省エネ活動実施に活用可能な資金確保のための制度、及び制度を運用する組織について提案を取り纏め、人民委員会(PPC)に提出し、承認を受ける。併せて省エネ活動の促進に資するインセンティブの一環として、ラベリング制度（グリーンラベル）の設計と試行を行う。

出典: JICA 専門家チーム

表 II-4.26 ハロン湾地域の持続的観光振興に係るパイロット活動概要

セクター	観光
パイロット活動名称	持続可能な観光振興 (観光情報の改善、クアンイエンにおけるエコツーリズムの促進及びブルーセイル認証の導入)
担当・実施機関	観光局(Department of Tourism)、計画投資局(DPI)、交通局(DOT)、天然資源環境局(DONRE)、ハロン湾観光管理部、観光協会、クアンイエン町
関連機関/組織	観光産業、運輸業者、博物館及び公園、文化的及び歴史的場所、協同組合、コミュニティ、研究者、個人など観光関連ステークホルダー、及び日本の観光企業
概略	ハロン湾には、国内外から年間約 250 万人（2015）の旅行者が来訪する。ハロン湾地域の観光情報の提供は様々な所で行われているが、連携や協力がなされていない。観光局及び HBMD はそれぞれ別々に観光情報センターを運営している。さらに、観光情報資料やツールはハロン湾地域への観光客にとって必要かつ便利情報が含まれておらず、活用できるものはほとんどない。結果として、観光客は他の観光地や市内の名所へ行く機会を逸している。観光情報提供及び発信を改善することによって、観光客はより多くの興味深い場所を訪れる事が可能になると共に、クアンニン省の観光収入増加が期待できることから、パイロット活動では、ハロン湾地域全域に寄与する観光情報提供及び発信の改善に係る活動を実施する。また、観光の多様化と持続性強化のため、パイロットエコツアールートを開発をクアンイエン町で試行する。併せて、世界遺産地域での観光活動による負荷低減やハロン市のグリーンな都市としてのブランド化への寄与が期待される、環境配慮型の観光船の運航に寄与するグリーンラベル（ブルーセイル認証）制度運用のための活動を実施する。

出典: JICA 専門家チーム

表 II-4.27 湾内直接負荷削減に係る能力強化に資するパイロット活動概要

セクター	環境管理セクター
パイロット活動名称	湾内直接負荷管理による水環境管理能力強化
担当・実施機関	ハロン市、ハロン湾観光管理部、天然資源環境局(DONRE)、農業農村開発局(DARD)、交通局(DOT)
関連機関/組織	パイロット活動対象地域の地元当局、地元関連企業、本邦企業

概略	ハロン湾における経済活動による直接負荷、特に船舶からの排水や水産養殖業による水質への影響はより注意深く規制すべきである。2015年より、クアンニン省は観光船からの排水や廃棄物の排出などについて規制を強化した。また、2016年に環境配慮型水産養殖業推進のための基本計画案を策定している。未処理の漁業廃棄物の投棄も規制及び管理を改善すべきであり、可能な手段の一つとして、漁業廃棄物のリサイクルが挙げられる。このような管理施策の推進に寄与する先進技術の導入が望まれている。本パイロット活動は、これらの活動強化に係る活動を新規技術の試験的導入と技術導入のためのインセンティブメカニズム（グリーンラベル）の検討と併せ実施する。
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出典: JICA 専門家チーム

表 II-4.28 ハロン湾地域グリーン成長白書の定期的な作成と公開による啓発活動に係るパイロット活動概要

セクター	環境啓発及び教育セクター
パイロット活動名称	ハロン湾地域グリーン成長白書の定期的な公開による啓発活動
担当・実施機関	計画投資局(DPI)、交通局(DOT)、商工局(DOIT)、天然資源環境局(DONRE)、観光局(Department of Tourism)、ハロン湾環境保全教育協会、地方自治体
関連機関/組織	関連企業、教育局、投資促進委員会(IPA)、情報局
概略	クアンニン省における環境負荷低減や観光セクター発展の促進によるグリーン成長継続のためには、様々なステークホルダーが汚染低減及び観光セクターの発展に係る行政手段の正確な進捗状況及び効果、あるいは観光資源としての地域資源の状態を理解し、連携することが必要である。地方行政によるグリーン成長白書の公開は、関連ステークホルダー内で情報を正確に理解するための一手段として有効である。 クアンニン省では、DONREはPPCに省環境モニタリングレポートを毎年、省環境ステータスレポートを5年毎にそれぞれ提出している。報告書には環境負荷低減の達成手段についての検討など有用な情報が含まれている。グリーン成長白書作成の際に、本レポートを活用することにより、関連ステークホルダーの環境現況の正確な理解及びグリーン成長実施に必要な活動の検討に効果があると考えられる。

出典: JICA 専門家チーム

#### II-4.2.10 パイロット活動を通じたプロジェクト終了後の期待

パイロット活動の目的は、活動による直接的な成果を得ることのみではなく、パイロット活動そのものが、下記に示す制度・組織の構築と、ハロン湾地域及びクアンニン省グリーン成長推進に資することである。

- クアンニン省グリーン成長白書を継続して発行する制度及び組織
- 環境管理活動及び省エネ活動を進めるための金融、資金メカニズム及び組織
- 観光情報の発信、更新及びマーケティングを行うための制度及び組織
- クアンイェン町でエコツーリズムを振興するための制度及び組織
- 省エネ及び持続的な観光活動を進めるためのラベリング制度及び組織

クアンニン省は、プロジェクト終了後においても、パイロット活動の継続と合わせ、実施フェーズで得られた教訓・経験や構築された制度・組織を活用し、省内の他地域への展開、他の政策分野・優先アクションへの応用、などにより、グリーン成長の一層の推進を図ることが望ましい。

添付資料 I-1

プロジェクトステアリングコミッティと PMU メンバー (2015 年 10 月現在)

Organization	Department	Member	Position
Project Steering Committee	Quang Ninh PPC	Mr. Dang Huy Hau	Head
	DPI	Mr. Nguyen Van Minh	Deputy Head
	DOF	Mr. Pham Van Tieu	
	DONRE	Mr. Pham Van Cuong	
	DOIT	Mr. Pham Quang Thai	
	DARD	Mr. Nguyen Van Cong	
	DOC	Mr. Le Huu Doan	
	DOST	Mr. Hoang Vinh Khuyen	
	DCST	Mr. Trinh Dang Thanh	
	Economic Zone Management Board	Mr. Hoang Trung Kien	
	HBMD	Mr. Le Minh Tan	
People's Committees of Districts, Towns and Cities of the Province	Mr. Hoang Quang Hai (Halong City PC)		
PMU	DPI	Mr. Hoang Danh Son	Deputy Director of DPI, Head of PMU
	DPI	Mr. Pham Hong Bien	Head of Foreign Economic Relations Division
	DPI	Ms. Dao Thi Thanh Huyen	Deputy head of Foreign Economic Relations Division
	DPI	Ms. Nguyen Thi Thu Trang	Deputy head of Foreign Economic Relations Division
	DPI	Ms. Nguyen Thi Thu Hong	Deputy head of Foreign Economic Relations Division
	DPI	Mr. Tran Thanh Phong	Head of Sectoral Economic Division
	DPI	Mr. Ta Thien Hy	Head of the Socio- Culture and Tourism Division
	DPI	Mr. Bui Tuan Anh	Deputy head of Generals and planning management Division
	DPI	Mr. Tran Xuan Cuong	Deputy head of Administration Division
	-	-	1 contracted translator
	-	-	1 contracted project secretary, Expert support
	-	-	1 contracted person to be on duty, administration, accounting

Source: Decision No. 3281/QĐ-UBND and Decision No. 3146 QĐ-UBND  
Decision No. 2682 QĐ-KHDT

添付資料 I-2

キックオフ会議（**2015年10月30日**）、第**1**回ステアリングコミッティ会議（**2016年3月21日**）、第**2**回ステアリングコミッティ会議（**2016年6月22日**）の議事録



## Attachment-1

### Minute of kick-off meeting (draft)

Venue: Meeting room in DPI

Date: 30 October, 2015

List of Attendant:

No	Name	Position	Organization
1	Duong Ngoc Hung	Vice head of finance and planning division	DARD
2	Vo Van Chung	Officer	DOC
3	Vu Van Dinh	Officer	DOF
4	Hoang trung Kien	Vice director	Economic Zone management board
5	Nguyen Van Tran	Vice head of Investment division	Economic Zone management board
6	Tring Dang Thanh	Vice Director	DCST
7	Nguyen Trung Son	Officer, tourism resource division	DCST
8	Le Minh Tan	Vice director	HLBMB
9	Le Lam Tuan	Head of division	HLBMB
10	Nguyen Manh Hung	Head of division	DSOT
11	Luong Gia Hung	Head of finance and planning division	DTOI
12	Phan Thi Hoang Hao	Officer	Sub-department of Environment Protection, DONRE
13	Tran Xuan Cuong	Vice head of administration office division	Sở kế hoạch đầu tư
14	Ta Thien Hy	Head of culture and society division	DPI
15	Dao Anh Duc	Officer, finance and planning division	Halong city PC
16	Nguyen Thi Thu Hong	Vice Head of foreign Economic Relation Division	DPI
17	Nguyen Thi Thu Trang	Vice Head of foreign Economic Relation Division	DPI
18	Dao Thi Thanh Huyen	Officer, foreign Economic Relation Division	DPI
19	Pham Hong Bien	Head of foreign Economic Relation Division	DPI
20	Hoang Danh Son	Deputy director	DPI
21	Vu Van Minh	Director	DPI
22	Nguyen Vu Tiep	Progame officer	Jica Vietnam Office
23	Katsurai Taro		Jica Vietnam Office
24	Norikiho Inoue	Chief Advisor	JET
25	Kengko Naganuma	Deputy Chief Advisor	JET
26	Tetsuo Isono	Member	JET
27	Keiichi Maeda	Member	JET
28	Duong Thi Nhuan	Translator	JET
29	Nguyen Thanh Phuong	Translator	JET

## Agenda:

Content	Person in Charge	Time
1. Opening remarks	Mr. Nguyen Van Minh (Director, DPI)	9:00 - 9:10
2. Presentation on the draft work plan	Mr. Norihiko Inoue (Chief Advisor, JET)	9:10 - 9:40
3. Discussion	All the participants	9:40 - 11:20
4. Conclusion and closing remarks	Dr. Hoang Danh Son (Head of PMU, Deputy Director of DPI)	11:20 - 11:30

## Contents of Discussion:

- (1) Mr. Nguyen Van Minh, director of DPI, open remark the kick off meeting
- (2) Mr. Norihiko Inoue, Chief Advisor of JET, showed presentation on outlines and work plan of the project.
- (3) Dr. Hoang Danh Son, head of PMU, Deputy director of DPI, commented as follows:
  - Depending on economic development need and economic affiliation into ASIAN and the world, the output of the project in actual situation can be changed to compare with time developing project in the pass. Hence, necessary adjustment of outputs of the project can be modified to meet the actual condition. However, the goals of project were not changed.
  - So far, Quang Ninh province has focused on transition from brown to green, and reform of economic structure. Tourism was playing important role in Quang Ninh province in particular, and in Vietnam in general. Production like clean water and food for tourism also considered.
- (4) Mr. Katsurai, JICA Vietnam Office, comment as follows:

The key point on green growth development was that specific actions are concretized in framework. JICA expected that specific of feasible activities and priority activities can be proposed in detail work plan after 9 months.
- (5) Dr. Hoang Danh Son, head of PMU, Deputy director of DPI, commented as follows:
  - Idea of Mr. Katsurai, JICA Vietnam Office, was agreeable.
  - Presentation showed by Mr. Norihiko Inoue was agreeable.
  - Activities in project should be closely to R/D and be suitable with transition from brown to green.
  - The project should organize technical workshop and short term training to strengthen and institute knowledge on green growth for key person in involvement of relative department in province, because green growth development is totally specific to compare with others.
- (6) Mr. Hoang Trung Kien, Deputy director of Economic Zone Management Board, commented as follows:
  - It is highly appreciate the project approach and implementation
  - Some information on area and population need to be updated.
  - If the project area cover whole Vandon Economic Zone?
- (7) Dr. Hoang Danh Son, head of PMU, Deputy director of DPI, explained as follows:
  - Halong Bay area concept includes 5 district excludes Uong Bi city formerly. However, Discussion between JICA and Quang Ninh PPC agreed to expand Halong Bay area including Uong Bi city. Yen Tu which is considered as spirit tourism area, was nominated to UNESCO to became cultural heritage.
  - Basically, the expanding boundary of the project follows the boundary administration in each district or city.
  - Province and government develop capacity of design and promulgate suitable policy with agreement of enterprises and local people.

- Application of Japan experience, particular in Shiga province as well as the successful in Lake Biwa management can lead the project implementation well. As result, Quang Ninh province can issue good and suitable institutional of green growth. In addition, it is way of Quang Ninh 's commitment for sustainable development of Halong Bay heritage.
  - Work Plan is not JET's but ours.
- (8) Mr. Le Minh Tan , Deputy director of HBMB, commented as follows:
- Work Plan is suitable. All activities are important for environment protection in Halong bay.
- (9) Mr. Vu The Tiep, program officer, JICA Vietnam Office, commented as follows:
- Human resource of green growth development is not only authority but also including enterprise and local people. We should consider how enterprise can reflect on institutional green growth policy. On the other hand, environment education association can contribute important role.
- (10) Dr. Hoang Danh Son, head of PMU, Deputy director of DPI, explained as follows:
- Mr. Vu The Tiep's comment is agreeable.
  - Firstly, main concepts on institutional green growth should be completely, then they can be introduced to enterprises, social association, and university/ college to get their comments.
  - Next step to implement specific action
  - Not only enterprise involves but also financial factor like bank and fund involve in next step while carrying out specific action.
  - Member of counterpart in Steering Committee and PMB should be trained shortly on green growth development knowledge in order to continuously develop when finishing project.
- (11) Mr. Vu The Tiep, program officer, JICA Vietnam Office, commented as follows:
- UNDP coordinated with National University to organize on green growth courses. Quang Ninh province joined this program.
- (12) Ms. Phan Thi Hoang Hao, DONRE, commented as follows:
- DONRE just received workshop's document, so DONRE will send the comment later in writing.
  - Item 1.2 on page 3 in work plan need to be clarify clearer. There is no information on how to carry out action and implement project.
  - JET can introduce more management model for more reference, not only Biwa lake model.
- (13) Dr. Hoang Danh Son, head of PMU, Deputy director of DPI, explained as follows:
- Mr. Dang Huy Hau, vice chairman of Qunag Ninh PPC, would like to completely implement the project shortly. By the end of March, 2016, phase I of project can complete to meet fiscal year in Japan. So that, the phase 2 can be started in the next fiscal year.
  - JET study carefully Ms. Phan Hoang Hao's comment. If necessary, adjustment can be carried out.
  - All comment from relative department and authority are expected to receive by the end of next week.
- (14) Mr. Norihiko Inoue, Chief Advisor of JET, commented as follows:
- Representative of Shiga province and Lake Biwa management board will join on the workshop on 17 Nov, 2015 to share experience and information.
  - Involvement of enterprise is important on green growth development, however co-operation of PMB, Steering Committee, and city – district government in project area play really important in this step. So, Involvement of enterprise can be carried out in next step in whole province.
  - Reflect of all comment in work plan is illustrated in final.
- (15) Dr. Hoang Danh Son, head of PMU, Deputy director of DPI, concluded as follows:

- Thanks all participant and JET for sharing time in the meeting.
- It is highly appreciated JET's presentation and Participant's comment.
- JET will revised work plan based on comment of relative department and authority
- Workshop will be held on 17<sup>th</sup> November, 2015 in which some main idea in this meeting will continuously to discuss. PMB will inform to members in relative department and authority later.
- DPI will arrange meeting with DOF, DOIT, DARD, and Halong city next week.

End of Document

**Project for Green Growth Promotion in Halong Bay Area, Quang Ninh Province,**  
**in the Socialist Republic of Vietnam [Detail Planning Phase]**

**1st Steering Committee**

**21st March 2016**

**RECORD OF DISCUSSIONS**

The Government of Vietnam (GOV) requested the technical cooperation project to the Government of Japan, in order to strengthen the policy and institutional mechanism for implementing the Green Growth Action Plan (GGAP) under the Decision No. 3741/ KH-UBND. Upon the request, Quang Ninh PPC and Japan International Cooperation Agency (JICA) signed the Record of Discussions (RD) on 12th June, 2015, on the Project for Green Growth Promotion in Halong Bay Area, in Quang Ninh Province (the Project). The 1st Steering Committee on the Project for Green Growth Promotion in Halong Bay Area, Quang Ninh Province [Detail Planning Phase] was held on 21<sup>st</sup> March 2016 in Quang Ninh PPC meeting room. This is the Minutes of Meeting describing comments and opinions of the participants in the meeting. The list of attendants and the agenda of the meeting were attached in Attachment-1 and Attachment-2, respectively.

**1. Mr. Dang Huy Hau, Vice chairman of Quang Ninh PPC, Head of Project Steering Committee** started the discussion by comments as follows:

- This is an important project offering important orientation for conservation of Halong bay, how to carry out both good utilization and protection of the Bay; if we have good utilization we can conserve the bay in the right manner.
- This is the support program from Japan to Quang Ninh Province, in a short time, the JICA expert Team could prepare very good materials with structure of 5 groups of pilot activities with 7 candidate topics for implementation in the Phase 2 of the Project.
- For the first time the Biwa lake model was offered. However, the Biwa Lake and Halong Bay are different (Biwa lake is a great fresh water of Japan and of the World. The water source can be utilized for many purposes, the core area of Halong Bay can be of the same area of Biwa lake.). It is a fact that Shiga Prefecture has good method in protecting the water quality and environment of Biwa Lake.
- Halong Bay has larger area, with salty water and daily tide, especially under high risk of pollution. Pollution is caused by impacts from industry in the surrounding areas of the bay and coal mining operations. Recently, the bay water is impacted by thermal power, cement factories and domestic wastewater;

Mr. Hau point out that Halong Bay is facing with two problem, i.e. (1) Sediment of Halong bay bottom: although without specific figures but serious sedimentation happens in the bay. Sea bed dredging has to be done annually in in Cai Lan Port, Vinpeal area, etc. that large ships cannot enter. In addition, site leveling with sea reclamations causes washing off of mud to the bay by rains. The PPC knows very well the situations but still does not know how to do; (2) Halong Bay water quality is polluted: this is a risk for Halong Bay. Still yearly expenditures to be made for environmental protection for Halong Bay with sources from: i) provincial budget, ii) Halong Bay tickets revenue and iii) individual foreign funded

projects.

Mr. Hau asked meeting participants to discuss on the (i) 7 topics presented by JET. He added that everybody needs find out whether these topics can solve the core problems or not, they are basis for implementing the phase 2 or not; (ii) what are the funding resources for implementation, PPC needs JICA experts to show on how to mobilise, from domestic sources: State budget, enterprises; from abroad: supports from governmental organizations or NGOs?

**2. Mr. Le Minh Tan, Deputy Head HBMD, PMU member**

- Good cooperation with JICA expert team by HBMD has made with provision of information and data in the process of discussions to prepare for proposals. Proposals given by the JET relatively appropriate with very careful reviewing and considerations.
- The proposed topics are small projects, how to deal with big problems? Such as wastewater and solid waste on Halong bay that HBMD has to cope with nowadays. These issues still challenge HBMD although despite of many efforts made by HBMD. HBMD suggest the further consideration by JICA Experts to have more synchronized solutions.

To this end, Dr. Hoang Danh Son, deputy director of DPI, the head of PMU elaborated that this project is a technical support project. Therefore the project only can focus on demonstration of models. Based on implemented models, the province can develop/improve related policies, mechanisms for future application.

**3. Mr. Nguyen Van Cong, deputy director of DARD, PMU member**

Mr. Cong expressed his high agreement with the proposed topics in the long list by the JICA Expert Team on Agriculture. The issues proposed by the topics are very close to the problems of the Agriculture Sector of Quang Ninh Province and environment in Halong bay.

Mr. Cong said he is reluctant in selecting either topic 5B1 - Greening fishery and aquaculture in the bay And topic 5C-1 Promotion of recycling agriculture waste and resource circulation in household- /small-scale activities. He expressed his favour in topic 5B1 for the following reasons: The activities that directly pollutes Halong Bay water is the fishery exploitation and aquaculture. For food supply for aquaculture, people try to catch all small fishes and even use electrofishing.

Concerning topic 5C-1, he explained that he main source of pollution causing eutrophication, flow of chemical, pesticide is from farming activities. He added that there are programmes that are in operation already concerning installation of biogas system in small scale/household agriculture activities. He said that so far more than 3.000 biogas models were installed and in the coming period, another 2.300 model will be installed. He proposed the topic to focus on large, concentrated scale of vegetation activities.

In this connection, Dr. Son explained that for the Japanese expert, the centralised farming is small scale.

**4. Mr. Hoang Vinh Khuyen, deputy director of DOST, member of PMU**

- For the 7 topics in the short list proposed by the JICA Expert Team, we have to see if they are

appropriate. We understand that main purposes of this project are on improvement/development of mechanisms and institution for green growth of Quang Ninh Province. These are important tasks.

- Reality in Quang Ninh province or in Vietnam in general: Many good mechanisms and policies issued but not good in practical applications, due to lacking of demonstration and specific revisions for actual effects in practice.
- Suggest to concentrate on designing the mechanisms and policies, —→ basing on community to find out what are the weak points, the deficiencies of those mechanisms and—→ then request the specialized and professional agencies, departments to revise and finalize. Concentrate more in designing of pilot projects, for example the Biwa model.
- Regarding the pilot project on “Enhancement of provincial funding and financial mechanism for Green Growth”, in reality, in Quang Ninh there are more funding sources and mechanisms, not only the two Funds as mentioned.

#### **5. Mr. Hoang Trung Kien, deputy head of Economical Management Board, Member of PMU**

Mr. Kien proposed the project can assist in: i) installation of some automatic environmental monitoring stations for the IZs to be connected with the existing automatic environmental monitoring stations network of the Province. ii) Enhancement of environmental management capacity for the Economic Management Board Economical Management Board, the IZ management Board and the secondary tenants.

He added that Viet Hung IZ is under developed in direction of a specialized IZ. We expect the proposed environmental management capacity can be deployed in the IZs and EZs.

Mr. Kien commits to cooperate closely in implementation of pilot projects.

#### **6. Mr. Ho Quang Huy, Halong City PC**

Mr. Huy said he is not the member of PMU and attends the meeting to represent leaders of Halong City PC. Mr. Huy said that he understands the main target of the project is Halong Bay and the project is for improvement of institutional mechanism and policies so topics to be selected should focus on issues related to Halong bay.

Concerning topic 1A-2, Mr. Huy add that for tenants in industrial zones, economic zones, one of the requirements is fulfillment of EIA report and they are governed by the Environmental protection law during their operation in the zones. Therefore, Mr. Huy raised a question if it is a waste for the project to focus on this issue.

Concerning topic 2-2 re. energy saving, the energy saving and Decision 778 dated 5<sup>th</sup> March 2016 by PPC on energy saving scheme of entire province which based on Green Growth Action Plan no. 6970. The decision states very clear and detailed about tasks, objectives and funding resources. Therefore, he asked what is the purpose of this topic.

Concerning topic 5C-1 re. recycle of agriculture/fishery waste: this topic seems not matching with our project target as for protection of Halong bay environment. Mr. Huy added that agriculture and fishery only accounts for 1.6% Halong City’ GRDP.

#### **7. Mr. Norihiko Inoue, Chief Advisor, Jica Expert Team**

Mr. Inoue said that JET find the comments raised by meeting participants understandable and agreeable and JET will continue to discuss with the PMU on final conclusion of the shortlist. He added that conclusion of

Phase 2 design and revised Record of Discussion will be confirmed by end of June. He expected that by the end of June agreement between JICA and Quang Ninh can be made. By late May, a second Steering Committee meeting can be convened if necessary.

Mr. Inoue reminded that preparedness for launching Phase II of the project should come from both side, including the Japanese side and the provincial side. He understood that some policies/mechanisms shall have to be improved or newly developed then such operation should take some months.

#### **8. Mr. Dang Huy Hau, Vice chairman of Quang Ninh PPC, Head of Project Steering Committee**

Mr. Hau suggested for further consideration by JET as follows: Some adjustment

- Concerning Group 1 topic on “Enhancement of provincial funding and financial mechanism for Green Growth”: quite necessary, but should add with appropriate mechanism for Halong Bay management. For example, he raised a question concerning if it is necessary to establish an environment research center since there is a need to have a standing agency in charge for the task and without a permanent management body, it would be difficult for management of Halong Bay.
- Regarding the topic on “Promotion of ecotourism”: It is OK if without this topic and it can be listed under the 2<sup>nd</sup> priority group because the operations are being implemented by the Province concerning ecotourism, spiritual, historical and culture tourism.
- In replace, in the 1<sup>st</sup> priority, he suggest issues need to solved regarding: i) Treatment of waste on Halong bay from vessels operating on the bay: overnight accommodation tourist boats, daily tourist boats; other cargo transporting vessels: for loading and unloading; ii) treatment of sedimentation in Halong Bay. He added that this problem is becoming more and more serious and threaten exploitation of beaches along coastline. He raised questions if the project needs to tackle issues concerning: Green label for tourist boats and treatment of sedimentation on the bay.
- Regarding the topic on “Promotion of recycling agricultural and fishery waste” should be replaced by: Aquaculture and Fishing on Halong bay.
- Regarding the topic on “Promotion of incentives for energy saving and management such as ESCO project” should be replaced by Treatment of Waste on Halong Bay (wastewater from tourist boats. How wastewater in Halong Bay can be handled?). Halong Bay wastewater must be treated.
- Regarding the topic on “Enhancement of Environment Management Capacity in Industrial Zone and Economical Zone” should replaced by “Environmental awareness and education”. This is very important, both for residents and tourists. This is a big problem, not only for Quang Ninh but in the whole country. Environmental education is of high appropriate activity for Halong bay.
- Regarding topic on “Improvement of Tourist Information”: Quite necessary.
- Regarding topic on “White book”: Very necessary. We must announce the results of environmental monitoring in order for people to be aware of how high the risk of environmental pollution. He understood that more monitoring stations should be installed on the bay since there are only 2 stations in operation at the moment.
- Concerning coal sector, Mr. Hau acknowledge valuation by JET on this sector and also understood that the project cannot cover such a large scale concerning coal sector. The province shall have other programme for the sector.



At the end, Mr. Hau said that once the shortlist can be confirmed, report to the provincial leaders is necessary.

**9. Mr. Norihiko Inoue, Chief Advisor, Jica Expert Team**

Mr. Inoue said that for some possible modification of the shortlist, more clarification and discussions with PMU are necessary on the selecting criteria which have already been agreed upon.

He also raised a question concerning the expected collaboration between Japan and Quang Ninh province, how Shiga experiences, Biwa model be transferred to Quang Ninh and he understood that more discussions will be held on this point.

Mr. Inoue also hoped that the coming visit of Quang Ninh to Shiga contribute more understanding of the projects and effective for the final designing for Phase 2 activities.

**10. Mr. Dang Huy Hau, Vice chairman of Quang Ninh PPC, Head of Project Steering Committee**

Mr. Hau requested the relevant departments, agencies to considers in more depth on how to contribute to development of Halong Bay.

He added that even from this early stage, considerations should be taken on how to mobilise sources. Data should be provided to JET for study, for instance (i) expenditure of Halong Bay (for wages, for investment, for environment protection) so advice can be provided by JET on the appropriateness of the expenditure structures; (ii) budget allocation from the province for Halong bay management.

Mr. Hau also added that JET should need to advice on mobilisation from external sources such as grant, supports, which can be from the Japanese government and any other countries.

He gave an example that the environment protection association is already established then its fund should also be established. If the association functions well then many organisations, individuals will contribute to support since they will get beneficiary from the Heritage and also provide their society responsibilities.

Another source that can be accessed is enterprises who can invest for the activities. For instance, for wastewater treatment which is existing in Halong but not yet in Cam Pha, Van Don, enterprises can invest (by BOT for example) and collect treatment fees.

*End*

## Attachment-1

List of Attendants

<b>I</b>	<b>STEERING COMMITTEE</b>	<b>POSITIONS</b>
1	Head of Steering Committee: Mr. Dang Huy Hau	Standing Vice-chairman of QNPP
2	Mr. Pham Van Tieu	Deputy director of DOF
3	Mr. Pham Van Cuong	Deputy director of DONRE
4	Mr. Hoang Vinh Khuyen	Deputy director of DOST
5	Mr. Ho Chi Duc	Deputy director of DCST
6	Mr. Pham Quang Thai	Deputy director of DOIT
7	Mr. Le Huu Doan	Deputy director of DOC
8	Mr. Nguyen Van Cong	Deputy director of DARD
9	Mr. Le Minh Tan	Deputy head of HBMD
10	Mr. Hoang Trung Kien	Deputy head of Economic Zones Management Board
<b>II</b>	<b>PROJECT MANAGEMENT UNIT</b>	
11	Head of PMU: Dr. Hoang Danh Son	Deputy Director of Department of Planning and Investment
12	Mr. Pham Hong Bien	Head of Foreign Economic Relations Section
13	Ms. Tran Thi Thanh Tam	Deputy head of Foreign Economic Relations Section
14	Ms. Nguyen Thi Thu Trang	Deputy head of Culture - Society Section
<b>III</b>	<b>LOCAL ADMINISTRATIONS</b>	
15	Mr. Ho Quang Huy	Vice Chairman, Halong City
16	Mr. Pham Ngoc Vinh	Vice Chairman, Cam Pha City
17	Mr. Hoang Thanh	Van Don District
18	Ms. Do Thu Hang	Deputy Head of Agriculture and Rural Development Section - Hoanh Bo District
19	Mr. Pham Minh Hai	Deputy head of Natural Resources and Environment Section - Quang Yen Town
20	Ms. Le Ngoc Ha	Deputy head of Natural Resources and Environment Section - Uong Bi City
<b>IV</b>	<b>ADVISORS: OFFICIALS OF SHIGA PREFECTURE</b>	
21	Mr. Yukinori KAWASHIMA	Senior Technical Executive, Department of Lake Biwa and Environment, Shiga prefecture
22	Mr. Naoya YAMAMOTO	Senior Manager, Department of Commerce, Industry, Tourism, and Labor, Shiga prefecture
<b>V</b>	<b>JICA STUDY TEAM</b>	
23	Norihiko INOUE	Chief Advisor / Expert on Policy for Green Growth and Regional Development Planning
24	Kengo NAGANUMA	Deputy Chief Advisor / Expert on Environmental Measures for Industry
25	Tetsuo ISONO	Expert on Promotion for Sustainable Tourism Development
26	Toshiaki KAGATSUME	Expert on Water Environment Management
27	Keiichi MAEDA	Expert on Policy for Cooperative Mechanism among Organizations / Coordinator
28	Ms. Duong Thi Nhuan	Interpreter / Translator
29	Ms. Tran Thi Mai Lan	Interpreter / Translator
30	Ms. Nguyen Thi Thao Hien	Interpreter / Translator
31	Ms. Nguyen Thi Van Anh	Japanese Interpreter

## Attachment-2

### Agenda of 1st Steering Committee on the Project for Green Growth Promotion in Halong Bay Area, Quang Ninh Province [Detail Planning Phase]

#### 1. Date, Time and Venue

- (1) Date: March 21st (Mon) 2016
- (2) Time: 14:00 pm - 17:00 pm
- (3) Venue: Meeting room in Quang Ninh PPC

#### 2. Objectives

- (1) To report progress of study,
- (2) To confirm the candidate topics selected for pilot activities in Phase 2 of the Project with sharing the selection process,,
- (3) To discuss on outline of candidate pilot activities and schedule of improvement of institutional development/improvement, and
- (4) To introduce experiences and knowledge of Shiga prefecture and Lake Biwa contributing to implementation of the Project.

#### 3. Participants

1. Head of the Steering Committee: Mr. Dang Huy Hau – Standing Vice-chairman of QNPPC
2. Deputy head: Mr. Nguyen Van Minh – Director of Department of Planning and Investment
3. Members of the Steering Committee
  - (1) Mr. Pham Van Tieu – Deputy director of DOF
  - (2) Mr. Pham Van Cuong – Deputy director of DONRE
  - (3) Mr. Hoang Vinh Khuyen – Deputy director of DOST
  - (4) Mr. Trinh Dang Thanh – Deputy director of DCST
  - (5) Mr. Pham Quang Thai – Deputy director of DOIT
  - (6) Mr. Le Huu Doan – Deputy director of DOC
  - (7) Mr. Nguyen Van Cong – Deputy director of DARD
  - (8) Mr. Le Minh Tan – Deputy head of HBMD
  - (9) Mr. Hoang Trung Kien – Deputy head of Economic Zones Management Board
  - (10) Mr. Hoang Quang Hai – Vice-chairman of Halong City PC
4. Members of the PMU;
  - (1) Head of PMU: Dr. Hoang Danh Son – Deputy Director of Department of Planning and Investment
  - (2) Members of PMU
5. Leaders of local administrative bodies in Halong Bay Area other than Halong City (Cam Pha City, Van Don District, Hoanh Bo District, Quang Yen Town and Uong Bi City)
6. Representatives of JICA
7. Advisors: Officials of Shiga Prefecture
8. JICA Study Team

#### 4. Program

Content	Person in Charge	Time
<i>Registration</i>		13:40 – 14:00
1. Opening remarks	Mr. Dang Huy Hau (Head of the Steering Committee, Vice Chairman, Quang Ninh PPC)	14:00 - 14:10
2. Suggestion for implementation of the candidate pilot activities based on the experiences and knowledge of Shiga prefecture with application of Lake Biwa Model (1)	Mr. Yukinori Kawashima (Senior Technical Executive, Department of Lake Biwa and the Environment, Shiga Prefecture)	14:10 – 14:40
3. Suggestion for implementation of the candidate pilot activities based on the experiences and knowledge of Shiga prefecture with application of Lake Biwa Model (2)	Mr. Naoya Yamamoto (Senior Manager, Department of Commerce, Industry, Tourism, and Labor, Shiga Prefecture)	14:40 – 15:10
<i>Coffee break</i>	All participants	15:10 – 15:20
4. Presentation on the progress of the study, selecting process of the candidate pilot activities, and outline of the short-listed pilot activities with contents and schedule of required institutional improvement and development.	Mr. Norihiko Inoue (Chief Advisor, JET)	15:20 - 15:50
5. Discussion	All participants	15:50 - 16:50
6. Conclusion and closing remarks	Mr. Dang Huy Hau (Head of the Steering Committee, Vice Chairman, Quang Ninh PPC)	16:50 - 17:00

**Project for Green Growth Promotion in Halong Bay Area, Quang Ninh Province,**  
**in the Socialist Republic of Vietnam [Detail Planning Phase]**

**2nd Steering Committee**

**22<sup>nd</sup> June 2016**

**RECORD OF DISCUSSIONS**

The Government of Vietnam (GOV) requested the technical cooperation project to the Government of Japan, in order to strengthen the policy and institutional mechanism for implementing the Green Growth Action Plan (GGAP) under the Decision No. 3741/ KH-UBND. Upon the request, Quang Ninh PPC and Japan International Cooperation Agency (JICA) signed the Record of Discussions (RD) on 12th June, 2015, on the Project for Green Growth Promotion in Halong Bay Area, in Quang Ninh Province (the Project). The 2<sup>nd</sup> Steering Committee on the Project for Green Growth Promotion in Halong Bay Area, Quang Ninh Province [Detail Planning Phase] was held on 22<sup>nd</sup> June 2016 in Quang Ninh PPC meeting room. This is the Record of Discussions describing comments and opinions of the participants in the meeting. The list of attendants and the agenda of the meeting were attached in Attachment-1 and Attachment-2, respectively.

Mr. Norihiko Inoue, Chief Advisor of JICA expert team gave presentations on Part 1 - Overall Project Structure & Outlines of Five Selected Topics for Phase 2 and Part 2 - Project Design Matrix (PDM) and Plan of Operation (PO) for Phase 2.

Comments contributed by meeting participants are as follows:

**1. Ms. Nguyen Thi Thu Thuy, Deputy Head of Environment Protection Sub-department, DONRE**

**2.1 *Enhancement of Provincial funds and financial mechanism***

• Existing funds and mechanisms, policies:

Ms. Thuy said that JET have studied use of two existing funds, i.e. Environment Protection Fund and Science and Technology Development Fund for green growth. In addition to these funds, PPC also issues other mechanisms, policies that JET should also study. She gave an example of Decision No. 3799/2010/QD-UBND dated 15<sup>th</sup> Dec. 2010 stipulating financial incentives, supports for individuals, organisations for their science technology activities in Quang Ninh. This policy offers 50 million VND support for those who apply environment management system of ISO 14000.

• Only supports are mentioned:

Ms. Thuy said that concerning financial incentives for various activities, it includes (i) Partial support and (ii) support on loan with favourable interest rates and support on interest rate.

• Willingness of candidates:

Ms. Thuy said that there is no information mentioning on the willingness of candidate, i.e. markets and companies who are ready to participate in the pilot activities.

She added that it is a normal practice that a report should be prepared to reflect the preliminary results of survey, demand for loan.

She added that a clear criteria should be applied for selection of candidate, i.e. for loan recovery, candidates must be companies.

### 2.1 *Enhancement of capacity by controlling direct pollution load to the bay*

- JET have accessed information concerning other projects by JICA for introduction of bio-toilet project and composting. Clear indication should be given to reflect the role of the green growth project to these projects.
- Table-2 Possible Advanced Technique to be introduced (Tentative):
- + The table mentioned that “Bio-toilet has been introduced by Vietnam National Railway”. In stead, we should state that bio-toilet has been introduced in Quang Ninh province since in the actual fact, bio-toilets have already been installed in three tourist boats and final check will be soon carried out then operation instruction can be given to tourist boats.
- + Composting in An Giang: CHODAI company has already accessed clean agriculture and composting in Quang Yen town. This can be a reference.
- Page 46 of handout: “The selected enterprises will be given tentative green label by introducing advanced technique through the Project”. Ms. Thuy said that this approach is not suitable if company only access the technology then they can be given tentative green label.
- Project funded by Belgium government for pre-feasibility study: some activities are ongoing already. This project aims at collection of gray waste from toilet, solid waste from tourist boats for treatment. It is therefore necessarily to determine the role of this project in coordination with other projects which are ongoing in the province.
- Green label system and blue sail certificate: it is likely too many labels are introduced. Therefore, it is required to study criteria required by each of these two labels.
- Recommended measure for controlling direct pollution load to the bay: focus on 3R with strong focus on reduction of waste on tourist boats. This is also in line with waste segregation task proposed under IP for white book. Ms. Thuy added that waste segregation should concern not only tourist boats but also service companies, hotels, restaurants. Consideration can be made on those who well perform the task so their names can be announced in the public via the mass media as a way of awareness raising.

### 2.3 *Sustainable Tourism in Halong Bay Area*

Ms. Thuy suggested to add contents related to preservation of natural resources with setting environmental protection criteria in the tourism activities.

### 2.4 *Proposed Establishment of Halong Bay Research Centre*

Ms. Thuy said that under the provincial environment planning which has already been approved, a priority project includes establishment of provincial green growth centre. Therefore, she proposed JET to study that project in connection to this matter.

## 2. **Mr. Pham Quang Thai, Deputy Director of DOIT, Steering Committee Member**

### 3.1 *Promotion of incentive for energy saving and management*

- EE measure: Installation of inverter to motive load: Mr. Thai requested to add installation of

high efficiency equipment since equipment can also use other types of energy while only engine use electricity. In addition, Mr. Thai mentioned that in big companies where they use high capacity engines, required inverters have already been installed.

- EE measures with subsidy for high-end EE measures: Mr. Thai requested that equipment using recycle energy should be added.
- Implementation Structure, Preparation of action plan of designated enterprise for post-project phase in industry sector: Action plan has to be prepared by the enterprises themselves since they are the implementing entities. DOIT is a state management agency and cannot prepare the plan on behalf of the the enterprises.
- Promotion of energy auditing and energy label : Mr. Thai proposed the Centre for Industrial Incentives and Consultation for Industry Development should be the one to do energy audits of major consumers in the province, except for energy label which is issued by MOIT. Concerning green label proposed by the project, DOIT, in the next phase shall have deeper consideration on proposed criteria for label awarding.
- Procurement and implementation of pilot project: 12 months for this activity should be shortened to save time for the next activities.
- Monitoring of Pilot Activity, 2) Monitoring items for financing mechanism - Investment cost and specification of equipment that is installed: please add: technology. Mr. Thai explained that it is essential to examine the technology applied.
- Indicator for energy saving and CO2 reduction: TOE should be used since there are other sources of energy such as coal, fossil energy.
- Estimated Investment Cost: only preliminary estimate can be given but there is no foundation for it.
- Lam Thach -2 Cement: this company locates in Phuong Nam, Uong Bi City, not in Cai Lan industrial zone.
- Street light in Halong City: Financing option – Subsidy support: At the moment, the PPC have instructed Halong City and Cam Pha City to install high efficiency streets lights by socialisation fund. Investors shall pay for the pilot installation and be entitled to collect the difference from the monthly, annual electricity consumption expenditure. Therefore, no subsidy is applied for this activity.

### 3.2 *Enhancement of Provincial funds and financial mechanism*

During intensive consultation, DOIT provided names of candidates. Mr. Thai added further comments as follows:

- Ha Khanh industrial cluster which discharges to Cua Luc estuary; Wastewater treatment facility in Cao Xanh - Ha Khanh which is now operating with 6,000 – 7,000 m<sup>3</sup>/day by biological technology. Some survey is required for measures to be proposed to enhance its operation and with application of Japanese technology. This facility is working but quality of effluent is unknown.

### 3.3 *Enhancement of capacity by controlling direct pollution load to the bay*

- Bio-toilet and composting: please consider additional source of investment.
- Add contents concerning supervision of effluent control equipment from industrial zone, companies in halong bay area.
- Awareness Raising for Contribution to Green Growth Implementation with Regular Publishing of White book:
- + Implementation Structure : “Collect information on enterprises environmental management activity”: Mr. Thai said this responsibility should be under DONRE, not DOIT.
- + Participation: Department of Education and Training, Quang Ninh newspaper and Quang Ninh Television should be included.

#### 3.4 *Proposed Establishment of Halong Bay Research Centre*

Mr. Thai agreed proposed establishment of the centre.

### 3. **Mr. Ho Quang Huy, Vice Chairman of Halong City People’s Committee**

Mr. Huy said Halong PC has 10 pages of report that he would provide after the meeting. He has the following comments:

- Involvement of other localities in pilot activity: Mr. Huy said that direct load on Halong bay is from various localities around Halong Bay. He proposed JET to consider the role of other districts including Quang Yen, Cam Pha and Van don in this activity. He also added that there is a project called Halong – Cat ba project that also impact to the water area of Halong bay.
- Relevant with other projects in terms of source of fund: from city budget, province budget, ODA fund, socialisation fund, etc. For instance the water environment monitoring project is now also funded by Japanese ODA.
- *Proposed Establishment of Halong Bay Research Centre* : Mr. Huy suggested that there is no need to establish such a new agency. He proposed to enhance the current Halong Bay Management Board which is now under Halong city. He added that for management of activities in Halong Bay, currently the province issued regulations on management of tourist boats on the bay (Decision 4088) and submission has already made for PPC’s approval of the proposed regulations on management of products, services on the bay. These will become effective tools for managing socio-economic development activities on Halong Bay.
- *Impacts to Halong Bay:* he listed out impacts of coal mining projects, cement production, domestic activities along the coast line, Nam Cau Trang coal preparation plant, transshipment of goods on the bay (this activity is under control of Ministry of transport, not of the locality).
- Operation of tourist boats on Halong bay: basically controls of wastewater, solid waste situation.
- Aquaculture activities on the bay: he mentioned about the Aquaculture planning which is now under finalisation by DARD and Halong city will cooperate for implementation. He pointed out the fact that most of the aquaculture activities, no permit was issued and allocation of water area has not been conducted.
- Control of pilot activity implementation: a control board should be in place and to be headed by the PPC leader for strong authorisation.

#### **4. Mr. Hoang Vinh Khuyen, Deputy Director of DOST, Steering Committee Member**

##### *4.1 Awareness Raising for Contribution to Green Growth Implementation with Regular Publishing of White book:*

- Mr. Khuyen proposed JET to consider to request JICA for financial supports for this activity.

##### *4.2 Output 2 and Output 3*

Mr. Khuyen proposed the following pilot activities as follows:

- Energy Saving: Support for energy auditing. Auditing is now a requirement stipulated by the Vietnamese government. He explained that only through energy auditing, enterprises can realise their situation with energy saving and technology investment. He pointed out the fact that enterprises now are of small scale with lack of fund hence they are not ready for energy auditing. If the project can support for pilot activity on this, measures for energy saving will be promoted more strongly, thus contributing to project objective.
- Sustainable tourism: pilot on control of tickets for Halong bay cruise. It is known that CHODAI company has already transferred the technology to Halong City. With controlling of cruise tickets, it shall contribute to objective of sustainable tourism.
- Reduction of direct load:
  - ✓ Use of new generation of engines for boats, aiming at energy saving and minimisation of pollution. He gave an example that last week DOST had meeting with German consultant who introduced use of emulsion technology for engines, aiming at reduction of waste discharge. DOST is desirable to formulate a project with Germany for such project;
  - ✓ Treatment of waste oil on boats: at the moment, separation of oily water is already implemented on boats but treatment is not considered. This can be a pilot activity for reduction of load on the bay.
- Cleaner production: he proposed for support on knowledge, experiences on technological cultivation centre. Objective of such centre is help enterprise in promoting friendly technology in production. The first priority should be for centre of medicine plants; this shall help to contribute to shifting to green economy.

#### **5. Mr. Hoang Trung Kien, Deputy head of Economic Zones Management Board, Steering Committee Member**

##### *5.1 Enhancement of Provincial funds and financial mechanism*

Objectives: Mr. Kien requested to add the involvement of private enterprises in environment protection activities of the province. In development of these funds, these enterprises should also contribute their participation and then will get beneficial from these funding sources, including supports and loans.

##### *5.2 Promotion of incentive for energy saving and management*

Mr. Kien propose just to select 1 cement company as candidate for pilot activity and a processing company should be nominated in stead.

##### *5.3 Sustainable Tourism in Halong Bay Area*

Sustainable tourism: Mr. Kien proposed to add improvement of ecotourim in Van Don. This is in line with marine development strategy of Vietnam.

##### *5.4 Enhancement of capacity by controlling direct pollution load to the bay*

Mr. Kien said that the activity focus on impacts caused by agriculture and aquaculture then the ones caused by industrial production should also be included, i.e. from industrial zone, economic zones.



5.5 *Awareness with Regular Publishing of White book*

Concerning objective of this activity “Improve comprehension on progress and effectiveness of administrative measures on pollution reduction and tourism sector development, and current status of regional environment as tourism resources” : Mr. Kien proposed to revise it as for the entire province since it is very narrow to only serve for tourism sector.

5.6 *Involvement of Economic Zones Management Board*

Mr. Kien requests that Economic zone management board should be included in those pilot activities that are designed for industrial zone and economic zones.

**6. Mr. Nguyen Van Cong, deputy director of DARD, Steering Member**

Mr. Cong listed out ongoing projects in Quang Ninh province that can be linked to the green growth project:

- (1) Environmental friendly aquaculture in combination with ecotourism, pilot in Vong Vieng;
- (2) Environmental friendly aquaculture with minimization of direct load to the environment in various districts surrounding Halong bay;
- (3) Biological technology for water treatment in aquaculture ponds in association with VAST.
- (4) Composting
- (5) CHODAI project for composting in Quang Yen;
- (6) Oxygen extraction from water in shrimp ponds in Tien Yen;
- (7) Environment monitoring.

6.1 *Enhancement of capacity by controlling direct pollution load to the bay*

Mr. Cong mentioned in the last Steering committee, he made comments concerning focus on those activities that directly discharge to Halong Bay and he found that it is not reflected in this proposal.

- Composting: Mr. Cong request for clarification of (i) technology to be introduced since for An Giang case, it is fresh water treatment while our environment here is sea water with high salinity; (ii) tentative partners.

6.2 *Proposed Establishment of Halong Bay Research Centre*

Mr. Cong suggested to use Halong University for this purpose since Halong University is a training and research institution.

He also added for information that VAST is now studying for opening one of their branch here in Halong therefore some coordination can be considered to include the centre with their centre.

**7. Mr. Do Manh Hung, Vice Chairman of Quang Yen Town**

Mr. Hung said that Quang Yen is competent in developing ecotourism development. However, he pointed out the fact that since Quang Yen is in a lower level to the mean level, the most concerns for Quang Yen now is environment with huge impacts of wastewater and solid waste.

Mr. Hung requests that more details of activities with clarification of mechanism, policy with sanction should be made for further implementation.

**8. Mr. Pham Ngoc Vinh, Vice Chairman of Cam Pha City**

- Mr. Vinh proposed to add part of Bai Tu Long bay in the project area.
- Projects related to green growth: Mr. Vinh provided information concerning ongoing projects in Cam Pha that JET can use for their update: (1) Reclamation project for connecting Cam Pha city coastal road with Halong City coastal road. Planning and implementation of this project is under the coal sector who later will take a part of the reclaimed land as disposal sites for their waste.

He added that this project shall contribute to increase 2/3 of Cam Pha's current land area; (2) Wastewater: Cam pha is formulating a domestic wastewater drainage project with support from coal sector.

**9. Mr. Norihiko INOUE, Chief Advisor**

Mr. Inoue expressed his high appreciation of comments contributed by the meeting participants. However, he also reminded that up to date many intensive consultation meetings were held with participation of all related departments including discussions on long list, then shortlist before these 5 activities are nominated for demonstration.

Mr. Inoue acknowledge the comments on additional activities which will be then included in the recommendations that the project shall make toward the end of the project.

**10. Mr. Taro Katsurai, JICA Vietnam Representative**

Mr. Katsurai gave general comments as follows:

- For JET: he requested JET to take the recommendations given by meeting participants seriously for incorporation in the project documents. He added that JICA realised that careful selection process in the past few months was taken and it is inefficient to go back and repeat the process for selecting other activities then improvement should be made to revise the proposed activities;
- For Quang Ninh PPC, JICA request for commitment of the province for implementation of the activities.

**11. Mr. Dang Huy Hau, Standing Vice-chairman of QNPPC, Head of Steering Committee**

Mr. Hau conclude the meeting as follows:

- Revision of material: Mr. Hau understands that for project, it is impossible to spread on all activities therefore the 5 activities are selected. He requested JET to base on the comments given to update, revise the 5 activities toward better feasibility.
- Detail for implementation: Mr. Hau pointed out that the more detailed of the scenario for implementation is prepared the more effective implementation can be realised, especially with specific assignments of tasks. He stressed the important of awareness, with issuance of White Book.
- Commitment on financial allocation as counterpart's fund: Mr. Hau confirms that PPC shall allocate counterpart's fund for this project. He instructed DPI in coordination with DOF and other department to make it clear about funding allocation for green growth project. In addition to that, he proposed JICA and JET to find out other sources for supporting the project since there might be inflation during the 3 years of project and funding need to be ensured.
- Energy saving policy: There are many models for this activity in addition to street lighting. He requested for update with friendly transports for tourism since there are some companies who have introduced electric cars for tourism activities in the area.
- Control of environment pollution: some locations can be selected as candidate.
- + For Cai Lan industrial zone: nominate one or two projects;
- + Market: Mr. Hau requested Mr. Ho Quang Huy, Vice chairman of Halong PC to check again in terms of any future development of the market since at the moment there are many problems with the wastewater matter from this market.
- + Seafood processing company No. 1: this company is planed to be removed off site.

- + Industrial Cluster: to select Ha Khanh industrial cluster. The purpose of having the cluster is for relocation of industrial entities which are scattered in the urban residential area. It is necessary to find out the exact situation of environment treatment in this cluster so pilot activity can be applied for it.
  - + Thermal power plants, cement plants: PPC also have specific instructions to operation of these plants, including requirements of environment monitoring system, continuous replacement of equipment. Nevertheless, Mr. Hau agreed to include these plants in the pilot activities as a tool strengthening for management work.
  - Update of ongoing projects in Halong City that relate to protection of Halong bay environment; specific information should be given on name and donor.
  - Establishment of Halong Bay research centre: Mr. Hau asked for establishment of this centre which shall be under the Halong Bay Management Board with solely functions on research and consultation. He expect that in the future there should be an institute for research of Halong Bay and Bai Tu Long bay. Therefore the proposed centre is considered as the initial step for the future institute.
  - Inspection and handling of violations: Mr. Hau requested to include this requirement. He understood that for this requirement the current regulations will be applied. Therefore it is the matter of mentioning the requirement because project proposed many activities for which this requirement is necessary to be included.
  - Sustainable tourism, ecotourism: Selection of Quang Yen is appropriate.
  - Blue sail label: for implementing this activity, it is necessary to have support from the administration authorities
  - Agenda for next step: after revision of materials, submission shall be made to PPC at the beginning of July so that approval can be released before 15<sup>th</sup> of July.
-

List of Attendants

<b>I</b>	<b>STEERING COMMITTEE</b>	<b>POSITIONS</b>
1	Head of Steering Committee: Mr. Dang Huy Hau	Standing Vice-chairman of QNPPC
2	Mr. Nguyen Van Minh	Director of DPI
3	Mr. Pham Van Tieu	Deputy director of DOF
4	Mr. Pham Quang Thai	Deputy director of DOIT
5	Mr. Le Huu Doan	Deputy director of DOC
6	Mr. Hoang Trung Kien	Deputy head of Economic Zones Management Board
7	Mr. Hoang Vinh Khuyen	Deputy director of DOST
8	Mr. Nguyen Van Cong	Deputy director of DARD
<b>II</b>	<b>PROJECT MANAGEMENT UNIT</b>	
9	Head of PMU: Dr. Hoang Danh Son	Deputy Director of DPI
10	Mr. Pham Hong Bien	Head of Foreign Economic Relations Section
11	Ms. Tran Thi Thanh Tam	Expert of Foreign Eco. Relations Section
12	Ms. Dao Thanh Huyen	Deputy head of foreign Eco. Relation Sec.
13	Ms. Nguyen Thu Hong	Deputy head of foreign Eco. Relation Sec.
14	Mr. Ta Thien Hy	Head of Socio-culture and tourism division
15	Ms. Nguyen Thị Thu Trang	Deputy head of Culture - Society Section
16	Ms. Dang Thi Thu Phuong	PMU Staff
<b>III</b>	<b>LOCAL ADMINISTRATIONS AND DEPARTMENTS</b>	
17	Mr. Nguyen Minh Son	Deputy manager of QNPPC office
18	Mr. Le Tien Manh	Expert of QNPPC office
19	Mr. Ho Quang Huy	Vice Chairman, Halong City
20	Mr. Pham Ngoc Vinh	Vice Chairman, Cam Pha City
21	Mr. Dang Dinh Sach	Vice Chairman of Uong Bi City
22	To Quoc Hung	Vice Chairman of Hoanh Bo District
23	Mr. Do Manh Hung	Vice Chairman of Quang Yen Town
24	Ms. Nguyen Thi Thu Thuy	Deputy Head of Environment Protection Subdepartment, DONRE
25	Ms. Nguyen Thi Thao	Deputy head of tourism resource development, Department of Tourism
26	Ms. Nguyen Thi Minh Luong	Head of Newspaper, Publication Division – Department of Information and Communication
27	Ms. Pham Thu Minh	Reporter of Quang Ninh Portal
<b>IV</b>	<b>JICA VIETNAM OFFICERS</b>	
28	Mr. Taro KATSURAI	JICA VIETNAM Office, representative
29	Mr. Nguyen Van Tiep	JICA VIETNAM Office, Program officer
<b>V</b>	<b>JICA STUDY TEAM</b>	
30	Norihiko INOUE	Chief Advisor / Expert on Policy for Green Growth and Regional Development Planning
31	Kengo NAGANUMA	Deputy Chief Advisor / Expert on Environmental Measures for Industry
32	Tetsuya SAITO	Evaluation/Analysis
33	Keiichi MAEDA	Expert on Policy for Cooperative Mechanism among Organizations / Coordinator
34	Ms. Duong Thi Nhuan	Interpreter / Translator
35	Ms. Tran Thi Mai Lan	Interpreter / Translator
36	Ms. Nguyen Thi Thao Hien	Interpreter / Translator

## Attachment-2

### Agenda of 2<sup>nd</sup> Steering Committee on the Project for Green Growth Promotion in Halong Bay Area, Quang Ninh Province [Detail Planning Phase]

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#### 1. Time and Avenue

- (1) **Time:** 14:00 - 17:20, **Date:** June 22<sup>nd</sup> 2016 (Wednesday).
- (2) **Avenue:** Meeting room at 4<sup>th</sup> Floor, Quang Ninh PPC Office.

#### 2. Expected contents: Including 3 main parts

- (1) Consulting the Steering Committee on contents of the Detailed Outlines of the 05 topics for proposing to JICA.
- (2) Consulting the Steering Committee on Project Design Matrix that drafted by the JICA Expert Team.
- (3) Report and consult the Project Steering Committee on Work plan that will be implemented until ending of Phase I of the Project and sign the Discussion Record for implementation of Phase II.

#### 3. List of Participants (expected total of about 30 people):

1. Head of Steering Committee: Mr. Dang Huy Hau, Standing Vice-chairman of QN PPC (kindly requested to be chairman of the meeting);
2. Deputy head of Steering Committee: Mr. Nguyen Van Minh, Director of DPI;
3. Members of Steering Committee:
  - (1) Mr. Pham Van Tieu – Deputy director of DOF
  - (2) Mr. Pham Van Cuong – Deputy director of TN&MT
  - (3) Mr. Hoang Vinh Khuyen – Deputy director of DOIT
  - (4) Mr. Trinh Dang Thanh – Deputy director of Dept.of Tourism;
  - (5) Mr. Le Minh Tan – Deputy director of Dept.of Tourism (Former Deputy Head of HBMD);
  - (6) Mr. Phạm Quang Thai – Deputy director of DOIT
  - (7) Mr. Le Huu Doan – Deputy director of DOC
  - (8) Mr. Nguyễn Văn Công – Deputy director of DARD
  - (9) Mr. Hoàng Trung Kiên – Deputy director of Economical Management Board
  - (10) Mr. Ho Quang Huy – Vice-chairman of Halong City PC.
4. Dept. of Information and Communication;
5. Leaders from Local People’s Committees within scope of the Project: Cam Pha City, Van Don District, Hoanh Bo District, Quang Yen Town, Uong Bi City (Halong City is included in the Steering Committee members);
6. Quang Ninh Tourism Association;
7. Representatives of JICA Office in Hanoi;
8. JICA Expert Team;
9. Members of the Project PMU:
  - (1) Head of PMU: Mr. Hoang Danh Son – Deputy-director of DPI;
  - (2) PMU members.

#### 4. Materials of the meeting

- Program of the meeting;
- Progress report on project implementation by the PMU;
- Draft Detail Outlines of the 05 topics;
- Draft Project Design Matrix and Project Structure.

#### 5. Draft Agenda

Time	Content	Implement
14.00 – 14.10	Meeting Facilitator on Meeting Program and Summary of Project Implementation Progress Report.	Mr. Hoang Danh Son (Head of PMU of Green Growth Promotion Project)
	<b>PART 1</b>	
13:10 – 14:30	1. Explanation of Overall Project Structure	Mr. ....
14:30 – 14:55	2. Report on Draft Outlines of 05 Selected topics from the Short list under Output 2 and Output 3	Mr. ....
14:55 – 15:02	2.1 DONRE – Chairing for commenting the Topic on: <i>“Enhancement of the provincial funds management and financial mechanism for Green Growth”</i>	Leaders of DONRE
15:02 – 15:09	2.2 DOIT – Chairing for commenting the Topic on: <i>“Promotion of incentive for energy saving and management”</i>	Leaders of DOIT
15:09 – 15:16	2.3 Dept.of Tourism – Chairing for commenting the Topic on <i>“Promotion of sustainable tourism in Halong Bay Area”</i>	Leaders of Dept.of Tourism
15:16 – 15:23	2.4 Halong City PC – Chairing for commenting the Topic on <i>“Enhancement of water environment management capacity by controlling direct pollution load to the Halong Bay”</i>	Leaders of Halong City PC
15:23 – 15:30	2.5 DPI – Chairing for commenting the Topic on: Awareness raising through Publishing <i>“Green Growth White book”</i>	Leaders of DPI
15:30 – 16:00	3. Discussion on contents of the 05 Topics	Mr. Dang Huy Hau (Head of Steering Committee, Standing Vice-chairman of QN PPC)
16:00 – 16:15	<i>Coffee Break</i>	
	<b>PART 2</b>	
16:15 - 16:40	1. Report on Project Design Matrix	JET
16:40 - 17:00	2. Discussion on Project Design Matrix	Chaired by Head of Steering Committee; All participants
17:00 - 17:10	3. Report, consult the Project Steering Committee on Work plan that will be implemented until ending of Phase I of the Project.	Mr. Hoang Danh Son (Head of PMU of Green Growth Promotion Project)
17:10 - 17:20	4. Conclusion and closing	Mr. Dang Huy Hau (Head of Steering Committee, Standing Vice-chairman of QN PPC)

添付資料 **I-3**

インテンシブコンサルテーション議事録

## Record of discussion of 6<sup>th</sup> weekly meeting with PMU

Avenue: JICA project office

Date: 10<sup>th</sup> Dec 2015

### List of attendant:

No	Name	Position	Organization
1	Mr. Tran Thanh Phong	Chief of sectoral economy division	DPI
2	Mr. Bui Tuan Anh	Deputy chief of generals and planning management division	DPI
3	Mr. Tran Xuan Cuong	Deputy chief of administration office	DPI
4	Dr. Hoang Danh Son	Deputy director	DPI
5	Ms. Dao Thi Thanh Huyen	Deputy chief of foreign Economic Relation Division	DPI
6	Ms. Nguyen Thi Thu Trang	Deputy chief of foreign Economic Relation Division	DPI
7	Mr. Norikiho Inoue	Chief advisor	JET
8	Mr. Kengko Naganuma	Deputy chief advisor	JET
9	Mr. Joshiak Kagatsume	Expert	JET
10	Mr. Keiichi Maeda	Coordinator	JET
11	Ms. Duong Thi Nhuan	Translator	JET
12	Mr. Nguyen Thanh Phuong	Translator	JET
13	Ms. Nguyen Thao Hien	Translator	JET

### Agenda:

#### 1. CONFIRMATION OF FINAL WORK PLAN

- (1) Comments from departments/ entities and actions taken for finalization
- (2) Delivery to related departments/ entities (PDF, Hard copy, Language)

#### 2. PROGRESS OF INTERVIEW SURVEY IN TOURISM SECTOR

- (1) Survey conducted and findings. Further schedule for survey completion.
- (2) Constraints and solutions in the course of survey works.

#### 3. A SERIES OF INTENSIVE CONSULTATION FOR DESIGN OF DEMONSTRATION IN PHASE 2 ON GREEN GROWTH PROMOTION IN HALONG BAY AREA

See attached

#### 4. REVIEW OF EXISTING INSTITUTIONAL SYSTEM FOR GG IN QN

See attached

- (1) Policy/ legal framework, plan, program, etc. related to GG in QN
- (2) Current organizational structure of departments/ entities concerned, and possible relationship/ mandate related to GG
- (3) Analysis of institutional mechanism for readiness of GG demonstration (needs, gap, necessity of new institutional framework, necessity of amendment/ improvement of existing institutional mechanism, etc.)



## 5. WEEKLY SCHEDULE (FROM 14TH TO 20TH DEC.)

## 6. OTHERS

- (1) JET staffing schedule as of 4th Dec. 2015.

### Content of discussion:

- (1) Mr. Norikiho Inoue, Chief advisor, JET, explained project activities detail as agenda in coming time.
- (2) Dr. Hoang Danh Son, head of PMU, deputy director of DPI commented as followings:
  - During implementing the project, PMU and JET would discuss to solve any problem together.
  - Basically, proposal by JET on intensive consultation meeting and getting comment by focal point person in each relevant department is agreeable. It is way for JET to get comment from relevant department.
  - JICA's idea is agreeable. JET develops institutional policy for province and specific demonstration activity for Halong bay area in phase 2.
  - JICA's idea of approach to reduce greenhouse emission caused by coal mining activities is agreeable. It is to recommend suitable institutional policy and mechanism for mining activities and PPC to cooperate together easily. E.g. plant tree on dumping site for biofuel. It is more effective and faster in term of economy and environment protection as well as water resource. JET should have a meeting with VINACOMIN to evaluate and propose coordination activities.
  - JET should recommend more specific tourism criteria for tourism development in ha Long bay area. It needs to organize workshop and technique seminar to relevant departments.
- (3) Mr. Tran Xuan Cuong, member of PMU, deputy chief of administration office, DPI commented as follows:
  - It is necessary to add green label food in item 5 in WP on green agriculture. Companies have to comply to produce cleanly procedure production.
  - Model of eco boat activity was conducted by HBMD in which environment education had been integrated formally. Program of environment awareness education can be integrated into activities of education and environment protection association operating under provincial youth union.
- (4) Ms. Dao Thi Thanh Huyen, member of PMU, deputy chief of foreign economic relation division, DPI commented as follows:
  - There is no answer of DONRE's comment on comment answer sheet.
- (5) Mr. Kengo Naganuma, deputy chief, JET answered as follows:
  - Because DONRE commented deeply, answer sheet is separated from others.
  - Revise wording in R/D will be resigned in June 2016.
- (6) Dr. Hoang Danh Son, head of PMU, deputy director of DPI commented as followings:

- JET should hold intensive consultation meeting following its schedule.
- JET sends revise schedule to PMU.
- DPI will join with JET for meeting with VINACOMIN.
- Mr. Nguyen Tuan Anh, member of PMU, will support JET on checking legal document of green growth development in Quang Ninh and the division in charge of green growth in each relevant department and local authorities.

*End of document*

## Record of discussion on intensive consultation

### Group-2

Avenue: DPI meeting room

Date: 16 Dec, 2015

#### List of attendants:

No	Name	Position	Organization
1	Dr. Hoang Danh Son	Deputy director	DPI
2	Mr. Pham Hong Bien	Chief of Foreign economic relations division	DPI
3	Dang Thi Thu Phuong		DPI
4	Mr. Tran Thanh Phong	Chief of sectoral economy division	DPI
5	Ms. Nguyen Thi Thu Thuy	Deputy director of Sub-dept. of environment protection	DONRE
6	Mr. Pham Duc De	Energy management division	DOIT
7	Mr. Norikiho Inoue	Chief advisor	JET
8	Mr. Kengko Naganuma	Deputy chief advisor	JET
9	Mr. Joshiak Kagatsume	Expert	JET
10	Mr. Keiichi Maeda	Coordinator	JET
11	Ms. Duong Thi Nhuan	Translator	JET
12	Mr. Nguyen Thanh Phuong	Translator	JET
13	Ms. Nguyen Thao Hien	Translator	JET
14	Ms. Nguyen Tran Nghia	Translator	JET

#### Purpose:

To set up the institutional mechanism for GG demonstration in Phase 2, through a series of intensive consultation among DPI and JET, with involving the key departments/ entities concerned when necessary.

#### Content of discussion:

1. Mr. Norikiho Inoue, chief advisor, JET, briefly introduced JICA project and participants.
2. Mr. Kengo Naganuma, deputy chief advisor, JET, showed presentation on intensive consultation, group -2.
3. Mr. Norikiho Inoue, chief advisor, JET, commented as follows:
  - One of the objectives of the project is to develop institutional mechanism for green growth promotion and consider how to promote new investment to encourage effective energy use. Especially, how to make ESCO enterprise contribute to energy saving sector by mechanism and policy of Quang Ninh province.
4. Ms. Nguyen Thi Thu Thuy, deputy director of Sub-department of environment protection, DONRE commented as follows:
  - Enterprises will be divided by group of factor management like energy and environment or by category of characteristic production such as hotel, cement, or thermal power?
5. Mr. Kengo Naganuma, deputy chief advisor, JET, answered as follows:

- Environment, energy, and tourism object management chosen by state management function of department are DONRE, DOIT, and DCST.
6. Mr. Pham Duc De, officer of energy division, DOIT, commented as follows:
- We should focus on sector which used large amount of energy such as cement, thermal power, and coal mining.
  - DOIT performed state management in term of energy by energy auditing in 2015 and before. Energy consumption has been saved 30% after the factory applied proposal by consultant. However, it is very difficult for the factory to install or replace new equipment in the term of capital. It is much better for the factory if PPC can introduce a mechanism supporting the factory to approach capital intensive for investment on energy solution.
  - There are 600-650 tourism boats operating in the Ha Long bay. It is necessary to have suitable support mechanism in energy such as using BDF for environment protection. In addition, spotlight system should be replaced by led light for saving energy on the Ha Long bay.
  - DOIT can provide energy audit report if JET need.
7. Mr. Tran Thanh Phong, chief of sectoral economy division, DPI, commented as follows:
- Group-1 is not only seafood processing factory but also cement plant, ship building, and coal mining. Especially, centralized urban resident areas along the coast on where many restaurants and hotels located.
  - Sediment from upstream of rivers discharging into the bay is also serious.
  - Group of energy saving is following decision No. 6970 in which the most important part is to conduct survey and collect information of energy use in factory/ hotel per overturn or per person. Awareness of energy saving use for both manager and worker levels and good demonstration on energy saving can easily persuade owner/ manager to apply energy saving to get benefit. Community in Ha Long area also needs to be good behaviour with energy saving.
  - Application of incentive economic for energy saving is better than using administration solution.
  - It is necessary to update “Public Private Partner- PPP” mechanism.
8. Ms. Nguyen Thi Thu Thuy, deputy director of Sub-department of environment protection, DONRE commented as follows:
- Divided group objects is agreeable.
  - DONRE is going to implement project of development of technical regulation on environment in each city/ district/ town in the province, and raise awareness on 3R in Thanh Son ward, Uong Bi city in 2016 in Ha Long Bay area.
    - o In the 3R project, demonstration on separation of waste at source and waste treatment at the end approach solid waste management procedure. Next step, it

can be applied for hotel group in Bai Chay area. This project can integrate in activity of group-6.

- Project of development of technical regulation on environment can utilize to manage for quality of waste source. There are incentive mechanism and roadmap to apply new technical regulation in each district/ city/ town.
  - Waste audit is necessary for waste management in near future.
  - PPC has incentive economy (50 million VND) for enterprise got ISO 14000 successfully. However, enterprise has not utilized process to apply ISO14000 because of not good guiding and propaganda.
9. Mr. Kengo Naganuma, deputy chief advisor, JET, questioned as follows:
- If it is realistic to set up new fund in Quang Ninh to support medium and small scale enterprises? E.g. there is similar fund in Shiga prefecture to support enterprises which discharge from 10 -30 m<sup>3</sup>/day.
10. Ms. Nguyen Thi Thu Thuy, deputy director of Sub-department of environment protection, DONRE commented as follows:
- Currently waste water treatment for night stay tourism boat in Ha Long Bay is serious issue.
  - Experience from install oil separate from cooling water in boat, the enterprise met many difficult in term of finance.
  - Quang Ninh Environment Fund has small capital. So it is better to improve process and condition to apply and increase amount of capital than setting up new Fund as proposed by IPA. It is also mechanism to increase Environment Fund's capital.
11. Mr. Pham Hong Bien, chief of Foreign economic relations division, DPI, commented as follows:
- Activities in IZ (Viet Hung IZ, and Cai Lan IZ) which have been ignored are directly impacting on Ha Long Bay. Especially, Viet Hung IZ is going to expand in coming future.
  - JICA is going to implement sewage and waste water treatment project in Ha Long city. JET should refer, analyse, and plan this project activities then cooperate.
  - ESCO is good idea. JET can select major consumption energy in the list of energy audit by DOIT. JET holds a workshop chaired by PPC in which major energy consumption joined to understand clearly, get experience on ESCO from successful company, and supervision of leaders of PPC to enterprise to approach 2 funds (environment fund and science and technology fund). Based on their supervision, capital of funds can be increased. Issuing ESCO certification by PPC for enterprise is considered to be proposed by JET.
12. Mr. Norikiho Inoue, chief advisor, JET, questioned as follows:

- If there are mechanism or policy in Vietnam which encourage enterprise to join social activities such as environment protection or raise awareness for community?
13. Dr. Hoang Danh Son, head of PMU, deputy director, DPI commented as follows:
- There is annual reward but the situation is continuously bad.
  - Decree No. 15 regulated on Public-Private Partner (PPP) is quite new. So it takes time to apply. It can understand in general, but it is difficult for application in specific condition. Basically, we have theory but have not practice. So we need to get Japanese experience as well as good PPP example in Japan.
  - ISO 14001 and ISO 5001 have introduced to apply for 10 years, but it is not effective. Responsibility of enterprise for society needs to be raised and to understand clearly themselves. E.g. enterprise has to retrieve expired electricity product like TV, especially battery to decrease hazard solid waste to environment.
  - Clean and safe food needs to be added. It is necessary to have a model to control.
  - It is needs to hold workshop, seminar, or training on ESCO mechanism.
  - DONRE introduces similar ESCO mechanism on raise awareness on the view of point chance and application for sustainable environment development. It can make leaders and managers who get overview of main issues framework. E.g. experience from Shiga prefecture develops whole Lake Biwa region. Therefore, leaders of authorities in province can understand and implement by their human resource and finance.
  - JET can introduces experience or can works with banking system to support for enterprise and people which can loan capital for environment protection purpose. For instance, green bank mechanism is suitable for this.
14. Mr. Kengo Naganuma, deputy chief advisor, JET, commented as follows:
- As my understanding, tax system and bank mechanism are only changed by central government only. How we can intervene at provincial level?
15. Dr. Hoang Danh Son, head of PMU, deputy director, DPI, commented as follows:
- Tax law regulated tax activities. However, Provincial Council can regulate the fee.
  - Special mechanism for Ha Long Bay area can be proposed. Leaders of PPC and People Council propose to central government for approval. Based on that, outside control before enterprise invests is established.
- E.g. either we can apply heavy fine for enterprise discharging waste water or enterprise have to move out of area if environment violent repeats.
16. Mr. Kengo Naganuma, deputy chief advisor, JET, questioned as follows:
- If there is any regulation to control reclamation in Ha Long bay on TSS and sediment.
17. Hoang Danh Son, head of PMU, deputy director, DPI, commented as follows:
- Reclamation activity only influences TSS and sediment during its activity. It happened in short time. Coal / mineral mining influences in long term. Control of TSS is important.

18. Mr. Joshiak Kagatsume, expert, JET commented as follows:
- Hotel and restaurant activities also impact strongly to water quality by oil and fat pollution.
  - Boat movement, reclamation, and coal mining influence TSS in water quality.
  - Hotel and restaurant
  - It is necessary to overview to review all pollution of Ha Long bay not only hotel and restaurant factors.
19. Hoang Danh Son, head of PMU, deputy director, DPI, commented as follows:
- Comments of Mr. Kagatsume are agreeable.
  - It is necessary to separate hotel/ restaurant as pollution sources.
20. Mr. Pham Hong Bien, chief of Foreign economic relations division, DPI, commented as follows:
- We can only know the isolated urban area in Ha Long city when the sewage and waste water treatment completed. However, JET can introduce a new technology for treatment of domestic waste water in small scale model. After applying a new technology for domestic waste water treatment, Ha Long city can completely treat domestic waste water issue.
  - We only mention on electricity in the term of energy. Another kind of energy such as wind and solar energy need to be mentioned.
21. Ms. Nguyen Thi Thu Thuy, deputy director of sub-department of environment protection, DONRE, commented as follows:
- It is to warn on oil pollution on Ha Long Bay. Red tide occupationally occurred.
  - WWT plant in Bai Chay with its capacity of 5000m<sup>3</sup>/day just started operating in July.
  - One problem is to collect water on surface washout.
  - So far, Chodai Company demonstrated a technology for domestic waste water in group of urban resident area as well as waste treatment on tourism boat.
22. Dr. Hoang Danh Son, head of PMU, deputy director, DPI, commented as follows:
- Raise awareness for leaders of authorities and communities is necessary.
  - Framework of institutional mechanism policy is developed to encourage enterprise to carry out green growth development strategy. It does not apply to solve unique a problem.
  - Strengthen of institutional mechanism which would be developed would implement green growth strategy with actual condition in Quang Ninh.

*End of document*

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation - 3

**Date:** 16 Dec 2015

**Avenue:** DPI Meeting Room

**List of attendants:**

No	Name	Position	Organization
1	Tran Tuan Anh	Deputy chairman	Ha Long Association of Education & Environmental Protection
2	Le Lam Tuan	Chef of Environment Management Division	HBMD
3	Hoang Danh Son	Deputy director	DPI
4	Nguyen Thi Thu Thuy		DONRE
5	Dinh Hai Ha		DONRE
6	Dang Thi Thu Phuong		DPI
7	Nguyen Thi Thu Trang	Deputy chief of foreign Economic Relation Division	DPI
8	Norihiko Inoue	Expert	JET
9	Kengko Naganuma	Expert	JET
10	Toshiaki Kagatsume	Expert	JET
11	Keiichi Maeda	Coordinator	JET
12	Duong Thi Nhuan	Translator	JET
13	Nguyen Thanh Phuong	Translator	JET
14	Nguyen Thi Thao Hien	Translator	JET
15	Nguyen Tran Nghia	Translator	JET

**Agenda:**

Intensive Consultation 3 – Group 6

- (1) Presentation to relevant organisations the contents of “Environmental Education and Awareness”
- (2) Discussion and recommendations

**Content of discussion:**

- (1) Mr. Kengo Naganuma – Environmental Specialist from JET gave a presentation on possible topics as demonstration activities in general and in group 6 in particular.
- (2) Mr. Norihiko Inoue – Chef Advisor from JET encouraged more comments and information from relevant organisations with implemented activities related environmental education and awareness related GG in Quang Ninh.



- (3) Mr. Le Lam Tuan - Chef of Environment Management Division, HBMD provided information about eco-boat in HLB as below:
- In the past, this model was funded by FFI (Fauna & Flora International). 2-3 years ago, it was handed over to HBMD, however, because of the limitation of budget and human resources, it is now degraded seriously and doesn't have its original function. If some organizations need to hold any activities related environmental protection in HLB, they have to rent a tourist boat.
  - Beside of the encouragement of using BDF for tourist boats, HBMD received an approval of supports from Ministry of Transport and Vietnam Petroleum Association in supplying CNG (Compressed Natural Gas) after a meeting one week ago. Boat owners were really interested in trying this kind of fuel and its advantages after hearing about the news.
  - It is necessary to reexamine existing issues, for example: the reason why eco-label has not been approved yet in HLB.
- (4) Mr. Inoue had a question if BDF and CNG are now in operation or just in experiment.
- (5) Mr. Le Lam Tuan – HBMD commented as below:
- Both BDF and CNG are now under experiment, it will take time to test and select the most suitable one.
  - In function of HBMD, by institutional mechanisms, they now just can encourage all boat owners to use BDF & CNG.
  - According to the report from Vietnam Petroleum Association, they have so far good results from CNG using.
- (6) Ms. Nguyen Thi Thu Thuy – DONRE said that their organisation would take charge of reviewing all the recommendations.
- She also mentioned about the new experiment of Eco-Kayak – using kayak as an eco-product.
- (7) Mr. Le Lam Tuan – HBMD mentioned about a coordination in 2013 between JICA (Otsuka Sensei) and DOET to compile a collection of curriculums about environmental protection for all levels of school in Ha Long.
- (8) Mr. Tran Tuan Anh - Deputy chairman of Ha Long Association of Education & Environmental Protection added another information regarding the compilation of curriculums as below:
- The ideal program is to make textbooks for all levels of school.
  - Owing to the limitation of budget, it is now fulfilled only for student from 1st to 8th grade.
- He also mentioned about a scientific study for students in Hung Thang Primary School in Ha Long city:
- In the past, the students had chance to visit Cua Van fishing village and experienced The Secchi Disk - a device to measure water transparency.

- Now, because of different reasons, the model of measure water transparency can not be continued.
- (9) Mr. Inoue proposed that the model of Secchi Disk should be tried on tourists.
- (10) Mr Son - Deputy director of DPI clarified some information after previous discussions as below:
- By a considerable amount of projects funded by NGOs and other organizations, generally, local people understand already the importance of environmental protection. Now the biggest aim is to help them with “HOW to protect”, not more “WHY to protect”.
  - The most important role of GG project is to build mechanism and policies which can identify clearly main targets and contents towards Green Growth.
  - After the demonstration phrase, it is essential to build mechanism to widen the propaganda which will focus on responding climate changes and using effectively natural resources.
  - After consulting good experiences from Japan and other countries, if possible, it is in need of making environmental protection guidebooks for boat owners and local people.
  - Regarding to the issues of Eco-label, this model was not good before but recently, thanks to stricter laws and new marine projects with good design, almost boats have to gather at Tuan Chau Boat Station before going out to sea. With an efficient management, it will be easy to classify good and bad boats related to GG. Only boats with Eco-label will have permission of going offshore.
- (11) Mr. Toshiaki Kagatsume – Water Environmental expert from JET presented a guidebook from Shiga prefecture with main points as below:
- The propaganda in Shiga is based on various levels: The volunteers go first to factories or other industrial zones to research and study. Then they go back to schools to guide the students. They have suitable curriculumss for each level of school.
  - From 1983 until now, there is always a model of school boat which can contain 150 students. For example: Student of 4th grade take part in 2 days - 1 night tour in the sea to know more about the environment. Although the budget for this activity are totally not small, they try to maintain it year after year, generation to generation.
  - For Japanese students, they have at least experiences of living like a fisherman while catching fish, working in ricefields or planting in the forests. They really do the works and see the true results after their trips.
  - There are also places for environmental protection education in many museums.
- (12) Mr. Norihiko Inoue proposed the necessity of receiving feedbacks from local people after propaganda phase.
- He recommended that environmental protection and awareness should also aim to factories and enterprises. For example: One factory with effective waste treatment related GG can set a good example to others by welcoming them to visit and study.

- (13) Ms. Nguyen Thi Thu Thuy – DONRE reconfirmed that in HLB, the restaurants, hotels and boats have already their own ways to protect environment. There are annual workshops, programs and training courses which can be called “environmental protection and awareness”. For example: 3R, ecotourism.etc. There was also contest for scientific inventors related environmental protection for students but now, due to the shortage of budget, it no longer exists.
- (14) Mr. Le Lam Tuan – HBMD gave a proposal of classifying many sectors related GG in to different groups such as agriculture, industry, tourism.etc.
- (15) Mr. Hoang Danh Son – DPI gave 2 proposals as below:
- It is quite good to build a regular TV program between Japan-Vietnam in which there are useful guiding information, forums for open discussion for all enterprises and other activities related GG in Quang Ninh province. Actually, there is so far only a program of Science-Technology in QNTV channel. Quang Ninh people are aware of doing themselves, just needing the consultations from Japan and other countries.
  - Moreover, Quang Ninh museum – one of the most attractive destinations in Quang Ninh with some big meeting rooms can be taken advantage for organising exhibitions, seminars, workshops etc... for environmental protection. It will be an ideal place not only for presenting the beauty of Ha Long bay but for strengthening environmental protection.
- (16) Mr. Norihiko hoped for a sustainable mechanism for all sectors in Quang Ninh even when JICA project finishes, in learning from experiences of Eco-boat model.
- (17) Mr. Hoang Danh Son – DPI hoped for a leading position of Quang Ninh related to GG on a national scale. On behalf of relevant organisations, he also committed to implement and work for good results even when JICA project finishes.
- (18) Mr. Toshiaki Kagatsume proposed the importance of protecting upstream areas and supporting the tax for forest planters. He put forward a new model of inviting tourists to afforest, then others can visit nice forests as a tourist destination.
- (19) Mr. Norihiko Inoue and Mr. Kengo Naganuma had an interest in the Socialization Fund in Quang Ninh, the organisation in charge and its capacity of supporting environmental protection.
- (20) Mr. Le Lam Tuan – HBMD replied that Socialization Fund is managed by Provincial Treasury which belongs to DOF. There is always allocations for environmental protection.
- (21) Mr. Hoang Danh Son – DPI proposed an another meeting with DOF to clarify all issues and recommended more probable cooperation between JICA and DOF.
- (22) Mr. Norihiko Inoue had a big appreciation of this proposal and made an appointment of another meeting at the beginning of January.

*End of document*

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation - 4

**Date:** 29 Dec 2015

**Avenue:** DPI Meeting Room

### List of attendants:

No	Name	Position	Organization
1	Tran Tuan Anh	Deputy chairman	Ha Long Association of Education & Environmental Protection
2	Nguyen Trung Son	Tourism expert	DCST
3	Hoang Danh Son	Deputy director	DPI
4	Pham Hong Bien	Chief of Foreign economic relations division	DPI
5	Tran Xuan Cuong	Deputy chief of Foreign economic relations division	DPI
6	Nguyen Thi Bao	Chairman	Tourism Association
7	Dang Thi Thu Phuong	Staff	PMU
8	Norihiko Inoue	Expert	JET
9	Tetsuo Isono	Expert	JET
10	Keiichi Maeda	Coordinator	JET
11	Duong Thi Nhuan	Translator	JET
12	Nguyen Thanh Phuong	Translator	JET
13	Nguyen Thi Thao Hien	Translator	JET
14	Tran Thi Mai Lan	Translator	JET

### Agenda:

Intensive Consultation 4 – Group 3 & 4

- (1) Presentation to relevant organizations the contents of “Greening of Existing Tourism Industry” and “Greening of Quang Ninh industries through Promotion of Ecotourism”
- (2) Discussion and recommendations

## **Record of discussion:**

- (1) Mr. Norihiko INOUE – Chef advisor of Green Growth Project (GGP) presented GGP and Intensive Consultation in Ha Long Bay area in combination with Quang Ninh Province Green Growth Action Plan
- (2) Mr. Tetsuo ISONO – Tourism Expert presented the overview of current tourism of Ha Long Bay area and the results of tourism survey in cooperation with CONREM. In details:
  - Assessment of current situation of tourism sector in Ha Long Bay area by demand, supply and marketing.
  - Survey result of environmental performance of tourism industry with 3 main subjects: hotels, restaurants and tourist boats
- (3) Ms. Nguyen Thi Bao – Chairman of Tourism Association highly appreciated the result of tourism survey. Once Green Growth Project in Ha Long area is implemented, the sector which has the best benefits will be tourism.

She also talked about Master Plan of Tourism until 2020 in vision 2030 and explained about the situation that visitor arrivals to Quang Ninh province is increasing while visitor arrivals to Ha Long Bay is stagnated. Most of international tourists only visit Ha Long Bay while domestic tourist have lots of choices. She agreed that Quang Ninh tourism is now dependent a lot on tour companies in Hanoi as no responsible DMO exists.

She mentioned some functions of Tourism Association in which they organize some events for hotels and restaurants related to energy saving awareness. Almost hotels in Hon Gai and Bai Chay area have contracts with a company of hazardous waste treatment.

In fact, it is always easier to manage waste treatment on land than on sea, especially with night cruises. She proposed a necessity of having very specific and detail regulations for night cruises. She gave a personal solution: it is essential to control daily menus in order to manage input materials (food) and output (solid waste). For example, if there are not waste of crabs after meals while there are crabs on menu, they need to examine the cause.

She hoped to apply an official Green Label (Asean Standard) for tourism businesses and to well cooperate with other sectors which have also impacts to tourism sector like agriculture, industry (especially coal and cement industry)

- (4) Mr. Nguyen Trung Son – Tourism expert in DCST clarified main function of DMO (Destination Marketing Organization). He hold the view that DMO now in Quang Ninh belongs to Tourism Information and Promotion Center. He mentioned

about an European Project which help DCST finalize building organizational structure of DCST in general and DMO in particular.

- (5) Ms. Nguyen Thi Bao – Tourism Association completed information about this European project in Ha Long Bay which was started in 2005 with the original objectives of human resources training for the first phase, of responsible tourism for the second phase (Contract from 18 October 2013 to 2015 but extend one more year to 2016), in which:
  - Tourism sites planning
  - Destination management
  - Criteria and standards of service quality building
  - Human resources training
- (6) Mr. Hoang Danh Son, deputy director of DPI asked for more information about EU project and hope there will be useful information for Green Growth Project and JET can help also with unfinished works.
- (7) Mr. Tran Tuan Anh – deputy chairman of Ha Long Association of Education & Environmental Protection shared that his association was recently established from last JICA project in 2013 and they are always ready to contribute to Green Growth Project on their best.
- (8) Mr. Hoang Danh Son – DPI highly appreciated the result of tourism survey and proposed more researches not only with hotels, restaurants and tourist boats. He said that these results are now basically from CONREM. So it is necessary to have own recommendations from expert team with both technology and mechanism.
- (9) Mr. Tetsuo Isono – Tourism Expert asked a question from the survey about high amount of coal consumption in restaurants than in hotels.
- (10) Ms. Nguyen Thi Bao – Tourism Association answered that most hotels use gas to cook, only coal for laundry.
- (11) Mr. Tran Xuan Cuong - deputy chief of foreign economic relations division of DPI emphasized again that local people in Ha Long Bay don't have full benefits from tourism activities because actually, tourism is dependant on tour operators in Hanoi. Because of competition, they have to ask for good supplies with best prices from local people. So it is very important to build a destination management organization to attract tourists to Quang Ninh province directly, not by an intermediary from Hanoi.

Before establishing this organization, it is essential to define clearly roles and functions of each relevant departments. For example, Department of Transportation should take responsibility of infrastructures. From master plan, each department will have its own plan to have good implementation.

He shared his experience when two Italian tourists asked him where to eat in Ha Long, they got lost in succession of restaurants there. He proposed that an official website for Ha Long Bay tourism really should be included on building a destination management organization. So far, most so-called websites about Ha Long Bay tourism are from tour companies in Hanoi.

- (12) Mr. Hoang Danh Son – DPI highly appreciated Mr. Cuong’s opinion. He proposed also the necessity of clarifying function of DMO from previous opinions: for destination management or for marketing? We should base on psychology of tourists, avoid to impose subjective conception on them. Only when we have clear definition, we can have good implementation.
- (13) Mr. Pham Hong Bien - Chief of Foreign economic relations division talked about the necessity of having survey on others subjects like tourism destinations, tourism centers... such as boat stations, beaches, caves. etc. Only when all subjects are surveyed, there will be an overview of tourism sector. Only 3 surveyed subjects are totally not enough.
- He proposed that pre-long lists for Green Growth action should be renamed with both overall, simply and specific titles. After having an official name list, it is important to specifically apply to each sector.
- (14) Mr. Norihiko Inoue answered that this pre-long list is now just mainly from existing master plan of tourism and some basic proposals from JICA project 2010-2013. He mentioned about 10 underlined subjects from pre-long list which are in priority. From 25 subjects in long list, about 10 subjects will be chosen to implement.
- (15) Mr. Tetsuo Isono asked for opinions from participants to list implemented works so that JET can cut down the long list to have final short list.
- (16) Mr. Norihiko Inoue completed that if any subjects in pre-long list are not practical and related to Green Growth, every participants can bravely share their opinions.
- (17) Mr. Hoang Danh Son – DPI talked about Group 2 of pre-long list – Greening of Industrial Structure in Ha Long Bay are by promotion of ecotourism and proposed more focus on cultural sites such as Yen Tu mountain and Quang Yen town with Ha Nam island. He mentioned about Indochina Junk JSC in Ha Long who exploits very effectively Cua Van floating villages and invests to Yen Duc Village tour. Regarding activities of floating villages, Indochina Junk company implemented many activities to protect environment such as paying money to local people to help them clean tourist sites, organizing events for staffs and local people about environmental protection awareness, opening collecting

waste tours for tourists. etc. He suggested that JET should visit directly 2 offices related to floating villages and Yen Duc village tour of Indochina Junk to hear about their experiences.

(18) Ms. Nguyen Thi Bao – Tourism Association completed another information about a new exploited tour to craft villages from Saigon tourist company. Tourists will go by boat about 30kms from Ha Long Bay to Ha Nam Island in Quang Yen town, visit Hung Hoc traditional village of basket boat making, buy souvenirs, enjoy specialities and traditional music.

(19) Mr. Hoang Danh Son - DPI suggested also a visit from JET to Saigon tourist company and Quang Yen Town People's Committees to study their experiences. Once this model of tourism success, there will be not only Saigon tourist but other enterprises invest effectively and bring benefits to local people in Quang Yen town.

Besides, he wanted to know more about functions and works of Ha Long Association of Education & Environmental Protection which was newly established in 2013. He wondered if there is also a same kind of organization in Japan and hoped to receive experiences from Japan to expand effectivity of this association.

He proposed that before each project phase, it is necessary to care about the attitude of both local authorities and local people. In Vietnam, if local authorities approve a new reasonable policy, basically, local people will accept it too.

(20) Ms. Nguyen Thi Bao – Tourism Association admitted that now all tourist sites in Ha Long Bay area lack all kinds of information. Personally, Ha Long Tourism Association plan to build an official promotion website to give tourists detail information in 2016. An ideal website will be where they can sell and buy all services online.

(21) Mr. Pham Hong Bien- DPI mentioned about 2 ideas that Samsung cooperation proposed to Ha Long Bay tourism:

- Smart tourism card: Beside of having all information about tourism, tourists can use it directly like an ATM in some restaurants and hotels
- Smart tourism information kiosk: Normal information kiosk has been existing in many tourism destination but doesn't work well

(22) Mr. Hoang Danh Son – DPI highly appreciated Mr. Bien's opinion because it is the first opinion related to technology in the meeting. He said that once smart tourism card is used, if restaurants and hotels want to appear in the available list of online payment and get more customers, they need to improve their quality.



He admitted that it is difficult to apply all policies from Japan to Vietnam because of different political institutions. They aware that Quang Ninh province need to learn the way of working, not to copy everything.

He confirmed that in Vietnam, the role of associations is not really considerable, they mainly are under control of government. He hope to learn experiences from Japan so that all associations know how to organize themselves and don't need to wait for all direction from government.

(23) Mr. Norihiko Inoue said thank to every participants and made an appointment of upcoming meetings to more discuss and finalize a long list of Green Growth Activities.

He confirmed that JET will contact and work directly with Indochina Junk and Saigon tourist company. JET hope to receive every recommendation and help from relevant individuals and organizations.

*End of document*

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation - 5

**Date:** 30 Dec 2015

**Avenue:** DPI Meeting Room

**List of attendants:**

No	Name	Position	Organization
1	Dinh Quang Hai	Deputy director General secretary	Quang Ninh Union of Science and Technology
2	Nguyen Thi Duyen	Deputy director - Science and Technology Board	QuangNinh Union of Science and Technology
3	Duong Ngoc Hung	Deputy director – Finance and planning division	DARD
4	Hoang Danh Son	Deputy director	DPI
5	Nghiem Xuan Minh	Deputy director - Professional affairs division Also in charge of Agriculture Planning Section - Sectoral Economic Division	DPI
8	Norihiko Inoue	Chef advisor	JET
9	Tetsuo Isono	Tourism Expert	JET
10	Keiichi Maeda	Coordinator	JET
11	Duong ThiNhuan	Translator	JET
12	Nguyen Thanh Phuong	Translator	JET
13	Nguyen Thi Thao Hien	Translator	JET
14	Tran Thi Mai Lan	Translator	JET

**Agenda:**

Intensive Consultation 5 – Group 5

- (1) Presentation to relevant organizations the contents of “Green Agriculture Promotion” in QuangNinh Province
- (2) Discussion and recommendations

## Record of discussion:

- (1) Mr. Norihiko Inoue – Chef Advisor of Green Growth Project (GGP) presented GGP in Ha Long Bay area in agreement with QuangNinh Province Green Growth Action Plan in general.
- (2) Mr. DinhQuang Hai, deputy director & secretary of QuangNinh Union of Science and Technology highly appreciated GGP. He commented as below:
  - New GGP really follows up green growth orientation of QuangNinh and Vietnam in particular and all over the world in general
  - Our union so far always work towards greening production and Greening of lifestyle and promotion of sustainable consumption
- (3) Mr.NorihikoInoue continued to present GGP in agriculture sector in QuangNinh. In detail: Ideas of Long List Possible Topics for GG Pilot Activities for group 5 – Agriculture:
  - Ideas at R/D stage of the Project
  - Ideas of Decision No. 1396/ QD-UBND Agriculture Restructuring
  - Ideas of DARD Documents for meeting 15th Dec. 2015 with JET
  - Ideas of Study Report of MPI/ UNDP

From that, JET offered Issues for Consultation in Group 5 – Agriculture and asked for more discussion/recommendation from relevant organizations in QuangNinh.

- (4) Mr. Hoang Danh Son – DPI reminded other participants that these ideas of long list are now collection from existing ideas/implemented projects in QuangNinh; not totally and directly from JET.  
He helped JET to explain more purposes of long list to propose institutional policy through pilot activities. He also asked for more ideas and recommendation from relevant organizations from Vietnamese side.
- (5) Mr. Duong Ngoc Hung, Deputy director – Finance and planning division – DARD commented and ask a question as below:  
“From my understanding, GGP focuses on developing policy basing on experiences of previous projects. Is this project phase justonly a preparation phase or a detail planning period?”
- (6) Mr. Inoue answered and emphasized that this is detail planning phase before the 2<sup>nd</sup> phase of demonstration. In upcoming 2<sup>nd</sup> phase, some small projects will be experimented to test mechanism.
- (7) Mr. Duong Ngoc Hung – DARD mentioned ideas of possible topics for GG pilot activities and commented as below:  
The idea that “Food Security will be through linkage/ circulation from exit to entry: food service (hotel, restaurant) as exit - food residue - composting - input for farming - harvesting - shipping/ consuming at entry of food service” is not really in practice in Quang Ninh Province because instead of being used for composting, most food residue is often for livestock breeding.  
He mentioned 3 on-going activities in charge of DARD related to green growth but up to now, there are still a lot of existing problems: green label package, mangrove development and food security. In detail:
  - Green label package: Only green products that adapt to green standard can have support in classifying and label packaging. In a nutshell, Quang Ninh province hope to be helped with green standard and packaging activities.

- Mangrove development: Mangrove development is widely known to contribute a lot to reduce greenhouse effect. It is necessary to expand mangrove in provincial scale, especially in deep tidal areas.
  - Food security: It is always a big problem not only in Quang Ninh province but in Vietnam. Now a very big amount of agricultural products are impacted by over use of inorganic chemical and fertilizer.
- (8) Mr. Norihiko Inoue offered to be received more documents related to 3 sectors that Mr. Duong Ngoc Hung – DARD mentioned and asked if DARD takes responsibility of craft villages.
- (9) Mr. Hoang Danh Son – DPI wanted to make clear again 2 definitions of “craft village” and “traditional village” that are always easy to mistake. He held the view that craft village need to be renamed to “manufacture village” in comparison with “traditional village” which has a long tradition. So it is necessary to examine again all recognition criteria of craft village.
- (10) Mr. Dinh Quang Hai totally confirmed again that GGP should combine existing policies and implemented actions to have all agreement from both Japanese and Vietnamese sides. Regarding GGP in agriculture sector, he showed his two biggest interests in:
- Science and technology (\*)
  - Awareness of local people (\*\*)

In detail:

(\*) Focus on process of agricultural production. In which,

- Improve quality of breed
- Use economically and effectively irrigation water
- Modernize technology of preservation (Most technology to preserve agricultural products now are out of date. For example: use heat and electricity to dry fruits; ice to preserve aquaculture products)
- Improve package and transportation works

(\*\*) Promote many contests or strategies related to Green Creation and Green Lifestyle. For example: Apply/Build “Green Lifestyle” at street food in Ben Doan Street, Ha Long city

- (11) Mr. Norihiko Inoue mentioned 2 projects in Ha Long Bay and asked if they are in operation or not:
- Chiba prefecture project on environmental protection and awareness
  - Fujitsu Company (In coordination with FPT cooperation) on smart agriculture
- (12) Mr. Hoang Danh Son – DPI answered that so far they are still in plan
- (13) Mr. Nghiem Xuan Minh - Agriculture Planning Section - Sectoral Economic Division – DPI gave an information about biogas tank. Now just households in Quang Ninh province are supported with money and technology to build biogas tank and they only use it to produce fuel, not electricity. He hope that GGP can help with mechanism policy to widen this technology model in provincial scale.
- (14) Regarding water production, Mr. Norihiko Inoue asked about related to water supply and treatment, especially in rural areas and craft villages.

- (15) Mr. Nghiem Xuan Minh shared that now farmers have many difficulties not only with the finance but also with technology. One of the biggest technological problems is their old husbandry habits.
- He mentioned a practical technology which is highly encouraged by Ministry of Agriculture and Rural Development: Using biological liquid absorbing substances together with rice husks or sawdust to make a sheet-like mat in the farming of livestock and cattle (thickness from 10-60cm depend on seasons and kinds of animal). This mat can be a good habitat for “trun que” – a kind of earthworm to make organic fertilizer and food for animals. Local people with enough guides can make bio-substance mat themselves to save money.
- (16) Mr. Tetsuo Isono asked about the situation of GAP (Good Agricultural Practice) in QuangNinh province
- (17) Mr. Duong Ngoc Hung – DARD answered that so far, they only have some pilot GAP activities by Vietnamese Standard, not yet Asean Standard.
- (18) Mr. DinhQuang Hai completed an environmental issue related to aquaculture on the bay that started to be under discussion from 10 years ago. Local people often use styrene foam surround their floating houses and rafts because of its cheap price. In case of storm, styrene foam is easily destroyed which causes water pollution.
- (19) Mr. Hoang Danh Son – DPI shared his opinions related to biodiversity as below:
- In Ha Long Bay area, especially in the north of Hoanh Bo district, there are many special-use forests such as Dong Son – Ky Thuong Nature Reserve which is the upstream of Yen Lap – the biggest lake in Quang Ninh. JET should take interest in this area.
  - From my personal observation, when I was a child, Ha Long Bay is a concentrative place of birds, especially seagull. But nowadays, they are rarely seen, just appear with a small number in sea area for Quang Yen town. It is also a problem needed to be in discussion.
  - So far, there is no mention of quality of mangrove, just their quantity (coverage). Mangrove decrease is one of the cause of bird decrease in Ha Long bay. I suggest to refer SATOYAMA Model in Quang Yen town.
  - Yen Tu Mountain area is not only famous for Yen Tu Pagoda but Yen Tu National Park. We should develop religious tourism in combination with ecotourism.
- (20) Ms. Nguyen Thi Duyen - Deputy director of Science and Technology Board, QuangNinh Union of Science and Technology proposed that GGP should support “green” farmers with mechanism. In fact, their price of production is higher because of longer process, so it is often more difficult to consume.
- (21) Mr. Norihiko Inoue mentioned an experience from Japan: Farmer Union is an organization to protect the right of farmers.
- (22) Mr. Hoang Danh Son added the last comment that in Vietnam, there is also a similar union, like Tourism Association, Woman Union, Youth Union. etc but so far, they don’t play a big role in supporting people.

On behalf of DPI and JET, he made an appointment of upcoming meetings to more discuss and finalize a long list of Green Growth Activities with relevant organisations.

*End of document*

**Record of Discussion on Intensive Consultation [No. 06]  
for Design of Phase 2 Pilot/ Demonstration on GG Promotion**

**Draft Long List of Possible Topics for GG Pilot/ Demonstration Activities**

Venue: DPI meeting room:

Date: 4<sup>th</sup> January, 2016

List of attendants:

No	Name	Position	Organization
1	Dr. Hoang Danh Son	Deputy director	DPI
2	Mr. Tran Xuan Cuong	Deputy Chief of DPI Office	DPI
3	Mr. Tran Thanh Phong	Chief of sectoral economy division	DPI
4	Ms. Dao Thanh Huyen	Deputy Chief of foreign Economic Relation Division	DPI
5	Mr. Pham Hong Bien	Chief of Foreign economic relations division	DPI
6	Ms. Nguyen Thi Thu Trang	Deputy chief of foreign Economic Relation Division	DPI
7	Mr. Bui Tuan Anh	Deputy chief of General and Planning Management Division	DPI
8	Ms. Dang Thi Thu Phuong		DPI
9	Mr. Norikiho Inoue	Chief advisor	JET
10	Mr. Tetsuo Isono	Expert	JET
11	Mr. Keiichi Maeda	Coordinator	JET
12	Ms. Duong Thi Nhuan	Translator	JET
13	Mr. Nguyen Thanh Phuong	Translator	JET
14	Ms. Tran Thi Mai Lan	Translator	JET

**1. Purpose of a Series of Intensive Consultation**

To set up the institutional mechanism for GG pilot/ demonstration activities in Phase 2, through a series of intensive consultation among PMU and JET, with involving the key departments/entities concerned when necessary.

**2. Contents of discussions**

**(1) Dr. Hoang Danh Son:**

Dr. Son expressed his high appreciation of the scientific approach that JET applied in developing the long list. Dr. Son pointed out some his preliminary comments as follows:

- Re. item 3 (1). *Draft Long List of Possible Topics for GG pilot/Demonstration Activities for Phase 2 / (1) Pre-long list preparation*: Dr. Son asked all PMU members to study carefully if the five listed items are adequate sources of information for preparation of the list.
- Re. item 3 (2): *Draft Long List of Possible Topics for GG pilot/Demonstration Activities for Phase 2 / (2) Draft Long List As of 4<sup>th</sup> January 2016*: Dr. Son found the six listed viewpoints are appropriate. However, he commented as follows:
  - + Re. Viewpoint iii: It is necessary to list out all ongoing projects funded JICA as well as by other donors to allow possible collaboration.

To this point, Mr. Inoue, JET Chief Advisor said that he needs to consult with JICA concerning engagement of potential investors to involve in our project in parallel with their investment project in Quang Ninh.

+ Re. Viewpoint v: Dr. Son expressed his great interests in this viewpoint. He requested JET to supplement it with the idea as to attract the more potential investors, enterprises to invest on a variety of technologies the possible.

- Re. the list: Dr. Son judged that there are some overlapping of topics among 6 groups since awareness raising topics can be integrated in designing of other topics. He said he would provide more comments after study in more detailed of the document.

Dr. Son added that there was one topic that JET can consider concerning a new design of a website or an upgrade of DPI's existing website to make it a portal for introduction of investment opportunities to national and international investors as well as to introduce about our current GG promotion project, other related projects, reviews of experts and other contents. With such development of the website, it shall create great effects for our current project since the website is also linked with portals of Quang Ninh province and of other provinces. To this point, Mr. Inoue stressed that this is an item that JICA really wants to do in Quang Ninh.

**(2) Mr. Tran Xuan Cuong** has two comments as follows:

- Re. item 2.1 and 2.3: Since SME is mentioned in some of the project documents so that in these items, it is requested to specifically mentioned the pollution sources, i.e. cement plants, thermal power plants.
- Re. item 5A-1: this topic can be integrated with topics under group 3 and 4 as mangroves are also tourism resources. Mr. Cuong requested to add conservation of mangroves in Halong Bay to be the same as the Xuan Thuy Ramsar. One of the contacting organisation can be Mangrove for Tomorrow which is a very active international organisation operating on this field.

To this point, Dr. Son elaborated that in the Quang Ninh Environmental Planning and the Halong Bay Environmental Planning, it is proposed to develop a Ramsar site for Tien Yen mangrove. This mangrove lies in north of Van Don and on Tien Yen river area. Therefore this request is worth considering. In addition to this, Dr. Son also updated that at the moment Bai Tu Long national park is preparing their dossiers to apply for ASEAN Heritage Park title.

- Re. item 5B-1: artificial aquatic food should be consider as substitute for fish farming since at the moment fish farmers use mesh size net to catch small fishes for feeding their big fish, causing fish eradication.

To this point, Dr. Son added that to stop this, it requires many measures including strong enforcement of the current regulations.

**(3) Ms. Nguyen Thi Thu Trang** has comments after studying pre-long list and long list as follows:

- Ms. Trang agrees with topics listed under Group 3 and 4.
- Topic 3A-1: it is likely that the Green Lotus Hotel and/or ASEAN Green Hotel labels has been applied. Therefore, if it is still recommended under this project then it is necessary to add some specific characteristics of this project on the application. Ms. Trang said she would find out the exact status of the two mentioned labels with DCST and revert.
- Topic 3A-3: name of DOF, DOIT should be added on the “Key stakeholders” column. To this point, Dr. Son asked every PMU member to study in more details of the names listed under this column so for the time being name listed by JET is tentative (add etc. at the end).
- Topic 3A-2: Since floating village residents have already been moved ashore under a provincial programe so the idea of this topic concerning floating villages is not clear. However, Ms. Trang added that this can be replaced by another activity. For instance, it can be a training program for tourism narrators, targeting at pupils of the area. This aims at 1) raising awareness for pupils and 2) training them as junior tour narrators which make tourists understand the interests in tourism by every Quang ninh citizen.
- OCOP product topic (in pre-long list) is having high feasibility. However, the topic only mentioned about establishment of OCOP shop in Bai Chay area. Its contents should be upgraded to propose for development of OCOP products in hotels, restaurants in Halong bay area, aiming at 1) Promotion of local products, attracting tourists and 2) Make OCOP products green, clean serving for tourists.
- Green label for tourist boats: a review is necessary concerning feasibility of this project.

**(4) Mr. Bui Tuan Anh** said that the 6 groups focus on two main categories 1) Implementation Mechanism and 2) Implementation. However, there seems to have more discussions on the latter. Mr. Tuan Anh expresses his main concern on the former for the following reasons: even the National GG strategy, the provincial GG plan have been approved but their implementation are still not obligatory. So for proper implementation of the GG project, it is a must to have certain regulation in place for realising the proposed topics.



Item 1A-1 and 6-2 are not adequate enough to support the topic implementation.

Re. 1A-1: As far as state management is concerned, this item must be added as an indicator in the monthly, quarterly, yearly report. At the moment there is no budget line for green growth. Therefore, there is a need for a proposal to the PPC to establish a specific budget mechanism for green growth. Mr. Tuan Anh gave an example that every year a certain percentage is allocated for the Science and Technology Fund.

To this point, Dr. Son reminded the fact that the State budget cannot cover everything and application of Decree 15 concerning socialisation should be promoted as well.

**(5) Ms. Dao Thanh Huyen** has following comments:

- Re. the last column “Nominate / screen out”: it is necessary to have specific criteria on how to nominate / screen out a topic.
- Re. OCOP products: Assistance should be considered for support on testing and labelling of products to create trustworthy in hotels, restaurants, tourists and citizens.

To this point, Dr. Son said this will be for detailed design of the topic. This is essential and Japanese experience should be given as well.

**(6) Mr. Tran Thanh Phong**

- Re. item 3A-2: This regulation is already in place under PPC’s current issuance of regulations on operation of tourist boats. Therefore under column “Policy, legislation, regulation”: it should be noted as REFINING of current regulation.
- Re. item 5A-1, 5A-2: they can be added together since they are involving the same key stakeholders.
- Re item 5B-1: it could be more specific if the title is mentioned as “Greening/Application of advanced technologies for ...”. The concept of green is genetic.
- Re item 5B-3: this should be integrated in item 3C since its target is food safety and food supplies for cuisine activities come from many sources, not only from Quang Ninh.
- Additional topic for consideration: it is not adequate if only mentioned about waste water from tourist boats when addressing water environment management in the bay. It is necessary to standardise the construction activities in the Bay area since in the future there will be activities such as rehabilitation of caves, new construction on islands. A more strict set of standards is required for such activities. The PPC has already issued some regulations on this.

To this, Dr. Son added that he learnt some experiences in Japan that for such construction of houses, facilities along the coast line, a certain certificate must be issued on construction of underground works before works on the upper part can be imminent. It is a fact in Halong

that many coast line beaches the sand is muddy, resulting from surface wastewater and from underground wastewater therefore it is important to find out how to monitor, control pollution sources to prevent polluting the Bay water.

(7) **Mr. Pham Hong Bien** has following comments:

- Re. 1A-1: it is necessary to have proposal on 1) increase the funding for the two already existed funds and 2) Simplify procedures to increase access by enterprises.
- Re. item 3C: this can be integrated in Group 6 since it is difficult to distinguish which awareness is for tourism or for industry.
- Re. 5B-3: Screen out this since the street is closed.
- Re. 6-3: integrated in 3-A since it relates to tourism.
- Re. group 6: Add “Branding” to the name of topic “... awareness: At the moment Quang Ninh is strongly promoting the branding of “Halong Smile”. This activity has the same objectives to our project “Making Halong city a worth to live, to visit”. This relates also to branding of tourism slogan. Quang Ninh has a website Halong smile.

(8) **Ms. Nguyen Thi Thu Trang** added her last comment: budget allocation for projects to be implemented under GG promotion projects as well as criteria for selection of projects. To this point, Dr. Son said this is important for future application as well even after completion of this promotion project.

**The meeting ended at 4:30.**

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation 7

**Date:** 13 Jan 2016

**Avenue:** DPI Meeting Room

**List of attendants:**

No	Name	Position	Organization
1	Hoang Danh Son	Deputy director	DPI
2	Ta Thien Hy	Chief of Socio-culture and tourism division	DPI
3	Dao Thanh Huyen	Deputy chief of Foreign economic relations division	DPI
4	Tran Thanh Phong	Chief of Sectoral Economic division	DPI
5	Pham Hong Bien	Chief of Foreign economic relations division	DPI
6	Nguyen Thi Thu Hong	Deputy chief of Foreign economic relations division	DPI
7	Dang Thi Thu Phuong	Staff	DPI
8	Kengo Naganuma	Environmental Expert	JET
9	Tetsuo Isono	Tourism Expert	JET
10	Keiichi Maeda	Coordinator	JET
11	Duong Thi Nhuan	Translator	JET
12	Nguyen Thi Thao Hien	Translator	JET
13	Tran Thi Mai Lan	Translator	JET

**Agenda:**

Intensive Consultation 7 – Draft long list discussion

- (1) Representation to PMU (Project Management Unit) the updates from relevant organisations to draft long list for Green Growth pilot activities in Ha Long Bay area.
- (2) Discussion and recommendations

**Record of discussion:**

- (1) Mr. Kengo Naganuma summarized the results with comments from relevant organisations about draft long list of pilot activities of Green Growth in Ha Long Bay area. Until the day of intensive consultation 7, JET got comments from
  - 6 departments: DARD, DCST, DOC, DOF, DOIT, DOST
  - 2 People’s Committee: Hoanh Bo district, Quang Yen town.
- (2) Mr. Hoang Danh Son, deputy director of DPI commented as below:

“In functions of DPI, we have had already comments from last long list discussion. We hope to receive more recommendations from JET after your meeting tomorrow (14 Jan 2016) with JICA Vietnam. After that, we will finally summarize final long list. There will be 30-35 ideas in total”.

(3) Mr. Naganuma confirmed that according to plan of JICA, there will only 4-6/30 ideas in final list of pilot activities.

(4) Mr. Son commented as below:

“I understand this small number, so at the beginning, we shouldn’t make such a big long list with many options. I propose that we’d better quickly finish that list in focusing on each group”.

Personally, I highly appreciate:

- Group 3&4: Plan of reconstructing mangrove forests in Quang Yen town based on Satoyama model of Japan.
- Group 6: Environmental Education and Awareness, I hope project will have priority on SMB (Small and medium businesses).

(5) Mr. Nagamuna commented that at first, it is essential to come to an agreement of method and criteria to shorten the long list.

He also mentioned 3 funds in Quang Ninh Province that can be participated sources of green growth and asked which fund can be chosen.

- 1. Socialization fund
- 2. Science and technology development fund
- 3. Environmental protection fund

(6) Mr. Pham Hong Bien, Chief of Foreign economic relations division, DPI corrected that only number 2 and 3 are funds, the first one is exactly a policy “Encouragement of agricultural investment”. Both of them can be used for green growth in Quang Ninh Province.

(7) Mr. Son shared 4 opinions as below:

- A table of criteria for short list is very important that can be used in long term. Short list will be approved only when it is convincing to relevant organizations. JET should do a research about it.
- Topic number 2-2 “Promotion of ESCO project for energy saving and management” can be a priority in Group 2
- Because this phase is detail planning phase in mechanism and institutional policy, at the beginning (from draft long list), it is most important to head to the implementation of mechanism.
- It is necessary to build an official website of Green Growth Project

(8) Mr. Ta Thien Hy, Chef of Socio-culture and tourism division, DPI gave a lot of recommendations related to all groups of activities. In detail:

*Group 1: Environmental management*

- 1A-1: He asked if JET researched about all provincial funding mechanism for environmental management. In fact, Quang Ninh PPC maintain these mechanism effectively. In case of enhancement, how Green Growth Project can reinforce? Will enhancement of mechanism be based on studying experiences from other countries? Besides, regarding tentative key stateholders , IPA has no function in environmental management, JET should exclude this organization.
  - 1A-3 & 1B-1: He suggested to pay attention to avoid coinciding implemented activities.
  - 1C-1: Regarding solid waste management, he proposed to implement pilot activity of 3R at model area not only in Uong Bi city but Ha Long city.
- (9) Mr. Naganuma answered that in the future, JET also hope to implement 3R in Ha Long city but regarding to pilot activity, DONRE and JET came to an agreement of implement only in Uong Bi city.
- (10) Mr. Hy continued to recommend to other groups of pilot activities:
- Group 2: Energy saving and management*
- 2-3: JET should also remove IPA and add DOST to list of organizational/budgetary preparedness
  - 2-3 & 2-4 should be combined in one topic
- Group 3 & 4: Tourism sector*
- 3A-1: Regarding Greening of existing tourism industries, he proposed to combine application of “Green Lotus” or “ASEAN Green Hotel” for hotels on land and “Green Sail” for tourist boats on sea. (Eco-label “Green Sail” promoted by DONRE is now in testing phase).
- Group 5: Agriculture sector*
- 5A-2: Increasing green coverage: Regarding the enhancement of reforestation management off closure mining area, he proposed to invite investors to build golf courses. Quang Ninh PPC will surely support them with mechanism.
- Group 6: Environmental education and awareness*
- 6-3: Regarding strengthening of function and attractiveness of Quang Ninh museum as operational base for environment protection propaganda, he commented that now Quang Ninh museum is one of the best museum in national scale, which is good in both content and appearance. We dont’t need more help from JICA with improvement of facilities, just management mechanism.
  - 6-5: Regarding development of slogan and new brand for eco-friendly Ha Long Bay tourism, he proposed to study from “Ha Long Smile” – a program first launched in 2014 by DCST.
- (11) Ms. Nguyen Thi Thu Hong, Deputy chief of Foreign economic relations division, DPI commented on Group 1A – Environment management (intergrated approach) commented as below:

So far, almost enterprises in industrial zones have their own environmental management system, there are exactly small and scattered companies out of industrial zone which cause more pollution.

- (12) Mr. Son – DPI explained again and confirmed to Vietnamese staffs as below:
- “This long list is the result of cooperation of Quang Ninh province and JET. In which:
    - + Quang Ninh Province: master plan and implemented activities
    - + JET: researches, collection and selection of activities towards Green Growth

We should consider carefully and decide whether on-going activities are still suitable or not. JICA will only support Quang Ninh Province with mechanism and technology, not facilities or infrastructures. Now it is high time to focus and finalize collection of criteria for short list”.

- (13) Mr. Naganuma said that he totally agreed with Mr. Son’s opinions. He reminded that in 22 January 2016, JET would send draft report of project process from October 2015 and JET will surely send opinions from Quang Ninh relevant organizations to JICA.
- (14) He asked for more upcoming recommendations from Vietnamese staffs up to 18 January. He also hoped that JICA will support Quang Ninh province with a study trip to Japan in April or May 2016.

*End of document*

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation 8

**Date:** 15 Jan 2016

**Avenue:** DPI Meeting Room

**List of attendants:**

No	Name	Position	Organization
1	Hoang Danh Son	Deputy director	DPI
2	Ta Thien Hy	Chef of Socio-culture and tourism division	DPI
3	Tran Xuan Cuong	Deputy chief of Foreign economic relations division	DPI
4	Nguyen Thi Thu Hong	Deputy chief of Foreign economic relations division	DPI
5	Dang Thi Thu Phuong	Staff	DPI
6	Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
7	Tetsuo Isono	Tourism Expert	JET
8	Keiichi Maeda	Coordinator	JET
9	Duong Thi Nhuan	Translator	JET
10	Nguyen Thi Thao Hien	Translator	JET
11	Tran Thi Mai Lan	Translator	JET

**Agenda:**

- Report of T.V meeting with JICA on 14 January 2016 about draft long list for pilot activities of Green Growth in Ha Long Bay
- Discussion and recommendation

**Report of discussion:**

- (1) Mr. Kengo Naganuma, Environmental Expert and Deputy chief advisor reported the content of TV meeting between JICA Headquater, JICA Vietnam office and JICA Expert Team on 14 January 2016 in Hanoi. After that, he presented 5 main items pointed out by JICA to be discussed with PMU.

Regarding contribution to provincial green growth action plan and clarification of overall concept unified the proposed pilot activities, he mentioned that the pilot activities should be planned and implemented under unified upper level administrative policy and be shown as systematically.

- (2) Mr. Hoang Danh Son, Deputy director of DPI asked to make clear the definition of “upper level administrative policy”.
- (3) Mr. Naganuma - JET explained that it is like a slogan or theme include 1-2 words to show concept of a strategy. It is necessary to have a slogan used as such unified upper level administrative in Quang Ninh. He reported the speech of Mr. Norihiko Inoue – Chef advisor of Green Growth Project that

“Lake Biwa Model” can be used, but in fact, it is more concentrative to water quality development. He hoped to receive opinions and recommendation from Vietnamese side.

He continued to present further procedure for preparing draft short list for GG activities with 3 main items. In general, JICA has the same opinions with Vietnamese side from last meeting of discussion on 13 January 2016, in which:

- A matrix showing criteria and result of narrowing down the GG pilot activities as short list
- Clarification of improved institutional mechanism in each pilot activity with the information on required period and road map for improvement
- Clarification of items for each activity. For example: Objective and contribution to overall administrative policy, priority, relationship with other activities, indicator. etc.

Regarding target sector for pilot activities, he mentioned the necessity of justifying selected target industrial sectors. In case a sector is out of selection, it is essential to clarify the reason. He gave an example of coal mining. So far, coal mining sector is under control of VINACOMIN – a big state cooperation which has been implementing all of solutions itself, in which environmental protection is more and more concentrated. In case coal mining sector is exclude from pilot activities, it is important to make clear the reason.

Regarding 2 last items to be discussed, he mentioned indicator of pilot activity and pilot project area, in which:

- Set up indicators to judge achievement of each pilot activity
- Narrow down pilot project area in order to have effective implementation.

In conclusion, JICA has no strong objection on the proposed draft long list in phase 2.

- (4) Mr. Son DPI highly appreciated the results of meeting, especially working of JET. He showed his happiness when so far, most of works done by PMU members and concerned organizations of Quang Ninh province towards green growth fit JICA’s orientation.

Personally, he highly supported the plan of building criteria collection and slogan related to green growth. He shared a lot of opinions related to 3 main items/topics:

- (a) Upper level administrative policy (Slogan)
- (b) Coal mining sector
- (c) Pilot project area

In detail:

*(a) Upper level administrative policy (Slogan)*

Regarding the “Lake Biwa Model”, he agreed that it could bring impression of an environmental protection slogan rather than a global green growth development slogan. In Quang Ninh province, there has been so far an official decision related to development theme/slogan. For example, there are 2 biggest slogans in 2016:

- Improvement of quality of administrative public management



- Construction of “Ha Long Tourism City”

He mentioned a big implemented program from 2014 - “Ha Long Smile” that shows good results in provincial scale. Besides, he proposed to build together a slogan for Green Growth Project but it is additional, not compulsory.

*(b) Coal mining sector*

He commented as below:

- “In Quang Ninh province, ten thousands of people depend on coal mining sector. For example, historic flood in July 2015 caused serious consequences of both human and economic damage, especially toxic spills and flooding from multiple coal mine and power plant sites in the province surrounding the Ha Long Bay World Heritage Site. In a nutshell, coal mining sector has impacts in many other sectors.

- Within the scope of green growth project, more investing or intervening to coal mining sector is impossible because VINACOMIN is a state cooperation. But excluding coal mining sector in green growth project is a mistake.

- In capacity, Green growth project can help with:

- + Enhancement of reforestation management at closure mining are

- + Risk preventability for residents in easily vulnerable areas of natural disasters.”

*(c) Pilot project area*

He agreed that the setting of the pilot project area can be considered as an option. He completed that pilot activities in each region will not be totally the same because of difference of:

- + Natural resources: water, soil, minerals. etc.

- + Human resources: local authority, local people and enterprises

In conclusion, except for coal mining sector that need to be more discussed, most of JICA’s comments to draft long list are similar to ideas from Vietnamese side.

(5) Mr. Ta Thien Hy, Chef of Socio-culture and tourism division, DPI proposed 2 opinions related to coal mining sector and pilot project area. In detail:

- Building golf course at closure mining can be a good idea because it not only improves environmental quality but brings benefits to tourism sector.
- All Ha Long Bay area is not too wide for implementation of pilot activities. In phase 2, in case of financial limit, project area can be cut down later.

(6) Mr. Tran Xuan Cuong, Deputy chief of DPI Office, DPI reminded an experience from last projects of JICA from 1999 related to environmental protection. He highly appreciated this detail planning phase of green growth project because it is the first time many sectors are considered as a detail topic in discussion. For example: reduce of GHG emission and application of “Green Lotus Hotel”.

In reminding experiences from previous projects, he proposed to determine clearly at the beginning all financial sources from:

- + ODA
- + People's Committees
- + Local people

Besides, he repeated the importance of building a road map for Institutional mechanisms improvement in pilot activities so that all localities can gradually be acquainted with green growth concept.

- (7) Mr. Naganuma – JET reminded that green growth project is a technology mechanism support, not a loan project so in plan, it is not expected to receive a huge financial source.

He explained the reason why he mentioned coal mining sector as a probably excluded pilot item in connection with an example of reforestation at closure mining. In upcoming 2-3 years in phase 2 of green growth project, its results cannot be fully seen.

He emphasized again that an objective of project is improving environmental protection awareness of local people and JICA will try their best to support Quang Ninh Province with mechanism technology.

- (8) Mr. Son, DPI sympathized with Mr. Naganuma and proposed an opinion as below: “In case we cannot design and have specific activities in coal mining sector, it is still necessary to carry out all of activities to have connections with coal mining”.

- (9) Mr. Naganuma – JET proposed to have other upcoming meetings related to:

- Criteria classification for draft short list
- Promotion of ESCO project for energy saving and management
- Funding mechanism
- Promotion of green tourism

- (10) Mr. Son made an appointment and confirmed the participation of PMU staff in next meetings.

*End of document*

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation 9

**Date:** 19 Jan 2016

**Avenue:** DPI Meeting Room

### List of attendants:

No	Name	Position	Organization
1	Hoang Danh Son	Deputy director	DPI
2	Nguyen Tuan Anh	Chef of Socio-culture and tourism division	DPI
3	Tran Xuan Cuong	Deputy chief of Foreign economic relations division	DPI
4	Pham Hong Bien	Chief of Foreign economic relations division	DPI
5	Tran Thanh Phong	Chief of Sectoral Economic division	DPI
6	Nguyen Thi Thu Hong	Deputy chief of Foreign economic relations division	DPI
7	Dang Thi Thu Phuong	Staff	DPI
8	Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
9	Tetsuo Isono	Tourism Expert	JET
10	Keiichi Maeda	Coordinator	JET
11	Duong Thi Nhuan	Translator	JET
12	Nguyen Thi Thao Hien	Translator	JET
13	Tran Thi Mai Lan	Translator	JET

### Agenda:

- Presentation of criteria for preparing Short List for Green Growth Pilot Activities
- Discussion and recommendation

### Record of discussion

(1) Mr. Kengo Naganuma – Deputy chief advisor of Green Growth Project reported comments from 7 departments (DARD, DCST, DOC, DOF, DOIT, DONRE and DOST), and 2 local administrations (Hoanh Bo district and Quang Yen town) in combination with reply of JET for each comment. So far, there are no strong objection from all relevant organizations.

After that, he presented aspects related to criteria for preparing short list for Green Growth Project:

- Selecting process of pilot activities
- Remind of Criteria for preparing long list
- New presentation of criteria for preparing short list

- Possible institutional mechanism to be developed/improved
- Summary of general procedure for institutionalization in Quang Ninh province

In presentation of selecting process of pilot activities, he reintroduced in general Lake Biwa Model with its signification and function which can be applied on overall concept of pilot activities.

In presentation of 7 main criteria for preparing long list, regarding criteria 6 “High level dialogue between QN PPC and JICA representative in September 2015 is considered” he reminded an information of replacing engines for tourist boats and ESCO implementation.

Finally, he pointed out some issues to be discussed and confirmed on institutional procedure and hopefully asked for more and more opinions from PMU members.

- (2) Mr. Hoang Danh Son, deputy director of DPI asked if possible institutional mechanism to be developed/improved are examples or proposals from JET
- (3) Mr. Naganuma answered that they are just examples in which 4 first existing mechanism to be improved and especially 2 last mechanism to be developed. In detail:
  - Securing budget for green growth action plan
  - Developing new financial source for green growth action plan
- (4) Mr. Son – DPI reminded that long list is the result of serious research and summary from previous master plans of Quang Ninh province, especially socio-economic master plan. Of course, candidate activities in long list adapted to 3 criteria of priority, effectiveness and feasibility belong to Quang Ninh criteria but in that long list, these criteria can be loosened as long as they are related to green growth. So criteria for short list must follow criteria for long list.

Regarding criteria for preparing short list, he basically agreed with 3 groups of criteria but it is necessary to specify. For example:

- Group 1 – Priority: What is “high contribution to achievement of provincial GG action plan targets”? Contribution for reduce of GHG emission or for investment promotion?
- Group 3 – Feasibility: Is there only expectation on collaboration with Japanese private sector? How about the collaboration with other countries?

Regarding the appliance of Biwa Lake Model to pilot activities, he asked for criteria of its selection based on priority, effectiveness and feasibility.

Regarding general procedure for institutionalization in Quang Ninh province, he reminded and completed 4 main points:

- It is very important to observe Vietnam law (2008) on Promulgation of Legal Normative Laws and Vietnam law (2004) on Promulgation of PPC & People's Council legislation documents for local authorities.
- Project Steering Committee will have specific right and power to decide in pilot activities without middle phase of submitting for PPC’s approval

- If there is an issue which probably affects to socio-economic benefits of Quang Ninh province, it is compulsory to ask for approval of the Provincial Party Council
  - At the end of pilot phase, in case of implementing official activities from pilot activities, it is obligatory to obey a new procedure for institutionalization in the right order.
- (5) Mr. Naganuma wanted to know the duration of this procedure and the frequency of PPC's meeting for discussion of draft documents
- (6) Mr. Son answered that there is no fixed duration for one procedure, it depends on each case but the minimum time is from 1-2 month, so it is mostly based on the effective working of Compiling Committee. It is the same for PPC's meeting frequency. If necessary, Quang Ninh PPC can gather for an urgent meeting.
- (7) Mr. Naganuma agreed with Mr.Son's opinion that investment promotion effectiveness can be a priority criteria for short list and asked for other explanation and recommendations as well.
- (8) Mr. Tran Thanh Phong – Chief of Sectoral Economic division- DPI repeated that criteria for short list should be included in those of long list. He shared his opinions that priority is not a criteria, he proposed to use:
- Appropriateness to legal documents
  - Effectiveness to economic, social and political benefits
  - Feasibility to investment promotion and national & provincial budget ability

Regarding the specification of criteria, he proposed to build 2 levels for each group. For example, there will be 1 big headline and 2 smaller headlines.

He supported Mr.Son's opinion that the progress of procedure depends on the level of Compiling Committee for drafting the institutional documents. For example, in 2015, it took only 1 month for institutionalization procedure of a resolution related to tourist boats in Ha Long Bay.

- (9) Mr. Nguyen Tuan Anh - Chef of Socio-culture and tourism division, DPI commented on possible institutional mechanism to be developed/improved as below:
- For these mechanism, PPC can totally approve depending on the capacity to persuade of Compiling Committee:
    - + Method on monitoring and evaluation for implementation of activities for green growth action plan
    - + Consistency with objectives of each activities with overall target for green growth action plan, especially on tourism sector
    - + Clarification of mandate of relevant departments, local administrative bodies and external organizations
    - + Cross-cutting cooperation mechanism among Steering Committee members of provincial of provincial action plan.
  - However, 2 last possible institutional mechanism are under 2 levels of administrations: People's Committee and Provincial Party Council (through official resolution)

➔ In conclusion, if mechanism have impacts on socio-economic sectors in Quang Ninh province, it is compulsory to have approval of both People's Committee and Provincial Party Council

Regarding the difference of general procedure between building a new institutional documents and updating existing institutional documents, he affirmed that at phase of pilot activities, there will be mainly development of new ones instead of revision and update of existing ones.

Besides, he proposed to make a global mechanism for implementation process instead of dividing for each sector.

(10) Mr. Naganuma confirmed the importance of building new institutional documents in combination with editing existing ones. He gave an example of Quang Ninh Environmental Protection Fund which is not actively and effectively used at the moment. In the project scope, JET hoped to be able to update institutional mechanism related to this fund.

(11) Mr. Son reminded that from the beginning, everyone used bottom-up approach while Mr. Tuan Anh mentioned top-down approach which is focused on financial issues.

He mentioned that so far in Quang Ninh province in particular and in Vietnam in general, concept of Green Growth is too wide and financial division for it is not clear. For example, poverty reduction is also related to green growth. So it is essential to define all sectors can be related to green growth. Taking advantage of concerned projects in provincial scale can be opportunities to have financial sources for Green Growth Project.

He proposed to have a study for funding resources in Quang Ninh

(12) Mr. Tetsuo Isono, Tourism Expert - JET contributed an opinion related to ecotourism – mangrove development. So far, there are only 6 indicators for ecotourism in Quang Ninh. It is necessary to develop them.

(13) Mr. Son completed that at least, all tourism indicators in Quang Ninh have to adapt to provincial standard. Only when enterprises leaders prove that their businesses can adapt to environmental standard of Quang Ninh, they can get permission of operation. For example, by 31 December 2015, only tourist boats with waste water treatment system can work on the bay.

(14) Mr. Cuong, Deputy chief of Foreign economic relations division, DPI completed that environmental standard should be monitored in short term and long term of next 5 years and 10 years. Besides, ISO Standard can be a good reference. For example, in next 5 years, all indicators will have to meet Vietnamese Standard; in next 10 years: higher standard like Japanese or European standard.

He expressed a wish to know the method of selection from JET and proposed SMART method:

- S - Specific
- M - Measurable
- A -Attainable
- R - Relevant

- T - Time-bound
- (15) Mr. Naganuma answered that JET will make a matrix showing criteria and result of narrowing down the GG pilot activities as short list.
- (16) Mr. Cuong highly appreciated Mr. Naganuma's idea and hoped for having chance to see it soon. Besides, he wanted to know if there are many difference between procedure of institutionalization in Japan and in Vietnam, so that Quang Ninh province can study experience from Japan.
- (17) Mr. Naganuma answered that because of the difference of political institution, JET cannot apply procedure from Japan and it is best to respect Vietnamese procedure when working in Vietnam.
- (18) Mr. Pham Hong Bien - Chief of Foreign economic relations division, DPI proposed 3 opinions related to:
  - (a) Scale of short list
  - (b) Method of selecting
  - (c) Necessity of specifying short list for each sector and each region

In detail:

- (a) He repeated that criteria for short list must be included in previous criteria for long list
  - (b) He emphasized that the duration of implementation should be considered as an important criteria
  - (c) He said that among 6 regions, Heritage Core Zone should be in priority for pilot activities
- (19) Mr. Son added the last comments that there were a lot of ideas firstly in discussion in scale of intensive consultation but in fact, they are totally not new in Quang Ninh province. For example: environmental standard for infrastructure construction, quality of waste water treatment system.  
He reminded all PMU members to pay high attention in this period. It is better to have specific and detail proposals instead of global recommendations.
- (20) Mr. Naganuma made an appointment for next meetings related to criteria for short list, ESCO project and tourism sector.

*End of document*

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation 10

**Date:** 20 Jan 2016

**Avenue:** DPI Meeting Room

### List of attendants:

No	Name	Position	Organization
1	Hoang Danh Son	Deputy director	DPI
2	Dao Thanh Huyen		DPI
3	Nguyen Thi Thu Thuy		DONRE
4	Pham Van Cuong		DONRE
5	Pham Thi Duyen		DONRE
6	Doan Hai Ly		DOST
7	Bui Tuan Anh		DPI
8	Ta Thien Hy		DPI
9	Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
10	Keiichi Maeda	Coordinator	JET
11	Duong Thi Nhuan	Translator	JET

### Agenda:

- Presentation of existing fund system in Quang Ninh (EPF, Science and Technology Development fund)
- Discussion and recommendation

### Record of discussion

- (1) Ms. Ly, DOST commented as follows;
  - Science and Technology development fund was established in 2012 not 2015.
  - Purpose of this fund is to support enterprises which renew technology.
  - Information is opened in Quang Ninh portal site and includes specific information like Criteria of target to support and Intensive mechanism.
  - Please, confirm Law on Science and technology by Decree No.95.
  - Enterprise which have not more than 10% income tax for establishment of Science and Technology fund is targeted.
  - 100 billion VND is stocked.
  - Yearly plan is submitted to PPC.
- (2) Dr. Son DPI commented as follows
  - Source of 100 billion VND stock is 3-5% of income tax. It is decided by Decree No.95.
  - From 2016, each enterprise which related to science and technology establish their own fund.



- (3) Ms. Duyen, DONRE commented as follow
- Tasks of fund is as follow
    1. Receiving deposit from VINACOMIN
    2. Giving loan
    3. Donation (donated 1 billion VND for flood in July, 2015)
    4. Receiving donation (400 million donation for flooding last year from environmental protection of Vietnam )
  - Loan is maximum 5 years and maximum 5 billion. Number of application is small because of small scale fund.
  - This fund is for Environment protection not for GG.
  - Specific instruction is from central government.
- (4) Ms. Ly, DOST commented as follow
- Science and technology fund is instructed by Decree No. 95 from Central government level to province and enterprises.
  - Target research and study is recognized by Ministry.
  - Normal enterprises could use this fund until 2015 but only enterprise which related to science and technology can use their own fund from 2016. Target 5 enterprises are as follow;
    1. Seeding company
    2. Dat Minh Ha Company
    3. Pearl company
    4. Theanine(?) agriculture
    5. She does Not remember
- (5) Kengo Naganuma asked questions as follow
- Is it possible to add new company to list of target enterprise list of Science and Technology development fund?
- (6) Ms. Ly, DOST answered as follow
- It is possible but it should be related to Science and Technology.
- (7) Kengo Naganuma asked questions as follow
- Is it possible to use enterprises' own Science and technology fund?
- (8) Ms. Ly, DOST answered as follow
- They are not interested in renewing technology
- (9) Ms. Duyen, DONRE, commented as follow
- It is necessary to follow government instruction for deposit of environmental rehabilitation of VINACOMIN.
  - Interest rate is operated by government.
- (10) Mr. Tuan Anh, DPI, commented as follow;

- It is difficult to adjust, add, supplement existing fund system.
- Concept of Green Growth is very wide.
- It is necessary to consider to establish new fund for GG.

(11) Dr. Son, DPI, concluded as follow;

- It is better to establish new fund for GG.
- It is conceivable to add some criteria to existing fund but cannot cover all aspect of GG.

***End of document***

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation 11

**Date:** 21 Jan 2016

**Avenue:** DPI Meeting Room

**List of attendants:**

No	Name	Position	Organization
1	Hoang Danh Son	Deputy director	DPI
3	Tran Xuan Cuong	Deputy chief of Foreign Economic Relations Division	DPI
4	Tran Thanh Phong	Chief of Sectoral Economic Division	DPI
5	Nguyen Thi Thu Hong	Deputy chief of Foreign Economic Relations Division	DPI
6	Dang Thi Thu Phuong	Staff	DPI
7	Nguyen Manh Hung	Chief of Science Management Division	DOST
8	Pham Xuan Duong	Deputy chief of Technology Management Division	DOST
9	Nguyen Thi Dieu Huyen	Staff of Science Management Division	DOST
10	Vu Ngoc Phu	Staff of Environment Safety Technique Section	DOIT
11	Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
12	Keiichi Maeda	Coordinator	JET
13	Duong Thi Nhuan	Translator	JET
14	Nguyen Thi Thao Hien	Translator	JET

**Agenda:**

- Presentation of ESCO project and discussion on required mechanism and administrative policy
- Discussion and recommendation

**Record of discussion**

- (1) Mr. Kengo Naganuma, Environmental Expert, Deputy chief advisor of Green Growth presented the main content of Intensive Consultation meeting 11 in combination with the introduction of Green Growth Project to some participants from DOST and DOIT who joined for the first time.

Firstly, he presented 6 main contents related to ESCO project:

- Concept of ESCO
- Legal framework related to ESCO in Vietnam
- Status of ESCO in Vietnam
- Observed barriers for promoting ESCO project in Vietnam
- Possible solutions for promoting ESCO Project
- Examples of energy saving measure at building

*In detail:*

Regarding the concept of ESCO, he presented that it is a consulting organization which offers energy-saving solution and emphasized that ESCO groups, in cooperation with banks and donors will support initial investment and guarantee benefit that client can return investment cost gradually in 5 years-10 years and even more; the only fee that client pays is consultation fee.

Regarding legal framework related to ESCO in Vietnam, he mentioned Energy Audit Reports received from DOST recently and the situation when many enterprises in Quang Ninh province recognize the importance of energy saving and proposed that ESCO can be good solution at the beginning.

Regarding status of ESCO in Vietnam, he mentioned the status of 4 related issues in national level in comparison with those in Japan: National Energy Efficiency Law, National Energy Efficiency Programs, Governmental financial support for ESCO and Tax incentives. So far in Vietnam, there are about 15 ESCOs projects till 2013 and 6 ESCOs in 2015.

Regarding observed barriers for promoting ESCO in Vietnam, he completed that some barriers come from the lack of knowledge of ESCO and the others from the lack of financial support, tax institutions and compulsory regulations on energy efficiency. For the lack of information about ESCO, he proposed that it is necessary to promote propaganda of awareness raising.

Regarding the promotion of ESCO, he repeated the importance of awareness raising to possible facilities in combination with 6 other possible solutions. Among them, he highly mentioned Hanoi Energy Conservation Center (EEC) and Trial ESCO project by government office in some other projects by JICA in other countries.

Regarding examples of energy saving measure at building, he proposed that ESCO can be applied for Quang Ninh PPC building and presented some previous ESCO implementation in Shiga Prefecture and Ho Chi Minh City. He completed that ESCO can be implemented not only in building construction but in many other subjects such as in industrial zones.

*In conclusion*, he hoped to receive opinions if ESCO can be applied to Green Growth Project and what kind of institutional mechanism can be used for ESCO implementation in Quang Ninh province.

- (2) Mr. Hoang Danh Son – Deputy director of DPI commented that ESCO is a very new concept not only in Quang Ninh province but in Vietnam that is related to many different sectors such as industry, trading, science and technology.
- (3) Mr. Naganuma wanted to know if so far in Quang Ninh, there is an Energy Conservation Center like in Hanoi.
- (4) Mr. Son and some other attendants confirmed the absence of this center and mentioned that DOST has Science and Technology Development Fund to support science and technology investment in provincial scale but this fund is not used effectively due to short-term institution.
- (5) Mr. Naganuma commented as below:
  - ESCO project seems to be more developed in the south of Vietnam and in the north, only Hanoi Energy Conservation Center has a lot of knowledge and experience about ESCO implementation.
  - In Quang Ninh province where some enterprises have already Energy Audit Reports, it is an optimistic sign but it is also necessary to have more energy saving implementation.
  - In order to realize ESCO implementation, there are 2 possible ways for Quang Ninh:
    - + Create cooperative relation with enterprises having good implementation of ESCO
    - + Self-implement an ESCO investment. It will be better if ESCO project is under control of a main responsible organisation in Quang Ninh.
- (6) Mr. Vu Ngoc Phu - Staff of Environment Safety Technique Section, DOIT commented that in his understanding, regarding benefits of enterprise, ESCO has the same form with a bank loan when enterprises have to pay both fees of investment and consultation. He asked for more explanation from JET about the exact benefits that ESCO can bring.
- (7) Mr. Naganuma replied that the first benefit that enterprise can get is energy saving, synonymous with money saving and environmental protection. He emphasized that before each implementation, ESCO company always examines the status of client in order to find appropriate energy saving scheme. Only after a serious calculation, an official contract is made.

He shared Mr. Phu's opinion and commented that now anxiousness on securing benefit is one of the biggest barriers for ESCO promotion in Vietnam. Besides, he confirmed that so far, almost optimistic results of ESCO in Vietnam can be seen clearly.
- (8) Mr. Nguyen Manh Hung, Chief of Science Management Division, DOST highly appreciated Mr. Naganuma's opinion that awareness raising is firstly the most important solution for its ESCO promotion.

(9) Mr. Tran Xuan Cuong, Deputy chief of Foreign Economic Relations Division of DPI gave an information of 2 previous energy saving project (Inverter installation and burning energy saving project from Thailand) and analyzed 2 barriers from experiences of these projects:

- Anxiousness on the lack of energy for running machine
- Take of advantage of financial sources: in state companies, some individuals get personal commission from buying or selling coal or electricity. So they don't encourage energy saving to maintain their interest.

(10) Mr. Naganuma shared an experience from Japan that in fact, it even take an enterprise 1-2 years after the first phase to make an official contract with ESCO. That's why many mechanism are promulgated with the aim of encouraging and forcing enterprises to implement ESCO. On the other hand, some prefectures take the initiative on ESCO implementation before the appearance of policy.

He repeated the necessity of provincial strategy to develop energy saving and at the beginning, only 1-2 pioneers in ESCO implementation are enough.

(11) Mr. Nguyen Manh Hung, DOST proposed that awareness rising activities should be mainly under control of ESCO company and DOIT.

Besides, he reminded that in Quang Ninh province, most of the biggest companies are from state cooperation which are more and more focused on energy saving. They are the biggest sources of energy consumption in provincial scale. So it is better if ESCO project can be firstly implemented in these companies to set example.

He showed his uncertainty if there will be effective mechanism to encourage ESCO implementation. He commented: "To be honest, energy saving is not a priority in economic development strategy of Quang Ninh. I have the feeling that this is exactly the enterprise who can self-implement ESCO without waiting for mechanism from PPC. It is sure that at least, one of the technologies in ESCO was applied somewhere in Quang Ninh, it means they are not new. So what kind of mechanism do we need to promote ESCO in this case?"

In function of DOST, he mentioned 2 funds possibly to get involved:

- Science and technology development fund
- Science, technology application and study encouragement fund

Then he hoped to receive more information from Mr. Phu – DOIT regarding the status of enterprises and recent projects on energy saving.

(12) Mr. Vu Ngoc Phu – DOIT answered that Energy Management Section is in charge of these data with annual reports. But there is no representative from this section at the meeting. He proposed to report the leaders to arrange a meeting between DOIT and JET.

- (13) Mr. Naganuma asked about Science and Technology Development Fund that JET had previous discussion with DOST and said that for enterprise, it may be difficult to get support from this fund but it is still possible. He shared his personal idea that small and medium enterprises should have priority in ESCO implementation.

He hoped to receive reports on energy management from Energy Management Section in DOIT.

- (14) Mr. Tran Thanh Phong, Chief of Sectoral Economic Division – DPI highly appreciated the possibility of ESCO project because for economic and political aspects, it doesn't cause any conflict between 3 relevant sides:

- Enterprises
- Society/Community
- ESCO

He totally agreed with the first barrier for promoting ESCO: “Lack of awareness on benefit of ESCO” and emphasized that how enterprises and residents can understand well about ESCO when even the participants of the meeting – the leaders cannot get it fully.

He proposed to refer 2 existing policies:

- Vietnam Law on promotion of domestic investment
- Policy on Agriculture and Forestry development

He emphasized that Quang Ninh must be the pioneer in energy saving because Quang Ninh province is one of the leaders in heavy industry in Vietnam and shared that in function of DPI, they can give favour to enterprises that invested on energy saving solutions.

- (15) Mr. Naganuma proposed that if necessary, JET can invite an ESCO company to Quang Ninh to give a detail presentation about ESCO project. He hoped to receive a list from DOIT and DOST of potential enterprises and organization for promoting ESCO.

- (16) Mr. Son – DPI added his last comments as below:

- JET should refer Decision No. 2612/QĐ-TTg dated December 30, 2013 of the Prime Minister approving the strategy for using clean technologies by 2020 with a vision to 2030.

- Regarding examples of ESCO implementation, in near future, some PPC buildings will be inaugurated. He proposed to put a trial ESCO application in administrative building.

- He totally agreed with 2 recommendations from Mr. Naganuma and Mr. Phu:
  - + Meeting with DOIT
  - + Meeting with an ESCO company.

- He asked JET to give a list of ESCO implemented enterprises in Vietnam and their reports of ESCO effectiveness. Besides, he proposed that if JET could make a study or write an article, they are ready to put it on media for propaganda.

(17). Mr. Naganuma highly appreciated Mr.Son's idea of implementing ESCO in PPC building, confirmed the presentation of an ESCO company and made appointments for next meetings.

*End of document*



## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation 12

**Date:** 25 Jan 2016

**Avenue:** DPI Meeting Room

**List of attendants:**

No	Name	Position	Organization
1	Le Thi Hai Binh	Expert Transportation Management Division	DOT
2	Kengo Naganuma	Environmental expert	JET
3	Duong Thi Nhuan	Translator	JET
4	Nguyen Thi Thao Hien	Translator	JET

**Agenda:**

- Presentation of the replacement of Engine and Usage of BDF for tourism boats in Ha Long Bay
- Discussion and recommendation

**Record of discussion**

- (1) Mr. Kengo Naganuma – Deputy chief of Green Growth Project presented the idea of replacement of Engine and Usage of BDF for Tourism Boats. In detail:
    - Selecting Process of Pilot Activities
    - Replacement of outdated diesel engines of tourist boats
    - Promotion of Bio-Diesel Fuel (BDF) for tourist boats which is being experimented by JICA and Vietnam National University.
  - (2) Ms. Le Thi Hai Binh, Exper - Transportation Management Division commented as follows:
    - BDF has been used and according to reports of tourist boat owners, it doesn't have any bad effects to engine
    - Petrolimex Vietnam had a meeting with QN PPC a month ago in order to discuss about replacing CNG (Compressed Natural Gas) for diesel by reason of:
      - + Environmental protection
      - + Expense saving of 10%
      - + Feasibility of exploiting a gas mine in Thai Binh Province
- So far, QN PPC has not had official regulations yet, the meeting was organized by DOT in cooperation with DOST, DONRE & HBMD

- When using BDF, tourist boats doesn't need to be renovated, different from CNG usage. So far, after an experiment of using BDF in Ha Long Bay, tourist boat owners care most about the price and the supply source. In last experiment phase, only one boat was supplied 1000 liters of DBF and then it stopped.
- (3) Mr. Naganuma reported the implementation result from VNU that the quality of BDF is very good and it is totally possible to manufacture a large amount of BDF, but it takes time to examine the production cost. If QN PP approves, it had better to widen the implementation of BDF for tourist boats.
  - (4) Ms. Binh agreed and completed that DOT and DPI can find some suitable boats to experiment but finally, it is compulsory to report to PPC.
  - (5) Mr. Naganuma asked if main partners of DOT are DOST and DONRE
  - (6) Ms. Binh affirmed and asked if BDF is produced in Japan, from the first experiment in 2007
  - (7) Mr. Naganuma said that he didn't get exact information and asked if any Japanese Companies invested in BDF production in Vietnam. If PPC approved that JET can be in charge of BDF promotion, he hoped that DOT could help with the list of this kind of company.
  - (8) Ms. Binh said that DOT would always be ready to participate. She repeated that in position of boat owners, she is most interested in the price. She mentioned that in last 2 years, a lot of new regulations and rules were applied that made tourist concerned much about the price. For example:
    - Oil split installation costs 20 millions VND/boat
    - White painting for boat that needs to be repainted 2-3times/year
  - (9) Mr. Naganuma said that basing on approval of PPC, JET can build mechanism to support boat owners with the price. He asked if DOT could take lead to be a focal point.
  - (10) Ms. Binh answered that regarding the price, DOF is mainly in charge of it, DOT is only a consulting organization for PPC. The most important participants are boat owners. If they see reasonable and profitable aspect, they will surely support the replacement of engine and implementation of BDF. In fact, almost boat engines now in Ha Long are from Japan, old boat with a 40-55 horsepowe engine and new boat with 105 horsepowe engine. If boat owners realized that old engine wastes more fuels, they will surely replace it.
  - (11) Mr. Naganuma asked if DOT had any plans to reduce boat number and promote the replacement of engine.
  - (12) Ms. Binh mentioned 3 Decisions from QNPPC
    - Decision 3624 by QN PPC 16 Nov 2015. Stop of building new ships by investment permission
    - Decision 3625 by QN PPC 16 Nov 2015. Stop of building & replacing wooden ships on Ha Long - Bai Tu Long bay

- Decision 4088 by QN PPC 21 Dec 2015. Temporary regulations for tourist boats on Ha Long - Bai Tu Long bay

In detail:

**Decision 3624**

- Section 1: Base on investment certificates of enterprises approved by PPC, stop the build of 119 ships which are being built
- Section 2: DPI & IPA take the lead to check, consult for PPC to withdraw/adjust the investment certificates of 6 enterprises
- Section 3: Departments and organizations in charge: PPC administration division, DPI, DOT, DCST, IPA, HBMD, Provincial Police, Fire Police and other related local administrations

**Decision 3625**

- Section 1:
  - + Stop to build new ships and replace/repair wooden boats by using steel/composite cover, which are out of operation time on Ha Long - Bai Tu Long bay
  - + DOT take the responsibility to withdraw working permit of expired wooden boats after 18 Mar 2015
  - + By 20 Nov 015, DOT takes charge to report QN PPC to examine and find solutions for each ship with building permit before 18 Mar 2015, only permit them to operate like normal day boats, not night cruiships.
- Section 2: Departments and organizations in charge: PPC administration division, DOT, DCST, HBMD, Provincial Police, Fire Police and other related local administrations

**Decision 4088**

New regulations to give working permission to tourist boats on Ha Long - Bai Tu Long bay related to:

- Condition for tourist boats
- Condition for employees in tourist boats
- Condition & standard for boat stations and wharf areas
- Responsibility of boat owners and staffs, tourists, boat station administration and relevant administrative organizations.

(13) Mr. Naganuma highly appreciated useful information from Ms. Binh and commented that as his understanding, there have been so far lots of changes in boat management. Within the framework of Green Growth Project, it is a good change to propose improvement mechanism.

(14) Ms. Binh shared her personal idea that promotion of BDF would get good result because at least, QN PPC had clear and strict regulation for this typical business. There is no reason to refuse the promotion of BDF.

She said that the oil split implementation was begun from 2013, reinforced from the end of 2014 and really fulfilled from November 2015. At the beginning, because boat owners had to pay investment cost, they didn't see fully the advantages. Gradually, they

even encouraged each other to install it and by 31 Decemeber 2015, 100% tourist boats were installed with oil split system.

She emphasized that boat owners cannot really see the importance of environmental protection, they only care about the cost. Because UNESCO warned before about the environment in Ha Long, oil split implementation was strengthened. It will be the same for BDF implementation with the same good purpose.

She asked Mr. Naganuma about influence level of BDF in case of oil lick, in comparison with diesel oil lick.

(15) Mr. Naganuma answered that BDF decomposes faster than diesel, so using BDF is a good solution.

He hoped for get more cooperation from DOT and made an appointment for next meetings.

*End of document*

## RECORD OF DISCUSSION

**Title of meeting:** Intensive Consultation 13

**Date:** 25 Jan 2016

**Avenue:** DPI Meeting Room

**List of attendants:**

No	Name	Position	Organization
1	Tran Thi Quynh Van	Expert - Tourism resource development division	DCST
2	Tetsuo Isono	Tourism Expert	JET
3	Kengo Naganuma	Environmental Expert	JET
4	Duong Thi Nhuan	Translator	JET
5	Nguyen Thi Thao Hien	Translator	JET

**Agenda:**

- Pre-presentation of pilot activities on Tourism Sectors
- Discussion and recommendation

**Record of discussion:**

- (1) Mr. Tetsuo Isono – Tourism Expert – JET presented issues related to pilot activities for Tourism Sector in Green Growth Project. In detail:
- Remind of Quang Ninh socio-economic development master plan: Milestones and objectives for Quang Ninh's GDP size and economic structure. Services will be in hope of 51% of GDP in 2020 and 2030.
  - Trend of Visitors and number of visitors to Quang Ninh and Ha Long
  - Remind of Quang Ninh Green Growth action plan and Tourism master plan with 2 orientation related to green growth: GREEN growth and green GROWTH
  - Presentation of criteria for preparing long list with 3 main criteria: consistency with Quang Ninh province requirement, effectiveness as JICA project considering Lake Biwa Model, Feasibility and Applicability
  - Presentation of long list of pilot activities with 2 groups: Greening of existing tourism industries and Greening of industries in Ha Long Bay area by promotion of ecotourism.
  - Presentation of criteria for preparing short list with 4 criteria: Appropriateness, Priority, Effectiveness and Feasibility
  - Example for selecting short list (Tentative)

(2) Ms. Tran Thi Quynh Van, Tourism resource development division, DCST highly appreciated the work of JET and said that she basically agreed with criteria for preparing long list and short list.

Especially, she gave an information related to group B – Long list of pilot activities, Greening of industries in Ha Long Bay area by promotion of ecotourism that EU Project have been helping Quang Ninh province with the improvement of Tourism Information. There will be soon a workshop between EU expert team, PPC and tourism enterprises in Ha Long.

She promised to share more information about the workshop and its results of discussion and said that in function of tourism resource development division, DCST, they would always ready to support Green Growth Project.

(3) Mr. Tetsuo Isono – JET said thank you and made an appointment for next meetings to have more deeper discussions.

*End of document*

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 14] – PART 1**

### *Discussion on Pilot Activities for Phase 2*

Venue: DPI meeting room

Date: 18<sup>th</sup> February 2016

List of attendants:

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Dr. Hoang Danh Son	Deputy director	DPI
2	Mr. Pham Hong Bien	Chief of Foreign economic relations division	DPI
3	Mr. Tran Thanh Phong	Chief of sectoral economy division	DPI
4	Ms. Dao Thanh Huyen	Deputy Chief of foreign Economic Relation Division	DPI
5	Nguyen Thi Thu Hong	Deputy chief of foreign Economic Relation Division	DPI
6	Mr. Bui Tuan Anh	Deputy chief of General and Planning Management Division	DPI
7	Mr. Norihiko Inoue	Chief advisor	JET
8	Ms. Duong Thi Nhuan	Translator	JET
9	Ms. Tran Thi Mai Lan	Translator	JET

#### **1. Discussion Points**

- (1) Criteria for Selecting Candidate Topics of Pilot Activities for Phase 2
  - Confirmation on Criteria for Preparing Long List of Pilot Activities
  - Confirmation on Criteria for Preparing Short List of Pilot Activities
- (2) Draft Short List of Pilot Activities for Phase 2
  - Matrix of Evaluating Long-listed Topics for Short Listing
- (3) Perspectives of Readiness for Phase 2
  - Scoping Improvement / Development of Policy Framework and Institutional Mechanism
  - Time Frame for Institutional Improvement / Development

#### **2. Contents of discussions**

##### **(1) Dr. Hoang Danh Son:**

Dr. Son expressed his strong supports to the contents of the documents prepared by JET. Dr.

Son had some comments as follows:

- ***Re. Topic 6-2: Regular Publication of Environmental Monitoring Report (White Book):*** Dr. Son proposed JET to consider to point out some basic contents which are expected to be presented in the environment monitoring report.

**Rationale:** Dr. Son elaborated that normally the current Vietnamese “Environmental Monitoring Report” basically only contains monitoring results without any discussions on the related trend of environmental pollution, its affects on the socio-economic conditions, environment, health of people and necessary proposed solutions. In addition, the report has neither been able to point out the pollution sources, good / bad performance enterprises on environmental protection, nor assessment of any current policy that need improvement to ensure future effectiveness.

Dr. Son suggested the name of the report can be “Environment and Development” in which, monitoring results are a small component of the report.

Dr. Son also pointed out that the current environmental monitoring report has not covered biodiversity which he affirmed that it plays an important role to green growth.

- **Re. Perspective of Time Frame for Institutional Improvement / Development:**

Dr. Son proposed that under each nominated topic, a working group should be established. The head of the working groups will be focal point, members of the group will be members of various departments, districts and representatives of the unit that directly involves in the implementation.

- **A mechanism for overall management of the 6 nominated topics**

Dr. Son pointed out that JET need to make a proposal on a mechanism for overall management of the nominated topic in Phase 2. Based on such proposal, the Vietnamese side will be able to arrange human and financial preparedness for the coming phase.

(2) **Mr. Pham Hong Bien**

- Proposed JET to consider to ***add “Mobilisation of other resources, projects.” under Criteria for Selecting Candidate Topics/ 2. Priority***

Rationale: due to limitation of state budget, the mobilisation of other resources such as ODA projects (USAID, UNDP supports) is very essential, including involvement of private sector. This will be a very convincing point to persuade the Steering Committee members. Mr. Bien also gave an example that with ESCO projects, the private sector will likely show their strong involvement.

- ***Re. criteria No. 3. Effectiveness:***

Mr. Bien proposed JET to simplify the wording to make it easier to understand for the massive people since the terminology is very broad since Effectiveness should be specifically understood as: *Improvement of tourism activities and environment at the districts under project area.*

- ***Consideration for nomination of topic IA-2: Enhancement of Environmental Management Capacity in Industrial Zone and Economic Zone***

Rationale: Mr. Bien proposed JET to select this topic for the following reasons:

- ✓ It is applicable as shown in the JET assessment matrix;
- ✓ Its contents involve directly with the project area;



- ✓ In the coming period, the expected boost of Van Don and Viet Hung Industrial Zones will surely create large impacts to the environment. Therefore it is inevitably to have specific management mechanism in place.
- ***Topic 6 -1 - Awareness for factories / buildings (hotel, restaurants, etc.) in pilot areas of other groups: to be nominated or integrated in other topics.***

Rationale:Mr. Bien proposed JET to also select this topic or to integrate it in other topics, for the following reasons:

- ✓ It is applicable as shown in the JET assessment matrix;
- ✓ This is communication, awareness raising activity so it has high feasibility. Mr. Bien added that in the actual fact, JET had conducted a specific survey on this particular topic.

**(3) Mr. Tran Thanh Phong**

Mr.Phong reiterated his comments which were made during Intensive Consultation No. 9 when he said he did not consider priority as a criteria. In his opinion, the three remaining criteria are adequate for the selection. He proposed to use scoring system, higher scored topics shall be selected.

Mr. Phong also added that he could not give exact answer on the selection since he needed to check with other relevant documents and would provide further comments at a later date.

Concerning interpretation of terminology, Mr. Phong proposed to use some better meaning in the Vietnamese language of certain terminologies such as: nominated topics should be translated as proposed projects, etc.

**(4) Ms. Dao Thanh Huyen**

- ***Re. Perspective of Time Frame for Institutional Improvement / Development:***

Ms. Huyen request for clarification on sequencing of activities since she understood there are certain activities to be completed first before other activities can be imminent. In the current document, all activities have the same start date.

Example: only once Working group is established then preparation of action plan can be started.

**(5) Mr. Bui Tuan Anh**

Mr. Tuan Anh expressed his consent to the 4 groups of criteria. However, he proposed that weighing system should be applied among these criteria since he understood that there is certainly criteria that is more important compared to others.

Mr. Tuan Anh also commented that within his own profession he can only assess some of the topics among the 6 groups therefore the more intensive involvement of professional departments is very critical.

Mr. Tuan Anh also added that the number of nominated topics is also depended on the limitation of the budget.

**(6) Mr. Norihiko Inoue**

Mr. Inoue expressed his high appreciation on fruitful comments conveyed by the meeting participants. He also understood that it is essential to make the selection convincing to the Committee leaders in the coming Steering Committee meeting, which is tentatively scheduled on 21/22 March 2016.

Mr. Inoue also proposed that JET expected to get agreement on the short list in the scheduled meeting and he again confirmed the intensive viewpoint of Japanese side concerning the involvement of private sector in the process. Mr. Inoue stressed that even their involvement in this early stage is even better.

**(7) Dr. Hoang Danh Son**

Concerning the scheduled Steering Committee Meeting, Dr. Son expressed his expected agenda as follows:

- 1) Submission of draft detailed outlines for each of nominated topic;
- 2) Preliminary proposal of working groups with specified focal points while the overall management is held by DPI;
- 3) Proposed framework for overall management.

Once conclusions can be made by leaders in the scheduled meeting, the Vietnamese side can start their preparation concerning both personnel arrangement and financial arrangement for the next phase.

**(8) Next meeting**

Next meeting will be held on Friday, 19<sup>th</sup> February for PMU to provide further comments to this current meeting discussion and then to confirm the short list with the PMU.

**The meeting ended at 4:30.**

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 14] Part 2**

### ***Discussion on Pilot Activities for Phase 2***

Venue: DPI meeting room

Date: 19<sup>th</sup> February 2016

List of attendants:

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Dr. Hoang Danh Son	Deputy director	DPI
2	Mr. Pham Hong Bien	Chief of Foreign economic relations division	DPI
3	Mr. Tran Thanh Phong	Chief of sectoral economy division	DPI
4	Ms. Nguyen Thi Thu Trang	Deputy chief of foreign Economic Relation Division	DPI
5	Ms. Dao Thanh Huyen	Deputy Chief of foreign Economic Relation Division	DPI
6	Nguyen Thi Thu Hong	Deputy chief of foreign Economic Relation Division	DPI
7	Mr. Bui Tuan Anh	Deputy chief of General and Planning Management Division	DPI
8	Mr. Norihiko Inoue	Chief advisor	JET
9	Ms. Duong Thi Nhuan	Translator	JET
10	Ms. Tran Thi Mai Lan	Translator	JET

#### **1. Discussion Points**

Following the Intensive Meeting No. 14 held on 18<sup>th</sup> February 2016, this Part 2 meeting on 19<sup>th</sup> February is aimed at JET's confirmation on PMU's comments which were raised during the 18<sup>th</sup> February meeting and to receive possible further comments from both side, as follows

- (1) Topic 6-2: basic Contents of White Book – Japanese reference.
- (2) Topic 1A-2: consideration of nomination
- (3) Topic 6-1: consideration of nomination as a single topic or be integrated into other topic
- (4) Possible further comments from PMU on draft shortlist.

#### **2. Contents of discussions**

##### **(1) Topic 6-2: basic Contents of White Book – Japanese reference**

Mr. Inoue Norihiko, JET chief advisor gave brief presentation on the table of contents of the Japanese White Book which was issued recently.

Dr. Hoang Danh Son, DPI deputy director commented that the Japanese white book is very much different to the Vietnamese annual environmental report.

Dr. Son added that annually, MONRE as well as other ministries prepare their annual report but there is no combination among them to be as a consolidated report. It is the same with the provincial level reports and there is no budget for such consolidation of the reports together. Dr. Son pointed out the fact that Quang Ninh Province allocates annual expenditure for preparation of annual environment report.

Dr. Son proposed that for green growth, specific recommendations are required concerning preparation of such a white book; clarification has to be made on target users who will be using the report on a frequent basis, what kind of information to be reflected in the report in an effort to avoid wasting of budget in unnecessary surveys for data.

**(2) Topic 1A-2:**

Concerning this topic, Mr. Inoue expressed the importance of it by giving an example when JET conducted interviews with various stakeholders in Cai Lan Industrial Zone. Enterprises in the zone all have the same high demand of renewing their wastewater treatment stations. Therefore it is understood that it is essential to have certain supportive policies in place to help the enterprises.

**(3) Topic 6-1**

Mr. Inoue said that 1 possible option for topic 6-1 is to be integrated into either topic 3B 2 or 3B3.

PMU agreed with this.

**(4) Topic 1C-1**

Ms. Dao Thanh Huyen raised the question concerning possible integration of topic 1C-1 for 3R activities into any topic.

To this end, Dr. Son said that PPC has allocated budget for this activity that DONRE is in charge for implementation.

Mr. Inoue stressed that JICA makes it very clear that they are not in favour of providing supports to the activity that overlaps with other donor.

**(5) Topic 3B2**

Ms. Nguyen Thi Thu Trang raised comments that Van Don should also be included in this topic. To this end, Mr. Inoue said that the purpose of this topic aims at reduce load for Halong bay by introducing more tourism activities on inland resources. Therefore it is needed to confirm the potential of Van Don for such purpose. Beside, some rewarding of the topic is necessary to reflect this point.

In connection to this Dr. Son said that Van Don gathers the most number of nice islands, both rocky and earth islands and there is a mangrove area North of Van Don which even was proposed by Nippon Koei to be established as a Ramsar site in Quang Ninh Environmental Planning. Dr. Son also added that Hoanh Bo also have potential for inland tourism activities since there is a natural primitive forest in Hoanh Bo, namely Dong Son – Ky Thuong; and there are many well developed flowers, orange planting farms where many schools now have started bringing their students in for nature visit.

**(6) Conclusion**

After many discussions concerning next step of screening the shortlist, Dr. Son concluded as follows:

Quang Ninh wants to keep the 7 nominated topics in the short list (6 topics as listed in the material for Intensive Consultation No. 14, plus topic 1A-2 (for industrial zone)).

However, depend on requirement and possible resources, clarification is needed on the extend of the support, number of topics will be decided after consultation with JICA.

**The meeting ended at 4 p.m.**

**RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 15]**

***Discussion on Short-listed Activities: Enhancement of Environment Management Capacity  
in Industrial Zone and Economic Zone***

Venue: DPI meeting room  
List of attendants

Date: 1st March 2016

No.	Name	Position	Organization
1	Dr. Hoang Danh Son	Deputy Director	DPI
2	Mr. Pham Hong Bien	Chief - Foreign Economic Relations Division	DPI
3	Mr. Tran Thanh Phong	Chief - Sectoral Economy Division	DPI
4	Ms. Dao Thi Thanh Huyen	Deputy Chief - Foreign Economic Relation Division	DPI
5	Ms. Tran Thi Thanh Tam	Expert - Foreign Economic Relation Division	DPI
6	Ms. Nguyen Thi Thu Hong	Deputy chief of foreign Economic Relation Division	DPI
7	Ms. Dang Thi Thu Phuong	Project Secretary	DPI
8	Ms. Nguyen Thi Thu Thuy	Deputy director - Sub-dept. of environment protection	DONRE
9	Mr. Hoang Trung Kien	Deputy Director	QEZA
10	Mr. Bui Hong Long	Deputy Chief - Natural resources and Environment Management dept.	QEZA
11	Mr. Nguyen Van Tuan	Deputy Chief - Investment Management dept.	QEZA
12	Ms. Nguyen Thi Thuong	Expert - Natural Resources and Environment Management dept.	QEZA
13	Ms. Nguyen Thi Vinh	Deputy Chief – Planning and Finance Division	Quang Yen PPC
14	Mr. Pham Minh Hai	Deputy Chief – Resources and Environment Division	Quang Yen PPC
15	Mr. Luong Gia Hung	Chief – Finance and Planning Division	DOIT
16	Mr. Pham Quang Thai	Deputy Director	DOIT
17	Mr. Le Minh Tan	Deputy Director	HBMD
18	Mr. Le Lam Tuan	Chief - Environment Management Division	HBMD
19	Mr. Kengo Naganuma	JET	JET
20	Ms. Duong Thi Nhuan	Translator	JET
21	Ms. Tran Thi Mai Lan	Translator	JET
22	Ms. Nguyen Thi Thao Hien	Translator	JET

## 1. Discussion Points

- (1) Scope and Activities of enhancement of environment management capacity in industrial zone and economic zone for Phase 2
- (2) Readiness for Institutional Mechanism of enhancement of environment management capacity in industrial zone and economic zone for Phase 2
- (3) Responsible organizations of enhancement of environment management capacity in industrial zone and economic zone for Phase 2

## 2. Record of discussions

- (1) Mr. Naganuma - JET presented a list of 7 existing industrial zones and economic zones from a Japanese source, asked for confirmation from relevant organizations and recommended to choose a pilot industrial zone in Phase 2
- (2) Mr. Son – DPI commented that it is necessary to *define which international effluent standards to be adopted*.  
He also gave 2 information related to:
  - Automatic environmental monitoring stations which are being installed in provincial scale
  - ISO 14000 has been implemented since 2010 but not fulfilled so far
- (3) Mr. Naganuma – JET presented tentative policy framework or institutional mechanism to be improved/developed and emphasized that it is necessary *firstly to choose suitable policies or institutional mechanism and then the period for each one*. He asked for additional ideas from participants.
- (4) Mr. Kien – QEZA said that the list of 7 existing industrial and economic zones is out of date and promised to give a new one.  
He mentioned *2 projects being under construction* and *3 policies to support industrial zones* can be involved to GGP
  - 2 projects:
    - Amata hi-tech industrial-urban complex
    - Dam Nha Mac seaport service zone
  - 2 policies:
    - **Decision No.2895/2015/QD-UBND** by Quang Ninh PPC on investment incentives for industrial zones and economic zones. In detail: Section 8: After finishing the installation, investors of industrial zones will get a support of 30% from PPC (maximum 30 billions VND) for constructing wastewater treatment system.
    - **Decision No.3799/2010/QD-UBND** by Quang Ninh PPC on financial support mechanism for science and technology development encouragement. In detail: Section 3: Support individuals/enterprises 50 millions VND for constructing or applying environmental management system ISO 14001
    - **Circular No. 35/2015/TT-BTNMT** by Ministry of Resources and Environment on the environmental protection of economic zones, industrial parks, export processing zones and hi-tech parks.

He completed that there is almost an environmental management section in each industrial zone and in Circular No.35 there are also relevant regulations for staffs of this section. He hope that GGP can do a favor in the implementation of this Circular.

(5) Mr. Naganuma – JET highly appreciated the idea of supporting enterprises which have wastewater treatment. He asked 2 questions related to:

- Efficiency of Decision No.2895 on supporting enterprises
- Reasons for difficulties of wastewater treatment installation in Cai Lan Industrial Zone

Regarding 2 ongoing projects that Mr.Kien mentioned, he commented that in short period 2-3 years of Phase 2, GGP will not be able to fully contribute to these projects.

(6) Mr. Kien – QEZA answered that there are 2 different areas in Cai Lan Industrial Zone:

- Old area of 78 ha constructed *before Decision No.2985*
- New widened area of 274 ha with a wastewater treatment capacity of 19.000m<sup>3</sup>/day

He hoped that it will be ideal if each industrial zone has its automatic environmental monitoring station and GGP could help.

(7) Mr. Thai – DOIT commented that 2 projects mentioned by Mr. Kien – QEZA belongs to the future. So now, it is more necessary to:

- Focus on existing industrial zones
- Include fine sanction for breaking law cases

(8) Mr. Naganuma – JET commented that in Japan, eco-industrial zone or eco urban area are highly appreciated and in Vietnam, once implement, Quang Ninh province would be the pioneer and leader of this model.

(9) Mr. Thai propped 2 opinions as below:

- 2 mechanism in Phase 2 should be shortened from 1-2 years to 6 months:
  - + Funding mechanism to support renovation of existing WWTP in Cai Lan industry
  - + Policy to invite clean or environmental friendly enterprises preferentially in industrial zones and economic zones
- Cam Pha PPC should be included in list of agencies concerned because of its high industrial activities.

(10) Ms. Thuy – DONRE commented as below:

- 7 zones mentioned in the list of JET are almost industrial zones. How about other economic zones?
- In the period 2016-2018, environmental standards for each regions are being built by Quang Ninh PPC.
- What exactly GGP can contribute to promote ISO 14000? So far, mechanism for ISO 14000 have been implemented since 2010. Until now, there are only 2 fully implemented enterprises in Quang Ninh:



+ *B12 – Petrolimex area*

+ *Cua Ong mining zone*

- Emission reduction and 3R promotion should be included in the list of enhancement of environment management.

(11) Mr. Tuan – HBMD recommended to build a eco-industrial zone as a tourism destination.

(12) Mr. Son – DPI commented that it is a good but difficult solution.

He recommended to transform Viet Hung Industrial Zone in the orientation of a eco-industrial zone and invite a Japanese investor.

He concluded by discussing and having a list of responsible organizations and focal points. In detail:

- Mr. Kien - QEZA
- Ms. Hong – DPI
- Ms. Thuy – DONRE
- Mr. Tuan – HBMD

***The meeting ended at 4:30pm***

**RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 16]*****Promotion of ecotourism using cultural/historical assets in Halong Area  
Improvement of Tourist Information (TIC, website, map and event calendar, etc.)***

Venue: DPI meeting room  
List of attendants:

Date: 3<sup>rd</sup> March 2016

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Dr. Hoang Danh Son	Deputy director	DPI
2	Mr. Pham Hong Bien	Chief of Foreign economic relations division	DPI
3	Mr. Tran Thanh Phong	Chief of sectoral economy division	DPI
4	Ms. Dao Thanh Huyen	Deputy Chief of foreign Economic Relation Division	DPI
5	Ms. Nguyen Thu Hong	Deputy Chief of foreign Economic Relation Division	DPI
6	Tran Thi Thanh Tam	Expert - Foreign Economic Relation Division	DPI
7	Mr. Tran Xuan Cuong	Deputy chief of General and Planning Management Division	DPI
8	Mr. Ta ThienHy	Head of Socio-culture and tourism division	DPI
9	Ms. Nguyen Thi Thu Trang	Deputy Head of Socio-culture and tourism division	DPI
10	Ms. Dang Thi Thu Phuong	PMU Staff	DPI
11	Ms. Pham Hong Lan	Deputy director	Information and Communication Department
12	Mr. Do Manh Hung	Vice Chairman	Quang Yen Town PC
13	Mr. Ngo Dinh Dung	Deputy Head – Information and Culture Division	Quang Yen Town PC
14	Mr. Nguyen Cong Hoang	Deputy Head – Information and Culture Division	Uong Bi City PC
15	Mr. Nguyen Van Dong	Head – Information and Culture Division	Van Don District PC
16	Mr. Doan Van Dung	General Director	Indochina Junk
17	Ms. Nguyen Thi Bang	Deputy Head – Information and Culture Division	Halong City PC
18	Mr. Le Minh Tan	Deputy Head	HBMD
19	Mr. Le Lam Tuan	Head of Environment Management Division	HBMD
20	Ms. Phan Thi Hoang Hao	Expert of Environmental Protection Sub-department	DONRE
21	Ms. Do Thi Ngoc Quy	Expert of Financing – Planning Division	DOIT
22	Mr. Nguyen Hai Nam	Expert of Tourism Professional Division	DCST
23	Mr. KengoNaganuma	Environmental Expert Deputy chief advisor	JET
24	Ms. Duong ThiNhuan	Translator	JET
25	Ms. Tran Thi Mai Lan	Translator	JET
26	Ms. Nguyen Thi Thao Hien	Translator	JET

**1. Discussion Points**

- (1) Blue Print for Pilot Activity of Phase 2 Project for Green Growth Promotion in Halong Bay Area: Improvement of Tourism Information;
- (2) Blue Print for Pilot Activity of Phase 2 Project for Green Growth Promotion in Halong Bay Area: Promotion of Ecotourism.

**2. Contents of discussions**

**(1) Mr. Le Minh Tan, Deputy Head of Halong Bay Management Board (HBMD)**

**Promotion of Ecotourism:**

Mr. Tan requested to include Ha Long and Van Don in the covered area of activity “Promotion of ecotourism”.

Mr Tan added that recently Halong city carried out a survey on opening a new tour to exploit the cultural historical assets in Halong and Van Don area including Van Don commercial port, the Viet ancient people – SoiNhu culture, inhabited earth islands, etc. with the participation of the community. Mr. Tan said that this is in line with the province’s direction on development of tourism in Van Don area aiming at reduction of tourism pressure for Ha Long bay and for development of Van Don economic zone.

**Tourism Information:**

Mr. Tan also mentioned this issue has become a hot issue in the province as tourism information is very essential. He pointed out a fact that there are very little information can be found on the internet concerning Halong tourism. Recently, Halong City People’s Committee established a working group to focus on information and communication on tourism where Culture and Information Division is the key unit and HBMD is invited to join for editing a website. He also added information that HBMD is now intending to propose to the city PC on improvement of an existing multi media portal site which have not been effectively so far. Concerning the City’s decision, Mr. Tan said he would provide a copy after the meeting.

**Green Label**

Concerning green label, he said this is a good idea and so far there is no tourism establishments in the area granted with the label. He suggested that the Indochina Junk should pay attention to this issue since they have many nice junks which are famous in the world so the green label with Halong name will surely contribute to spread the name of QuangNinh and also for the benefit of tourism enterprises.

**(2) Mr. Nguyen Hai Nam, Tourism Profession Division, DCST**

***Use of biofuel to all tourist boats***

Mr. Nam said that so far tourist boats in Bai Thotourism company have been using biofuel. Goodassessmentis reported on using this fuel. He suggested for consideration to disseminate using on a broader scale on the bay.

To this end, Mr. Naganuma said if necessary JET will consider to include using of biofuel in the pilot project.

**(3) Mr. Do Manh Hung, Vice Chairman of Quang Yen Town People’s Committee**

***Consideration of Larger Scale Topics***

Mr. Hung expressed the importance of tourism information and development of ecotourism contributing to green growth of the province. He said that the proposed topics only cover a very small scope which can not help to improve the overall objectives of green growth. He said he expected the project to consider to propose a larger scale topics based on the current Socio-economic Development Master Plan and the Tourism Development Master Plan of QuangNinh Province.

In this connection, Mr. Naganuma explained that the project surely cannot solve all items implementing the province’s green growth programe. Mr. Naganuma elaborated that JICA has been supporting QuangNinh Province since 1998, starting with the preparation of feasibility study for the Halong Bay Environment Protection Master Plan; the most recent assistance from JICA is for improvement of water environment of Halong City through a wastewater treatment system project. That project is carried under JICA’s strategy to support QuangNinh province. Mr. Naganuma added that green growth is a new concept so that JICA decided to provide support through a technical cooperation project to carry out some initial action on green growth. The pilot activity include improvement/development of policies to serve the implementation of pilot activity. Further request for JICA’s support can be considered depending on the achieved results.

***Need for typical tourism products***

Mr. Hung said it is essential to identify typical tourism products for tourism development. To this end, Mr. Naganuma expressed his consent to this point since image for tourism is very important.

**(4) Ms. Pham Hong Lan, Deputy Director of Information and Communication Department**

Ms. Lanexpressed her great interests in the topic for improvement of tourism information. She said in general, current tourism information is scattered, not regularly updated, main language used is only Vietnamese, etc.

Ms. Lan proposed to have supports from JICA for implementation of tourism information system, expenditure for maintaining websites, etc.

In this connection, Mr. Naganuma answered that Ms. Lan's idea is consistent with JICA idea for the pilot activity. He added that website is very important for communication and it is also important on how to maintain and update website. JET will propose this pilot activity under the project.

Concerning expenditure for maintenance of website, Mr. Naganuma said that since the project is expected to be completed by 2019 then during the project period, JICA will support for improvement/development of institutional mechanism which should also include how to allocate financial source for long term activity.

**(5) Mr. Ta ThienHy, Head of Culture and Social Division, DPI**

***Proposed pilot activity on improvement/development of existing regulation on management of Halong Bay Area***

Mr. Hy said expressed his concerns about the absence of the task on improvement/development of policies under the two topics. He elaborated that QuangNinh province so far have had great interests in green growth, especially in tourism development which include enhancement of the value of the World Heritage Halong Bay.

Mr. Hy said that the current regulations on development of Halong Bay tourism have not been effectively implemented. In year 2014, DPI was assigned by the PPC to develop regulations on management and exploitation for enhancement of Halong Bay World Heritage but this difficult task was beyond the capacity of DPI.

Mr. Hy proposed JET to consider to add item for pilot study on regulations for management and exploitation of Halong Bay value which will be demonstrated in some certain tourist sites. DPI will provide the existing regulations for JET to consider. Mr.Hy said that the pilot regulation/mechanism can help to attract strategic investors to manage, exploit tourism services on Halong Bay, thus enhancing the Bay value via economic contributions.

Concerning this point, Mr. Naganuma asked if it is easy to amend such regulations. Mr.Hy said that it will be depended on how JET prepared the proposal since the Vietnamese side's objective is (i) Investment attraction and (ii) Enhancement of the World Heritage Halong Bay.

Mr. Naganumasaid he understand the importance for increasing investors including for tourism development and said since this content is a broad matter so he proposed to include this content under Output 1. He explained that by the end of Phase I, JET will have to submit to the PPC an action plan so during April, work can start on this matter. Mr. Hy agreed with this.

Furthermore, Mr. Hy added that he was in the same view of other meeting participants that they do not care much about financial supports from JICA but they are really interested in JICA's supports for improvement/development of the current regulations for demonstration in some tourist sites. After some certain years of demonstration, the Vietnamese side will request higher authority for necessary amendments, supplements of related regulations to make the suitable.

At last, Mr. Hy added that exploitation of historical and culture resources especially spiritual sites should be in harmonisation with preservation as well.

**Ecolabel for tourist sites**

Mr. Hy proposed JET to consider ecolabel for tourist sites on Halong Bay.

**(6) Mr. Do Manh Hung, Vice Chairman of Quang Yen Town People's Committee**

Mr. Hung expressed his understanding that mechanism improvement/development is a wide concept and even beyond the capacity of the JET. He proposed JET to study on specific objectives, topics based on experiences from other countries in order to propose necessary policies for the Vietnamese side, in terms of environment (increase of sanction,...), investment (offer of supports, based on international experiences) to aim at best implementation of the set targets.

To this end, Mr. Naganuma replied that one of the important concept related to Green growth is how to attract investors considering environmental friendly aspect. Mr. Naganuma also gave an example in Japan where some prefectures issue orders and provide incentives for investing or implementing eco tourism. If the Vietnamese side wants to enforce such order, the project can apply but it surely takes certain time for the proposed decision be enforced.

Mr. Naganuma explained JET proposal as follows: initially work will be carried out before enforcing such decision and implement some pilot activity and JET will access the provincial regulation and propose possible improvements. During implementation phase, JET will examine to enforce some special order and propose for post project phase.

**(7) Mr. Doan Van Dung, General Director of Indochina Junk**

Mr. Dung appreciates the benefit that green growth can bring to tourism including enterprises and the community. He concerns about the management for implementation of green growth since he cannot see the role of enterprises. He said enterprises should be involved in the process since for a feasible plan to be implemented, a mechanism to be developed, contribution from enterprise is also needed. He added that enterprises need to know the focal point on green

growth for cooperation, for instance when they have intention to improve their tourism products toward green growth or new product ideas, which agency the enterprises should deal with.

To this end, Mr. Naganuma said it is important about management and the focal point. He added that so far the proposed responsible department is DCST. In case of any changes of the responsible departments, JET is available for discussion within this month.

Concerning Green label, on the view point of tourism enterprises, Mr. Dung said that it is not necessary to develop a new label since on the global scale, just 1 label is good enough for international tourists to recognise Vietnam Tourism as a whole, such as Green Lotus which can also cover for tourism boats in addition to their designed purpose to grant accommodation facilities.

In this connection, Mr. Naganuma said during implementation process, further discussions can be held on labelling matter which relates to both topics.

**(8) Mr. Kengo Naganuma, Environmental Expert, Deputy chief advisor**

Mr. Naganuma raised the question if Van Don and Ha Long should be included in covered areas of the two topics. He made it clear this will require involvement of the related localities in the implementation.

This question is still left open.

**(9) Mr. Ngo Dinh Dung, Deputy head of Culture and Information Division, Quang Yen Town**

Mr. Dung stressed the importance of training and awareness raising to be included in the topics.

**The meeting ended at 11:30.**

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 17]**

### ***Promotion of recycling agricultural waste and resource circulation in household / small - scale activities***

Venue: DPI meeting room

Date: 4th March 2016

List of attendants

No	Name	Position	Organization
1	Mr. Hoang Danh Son	Deputy Director	DPI
2	Ms. Dao Thi Thanh Huyen	Deputy Chief - Foreign Economic Relation Division	DPI
3	Ms. Tran Thi Thanh Tam	Expert - Foreign Economic Relation Division	DPI
4	Ms. Nguyen Thi Thu Trang	Deputy Chief -	DPI
5	Mr. Nghiem Xuan Minh	Deputy Chief -	DPI
6	Ms. Dang Thi Thu Phuong	Project Secretary	DPI
7	Ms. Nguyen Thi Dieu Huyen	Expert	DOST
8	Mr. Le Quy Don	Expert	DARD
9	Ms. Phan Thi Hoang Hao	Expert	DONRE
10	Mr. Kengo Naganuma	Deputy chief advisor – Environmental expert	JET
11	Ms. Duong Thi Nhuan	Translator	JET
12	Ms. Tran Thi Mai Lan	Translator	JET
13	Ms. Nguyen Thi Thao Hien	Translator	JET

#### **1. Discussion Points**

- (1) Scope and activities to promote recycling agricultural waste and resource circulation in household / small - scale activities in Phase 2
- (2) Duration/time schedule of each activities
- (3) Responsible and relevant organizations to promote recycling agricultural waste and resource circulation in household / small - scale activities in Phase 2

#### **2. Record of discussions**

- (1) Mr. Naganuma - JET asked if there were so far *criteria for fertilizer producing/using* in Quang Ninh province
- (2) Mr. Don – DARD answered that DARD would examine carefully again and provide it to JET. He emphasized that in functions of DARD, there are 4 sub-sectors:
  - *Agriculture*
  - *Forestry*
  - *Aquaculture*
  - *Irrigation*He recommended that JET should research and examine all 4 sectors in the scope of GGP, *not only agriculture waste.*



Especially, he recommended to change title of project to “promotion of recycling agricultural waste and resource circulation in *big enterprises and farms*. He gave some reasons:

- Almost households in provincial scale have been implementing recycling agricultural waste and resource circulation
  - Only big enterprises and (big) farms now still have lots of difficulties in this implementation because of the lack of technology and budget.
- (3) Mr. Son – DPI answered that it is not simple to change the title of project because it is working result of all team in a long time.  
In case of having any changes, he recommended to look into the title modification of “*medium and small scale farms*”.
- (4) Ms. Huyen – DOST gave an information that so far, DOST have been supporting many projects related to recycling agriculture waste and resource circulation. For example:
- Project “*Science and technology application in bio-fertilizer producing from agricultural residues and other organic resources in Quang Ninh province*” implemented by Thien Thuan Tuong Mineral Mining JSC. Bio-organic fertilizer is produced from mud-washing coal, cow/buffalow dung and rice traw into 3 types: grain, powder and liquid.
  - *Bio-mat producing project* in Dong Trieu Town. Farmers use biological liquid absorbing substances together with rice husks or sawdust to make mat in the farming of livestock and cattle. With enough guides, farmers totally can make bio-substance mat themselves to save money.
- She emphasized that DOST always apply the modernest and newest technologies for the projects and recommended that JET should cooperate with VAST – Vietnam Academy of Science and Technology.
- (5) Mr. Naganuma – JET asked whether it would be better if these relevant topics are cut down from tentative necessary policy framework or institutional mechanism to be improved/developed:
- Criteria on characteristics of agricultural/household waste that can be used for composting
  - Criteria on characteristics of fertilizer produced by agricultural/household waste composting
- (6) Ms. Huyen – DOST answered that there was no need to cut them down because so far, almost ongoing projects are pilot and there have not been yet official and long-term mechanism to support them; therefore, GGP totally can contribute to these implementations.
- (7) Mr. Son – DPI gave 2 opinions as below:
- Pilot activities are now scattered and small without large social impacts. From these activities, GGP can support Quang Ninh province to build mechanism to widen good models in provincial scale. Once a project is chosen, it is needed to be standardized.

- It is important to check and examine implemented/implementing relevant projects built by DOST, DARD and DONRE by some points:
  - + Level of adaptation to green growth
  - + Result
  - + Cause
  - + Solution

He hoped for cooperation from these 3 departments to receive the list of:

- *Relevant projects Quang Ninh Province*
- *Technology transfer units*

- (8) Mr. Minh – DPI gave an information that so far, Quang Ninh PPC support 5 millions VND for each biogas and biomat implementation but in fact, in all 6 regions of Ha Long Bay area, not many household register to receive supports. That's why Quang Ninh needs mechanism to encourage farmers to widen this model
- (9) Ms. Hao – DONRE recommended to attach also organic products to the names of local specialities and build mechanism to:
- *Widen good science and technology application projects*
  - *Attract and support domestic and international investors*
- She recommended to refer “*Decision No. 50/2014/QĐ-TTg*” dated September 04, 2014 of the Prime Minister on supporting policies to enhance efficiency of livestock farmers period 2015 – 2020 which was enact to provide resources to support and maintain farm husbandry practices, improve efficiency, enhance added value, minimize damage when Vietnam integrates with the region and the world.
- (10) Mr. Naganuma – JET asked if it was possible to combine several selected topics in long list of Agriculture/Fishery Sector in 1 topic
- (11) Mr. Son – DPI answered that it was totally possible, but it depends on JICA's support and in case of choosing one, topic 5B-1 and 5C-1 should be in priority. He concluded by asking relevant participants to refer, clarify and evaluate existing models to prepare for phase 2 of GGP.

**Meeting ended at 10:45**

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 18]**

### ***Regular publication of environmental report (White book)***

Venue: DPI meeting room

Date: 8th March 2016

List of attendants

<b>No</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Mr. Hoang Danh Son	Deputy Director	DPI
2	Ms. Dao Thanh Huyen	Deputy Chief - Foreign Economic Relation Division	DPI
3	Ms. Nguyen Thi Thu Trang	Deputy Chief - Socio-Culture and Tourism Division	DPI
4	Ms. Dang Thi Thu Phuong	Project Secretary	DPI
5	Mr. Vu Nam Phong	Director	CONREM
6	Mr. Le Ngoc Ha	Deputy director – Resources and Environment Division	Uong Bi PC
7	Mr. Pham Minh Hai	Deputy director – Resources and Environment Division	QuangYen PC
8	Mr. Le Minh Tam	Deputy director – Resources and Environment Division	Ha Long PC
9	Mr. Dang Quoc Hung	Deputy director – Resources and Environment Division	Ha Long PC
10	Mr. Nguyen Thanh Son	Deputy director – Resources and Environment Division	Van Don PC
11	Mr. Nguyen Trung Son	Expert – Tourism Resources Development Division	DCST
12	Mr. Nguyen Van Tuan	Deputy director	QEZA
13	Mr. Le Minh Tan	Deputy Director	HBMD
14	Mr. Le Lam Tuan	Chief - Environment Management Division	HBMD
15	Mr. Hoang Viet Dung	Deputy head - Environmental Protection Sub-department	DONRE
16	Ms. Phan Thi Hoang Hao	Expert of Environmental Protection Sub-department	DONRE
17	Mr. Norihiko Inoue	Chief advisor	JET
18	Mr. Kengo Naganuma	Deputy chief advisor - Environmental expert	JET
19	Mr. Toshiaki Kagatsume	Environmental expert	JET
20	Ms. Duong Thi Nhuan	Translator	JET
21	Ms. Tran Thi Mai Lan	Translator	JET
22	Ms. Nguyen Thi Thao Hien	Translator	JET
23	Ms. Nguyen Tran Nghia	Translator	JET

#### **1. Discussion points**

- (1) Scope and activities for regular publication of environmental report (White book)
- (2) Necessary policy framework or institutional mechanism to be improved/developed for regular publication of environmental report
- (3) Tentative work schedule for regular publication of environmental report

#### **2. Record of discussion**

- (1) Mr. Hoang Danh Son – DPI asked for Vietnamese translation of “Mechanism of environmental protection in Shiga prefecture”  
He explained to other participants that the name “White book” was just in plan, it is totally *possible to modify* it.

(2) Mr. Vu Nam Phong – Director of CONREM gave some information:

- So far, there are more than 100 environmental (env.) monitoring stations in Quang Ninh, of which 27 automatic env. monitoring stations (26 provincial stations and 1 national station by MONRE)
- CONREM makes env. monitoring report *4 times/year*. Especially, by Dec 2015, CONREM fulfilled *5-year-report* of environmental monitoring instructed by MONRE but some contents could not be included, for example: particular soil characteristics, biodiversity etc.
- CONREM has difficulties in using data from env. monitoring reports of enterprises despite its informative abundance because of their difference between implemental time, location and capacity of summarizing...

He recommended to *develop this 5-year-report into White Book (WB)* because except for water and air environment, almost other sectors cannot be covered in regular smaller reports.

Besides, he gave a suggestion for WB detail outline that there should be comments from relevant organizations, experiences from Japan and particularities of Quang Ninh.

(3) Mr. Hoang Viet Dung – DONRE gave some information:

- July 2015, env. monitoring station system was updated with an *expansion in total 14 regions* in Quang Ninh
- In Ha Long Bay – Bai Tu Long Bay, there are *5 online env. monitoring stations*

He showed some regular and 5-year env. reports of DONRE that are all big and thick and highly appreciated the idea of publishing WB for some reasons:

- Target readers of current reports are administrative officials
- Once implemented, WB will have bigger and better impacts on enterprises, local people and tourists

He approved of Mr. Phong's opinion of building detail outline for WB and showed DONRE's readiness to cooperate with JET.

(4) Mr. Son – DPI made some recommendation as below:

- *Add more relevant sectors/topics to WB*. For example: environment in aquacultural areas have never been researched seriously.
- WB should be *attached closely with green development*
- It is *impossible to apply/copy all experiences from Japan* because of different awareness level of people

(5) Mr. Naganuma – JET highly appreciated all comments from contributors and asked about the possibility of building a new agency in charge of WB besides relevant

existing ones. Even when Green Growth Project (GGP) finishes, JICA hopes that Quang Ninh province will keep this model in a long time.

(6) Mr. Son – DPI shared some ideas:

- It is better to *apply the same model of WB to other sectors*, not only environment.
- In the trial phase of WB publication, it is necessary to *identify which information is important* with the aim of:
  - + *Raising awareness*
  - + *Contributing to green development*

⇒ In conclusion, once implement WB, Quang Ninh will be the pioneer. In the trial phase, *good selection of information* is one the most important thing.

(7) Mr. Kagatsume – JET mentioned that not only in Shiga prefecture but in whole Japan, with the publication of WB, env. protection awareness of Japanese people is improved.

He approved of Mr.Son’s opinion of building WB with *simple but friendly and interesting appearance*, so all people and enterprises can easily access it.

(8) Mr. Dang Quoc Hung – Ha Long City PC gave some information and recommended a Decision to refer:

- Resources and Environment Division - Ha Long PC has env. reports twice a year
- *Decision 61/KH-UBND* signed 03/03/2016 by Halong PC on Plan of developing Green Clean Halong City attaching with Green Growth
- Events of raising env. protection awareness are regularly organized by Ha Long PC in cooperation with other relevant organizations

He agreed with Mr.Son’s opinion of widen more env. sectors to include in WB.

(9) Mr. Nguyen Thanh Son – Van Don PC share some opinions:

- Widen the model of WB not only in Ha Long Bay area but also Bai Tu Long Bay in the future
- Besides env.reports, *add a part of “warning”* based on env.problems in order to warn people and raise their awareness.

(10) Mr. Son – DPI made some recommendations:

Besides building Steering Committee, it is now high time to:

- *Select and examine relevant reports*
- *Send questionnaires to relevant organizations or enterprises*
- *Select focal points from each relevant organizations*
- *Organize training courses for responsible officials*

Regarding training courses, he explained the reasons that there could be some ‘sensitive’ information in WB which is considered to be unfavourable by some enterprises. So it is essential to organize training courses for staffs in charge with specific instructions to avoid unnecessary risks.

Regarding questionnaire forms, he emphasized the importance of asking for approval of PPC before distributing them.

- (11) Mr. Inoue – JET asked if there would be in need legal documents from PPC before publishing WB.
- (12) Mr. Son – DPI gave a “yes” answer and gave a proposal of WB implementation order:
  - Submit plan of WB for PPC’s approval to establish Steering Committee
  - Build detail outline approved by all local authorities in combination with organizing training courses for outline composers.
  - Build an Assessment Board before the publication

**Meeting ended at 11:00**

**RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 19]**

***Enhancement of Provincial Funding Mechanism for Environmental Management and Green Growth***

Venue: DPI meeting room  
List of attendants:

Date: 11<sup>th</sup> March 2016

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Dr. Hoang Danh Son	Deputy director	DPI – part time
2	Mr. Bui Tuan Anh	Deputy head of General and Planning Management Division	DPI
3	Ms. Dao Thanh Huyen	Deputy Chief of foreign Economic Relation Division	DPI
4	Tran Thi Thanh Tam	Expert - Foreign Economic Relation Division	DPI
5	Mr. Dao Manh Thang	Deputy Head, Budget Planning Division	DOF
6	Mr. Tran Van Manh	Expert – Office	DOIT
7	Ms. Phan Thi Hoang Hao	Expert, Environment Protection Sub-department	DONRE
8	Ms. Dang Thi Thu Phuong	PMU Staff	DPI
9	Mr. Norihiko Inoue	Chief advisor	JET
10	Mr. Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
11	Mr. Joshiak Kagatsume	Expert	JET
12	Mr. Keiichi Maeda	Coordinator	JET
13	Mr. Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
14	Ms. Duong Thi Nhuan	Translator	JET
15	Ms. Tran Thi Mai Lan	Translator	JET
16	Ms. Nguyen Thi Thao Hien	Translator	
	Ms. Tran Thi Van Anh	Translator	JET

**1. Discussion Points**

Enhancement of Provincial Funding Mechanism for Environmental Management and Green Growth.

**2. Contents of discussions**

After Mr. Naganuma's presentation, Mr. Joshiak Kagatsume shared some experiences on funding mechanism applied in Shiga prefecture.

**(1) Dao Manh Thang, Deputy Head of Budget Planning Division, DOF**

**Clarification on Fund and Annual Expenditure for Environment**

Mr. Thang explained as follows:

- (i) Fund: fund provides supports to enterprises for implementation of environment protection tasks: According to Vietnamese regulation, the state budget does not provide direct support to

enterprises but through a third party, which is the fund. Supports to enterprises can be support on loan interest, favourable interest rate, etc.

- (ii) Annual expenditure for environment protection provides support for large projects, tasks: direct support from state budget is provided for implementation of large projects on environment improvement.

In general, for the fund (i), if its annual allocation by state budget is not used during the fiscal year, it will be kept for the following year expenditure whilst it is not the same case for annual allocation by state budget for large projects, tasks (ii), if it is not used during the financial year, it will be returned to the state budget.

**Restricted establishment of non-state financial fund: Elaboration on State Budget Law 83/2015/QH13**

Concerning proposed establishment of a fund for project implementation, Mr. Thang provided information concerning legal aspect concerning restriction of establishing more funds, as follows:

State Budget Law 83/2015/QH13 is promulgated on 25<sup>th</sup> June 2015 and will be effective as from budget year 2017.

At the moment, all relevant stakeholders are giving comments to a draft circular on implementation of this law. In the draft circular, it states as follows:

Quote:

*“(6) Concerning Non State Financial Funds*

This is a new content stated in the Budget Law 2015, with objective to refrain establishment of non state financial funds which in the actual fact their source of income is from the state budget. On the other hand, it is a must to change operation method of those current non state financial funds which are financed by state budget, aiming at mobilisation sources outside state budget. Therefore, the draft Circular shall have a separate article (Article 13) giving stipulations on non state financial funds as follows:

*“1. Non state financial funds are funds whose establishments shall be decided by the state authority and under the direct management of the state agency.*

*2. State budget shall not support operation expenditures for non state financial funds.*

*3. Depending on capacity of state budget, non state financial funds can be given supports on charter capital from the state budget, satisfying the following conditions: a) Be established and operational as per the provisions of the law; b) Have financial independence; c) have sources of income, expenditure tasks which are not overlapping with the income sources and expenditure tasks of the state budget.*



4. *Non state financial funds and the fund management agency must abide by provisions of the Budget Law and regulations under this Circular in terms of formulation, adherence, final accounting, auditing of state budget.*

5. *Annually, the fund management agencies under the central government management have to submit to MOF a report on plan of income and expenditure and final account of income and expenditure for further consolidated report to the Government, the National Assembly together with the report on state budget estimation and final account; the fund management agencies under the provincial level have to report to DOF on plan of income and expenditure for further consolidated report to the PPC who is expected to report to provincial people's council in combination with the report on local budget estimation and final account.*

6. *The non state financial funds at the central government level is responsible as key agency to cooperate with MOF in reporting to the Government for making justification to the National Assembly when requested; the non state financial funds at provincial level is responsible as key agency to cooperate with DOF in reporting to the PPC for making justification to the same level people's council at request".*

Unquote.

Mr. Thang suggested the project should avoid proposing for new fund establishment as to avoid overlapping with the already existed fund. To that end, Mr. Thang proposed to continue to use the Environmental Protection fund with some supplements to its existing tasks.

#### **Implementation Agency**

Mr. Thang said it is better that the PPC shall issue a regulation for specific assignments of related departments to be in charge for this activity.

#### **(2) Bui Tuan Anh, Deputy head of General and Planning Management Division, DPI**

##### ***Improvement / development of new mechanism:***

Mr. Tuan Anh proposed **improvement of existing funds**, not to establish a new fund. He proposed that the project should review the existing funds for possible improvements of the funds for better application. He added that since the objectives of the fund has already been fixed by the Central government so it is possible for the project, as being at provincial level, to propose amendments to the fund's scope.

##### **Proposed provincial target programe for green growth**

Mr. Tuan Anh elaborated that for green growth activities, state budget can be provided through 2 ways:

- (1) Direct supports to enterprises through various funds;
- (2) Direct supports for projects/programes by annual budget allocation, namely annual budget for investment, development.

Therefore, Mr. Tuan Anh recommended that the project should propose establishment of a provincial target programme for green growth. Such programme shall be directly financed by provincial budget on an annual basis. If it can be soon established then financing for projects in Phase 2 can be guaranteed.

Mr. Tuan Anh explained that for central government level, there are various national target programmes including target programme for responses to climate change and green growth while there is no such target program for green growth at provincial level. He added that this target programme for green growth shall make Quang Ninh different to other provinces in Vietnam in implementation of green growth. This shall be a very persuasive point to the province leaders concerning proposed establishment of provincial target programme on green growth.

He also added that under such programme, PPP (Public – Private Partnership) projects can be applied.

**(3) Phan Thi Hoang Hao, Expert, Environment Protection Sub-department, DONRE**

Ms. Hao said that for environmental protection, there are 3 types of funds:

- 1- Environment protection fund, which is under the management of DONRE;
- 2- Coal sector environment fund, which is under the management of VINACOMIN;
- 3- Environment protection expenditure, which is under the management of DONRE and DOF.

Concerning 1- Environment protection fund: Ms. Hao said that the fund has 20 billion VND in charter capital and it is a fact that not many enterprises are interested in the fund except for only 1 enterprise namely Viet Long, who took a loan of 5 billion VND.

In 2015, MONRE organised a review meeting on operation of this funds in provinces. Many weakness, difficulties concerning the fund operation were shared in the meetings. Ms. Hao requested the project to review and find out any suitable points that can be applied for the Quang Ninh fund.

Ms. Hao proposed **(i) improvement of the existing fund:** amendments of specific tasks, communication and propaganda to persuade enterprises to apply for the fund; it is also noted that the fund's regulations on organisation and operation are revised on an annual basis; and **(ii) use of 3- Environment protection expenditure for new projects.**

Ms. Hao said she is very interested in the topics that Shiga prefecture applied in each phases for green growth implementation and would like to share with Shiga prefecture on the experiences.

Mr. Naganuma raised a question concerning possible increase of charter capital for the environment protection fund. Ms. Hao answered that DONRE is now await PPC's approval for a proposed increase to 50 billion VND for the fund. She added that the source will be from environment protection fee collection but at the moment there is some problem with the transfer mechanism. The Provincial People's Council shall be the agency to approve the fund source.

**The meeting ended at 11:30.**

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 20]**

### ***Promotion of incentive such as ESCO project for energy saving and management***

Venue: DPI meeting room

Date: 14th March 2016

List of attendants

<b>No</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Mr. Nguyen Tuan Anh	Director	RCEE-NIRAS
2	Mr. Vu Tien Dat	Manager	RCEE-NIRAS
3	Mr. Hoang Danh Son	Deputy Director	DPI
	Mr. Pham Hong Bien	Chief - Foreign Economic Relations Division	DPI
4	Ms. Dang Thi Thu Phuong	Project Secretary	DPI
5	Mr. Tran Xuan Cuong	Deputy chief – Office Division	DPI
6	Mr. Ta Thien Hy	Chef - Socio-culture and Tourism Division	DPI
7	Ms. Tran Thanh Tam	Expert - Foreign Economic Relation Division	DPI
8	Mr. Pham Duc De	Deputy chief - Energy Management Division	DOIT
9	Mr. Vo Van Chung	Expert	DOC
10	Mr. Nguyen Van Tuan	Deputy chief – Investment Management dept.	QEZA
11	Mr. Kengo Naganuma	Deputy chief advisor - Environmental expert	JET
12	Mr. Toshiaki Kagatsume	Environmental expert	JET
13	Mr. Keichii Maeda	Coordinator	JET
14	Ms. Duong Thi Nhuan	Translator	JET
15	Ms. Tran Thi Mai Lan	Translator	JET
16	Ms. Nguyen Thi Thao Hien	Translator	JET

#### **1. Discussion points**

- (1) Presentation the model of ESCO of RCEE-NIRAS company
- (2) Scope and activities of promotion of incentive such as ESCO project for energy saving and management
- (3) Tentative necessary policy framework or institutional mechanism to be improved/developed of promotion of incentive such as ESCO project for energy saving and management
- (4) Responsible/implementation agency of promotion of incentive such as ESCO project for energy saving and management

#### **2. Record of discussion**

- (1) Mr. Nguyen Tuan Anh - RCEE-NIRAS responded to Mr.Naganuma's question of the number of implemented ESCO projects in Quang Ninh until 2016:  
RECC does not have exact statistics until 2016, only has estimated number of 2 years ago: Implemented ESCO projects occupy only 1-2% in Energy Audit Reports of 98 key energy consumers by sectors in Quang Ninh province. (Source: Decision No. 1535

/QDD-TTg by Prime Minister on the list of 1725 enterprises to be identified as key energy users in 2014)

Two main reasons for this low percentage: financial & technical barrier. In detail:

- ESCO is a new model from abroad. There are both the lack of information from ESCO companies and the knowledges of enterprise.
- The price of energy is quite low in comparison with world average, so Vietnamese enterprises have not seen the necessity of energy saving
- In fact, it takes 5-8 years to take back the investment capital in an ESCO project in Vietnam, which does not meet the expectation (2-3 years) of enterprises. So they have not seen the long-term advantage yet

(2) Mr. Pham Hong Bien – DPI asked if it was compulsory to apply 6 Energy Performance Contracts (EPC) mentioned to a specific ESCO implementation in Quang Ninh province in the context when there are lots of obstacles to apply ESCO.

(3) Mr. Nguyen Tuan Anh - RCEE-NIRAS answered that it is flexible to choose a suitable kind of contract, basing on the financial and technical situation of enterprise. He emphasized the biggest barrier now is the lack of information from both enterprises and ESCO companies and gave the information that in many countries, ESCO implementation in buildings got very good results.

(4) Mr. Tran Xuan Cuong – DPI asked for more researches from JET and RCEE-NIRAS related to:

- Type of enterprise suitable to apply ESCO in Quang Ninh. For example: transportation, mineral exploitation and processing or ceramic manufacture, etc.
- Each type of ESCO suitable for each enterprise
- Source of budget (Should find funds for researching in advance or for implementing or both?)

(5) Mr. Nguyen Tuan Anh - RCEE-NIRAS answered that it was always difficult to determine which ESCO model is better or best. It is better to establish a provincial ESCO unit as a member of Vietnam ESCO network.

Regarding Mr. Cuong's question of choosing appropriate type of enterprise and ESCO model, Mr. Tuan Anh & Mr. Naganuma proposed that if necessary, JET would cooperate with RCEE-NIRAS in doing a research.

(6) Mr. Hoang Danh Son – DPI mentioned the list of 98 key energy consumers by sectors in Quang Ninh province and emphasized that at the beginning, the most important thing is to identify which group of enterprise is suitable to apply ESCO.

(7) Mr. Nguyen Tuan Anh RCEE-NIRAS answered that an ESCO implementation is basically based on 2 sides:

- Customer
- ESCO supplier

Different customers have different expectation and different financial/technical capacity. For example:

- + Budget for Waste Heat Recovery (WHR) in cement manufacture is from 10-11 million USD, a super big money for enterprise.
  - + Budget for heating system improvement in building is smaller, from 1-1.5 million USD
- (8) Mr. Tran Xuan Cuong – DPI recommended to examine ceramic manufacture such as Viglacera cooperation in Quang Ninh.
- (9) Mr. Vu Tien Dat - RCEE-NIRAS commented that regarding transportation sector, energy saving mostly bases on awareness of drivers, so ESCO implementation may not have big impacts; but regarding Mr. Cuong’s opinion, he held the view that ceramic manufacture is a possible sector.
- (10) Mr. Nguyen Tuan Anh - RCEE-NIRAS gave some opinions as below:
- For ESCO implementation in industrial zone, renewable energy should be considered as a solution. MOIT is now in charge of building National Strategy of Renewable Energy development until 2030 vision 2050.
  - Regarding ESCO implementation in thermal power plants, the plain fact is that energy saving does not receive much interest because people who work in a place of creating energy do not often see the necessary of saving energy.
- (11) Mr. Toshiaki Kagatsume – JET asked if there are any researches/ideas related to ESCO in national and provincial scale.
- (12) Mr. Nguyen Tuan Anh - RCEE-NIRAS answered that MOIT is now building mechanism related to ESCO. In detail:
- Publish form of Energy Performace Contracts to apply in national scale
  - Establish ESCO association
  - Organize ESCO training courses
- (13) Mr. Naganuma – JET completed by giving information that Ho Chi Minh City Energy Conservation Center (ECC) established Viet Energy Consultant and Investment Corporation (VIET ESCO); there is also a similar ECC in Hanoi. He recommended that Quang Ninh should consider building mechanism for a similar center to promote ESCO and examine 2 more sectors:
- Wastewaster management and treatment
  - Food processing
- (14) Mr. Hoang Danh Son – DPI commented as below:
- In Quang Ninh province now, coal mining and processing, cement manufacture and thermal power manufacture are the biggest sources of energy consumption. Because the fact of too big investment capital, JET can contribute to research and propose relevant mechanism to promote ESCO.
  - 2 new inter-agencies buildings now are under construction. In the context of the orientation of developing Halong city as a green and smart city, it is possible to implement ESCO in these buildings

- In industrial zones, now ESCO model is basically not implemented and widened. If possible, only Cai Lan industrial zone should be in priority
  - Regarding tourist boats, although the effectiveness is not considerable, ESCO implementation will set a good example.
- (15) Mr. Pham Duc De – DOIT gave some opinions as below:
- DOIT used to examine energy saving in public lighting system but this solution has never been applied when most lamps are still in operating period
  - Using renewable energy is a feasible solution because there are lots of remote areas and islands in Quang Ninh where it is difficult for local people to have an abundant source of energies.
  - Regarding ESCO in thermal power plant and cement factory, due to the limit of budget, it is better to select a pilot one
- (16) Mr. Vo Van Chung – DOC gave some information related to ESCO implementation in public lighting system (*All in one pdf file - Doc No. 193 – Collected information*)
- In Decision No.4236/UBND-XD4 signed on 17 July 2015, PPC assigned to DOC and local authorities to make statistic report of urban lighting system in provincial scale
  - On Document No. 2809/SXD-QLXD signed on 28 October 2015, DOC submitted PPC for the approval of plan of replacing public lighting system by energy saving system in Ha Long city, which is invested by NOA LED – a Korean enterprise specialized in LED lighting and screening.
  - So far, this project is still in plan and Ha Long is the first pilot city.
- (17) Mr. Nguyen Van Tuan – QEZA commented as below:
- So far, there are not a lot of ESCO implementation in industrial zones in Quang Ninh
  - If possible, Cai Lan industrial zone should be considered as a pilot
  - Besides Cai Lan, Viet Hung specialized industrial zone which is now being built should also be examined in the first phase of construction.
- (18) Mr. Nguyen Tuan Anh - RCEE-NIRAS gave some comments and additional information as below:
- Applying ESCO model in public lighting system is a possible solution
  - Regarding ESCO implementation in building, JET should refer: National technical regulation on energy efficiency buildings issued by MOC in 2013 (*Doc No. 191 – Collected information*)
  - Regarding cement sector, MOC have some reports/studies of energy saving solution but so far, due to the lack of budget, there are not many enterprises to invest.
  - Regarding ESCO implementation in industrial zones, now there is not a general energy consumption report for all enterprises, only some of them have Energy Audit Reports.
  - Establishing an Energy Conservation Center with same operation with ECC Hanoi and Ho Chi Minh city is the best solution. If impossible, Quang Ninh can consider to

enhance the function of a relevant organization in charge of provincial industrial improvement.

(19) Mr. Naganuma – JET asked if there was no need to have more mechanism to promote ESCO in Quang Ninh province and the first thing to do is to identify possible targets to implement ESCO.

(20) Mr. Hoang Danh Son – DPI add the last comments

- Quang Ninh is always hoped to be the pioneer of green growth in national scale; but ESCO is a new model without any instruction or overall evaluation from relevant organizations; so its efficiency is still a big question.
- It is necessary to:
  - + Check and examine all possible sectors to have an overall evaluation report
  - + Make a list of possible sectors based on matrix of evaluating
  - + Select appropriate pilot sectors fit with JICA's orientation and Quang Ninh's situation.

He emphasized that in case it is impossible to cover all sectors in Green Growth Project, if JET could help Quang Ninh build mechanism for their implementation in near or far future, these mechanism would be highly appreciated as products of Green Growth Project.

**Meeting ended at 16:30**



## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 21]**

### *Discussion of Pilot Activities for Tourism Sector*

Venue: DPI meeting room

Date: 20<sup>th</sup> April 2016

List of attendants:

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Mr. Ta Thien Hy	Head of Socio-culture and tourism division	DPI
2	Mr. Nguyen Duc Hoa	Chief of Administration Office	DPI
3	Ms. Dang Thi Thu Phuong	PMU Staff	DPI
4	Ms. Nguyen Thi Minh Luong	Head of Newspaper and Publication	Information and Communication Department
5	Mr. Ngo Dinh Dung	Deputy Head – Information and Culture Division	Quang Yen Town PC
6	Ms. Vu Thi Hanh	Head – Tourism Resources Development Division	DCST
7	Mr. Nguyen Trung Son	Expert - Tourism Resources Development Division	DCST
8	Mr. Le Lam Tuan	Head of Environment Management Division	HBMD
9	Mr. Nguyen The Hue	Deputy Chairman	Quang Ninh Tourism Association
10	Mr. Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
11	Mr. Tetsuo Isono	Expert	
12	Ms. Duong Thi Nhuan	Translator	JET
13	Ms. Tran Thi Mai Lan	Translator	JET
14	Ms. Nguyen Thi Thao Hien	Translator	JET

#### **1. Discussion Points**

Pilot activities for tourism sector.

#### **2. Contents of discussions**

##### **(1) Mr. Le Lam Tuan, Head of Environment Division, Halong Bay Management Board (HBMD)**

Mr. Tuan said that the contents of the blue print do not relate to the objectives of green growth. Mr. Tuan said that the Vietnamese way of approach is to carry out propoganda in parallel with the tourism products and find JET's approach is different. Mr. Tuan also added that all sites to be recognised as tourism sites shall have to satisfy requirements prescribed under the Tourism Law.

##### **(2) Ms. Vu Thi Hanh, Head of Tourism Resources Development Division (DCST)**

Ms. Hanh raised a question whether provision of information communication for those sites which have not met required conditions for recognition as tourism sites while relevant investment has not been carried out will affect the image of the destination?

Ms. Hanh elaborated that the normal practice comprises of investment attraction, investment, completion then promotion shall follows.

Ms. Hanh also raised a question concerning the main responsibilities of DCST as she find it is not clear in the blue print where it states DCST as main responsible agency while implementing unit is DCST, HBMD, Tourism Association and Quang Yen Town.

Ms. Hanh requested JET to support the following:

- The Plan for pilot activities has to be developed more specific so that DCST can understand well what they have to do and what supports they receive;
- Training for community participating in responsible tourism;
- Training on how to smile as implementing the Halong Smile Code of Conduct

Ms. Hanh also added with information concerning many supports that the EU programe for responsible tourism have given to the province including consulting for establishment of the destination marketing agency, coal tourism and training of tourism boats.

**(3) Mr. Nguyen The Hue, Vice Chairman of Quang Ninh Tourism Association**

Mr. Hue understood that this is activity for improvement of tourism information for those already existed tourism sites.

Among those activities to be included in the implementation plan, Mr. Hue proposed JET to consider for support of activities such as branding for enterprises; implementation of Halong Smile Code of Conduct; introduction of local products (OCOP) and training for tourist narrators.

**(4) Ms. Nguyen Thi Minh Luong, Head of Newspaper and Publication, Department of Information and Communication**

In relation to communication products and targets, Ms. Luong asked if potential tourism investors are included.

Mr. Isono replied that the potential tourism investors are not covered by the blue print for pilot activity.

Mr. Naganuma answered that previously JET had already discussed with IPA concerning investment promotion by the project but no concrete idea has been decided. Mr. Naganuma said that JET can consider to include this content.

**(5) Mr. Ngo Dinh Dung, Deputy Head of Information and Culture Division, Quang Yen Town**

Mr Dung said he is very happy that Quang Yen Town is selected by the project as a target site for installation of on-site tourist information tools as well as training of local people/guides.

**(6) Others**

Mr. Dung (Quang Yen Information and Culture Division) and Ms. Hanh (DCST) requested that meeting material should be sent to meeting participants for thorough study for possible comments for the effectiveness of the meeting to be convened.

The meeting ended at 16:00.

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 22]**

### ***Discussion on Pilot Activity for Tourism Sector***

Venue: DPI meeting room

Date: 26th May 2016

List of attendants

<b>No</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Mr. Hoang Danh Son	Deputy Director	DPI
2	Ms. Tran Thanh Tam	Expert - Foreign Economic Relation Division	DPI
3	Mr. Tran Xuan Cuong	Deputy chief – Office Division	DPI
4	Ms. Nguyen Thi Thu Trang	Deputy Chief - Socio-Culture and Tourism Division	DPI
5	Mr. Nguyen The Hue	Vice chairman	Tourism Association
6	Mr. Ngo Dinh Dung	Deputy head – Information and Culture Division	Quang Yen PC
7	Ms. Le Thi Thin	Deputy head – Professions – Research Section	HBMD
8	Mr. Nguyen Duc Quynh	Planning and tourism resources development division	Tourism Department
9	Mr. Norihiko Inoue	Chief advisor	JET
10	Mr. Tetsuo Isono	Tourism expert	JET
11	Mr. Shinichiro Sugimoto	Ecotourism expert	JET
12	Ms. Duong Thi Nhuan	Translator	JET
13	Ms. Nguyen Thi Thao Hien	Technical assistant	JET

#### **1. Discussion points**

(1) Three pilot activities for sustainable tourism promotion in phase 2

- Improvement of Tourist Information
- Ecotourism Promotion in Quang Yen Town
- Introduction of Blue Sail Certificate

(2) Tentative schedule for each pilot activity

#### **2. Record of discussion**

(1) Mr. Shinichiro Sugimoto – Ecotourism Expert, JET gave a presentation on discussion of pilot activities for tourism sector in implementation phase of Green Growth Project.

(2) Mr. Quynh – Tourism Department highly appreciated three proposed pilot activities and gave some information related to ecotourism promotion in Quang Yen town:

- Decision No.1419-QD-UBND signed on 04/07/2014 on approval plan of tourism products promotion until 2020 vision 2030
- Tourism Department used to cooperate with Saigontourist company in organizing community based tours in Quang Yen.

(3) Mr. Dung – Quang Yen PC highly appreciated ecotourism promotion plans of JET, showed the readiness to cooperate and the hope for a good process from DPI to get approval from Quang Ninh PPC.

He recommended JET to build a detail itinerary so Quang Yen PC can have better preparation for phase 2.

- (4) Mr. Son – DPI recommended Mr. Dung – Quang Yen PC that Quang Yen should take the initiative to cooperate with JET instead of waiting for implementation phase. In advance, it had better for Quang Yen PC to check and summary necessary relevant information to coordinate with JET.

Regarding plan of JET, he gave some opinions as below:

- For both tourism information improvement and ecotourism promotion, the activity of “develop discovery route” should be shortened to implement in year 2016 because there has been already Quang Ninh official list of tourism routes and sites.
  - Training work should be implemented from the first year instead of the second year
- (5) Ms. Thin – HBMD totally agreed with three pilot activities and the implementation order when tourism information improvement is on first place of priority and gave some opinions as below:

- Regarding the activity of discovery route development, it is also essential to base on recognized routes in Quang Ninh.
- Regarding the development of tourism information, it will be best to build first four tourism information center (TIC) in 4 tourism spaces of Quang Ninh:
  - + Dong Trieu – Uong Bi – Quang Yen
  - + Ha Long – Van Don – Bai Tu Long
  - + Van Don – Co To
  - + Mong Cai – Tra Co

- (6) Mr. Tetsuo Isono – JET asked for the official work of current TIC located in new boat station in Tuan Chau island.

- (7) Ms. Thin answered that the current information kiosk belongs to Tuan Chau Group, not to any official governmental organization. She completed that there is center of information and tourism promotion which belongs to Tourism Department now located in No. 9B, Anh Dao Str., Bai Chay ward, Ha Long city.

- (8) Mr. Son – DPI proposed that if PMU members are always ready to coordinate if JET needs more official information.

Regarding Ms. Thin’s opinion of information improvement in four target tourism areas of Quang Ninh, he recommended to build same model and same management method in four TICs.

- (9) Mr. Hue – Tourism Association gave some opinions as below:

- Tourism information improvement should be implemented in whole province, not only in Ha Long Bay area. If possible, JET should TIC with Destination Management Agency (DMA) which is now under construction with aids of EU Project by European Commission
- Ecotourism promotion is very potential in Quang Yen town thanks to lots of natural and cultural values and less of tourism exploitation.

- Training work should be carried out from the first year of implementation phase because ecotourism also concerns Community Based Tourism, so from the first step of implementation phase, there should be training courses for local people.
  - Installing on-site signage and interpretation should be finished within the first year.
- (10) Ms. Trang – DPI asked JET for more explanation of:
- Implementation order of three pilot activities
  - Activity scale of developing discovery route: for general tourism sectors or only for ecotourism
  - Building scale of TIC: for whole province or only Ha Long Bay area
- (11) Mr. Sugimoto answered that three pilot activities would be implemented equally in parallel and discovery route development is aimed to ecotourism promotion.
- (12) Ms. Trang – DPI asked if Blue Sail Certificate is the continuation of Ecolabel project implemented from 2011 to 2013 and gave her personal opinions for the reason why that project did not get good long-term results. It stopped at building certificates to encouraged tourists to get in certificated boats but lacked specific supports for boat owners. From the experience, she emphasized the importance of keeping long-term effectiveness for the activity of Blue Sail Certificate even when Green Growth Project finishes.
- She gave some recommendations as below:
- Refer to previous criteria of Ecoboat project to save time and budget
  - Combine the improvement of tourism information (TIC) with the establishment of Destination Management Agency (DMA)
- (13) Mr. Son – DPI recommended to build toolkits related to Blue Sail Certificate.
- (14) Mr. Cuong – DPI gave some recommendations as below:
- Establish a working group for whole tourism sector in phase 2, then this group will support Quang Yen to set up a tourist information unit rather than Quang Yen PC build their unit themselves.
  - Make clear the scope of Green Growth Project, combine the establishment of DMA and the improvement of TIC
  - Support to build tourism event calendar
  - Standardize system of on-site signs and road map
  - Control the permission of working licence for tourguides, especially tourguides from other regions coming to Ha Long Bay area
  - Upgrade value of tourguide certificate basing on enhancement of professional tourism training
  - Build distinctive definition between ecotourism and responsible tourism
  - Refer to previous tourism certificates such as Ecoboat for tourist boats and Green Lotus for hotels.
- (15) Mr. Isono – JET asked if it is better to build ‘a working group’ instead of ‘a tourist information unit’ in Quang Yen town.

(16) Mr. Son – DPI affirmed that a working group would be established to cover all three pilot activities in tourism sector. For each activity, there will be local ‘working group’; its official name and organization will later be based on local administrative organization.

He gave some proposal as below:

- Set up working groups for other sectors in the scope of Green Growth Project, one member may take part in several relevant working groups
- Outline training plans and quantify the trainees from each region
- Remove the activity ‘Set up a committee to examine criteria and incentives for Blue Sail Certificate’. There is no need to build a new committee, just follow official provincial procedure. Mr. Son proposed the process for Blue Sail Certificate:
  - + Build criteria to submit PPC for approval
  - + Establish an Examining Board to approve those criteria
  - + Apply the certificate

Examining Board is established from existing relevant boards. For example, Department of Transportation is in charge of monitoring and rating tourist boats, Department of Tourism is responsible for evaluating hotels

⇒ In conclusion, the most necessary work is to build reasonable criteria and enhance working capacity of Examining Board.

(17) Mr. Norihiko Inoue – JET highly appreciated all contribution from participants and showed JET’s hope to apply other certificates for other sectors in Green Growth Project such as environment, energy management, etc.

(18) Mr. Son – DPI showed his agreement to Mr. Inoue and commented that building and applying other certificates for other sectors are totally possible but it is important to assign roles to specific organization, for example: energy saving label should be managed by Department of Natural Resources and Environment DONRE. Once receiving good plans of building certificates, Quang Ninh PPC will surely approve them.

He repeated that training and other preparation works should be implemented from the first year of phase 2.

He emphasized that it is now high time to reinforce working capacity of newly established Tourism Department’s staffs. Contribution to the foundation of DMA will be a typical product of Green Growth Project.

(19) Mr. Isono – JET gave an information that there is a variety of DMA model in the world. This kind of agency can be run by both government and private companies.

(20) Mr. Son – DPI responded that because DMA model is new in Quang Ninh province, at the beginning, it should be managed by government. Once DMA is in operation, PPP (Public - Private Partner) model will be considered. In fact, Quang Ninh is one of the most active province for PPP model. He recommended JET to cooperate with EU project funded by European Commission to succeed in establishing Quang Ninh DMA.

Mr. Son concluded the meeting by suggesting to send participants edited plan for tourism pilot activities by JET and showing the hope for further cooperation from relevant organizations.

**Meeting ended at 17:00**

**RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 23]**

***Discussion on Implementation Plan of Pilot Activity on Enhancement of provincial funding and financial mechanism for Environmental Management and Green Growth***

Venue: DPI meeting room

Date: 1<sup>st</sup> June 2016

List of attendants:

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Dr. Hoang Danh Son	Deputy director	DPI
2	Mr. Bui Tuan Anh	Deputy head of General and Planning Management Division	DPI
3	Mr. Pham Hong Bien	Chief of Foreign economic relations division	DPI
4	Mr. Tran Thanh Phong	Chief of sectoral economy division	DPI
5	Ms. Dang Thi Thu Phuong	PMU Staff	DPI
6	Mr. Pham Quang Thai	Deputy director	DOIT
7	Ms. Do Thi Ngoc Quy	Expert	DOIT
8	Mr. Vu Van Dinh	Expert	DOF
9	Ms. Nguyen Thi Thu Thuy	Deputy head of Environment protection sub department	DONRE
10	Ms. Pham Thi Duyen	Head of Environment Protection Fund Management Office	DONRE
11	Mr. Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
12	Mr. Tetsuo Isono	Expert	
13	Ms. Duong Thi Nhuan	Translator	JET
14	Ms. Tran Thi Mai Lan	Translator	JET
15	Ms. Nguyen Thi Thao Hien	Translator	JET

**1. Discussion Points**

Intensive consultation on implementation plan of pilot activity on enhancement of provincial funding and financial mechanism for environmental management and green growth.

**2. Contents of discussions**

**(1) Dr. Hoang Danh Son, Deputy Director of DPI, PMU director.**

Dr. Son reiterated the purpose of many discussions held so far on this topic are to (1) improve the two existing funds and (2) a separate financial channel for green growth programe. Dr. Son made further comments as follows:

- a. JET presentation has not addressed item (2) above and has only focused on Environment protection fund, not the Science Technology Fund;
- b. It is not clear concerning the source of funding supports, either it is from the State budget or from JICA source.
- c. No specific criteria on selection of targets. The two groups of targets proposed by JET are markets and companies, industrial park.

Dr. Son reminded meeting participants, especially DOIT representatives concerning the suitability of the two target groups that JET conducted visits, i.e. Markets and Food Processing Companies in terms of their currents plan for upgrade and development. Mr. Son added that some markets, companies shall have to be relocated as required by local development planning.

**(2) Mr. Kengo Naganuma, JET**



Concerning comments raised by Dr. Son above, Mr. Naganuma answered as follows:

Re. a.: Concerning targets applied by Science Technology Fund, there are possibilities to use the Fund if new technologies are to be introduced. Since we cannot decide at this early stage concerning the use of technique, however, the fund can also be a target fund.

Re. b.: This pilot activity aims at improvement of funding mechanism so the source should be from the province. Direct support from JICA can be decided for supporting other pilot activities.

Re. c: selection of market group can be based on criteria that the markets have connection to tourism activities or environment education activities. Mr. Naganuma added concerning selection of companies and markets, JET wish to have specific consultation of DONRE or DOIT.

**(3) Mr. Pham Quang Thai, Deputy Director of DOIT**

Mr. Thai said that participants to this meeting should have included DOST and Economic Zone Management Authority and Industrial Zone Management Board.

Mr. Thai mentioned (a) Decision No. 2895/2015/QĐ-UBND dated 30 Sep 2015 concerning supports for industrials parks and economic zones; (b) Decision No. 2408/2014/QĐ-UBND dated 22 Oct 2014 concerning regulations on management and utilisation of industry incentive expenditures.

Concerning point (a):

Mr. Naganuma reported that during discussion with Cai Lan industrial park management, JET understood that the support as mentioned in Article 8 of the Decision is only applied for new construction of IP so that Cai Lan IP had difficulty in accessing the funding.

Dr. Son said that now in seafood markets, there is no salinity wastewater treatment system so if JET can explore the availability of such technology, both in Japan and Vietnam for future proposal then for new technology introduction, Science Technology Fund can be applied.

Concerning poin (b): Mr. Naganuma said JET would study this decision later.

Targeted markets: Mr. Thai said that based on Decision 3340/QĐ-UBND dated 31/12/2014 of the PPC on approval of master plan of all markets in Quang Ninh to 2020, vision to 2030, none of the markets that JET conducted surveys are supposed to be relocated.

Mr. Thai suggested that a separate meeting should be held with DOIT's Commercial Management Division to select target market for pilot activities.

**(4) Mr. Vu Van Dinh, Expert of DOF**

Mr. Dinh said that firstly it is essential to enforce specific environment standards that all entities have to comply with. Entities can apply for the loans if they have financial difficulties.

For market groups, the market management board is not the one who can confirm demand for upgrade work, but their managing agency can, i.e. the district people's committees. It means that the relevant district PC will be the one who should apply for the fund.

Mr. Dinh added that companies, IP are eligible borrowers.

Suggested target group: shipbuilding entities.

**(5) Ms. Pham Thi Duyen, Head of Environment Protection Fund Management Office,  
DONRE**

Ms. Duyen said that there is no need to improve the fund's current regulations and mechanism which have already been prepared comprehensively.

Concerning Mr. Naganuma's question that so few number of companies applied for the fund, Ms. Duyen said that with small total amount provided by the fund (support of 1 billion and loan of 5 billions) many companies decided not to apply.

She added that the Fund can propose to the PPC for possible adjustment of the loan level depending on actual demand of companies.

The Fund has already disseminated fund information to coal mining companies and district PCs who are expected to forward to companies in their area. To this end, Ms. Duyen elaborated that the Fund has already proposed to increase the total to 50 billion VND by 2020; she added a fact that to date, the Fund has not even got disbursement for year 2016.

Ms. Duyen said that markets are not eligible targets for taking the loan since they are under management of district PCs. One requirement for loan application is mortgage assets by the borrower. Therefore it is more suitable when the loan borrower is the investor of the markets, i.e. private companies.

**(6) Ms. Nguyen Thi Thu Thuy, Deputy Head of Environment Protection Sub-department,  
DONRE**

Ms. Thuy raised the following comments:

- (a) Survey on actual demand for loan is necessary;
- (b) Risk assessment in terms of loan recovery after project period;
- (c) Priority criteria for selection of loan borrowers.

In this connection, Dr. Son commented that (c) concerns the Fund's regulations which specify clearly on how to select borrowers; (a) and (b) are necessary and there is a need to carry out survey of needs and risk assesment for the entire Halong bay area. It is necessary to be carried out since it shall helps to improve the fund's scope and if necessary a separate programe with separate financial funding should be established for this activity.

Mr. Naganuma said that (a) and (b) can be included in the Project. One candidate like Cai Lan industrial park can be selected for trial implementation and at the same time Japanese technology can be introduced.

Mr. Naganuma raised a question concerning department to be in charge to conduct the survey.

Dr. Son said consideration can be made later to decide the implementing unit and the most important fact is JET confirm the need to have the survey.

This survey work is understood to be conducted in Phase 2.

**(7) Bui Tuan Anh, Deputy head of General and Planning Management Division**

Mr. Tuan Anh said that the most important thing is to enforce a strict mechanism on environment standard compliance and make improvement of wastewater facility mandatory then the Fund can be attractive to borrower.

Mr. Tuan Anh again repeated that the target of the fund should be enterprises.

He also reiterate the need to have a separate financial channel, targeting at enterprises who can carry out WW treatment projects in the form of PPP (Public private partnership) method.

Mr. Naganuma replied that environment inspection is the task that Vietnamese side. JET can either propose to the PPC to conduct the most strict control of environment, under Output 1, if necessary to draft a decision attaching with list of critical pollution sources.

**(8) Mr. Tran Thanh Phong, Chief of sectoral economy division, DPI**

Mr. Phong gave his assessment that the funds are not the best channel for improvement of wastewater situation in Halong Bay area since the only attractive fact from the funds is low interest rate (3%/year) and for enterprises, taking the loan means increasing of their operating expenses and that is what companies are not fond of.

He proposed that there should be a separate programe for green growth with investment supports. He gave an example that last year the province allocate 50 billion VND as annual budget for agricultural investment.

Therefore he suggested that project shall propose the PPC to issue decision for supports to enterprises for their investment, improvement of standard wastewater treatment facilities. This decision shall also cover others recommendations which are expected to be from other pilot activities of the project.

**(9) Dr. Hoang Danh Son, Deputy Director of DPI Head of PMU**

Dr. Son proposed to change the wording in the name of this pilot activity as Enhancement of financial mechanism for environmental management and green growth. The purpose is to make it clearly understood that contributions will be from various sources, not only from the provincial budget.

Dr. Son said that further study is required on these funds, investment supports, incentive mechanism for good environment performance enterprises in order to propose a separate financial source for green growth and this should cover only for improvement of Halong bay water environment.

He emphasised the need to have a survey in the entire project area. Through survey, for areas of high concentration of polution sources, large projects will be proposed for calling for investment; in smaller areas, supports can be considered to encourage enterprises, investors with introduction of small scope technolog of Japan.

Dr Son added that through the survey, a proposed plan of financial requirements can be made for treatment of all wastewater sources that are discharged into Halong Bay area. Such plan shall show financial phasing, showing clearly support portion from the state budget (through funds, investment support, etc.) and portion to be contributed by enterprises.

Concerning pilot project, Dr. Son supported the idea by study team that more discussions should be held with Cai Lan IP in consideration of support possibility.

In addition, Dr. Son proposed Mr. Thai, DOIT to review and make a list of markets which are invested by private sector and propose candidate for pilot activities. JET is requested to arrange survey of these markets.

**(10) Mr. Kengo Naganuma, JET**

Mr. Naganuma said that project for huge investment of domestic wastewater should be separately from the green growth project.

Dr. Son added that the survey should make clear about the source, owner, discharge volume and quality of wastewater; and the survey should cover entire project areas, targeting at enterprises and some urban areas.

In this connection, Mr. Naganuma also reminded meeting participants that this project is a technical cooperation project so survey cannot cover all project area including domestic wastewater. Scope of survey will be discussed later after DOIT sends the list of proposed candidate for survey.

The meeting ended at 17:00.

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 24]**

### ***Proposed Implementation Plan for Pilot Project of Energy Efficient Measures***

Venue: DPI meeting room

Date: 02 June 2016

List of attendants

<b>No</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Mr. Hoang Danh Son	Deputy Director	Department of Planning and Investment (DPI)
2	Ms. Nguyen Thi Thu Trang	Deputy head Socio-Culture and Tourism division	DPI
3	Ms. Dang Thi Thu Phuong	Project secretary	DPI
4	Mr. Do Van Ninh	Deputy head Infrastructure and urban development division	Department of Construction (DOC)
5	Mr. Pham Duc De	Deputy head Energy management division	Department of Industry and Trade (DOIT)
6	Mr. Nguyen Van Tuan	Deputy head Investment division	Quang Ninh Economic Zone Authority (QEZA)
7	Mr. Kengo Naganuma	Deputy chief advisor	JICA Expert Team (JET)
8	Ms. Yuka Nakagawa	Energy management expert	JET
9	Mr. Tetsuo Isono	Tourism expert	JET
10	Mr. Shinichiro Sugimoto	Ecotourism expert	JET
11	Ms. Duong Thi Nhuan	Translator	JET
12	Ms. Nguyen Thi Thao Hien	Technical assistant	JET

#### **1. Discussion points**

- Preliminary selection of pilot project
- Financial mechanism for pilot project
- Institutional arrangement: Role and responsibilities
- Pilot project implementation structure
- Implementation schedule of overall activities

#### **2. Record of discussion**

(1) Ms. Yuka Nakagawa - Energy management expert – JET gave the presentation related to proposed implementation plan for pilot Green Growth Project of energy efficient measures.

In detail, she repeated some subjects which were discussed in previous intensive consultations:

- Criteria for selecting candidate topics
- Promotion of incentive such as ESCO project for energy saving and management

- Largest energy consumers in Quang Ninh
- Challenges of energy saving

She continued by presenting ESCO project for energy saving and management including its objectives, expected benefit and relevant organizations and after that the selection of candidate energy efficient measures.

Basing on the results of interview meeting with relevant enterprises in Ha Long Bay area, she gave the preliminary selection of three enterprises:

- Quang Ninh Construction and Cement JSC
- Thang Long Cement JSC
- Saigon Halong Hotel

Besides, other subjects are also put into presentation and discussion such as financial mechanism for pilot project, pilot project implementation structure and implementation schedule of overall activities.

- (2) Mr. Ninh – DOC gave an information related to preliminary selection of pilot project in which two cement factories will be tentatively selected: According to Provincial regional planning, after 2030, all cement factories in Ha Long bay area will be moved to the north of the highway which is now under construction.
- (3) Ms. Nakagawa – JET questioned if it is possible to select cement factories within 10 km from Ha Long Bay as the pilot project target, which is planned to be relocated in the provincial government plan by 2030.
- (4) Mr. Son – DPI answered that in case all cement factories in Ha Long are moved in 14-15 years, and it needs to confirm if energy saving investment can be recovered by the time of relocation
- (5) Ms. Nakagawa – JET confirmed that if there is an agreement between enterprises and government for relocation but the enterprises agrees to conduct energy saving investment under the situation, JET can select them as the pilot candidate.
- (6) Mr. Son – DPI responded that it is important to make clear energy saving efficiency level for both enterprises. In fact, the relocation of a factory depends on a lot of procedures, so the year 2030 is just tentative, it should be flexible in five years.  
He asked for the level of investment willingness of three tentatively selected enterprises (two cement factories and one hotel)
- (7) Ms. Nakagawa – JET answered that Thang Long cement factory shows the biggest readiness for energy saving investment. Besides, Quang Ninh Construction and Cement JSC had installed two second-hand inverters, but now one is currently out of order.
- (8) Mr. Son – DPI recommended that JET should add one more slide “Level of enterprises’ willingness to invest energy saving solutions”.
- (9) Ms. Nakagawa – JET asked for the possibility if Quang Ninh PPC can subsidize budget to support enterprises in energy saving.

(10) Mr. Son – DPI affirmed immediately that now all cement factories in Ha Long Bay area are under management of MOIT and investment of foreign companies. For example, Thang Long cement factory is invested by an Indonesian cooperation.

Quang Ninh PPC cannot support finance to such big foreign invested companies. Only policy to encourage these joint stock companies to install energy saving solutions such as preferential loan for energy efficiency measures should be taken.

In fact, there are relevant supportive funds in Quang Ninh such as environmental protection fund. JICA is also expected to support but it requires lots of procedures from both two sides for subsidy.

He recommended to implement energy saving measures in two PPC inter-agencies buildings which are now under construction and will be finished within 2017.

(11) Ms. Nakagawa – JET highly appreciated Mr. Son's contribution and suggested that JET would like to ask for further information from relevant organizations in energy saving installation in PPC buildings.

(12) Mr. Son – DPI showed the readiness to provide further information to JET and recommended that JET should finish project outline to present in Steering Committee meeting 2 in the end of June 2016 in which level of willingness should be added.

(13) Mr. De – DOIT gave some information related to governmental management of energy efficiency:

- Among 98 companies in the list of biggest energy consumers in Quang Ninh, 78/98 are industrial enterprises, 5/98 are construction ones and 22/98 are transportation ones.
- So far, only 47/98 enterprises have energy auditing, 3/47 are transportation enterprises, 2/47 are construction enterprises and 43/47 are industrial enterprises. Enterprises invest themselves energy auditing, MOIT only support partially, 50 mil. VND/enterprise/energy auditing.

Mr. De recommended to consider public lighting system because this system occupies 20% of all provincial electricity consumption. He totally agreed with Mr. Nakagawa's opinion that the biggest challenge is large investment cost. For example, a street lamp of Hapulico or Master costs 2-5 mil VND but this cost for an energy saving lamps is 7-8 mil VND. Besides, one another difficulty is the hesitation of enterprises when they want to recover investment cost in only 2-3 years.

Regarding energy saving implementation, he gave an information that Quang Ninh PPC has had plan to replace existing public lighting system by energy saving system (using LED) in Ha Long city and Uong Bi city.

(14) Mr. Son – DPI agreed with Mr. De that public lighting system is also a potential sector for energy saving installation and emphasized that the most important thing now is having reasonable plan, in which there are the current situation of energy

saving, the willingness level of enterprises and the proportion of financial support from Quang Ninh PC and JICA. This issue will be intensively discussed in the next Steering Committee Meeting in the end of June.

- (15) Mr. Ninh – DOC highly appreciated Mr. Son and Mr. De’s opinion related to public lighting system and gave a relevant information: In whole province, public lighting system includes 43789 lamps with length of 814km and capacity 20-250W (the average is 150W).
- (16) Mr. Tuan – QEZA agreed with Mr. Son’s opinion because implementing energy saving in PPC buildings may more easily get subsidy. Quang Ninh PPC can see directly the benefit of energy saving. Once Quang Ninh has buildings of energy saving, it will become a reputable model.
- (17) He gave other comments as below:
- JET should not choose two candidates in one sector, for example: two candidates in cement sector. Instead of it, transportation enterprise can be a candidate because of their energy consumption and pollution cause.

Regarding subsidy commitment, there should be only small financial support for enterprises in phase 2. From his experiences, enterprises may become passive, they wait for support to implement energy saving solution.

- (18) Ms. Nakagawa – JET highly appreciated Mr. Tuan’s contribution that energy saving in transportation industry is totally a good idea and should be promoted in policy, but since the monitoring will be too much complicated, it would not be suitable as pilot project target.
- (19) Mr. Son – DPI He emphasized that financial mechanism for pilot phase should be discussed most seriously in next Steering Committee Meeting.

He concluded the meeting by expressing the thankfulness to Ms. Nakagawa for such a clear and reasonable presentation and showing the readiness of cooperation.

**Meeting ended at 16:30**



## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 25]**

### ***Discussion on Enhancement of Water Environment Management Capacity by Controlling Direct Load of Wastewater Pollution on the bay***

Venue: DPI meeting room

Date: 3<sup>rd</sup> June 2016

List of attendants:

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Dr. Hoang Danh Son	Deputy director	DPI
2	Nguyen Thi Thu Trang	Deputy Head of Culture and Society Division	DPI
3	Ms. Dang Thi Thu Phuong	PMU Staff	DPI
4	Ha Khanh Hop	Expert	DOST
5	Nguyen Thi Chung	Expert	DARD
6	Hoang Tuan Linh	Expert	DONRE
7	Mr. Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
8	Ms. Duong Thi Nhuan	Translator	JET
9	Ms. Tran Thi Mai Lan	Translator	JET

#### **1. Discussion Points**

Intensive consultation on enhancement of water environment management capacity by controlling direct load of wastewater pollution on the bay.

#### **2. Contents of discussions**

##### **(1) Mr. Ha Khanh Hop, Expert of DOST**

Mr. Hop mentioned that if it was clearly pointed out in the invitation letter that the intensive consultation concern the two proposed pilot activities, i.e. (i) introduction of bio-toilet to tourist boats and (ii) introduction of recycle plant to producing bio-safety feed by fishery waste, then the best relevant attendant would have been assigned to join the meeting.

Mr. Hop also added that more detail information can be provided by DOST in writing in case JET finds necessary to do so.

Mr. Hop also requested JET to study further the Science Technology fund's regulation.

##### **(2) Ms. Nguyen Thi Chung, Expert of DARD**

Ms. Chung raised question concerning the source of fishery waste.

Mr. Naganuma said that so far JET mainly focus on waste from fishery processing companies.

Mr. Naganuma elaborated that a Japanese company now is implementing pilot activity of this advance technique in a fishery company in An Giang and if necessary project can invite the company to Halong for experience exchange.

Ms. Chung then requested JET to make it clear in the presentation material concerning the waste source for this pilot activity.

Mr. Naganuma also answered that JET shall also consider about waste discharge by aquaculture activities at a later date.

Ms. Chung asked question about possible impacts of composting feed to aquatic environment.

Mr. Naganuma said that as far as experiences learnt by that Japanese Company are concerned, they said the feed helps to make better water environment with natural and safe feed.

(3) **Ms. Nguyen Thi Thu Trang, Deputy Head of Culture and Society Division, DPI**

Ms. Trang commented that both proposed pilot activities are effective with high contribution to the green growth project. She raised questions concerning (i) if it is required to apply for permission to use these two technologies as far as their copyright are concerned; (ii) If bio-toilet activities shall overlap with DONRE's current activities with CHODAI company of Japan.

Mr. Naganuma replied as follows: (i): there is no need to apply for such permission since both companies wish to demonstrate their technologies; (ii) JET understood that CHODAI now is carrying out activities only for on land area; JET shall discuss with DONRE on expansion of CHODAI activities to tourist boats on halong Bay.

(4) **Mr. Hoang Tuan Linh, Expert of DONRE**

Concerning Bio-toilet:

Mr. Linh provided information that CHODAI is now cooperating with DONRE to install bio-toilets in 6 locations on land. CHODAI is also cooperating with Vietnam Environment Protection Fund to develop their bio-toilets for tourist boats in Hai Phong city. Mr. Linh requested JET to coordinate with CHODAI to avoid possible overlapping in activities.

To this connection, Mr. Naganuma said JET shall confirm with CHODAI on this.

Concerning treatment of fishery waste for feed:

Mr. Link mentioned Cat Phu Hai Seafood Joint Stock Company which apply treatment technology for recycling of water and use fishery residue in their processing for fermentation to feed aquaculture.

In this connection, Mr. Naganuma said that JET is interested in getting information which shall be disseminated in the white book.

Concerning tools for environment control

Mr. Linh proposed if green growth project can propose a pilot project for automatic environment monitoring system, for instant to check the temperature of cooling water discharged by thermal power plant. He said that this activity is killing aquatic environment in the recipient body.

To this end, Mr. Naganuma said that green growth project cannot handle all kind of issues related to wastewater and cannot afford big investment for equipment. JET can include the proposal in Output 1 of the project. Mr. Naganuma added that JICA is cooperating with Shiga prefecture concerning their experience in handling water environment in Biwa. Under the project, officers from Shiga prefecture shall come twice a year in Phase 2 of the project for exchange of technology, experience. Such proposal then can be included and submitted to the PPC.

Concerning tourist boats

Mr. Linh pointed out that recently the PPC instructed that all tourist boats operating on Halong Bay are required to have their wastewater treatment system to satisfy environment regulation for environment protection. Mr. Linh requested JET to consider the suitability of project's proposal to PPC for another instruction to use bio-toilet.

To this end, Dr. Son requests JET to pay attention to this comment of DONRE.

(5) **Ms. Nguyen Thi Thu Trang, Deputy Head of Culture and Society Division, DPI**

Ms. Trang raised a question if pilot projects can apply for the two funds.

Dr. Son said that DPI shall send letter to relevant departments concerning questions about the funds.

Ms. Trang also mentioned that pilot activity should cover the chain that involves all parties, including from waste -> composting -> distribution of products.

The meeting ended at 11:00.

## **RECORD OF DISCUSSION ON INTENSIVE CONSULTATION [NO. 26]**

### ***Discussion on Awareness Raising for Contribution to Green Growth Implementation with Regular Publishing of Environmental Report (White Book)***

Venue: DPI meeting room

Date: 13<sup>th</sup> June 2016

List of attendants:

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Mr. Vu Nam Phong	Director of CONREM	CONREM (DONRE)
2	Mr. Nguyen Ngoc Bien	Head of Database Division	CONREM (DONRE)
3	Ms. Ha Thi Minh Phuong	Staff of CONREM	CONREM (DONRE)
4	Mr. Le Hung Son	Second Secretary of Youth Union. Chairman of HL Association for Environmental Protection and Education	QN Youth Union
5	Dr. Hoang Danh Son	Deputy director	DPI
6	Mr. Pham Hong Bien	Head of Foreign Economic Relation Division	DPI
7	Mr. Tran Thanh Phong	Head of Sectoral Economy Division	DPI
8	Ms. Dao Thanh Huyen	PMU member	DPI
9	Mr. Tran Xuan Cuong	PMU member	DPI
10.	Ms. Tran Thi Thanh Tam	PMU member	DPI
11	Ms. Nguyen Thi Thu Hang		
12	Ms. Do Thi Ngoc Quy	Expert	DOIT
13	Ms. Dang Thi Thu Phuong	PMU Secretary	DPI
14	Mr. Nguyen Trung Son	Expert	Dept. of Tourism
15	Nguyen Thi Thu Thuy	Deputy head of Env. Protection Sub-dept.	DONRE
16	Nguyen Thi Thu Trang	PMU member	DPI
17	Mr. Kengo Naganuma	Environmental Expert Deputy chief advisor	JET
18	Ms. Duong Thi Nhuan	Translator	JET

#### **1. Discussion Points**

Intensive consultation on Awareness Raising for Contribution to Green Growth Implementation with Regular Publishing of Environmental Report (White Book)

#### **2. Contents of discussions**

##### **(1) Dr. Hoang Danh Son, Deputy Director of DPI, Head of PMU**

As his understanding the presentation made by Naganuma san, there are two main contents in this discussion: (i) Awareness raising on green growth; (ii) Specific pilot activity on regular publishing of White book. The first content (i) will be implemented during process of planning and preparing the White book; the second content (ii) will be made clearer during process of preparing the implementation plan for the pilot activity.

Dr. Son has some concerns:

1. Should make clear contents of White book. What will be included in the white book. Who will be the main responsible body for this activity. This is aiming at avoiding overlapping of information provision.
2. Need to have agreement on name of document, whether it is called White Book or Environmental Report?
3. The Halong City Environmental Education and Protection Association is a very important partner in this activity so they should be involved in the planning and formation stages. Also the Association is one of the products of the previous Halong Bay Env. Protection

Project in 2009-2013. Quang Ninh Province really respects the outputs from the Technical Cooperation Project with JICA. This Association, together with the Provincial Women Union, Tourism Association etc. should be consulted and asked for comments during the process of discussion on development of policy and mechanism, application of advanced science and technology of the project, both for getting their comments and for their capacity development.

4. Planning on contents of White book should be started in the 2<sup>nd</sup> year of the project implementation in order to be included in the provincial budget allocation plan.

(2) **Mr. Vu Nam Phong, Director of CONREM, DONRE**

1. Name of document should be called White Book, not Environmental Report. The book contents should include the environmental information in form of data to avoid the political implications. From the practical information and data included in the book, after three publications (3 years), the data in the book (trend) will have very high strength or power.
2. Regarding the main responsible Dept./Agency:
  - Some other depts. also should be concerned: DOC: Env. pollution sources due to activities of infrastructure development works; DOT: A lot of transportation, especially thousands of vessels operating on Halong Bay; Vinacomin: pollution sources from the coal waste landfill sites.
  - More concerned depts./agencies should be added: DOC causing environmental problems from infrastructure construction; DOT: especially thousands of vessels operating on the Bay discharging waste to the Bay; Vinacomin: Most of sources of pollution to Halong Bay is from coal solid waste dumping sites. However, Vinacomin is planning and implementing pollution management with mining wastewater treatment and environmental restoration at coal landfill sites. These good performance can be good inputs to the White Book.
  - He recommended DONRE to be the main responsible dept. for White book pilot activity.
  - The White book also should have functions of giving direct responses to the people's questions on environment.
  - Compiling is very heavy task for the Responsible Dept./agency. Good selection of information has to be made. Also, White book preparation put more heavy burdens to the Dept. while they have to carry on with their routine jobs.
3. Budget for implementation of White Book:
  - Budget for implementation of white book will be difficult. Should seek for good solutions on financial source. Donors for financial support is a good solution, so that we can avoid the hard financial arrangement every year for the book preparation

(3) **Ms. Nguyen Thi Thu Thuy, Deputy head of Env.Protection Sub-dept., DONRE**

- Need to identify targets of dissemination of this White book, i.e residents, enterprises or state agencies, so that we can set up contents of the book.
- Contents of the Book should focus on green growth activities; environmental protection; instructions on environmental protection. Many Associations that DONRE worked with complain about lacking of instructions for what they should do for environmental protection, what residents should do, what enterprises should do; Also, the White book should promote good performances examples in environmental protection; Enterprises are very interested in new technology, legal policies; Residents are interested in

environment quality in which they are living. All of these subjects determine contents of the White book.

- Should identify sources of information for the White book, including information on environmental technologies. DONRE had spent more than 500 mil.VND in preparing the Provincial 5 years Environmental Status Report with all available environmental data. In case of charged environmental information, the cost should be much different. Should form the Information Framework Mechanism for information provision for the later stages.
- From the White book contents, the main responsible Dept. can be identified.
- Regarding human resources for this pilot activity: This is a big book with lots of information. Human resource for the activity should be identified and trained?
- Time of publishing the White book also should be identified.

**4. Mr. Le Hung Son, Second Secretary of Provincial Youth Union, Chairman of Halong City Association for Env.Protection and Education**

- It is necessary to establish contents and roadmap for implementation of the White book publication.
- Association for Environmental Protection and Education of Halong City performs social activities including environmental protection education. The Association is also capable of performing the specific activities and projects such as: Development of Groups of Volunteers in community; Volunteer groups for eco-tourism routes and sites exploring; implementing project in cooperation with MCD (Cat Ba Alliance, a Vietnamese NGO, Centre for Marine Conservation); Implementing specific works such as organizing campaigns or events propaganda for environmental awareness raising in Tuan Chau Island; performed training on solid waste sorting for tourist boats on Halong Bay by Youth Union volunteers etc.
- The Association will have assignment to the members for cooperating tasks with the Project.

**5. Mr. Bien, Head of Foreign Economic Relation Division, PMU member, DPI**

- Scope of topic on Awareness raising is large, including of three main subjects: Propaganda, communication; Training and Sanctions. He asked whether Naganuma san intends to cover all these subjects in the “Awareness Raising”?.
- His personal opinion on naming of this pilot activity with 2 options: 1) Publishing of White book for contribution to green growth implementation; 2) The three subjects of awareness raising will be integrated into other topics.

**6. Mr. Phong, Head of Sectoral Economy Division, PMU member, DPI**

- Should consider the name as White book.
- Should identify the main responsible, standing agency for the pilot activity. The agency should be capable enough in collecting information and compiling of the Book.

- Should prepare Design Outlines for the pilot activity. We understand that the detail Implementation Plan for the pilot activity will be prepared later.
- This White book will be a democratic tool for provision of environmental information and also has function of announcement. Therefore, it should contain the following contents: i) Status assessment of Halong Bay Environment; Socio-economic development situation; Assessment and comparison on environment and socio-economy; ii) Activities promoting green growth from governmental agencies and private sector; information on management, supporting, changing ....; iii) Make orientation for the next phase. Targets for the next phase and solutions of implementation should be offered; iv) Announcement.
- Training should be arranged for people using this tool.
- The main responsible Dept. should be DPI.
- It is necessary to establish the Halong Bay Environmental Research Center in this Project.

**7. Ms. Phuong, staff of CONREM, DONRE**

- Agrees with the comments given by Mr. Phong, Director of CONREM. The pilot activity on regular publication of White book is a good one, for sharing and provision of environmental information to all the intended targets. Also the book will be a good tool for awareness raising.
- DONRE should be the main responsible agency to the pilot activity with support from JET.
- It is highly appropriate to have the Association for Environmental Protection and Education of Halong City being a partner involving in this pilot activity, especially for the purpose of awareness raising to the community, residents, local authorities and enterprises in Halong Bay area.

**8. Mr. Naganuma responds to the comments from participants**

- Agrees with Mr. Bien's comments that scope of awareness raising is large but we cannot cover all the aspects. In this pilot activity we focus only on publication of White Book for awareness enhancement on environmental protection.
- It should be the green growth White book, not Environmental White book.

**9. Dr. Hoang Danh Son, Deputy Director of DPI, Head of PMU in response to Mr. Naganuma's comments**

- His opinion on naming for pilot project as: White book on Sustainable development of Halong Bay
- Green growth is for development and development is towards green growth.
- Goals of White book: i) Can be open with some synthetic information, green growth information; ii) Evaluation on "green" level toward sustainable development. The

evaluation is in timely and spatial basis of Halong Bay, also evaluation on people's living quality; iii) Introduction of good models, orientations, activities towards the future being more green of Halong bay area.

**10. Mr. Naganuma's further responses to the comments:**

- If everyone agrees on the name as "White book on Sustainable development of Halong Bay", he will consult opinions from JICA, as originally it should be for green growth.
- In the 1<sup>st</sup> Steering Committee meeting, Mr. Hau suggested to consider Awareness raising activity in the Project, so the "Awareness raising" words are used as title for the pilot activity.
- In the study trip to Japan, Mr. Hau mentioned that enterprises is an important target group. They should be targeted in dissemination of White book to enhance their awareness, provided with information about project activities...
- Residents also should be targeted. Residents will create pressures to change for better behaviours and practices of enterprises.
- In the project, there will be a component for promoting eco-tourism. NGO companies will be contacted for experiences exchange.

**11. Dr. Hoang Danh Son made conclusions for the meeting**

- Regarding the main responsible Dept. for the pilot activity, his suggestion is that: It will be DONRE if more consideration on Environment; DPI if more consideration on green growth, and sustainable development.
- JICA Expert Team should offer suggestions on what kind of information will be included in the White book and the necessary roadmap of implementation.
- By 16<sup>th</sup> June 2016 should be deadline for provision of materials for the 2<sup>nd</sup> Steering Committee Meeting (scheduled on June 22<sup>nd</sup>), so that PMU can distribute them to the Steering Committee members before the weekend.

The meeting ended at 11:40.



添付資料 **I-4**  
個別トレーニング資料



Lake Biwa

# 水環境保全に関する 滋賀県の経験

～滋賀県の協力可能性について～

Hideyuki SAINO  
Director  
Sewerage division  
Shiga Prefecture

1

## アウトライン

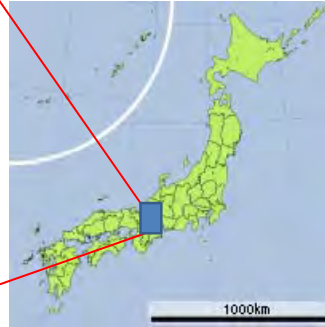
- ❖ 滋賀県の紹介
  - 滋賀県と琵琶湖の概要
  - 滋賀県の海外展開、企業
- ❖ 琵琶湖の水質保全の取組
  - 琵琶湖保全の取組の概要
  - 個々の施策の紹介

2

## 滋賀県と琵琶湖の概要

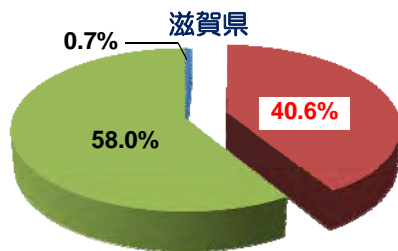


面積：670.25km<sup>2</sup>  
 湖辺長：約235km  
 貯水量：約275億 m<sup>3</sup>  
 北 湖：約273億 m<sup>3</sup>  
 南 湖：約2億 m<sup>3</sup>  
 最大水深：103.58m  
 平均水深：約 41m

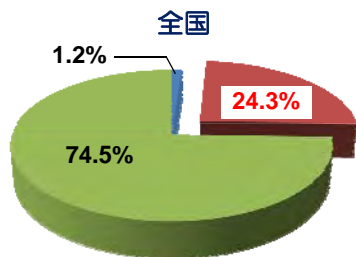


3

## 滋賀県の概要（ものづくり県）



- ❖ 滋賀県は、工業の盛んな県。
- ❖ 第二次産業の割合は47都道府県の中でトップ！



- 一次産業（農業、漁業等）
- 二次産業（製造業等）
- 三次産業（サービス業等）

4

## Prefectural Income per Person of Shiga

- ❖ Besides successful manufacturing, Prefectural Income per Person of Shiga is 4<sup>th</sup> in 47 prefectures in Japan.

Prefectural Income per Person (2011)

Rank	Prefecture	US \$
1	Tokyo	36,000
2	Shizuoka	26,000
3	Aichi	26,000
4	Shiga	26,000
⋮	⋮	⋮

5

## Shiga Water Environment Business Promotion Forumの設立

- ❖ 滋賀県は、工場が集積し、全国屈指の「モノづくり県」として発展。琵琶湖の水を生活用水や産業用水などに広く活用しながらも、水質的には比較的良好な状態を維持。
- ❖ 県民、企業、大学、行政が連携しつつ、それぞれの立場から水環境保全に取り組み、ともに技術やノウハウを創出・蓄積。
- ❖ これらを世界の水環境問題の解決に活かすため、2013年にShiga Water Environment Business Promotion Forumを立ち上げ。
- ❖ 現在、124の企業、大学等が参加。

プラットフォームを形成し、特にプロジェクトチームの形成や企業間のマッチングの推進

「琵琶湖モデル」を発信しつつ、企業の技術と行政の仕組みなど、産学官民一体となった展開

フォーラム関係企業・団体による水環境ビジネスへの参入・プロジェクト創出・展開へ

6

## Shiga Water Environment Business Promotion Forumの活動

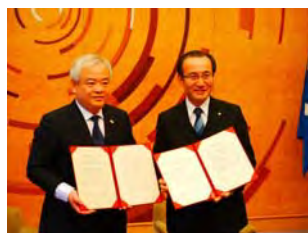
- ❖ 中国湖南省との環境分野に関する覚書を踏まえた活動
- ❖ 台湾台南市との経済・産業分野に関する覚書を踏まえた活動
- ❖ その他、セミナーや現地調査等を実施



滋賀県-湖南省 覚書締結(2013)



セミナーの実施(湖南省)



滋賀県-台南市 覚書締結(2013)



企業による下水処理場視察(台南市)

7

## 滋賀県の企業の活動

- 滋賀県に本社があり、海外展開をしている主な企業

社名	業種、海外展開
Takahashi Metal Industries Co., Ltd.	環境関連機器の開発・製造・販売 2005年に中国に、2012年にタイに現地法人を設立
Taiyo Sangyo Co., Ltd.	排水処理機器、浄水処理機器の製造販売 2013年にベトナムに現地法人を設立
Ichien Technos Inc.	空調設備、給排水工事の設計、施工 2010年に台湾に現地法人を設立
Hiyoshi Corporation	環境分析 2014年からJICA草の根技術協力事業を実施

- 「びわ湖環境ビジネスメッセ」

年に1度開催。今年は300企業・団体が出展、33,000人が来場



8

## 琵琶湖の水質汚濁

- ❖ 高度経済成長期、1970年代頃から琵琶湖の水質悪化が深刻化



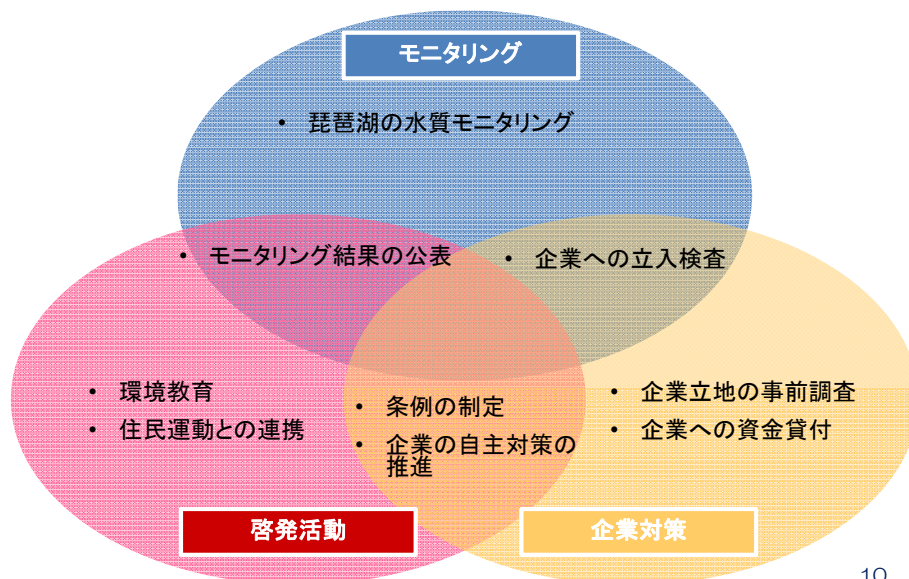
1977 琵琶湖で大規模な淡水赤潮発生



1983 琵琶湖でアオコ発生

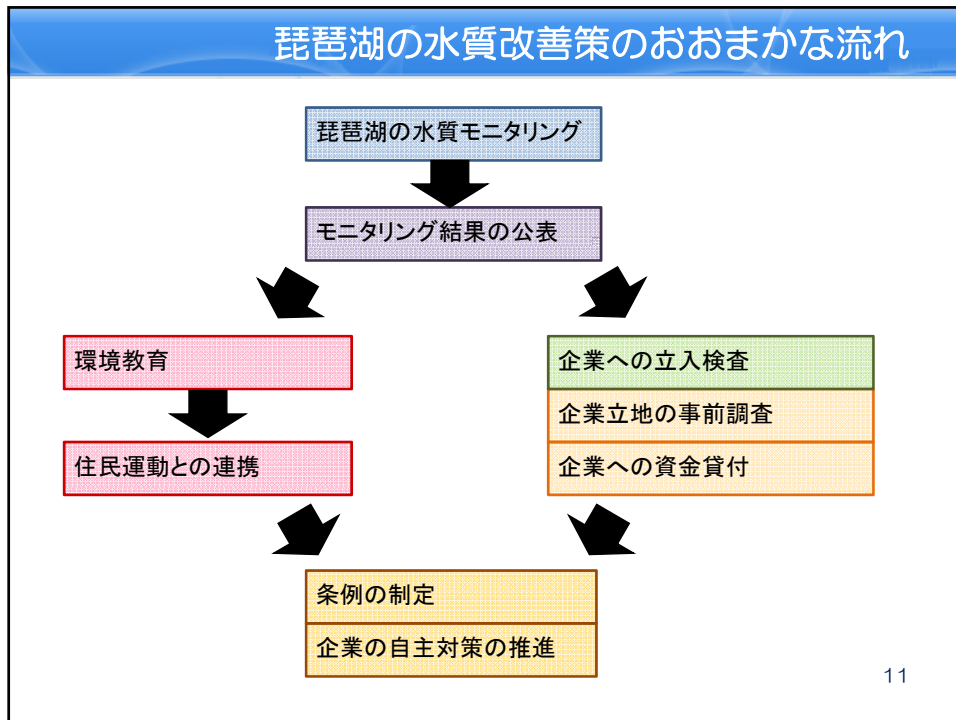
9

## 琵琶湖の水質改善策の体系図



10

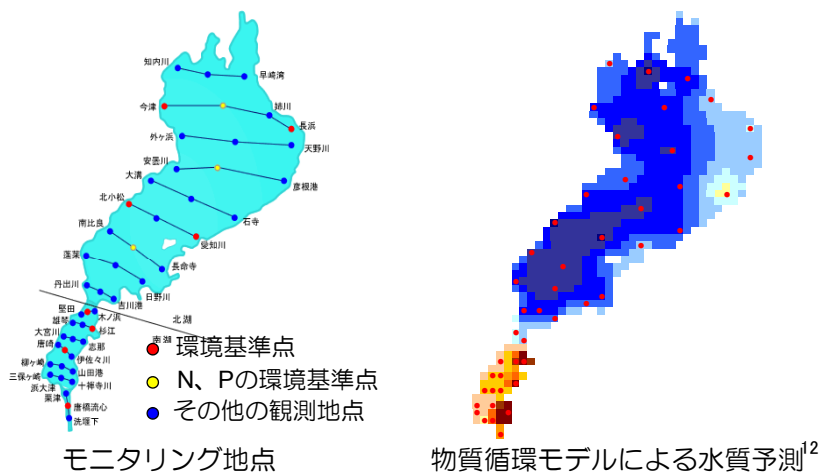
## 琵琶湖の水質改善策のおおまかな流れ



11

## 琵琶湖の水質モニタリング

- ❖ 1966年から、琵琶湖の水質調査を実施。
- ❖ 現在は、琵琶湖47地点で月1回のモニタリングを実施。
- ❖ 琵琶湖内の物質循環モデルの構築とそれによる対策立案にも活用。



## モニタリング結果の公表

- ❖ モニタリングの結果は、「公害白書」として出版し公表。
- ❖ 近年のデータはWEB上に公開。（日本語のみ）  
<http://www.pref.shiga.lg.jp/biwako/koai/hakusyo>
- ❖ モニタリング結果は住民や事業者にも公表し、問題意識を共有。
- ❖ 問題意識の共有が、すべての対策のスタートになる。



項目	A					B					C					D					E				
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
琵琶湖湖底汚濁調査	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

滋賀県公害白書 FY1973

## 環境教育

- ❖ 排水規制、企業への支援、環境行動の促進等、あらゆる施策の実施のためには、住民の理解を得ることが必要。
- ❖ このため、住民の方に琵琶湖を意識し、琵琶湖の水質改善の大切さを理解していただくために、環境教育を実施。

### 【環境週間】

琵琶湖の県下一斉清掃、ごみの持ち帰り運動、ポスターの募集等を実施。1973年から実施。最近では、優秀なポスターを白書の表紙に利用。



### 【琵琶湖フローティングスクール「うみのこ」】

学習船「うみのこ」に宿泊し、県内すべての小学5年生が琵琶湖について学習。1983年の就航以来、47万人以上が体験学習に参加



## 住民運動との連携

- ❖ 1970年頃から、琵琶湖の水質汚濁防止の観点からリンを含む合成洗剤の使用をやめようという住民運動が始まっていた。
- ❖ 自分たちの生活の利便性の一部を犠牲にしても、琵琶湖を守ろうという考え方が支持された。
- ❖ この住民運動と連携し、住民の支持を得ることにより、窒素やリンの排水規制を定めた「富栄養化防止条例」の制定と周知を実現した。



粉石けん使用の呼びかけ



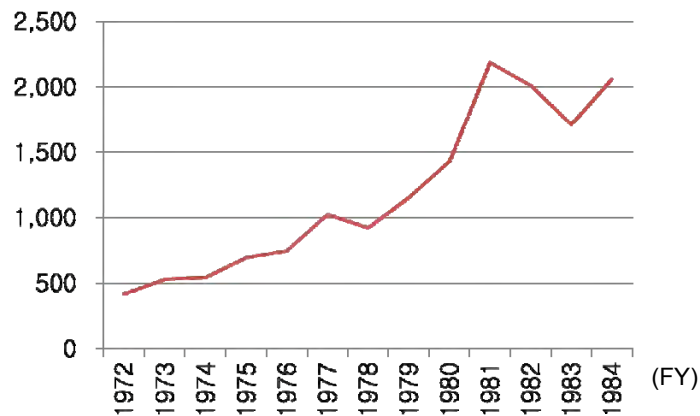
粉石けんと交換した有リン合成洗剤

15

## 企業への立入検査

- ❖ 水質モニタリングの公表や住民の支持も踏まえ、主な排出源の一つである工場への立入検査も強化。
- ❖ 工場排水対策のためには、徹底的な排水検査が重要。

工場への立入検査数の推移

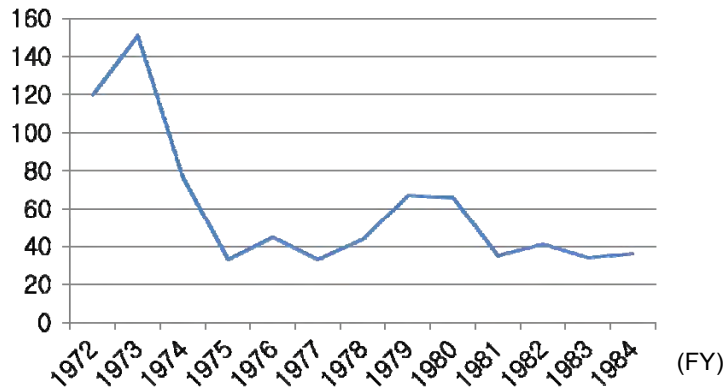


16

## 企業立地に対する事前調査

- ❖ 既存の工場だけでなく、新たに立地しようとする工場についても、立地前に調査を実施。
- ❖ 調査では、水使用量や排水処理施設の設置計画を確認し、水質汚濁を未然に防止。

工場に対する事前調査の実施件数

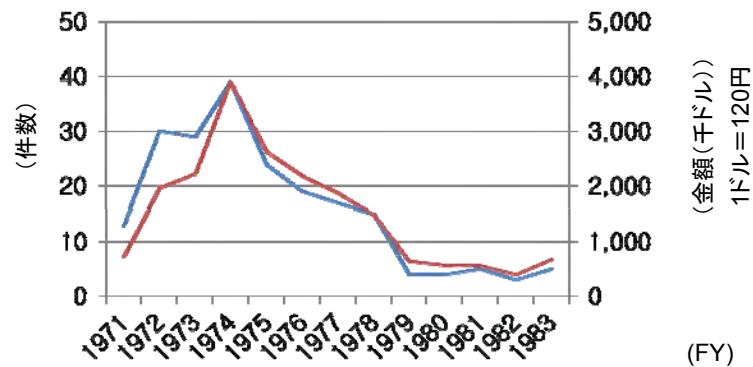


17

## 企業への資金貸付

- ❖ 立入検査や規制だけでなく、排水処理設備に対する資金貸付も実施。
- ❖ この制度の実施にも、予算が必要なことから、住民や企業の理解が不可欠。
- ❖ 排水処理設備の設置が進むにしたがって、1974年をピークに貸付件数は減少。

企業への資金貸付件数と貸付額(通常分のみ)



※排水処理設備は最低限のものであり、処理後、公共下水道へ放流される。

18

## 企業への資金貸付（貸付条件）

### 【通常の資金貸付制度】

- ❖ 貸付対象  
排水処理のために必要な機械、装置。これらの設置に必要な土地。
- ❖ 貸付限度額  
所要資金の80%。  
1事業所あたり250千ドル。（小規模事業者は83千ドル。）
- ❖ 利率、貸付期間  
年率5～6%程度、10年（据置期間1年）

### 【窒素・リン処理施設に係る貸付制度】

※富栄養化防止条例の施行にともなって実施。通常よりも有利な条件としている。

- ❖ 貸付対象  
排水処理のために必要な機械、装置。これらの設置に必要な土地。
- ❖ 貸付限度額  
所要資金の100%。  
1事業所あたり42千ドル。
- ❖ 利率、貸付期間  
年率2%程度（小規模事業者は無利子）、10年（据置期間2年）

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## 富栄養化防止条例の制定

- ❖ 水質モニタリングの公表、住民の支持、企業への規制・支援制度を踏まえ、1979年に富栄養化防止条例を制定。
- ❖ 企業に対する窒素・リンの排水規制は日本で初めて。（おそらく世界でも初めて。）
  - リンを含む合成洗剤の滋賀県内での使用、販売の禁止
  - 工業排水に対する窒素、リンの排水基準設定
    - 規制対象となったのは514施設
    - 規制が適用される1981年には、そのうち95%で排水対策を実施完了
    - 残る5%にはさらに1年の猶予期間が設定され、実施完了

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## 企業の自主対策の推進

- ❖ 富栄養化防止条例の制定後、企業関係者が連携し、自主的に環境保全体制を確立することを目的として「滋賀県環境公害防止協会」を設立。（1981年。約500社参加）
- ❖ 以下のような事業を実施。
  - 排水処理に関する自主管理体制の推進
  - 排水処理に関する技術の普及促進
  - 排水処理に関する調査研究
  - 水質分析
  - 講習会や講演会の開催
  - お互いの情報交換や広報



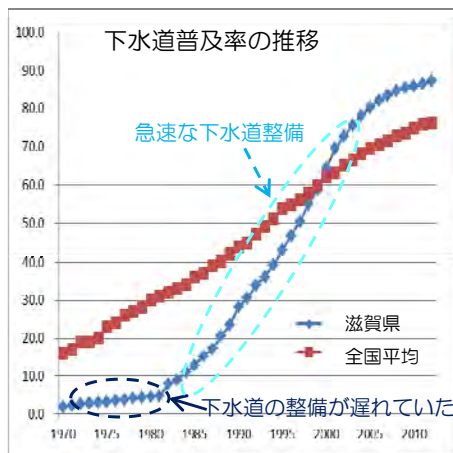
県が実施したアンケートによれば、

- 何らかの環境保全行動を行っている企業は81%
- 従業員に対し環境教育を行っている企業は70%
- 一般の方に対し環境教育を行っている企業は18%

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## 下水道も急速に整備

- ❖ 滋賀県では、1982年に流域下水道が供用開始
- ❖ その後、琵琶湖湖沼水質保全計画に基づき、急速に下水道が普及
- ❖ 集合処理、個別処理を合わせると、現在の普及率は98.2%（全国3位）



88.3%（2015年末）  
（污水处理整備率は98.3%）

77.6%（2014年末）

22

## 環境教育の必要性

- ❖ 琵琶湖に触れることにより、生活系の汚濁負荷の削減を意識してもらう。
- ❖ 高度処理は、通常の処理よりも経費を必要とする。このため、費用負担に関する行政と住民の合意形成が大切。
- ❖ 下水道を整備しても、個別の家庭が下水道に接続する必要があるが、その費用は個人負担。

滋賀県の下水道料金（一般家庭の1ヶ月あたり：25m<sup>3</sup>/月）

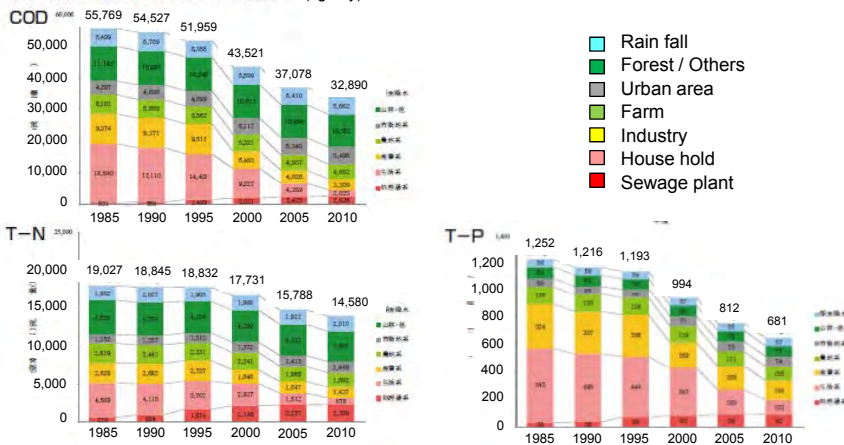
	下水道料金	水道料金
大津市	3,720	2,916
彦根市	3,650	3,186

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## 琵琶湖に流入する汚濁負荷量の経年変化

- ❖ これらの整備により、琵琶湖に流入する負荷量は確実に減少。

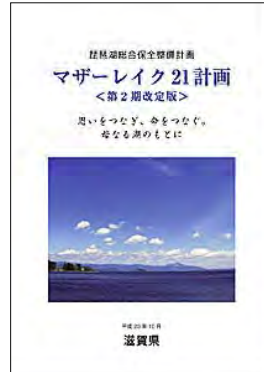
◆琵琶湖に流入する負荷量の経年変化 (kg/day)



24

## Mother Lake 21 Plan

- ❖ マザーレイク21計画は、琵琶湖の保全・再生のために策定された現在の計画。
- ❖ 2050年頃の琵琶湖を念頭に、2020年までに実施すべき取組を盛り込んでいる。
- ❖ 単なる水質改善だけでなく、「生態系の保全・再生」「暮らしと琵琶湖の関わりの再生」を目標としている。
- ❖ 指標の例
  - 琵琶湖の水質（COD、T-N、T-P等）
  - 漁獲量
  - 下水道普及率
  - 環境にやさしい農業の割合
  - 琵琶湖を大切と思う人の割合
  - 琵琶湖の保全活動をするNPOの数



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## まとめ

- ❖ 以上が、琵琶湖の水質保全の取組です。
- ❖ 興味を持った内容やご質問があればこちらまでご連絡ください。

[saino-hideyuki@pref.shiga.lg.jp](mailto:saino-hideyuki@pref.shiga.lg.jp)

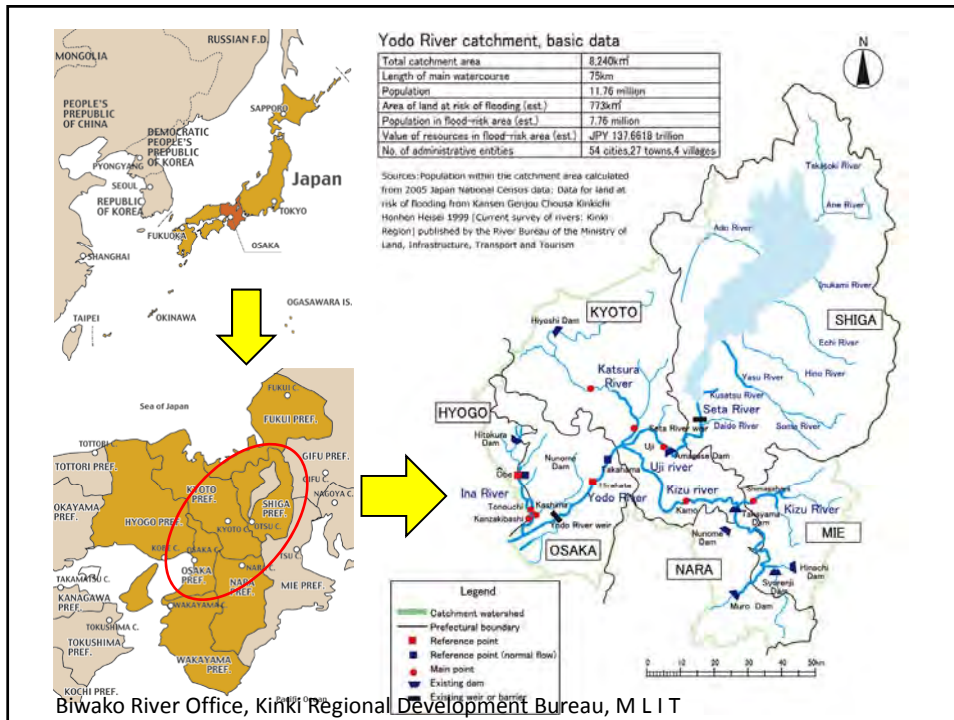
*Thank you and Xin cảm ơn*

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# Water Conservation Measures of Lake Biwa

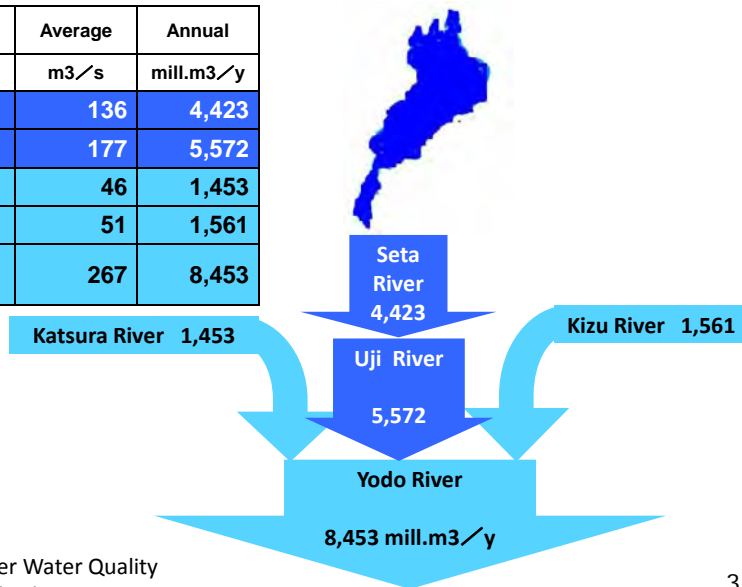


International Lake Environment Committee  
Foundation (ILEC)  
Toshiaki Kagatsume



## Water Flow of Lake Biwa-Yodo River Basin

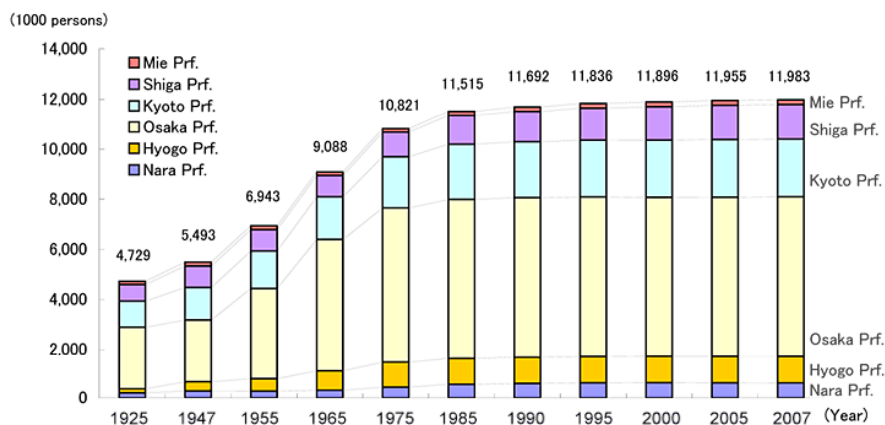
	Average	Annual
	m <sup>3</sup> /s	mill.m <sup>3</sup> /y
Seta River	136	4,423
Uji River	177	5,572
Katsura River	46	1,453
Kizu River	51	1,561
Yodo River mainstream	267	8,453



Lake Biwa-Yodo River Water Quality Preservation Organization

3

## Change in Population of Lake Biwa - Yodo River Basin



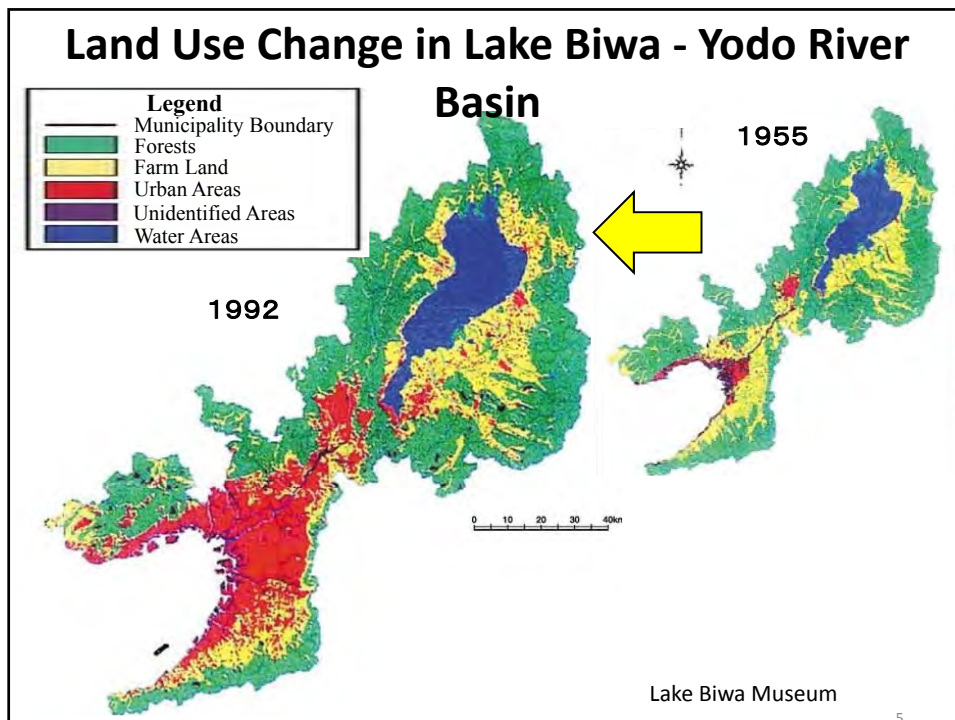
Changes in population of catchment area broken down by prefecture.

Note: This data has been compiled from statistics for all administrative entities in the Biwako - Yodo River catchment area. In some cases, part of the entity may lie beyond the watershed.

Source: Compiled from Japan national tax survey data; figures for 2007 are estimated.

In 2007 total for Mie Prf., from Tsu City only the population of what was formerly Misugi-mura is included. In Kyoto Prf., from Nantan City, only the population of what was formerly Miyama Town is included.





## Water Quality Conservation Policies

### **1969, Pollution Prevention Control Ordinance was enacted**

The ordinance was required factories and other commercial facilities that discharge wastewater into public waters or generates noise to report to the prefecture government and to comply with the effluent standards and noise control values.

### **1972, The ordinance was fully revised, and the more stringent effluent standards were established**

○ stringent emission standards for heavy metals and other hazardous substances,

○ a permit system for the establishment of factories using hazardous substances,

○ effluent standards that apply to the effluents of factories or commercial facilities which discharge 30m<sup>3</sup> (10m<sup>3</sup> now) or more of effluent per day on average.

### **1973, “AA”, the highest class of the Environmental Quality Standard (EQS) for lakes was applied to Lake Biwa.**

## **Eutrophication phenomenon of Lake Biwa**

**1950s-1960s**

**Outbreaks of phytoplankton (green algae etc. ) and waterweed caused failure or disorder of the water purification facilities of city water system.**

**In 1969 and 1970 serious problems of odor and taste in city water were occurred in Kyoto, Osaka and Otsu City.**

## **Countermeasure to the Eutrophication of Lake Biwa**

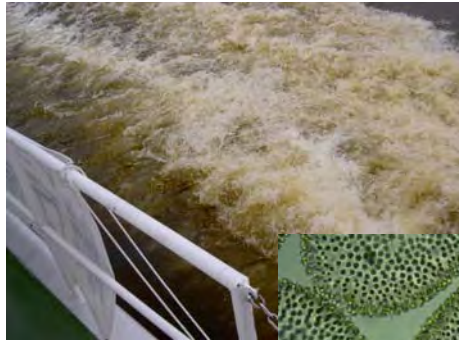
1973- Investigation about the eutrophication and simulation were carried out. It became clear that phosphorus and nitrogen were the limiting factors of the eutrophication of Lake Biwa

1975 Governor of Shiga consulted it about the nitrogen and phosphorus regulation of the factory effluent in the council for water.

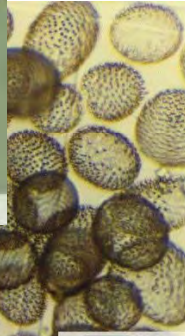
1977 A red tide of flesh water suddenly appeared in the North Basin of Lake Biwa. This event intensively alarmed Shiga citizen of the prefecture.

1980 Eutrophication of Lake Biwa Control Ordinance implemented. The ordinance was the very first act for eutrophication control in Japan. It sets nitrogen and phosphorus standards for industrial effluents as well as prohibits the use of phosphate-containing synthetic detergents in Shiga.

## Freshwater Red Tide



*Uroglena americana*



## PR of the Ordinance



## Soap Campaign



当時、主婦たちが石けん運動の中心になった

## Outcomes and Effects of Ordinance for Prevention of Eutrophication of Lake Biwa

- Recovery of water quality of inflowing rivers : T-N.T-P
- Put the brakes on the progress of eutrophication of Lake Biwa ( Decrease in T-N.T-P.COD)
- Emphasis on environmental administration become to the keynote of Shiga prefectural Government
- World Lake Conference was held (1984)  
ILEC was established (1986)
- School Boat “Umi-no-ko[Children of Lake Biwa]” was built. 1983
- Shiga Prefecture lead ISO14001 and Green Purchasing
- Promotion of Environmentally Conscious Agriculture
- Led to the widespread use of phosphate-free household detergent
- Lead to a revision of the Water Pollution Control Law etc.

## World Lake Conference

**1984** Shiga Pref. held the First World Lake conference bringing together researchers, governments and residents.

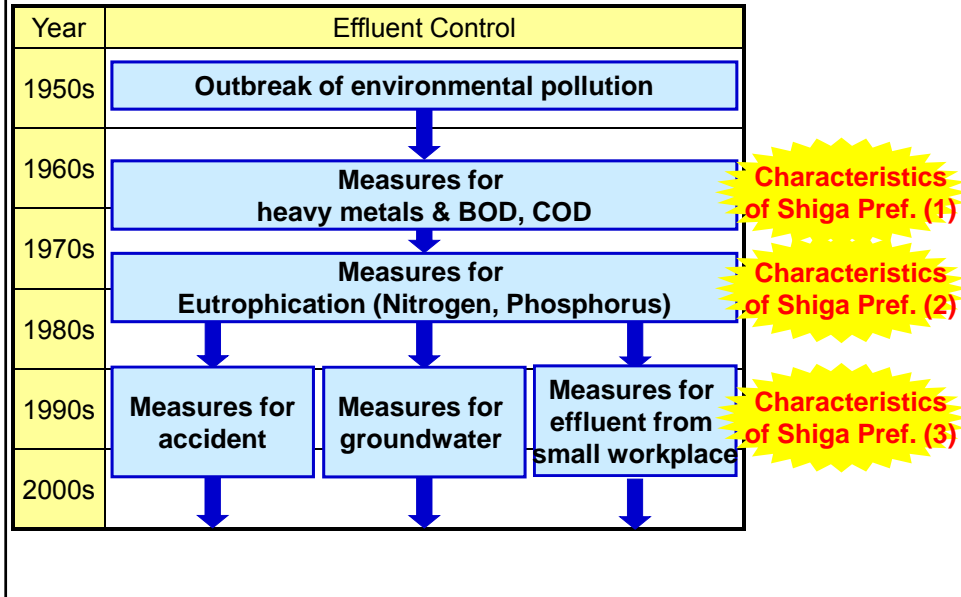
**1986** ILEC established

**2014** 15<sup>th</sup> conference  
Perugia

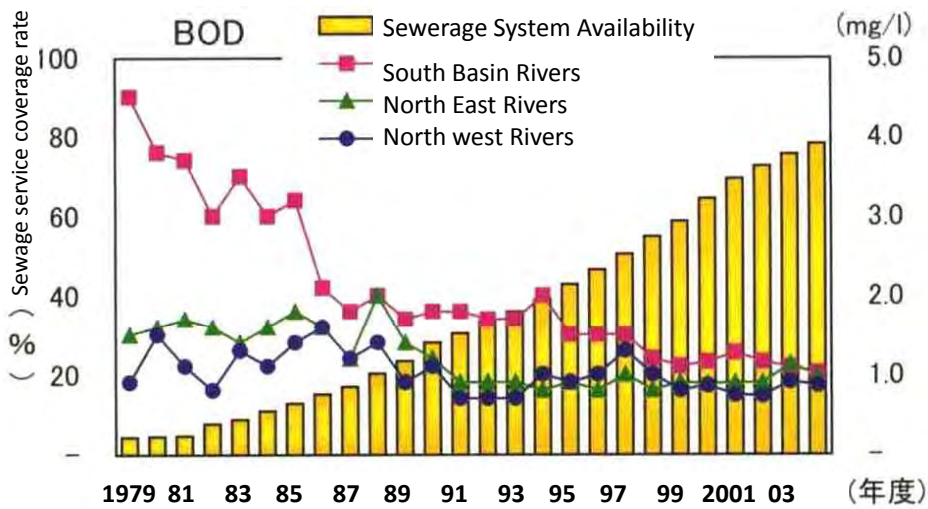
**13<sup>th</sup>** 1-5 Nov. 2009  
Wuhan, China



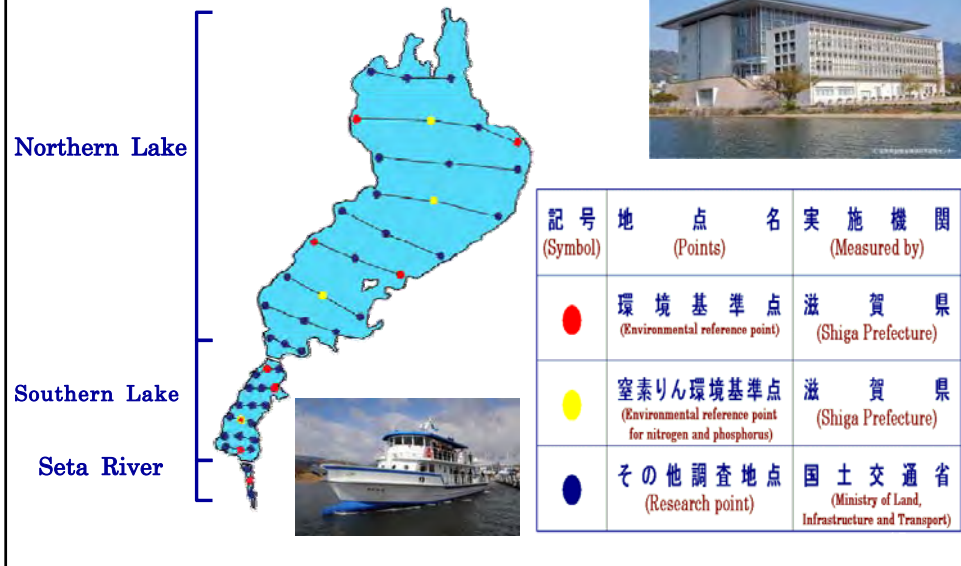
# History of Effluent Control in Shiga Pref.



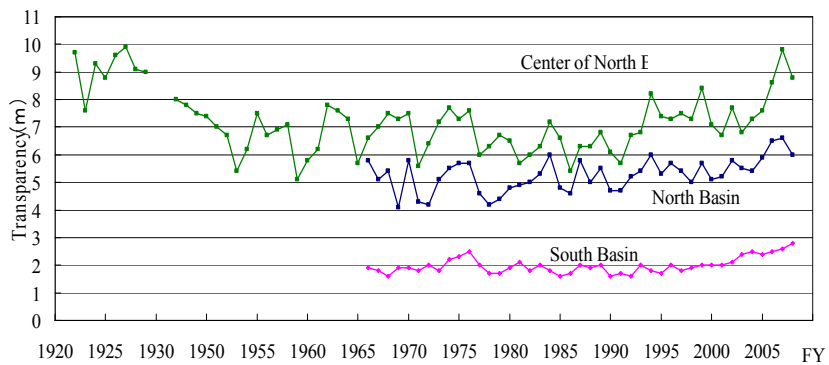
## Changes of Water Quality of Inflowing Rivers



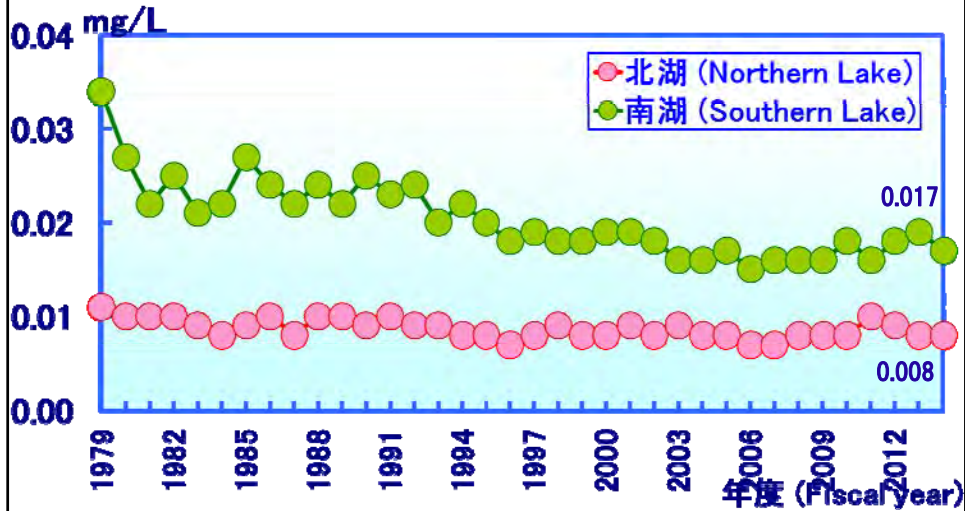
## Monitoring Points of Water Quality in Lake Biwa



## Changes of the water transparency of Lake Biwa

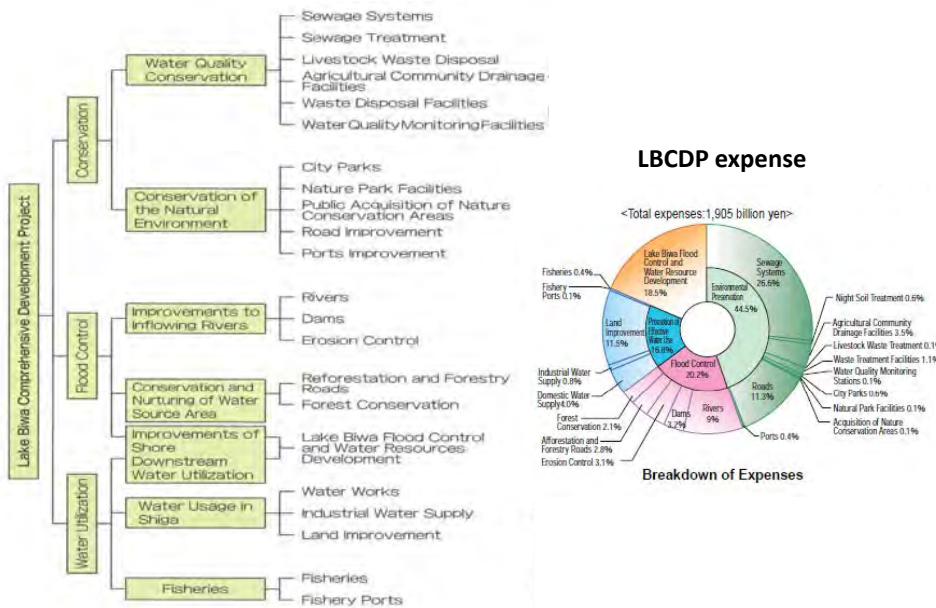


## Annual trends of T-P



データ: 国土交通省近畿地方整備局琵琶湖河川事務所、水資源機構、滋賀県琵琶湖環境科学研究センター

## Lake Biwa Comprehensive Development Project



## Hardest Flood in the Shores of Lake Biwa, 1896 (+3.76m)

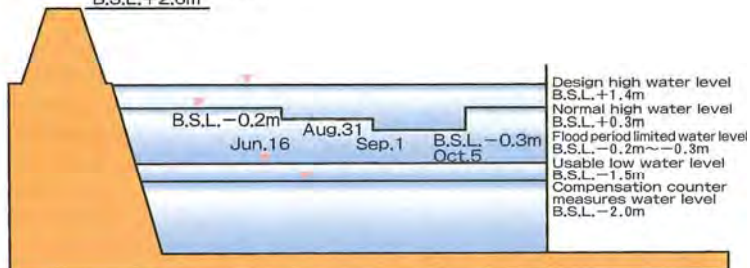
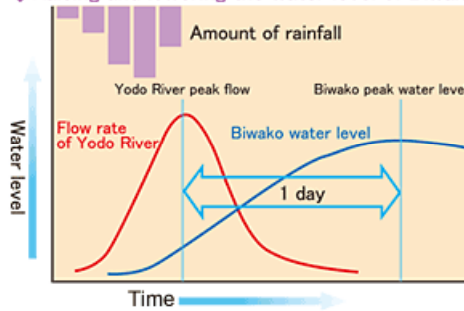


### Flood Control in the Basin



Crown of lake levee  
B.S.L.+2.6m

◆ Raising and lowering the water level of Biwako



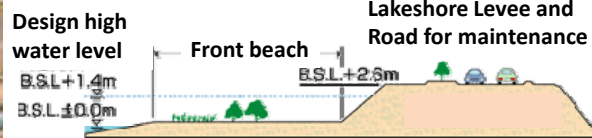
Biwako River Office, Kinki Regional Development Bureau, M L I T



## Flood Control Measures in Lake Biwa



Drainage pump station



Lake Levee

Lake Biwa Development Integrated Operation and Maintenance Office, Japan Water Agency

## Water quality Conservation Engineering Intervention against Eutrophication

### Sewerage System



Tohoku-bu Sewage Treatment Plant



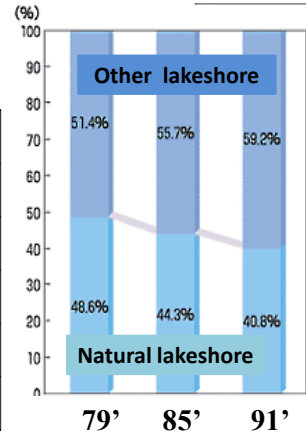
Konan-chubu Sewage Treatment Plant

## Degradation of Lakeshore Environment

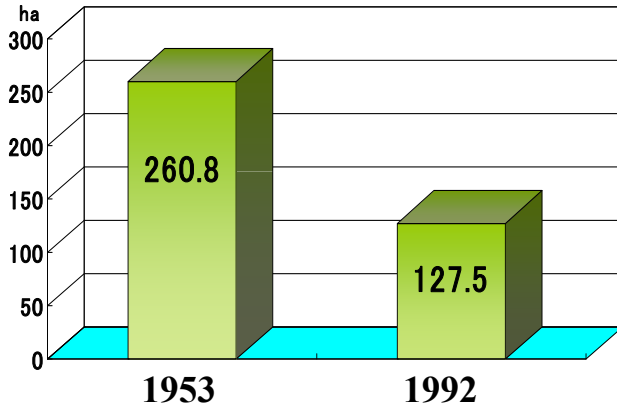


challenge

Natural lakeshore decrease



Reed Colonies decrease



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## Ordinance of "Rules and Regulations for the Conservation of Reed Communities"



### Protect

In order to preserve a good environment for reed communities, we will designate areas that need to be protected as "reed community conservation areas" and regulate what people can and cannot do in the areas.



### Develop

In addition to our efforts to revitalize the lost reed communities, we will also strive to maintain them by cutting the reeds and keeping the areas clean.

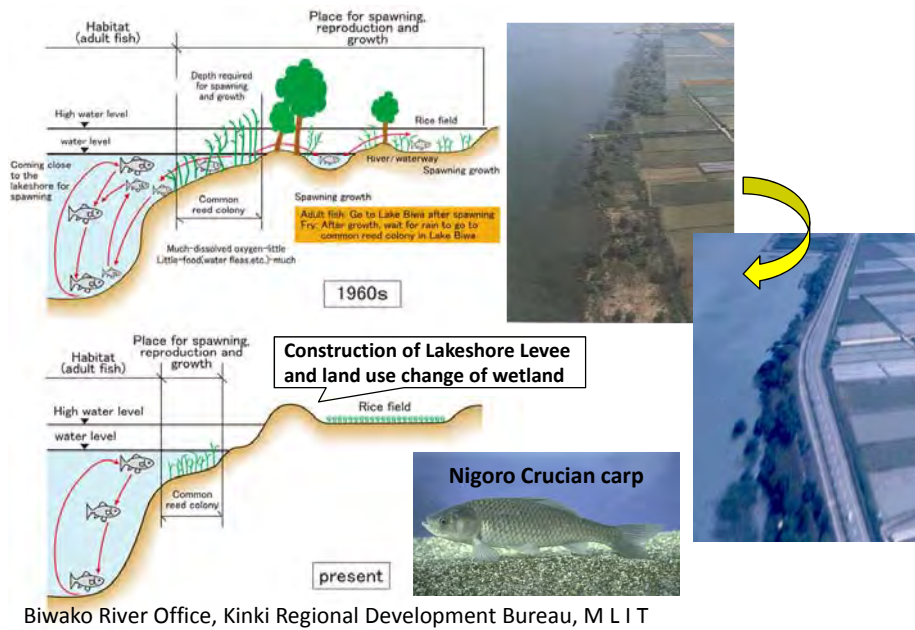


### Utilize

We will engage in activities to utilize the weeds we cut in our daily lives.

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## Loss of Habitats for Endemic Species



## Mother Lake 21 Plan

### Lake Biwa Comprehensive Conservation Plan



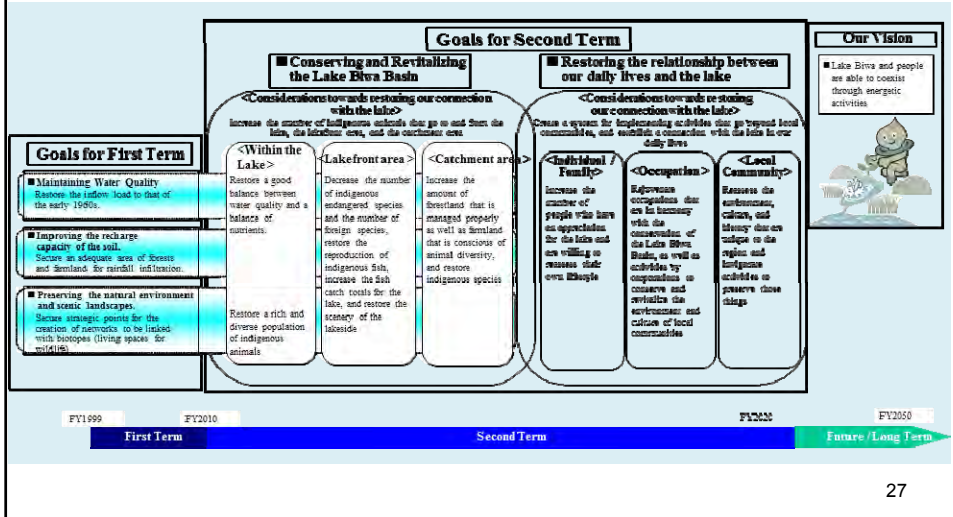
#### Basic Idea :

Symbiosis between Lake Biwa and the people

#### Basic Principles

- **Empathy**  
(Broad emotional identification between people and region)
- **Coexistence**  
(synergies between conservation and active lifestyles)
- **Common Property**  
(Sharing Lake Biwa with future generation)

# The length of the plan and The objectives at Each Stage



# Ordinance to collect Prefectural Tax for Promoting Forest Regeneration



- Taxable persons**  
Individuals: Those who have an address in Shiga Prefecture.  
Corporations: Companies with offices in Shiga Prefecture.
- Tax amount**  
Individuals: 800 yen per year.  
Corporations: 2,200 - 88,000 yen per year (depending on corporate capital, etc.)
- Taxation method**  
Additional prefectural resident taxation on per capita basis (A certain amount is added to the existing per capita tax amount.)
- Term in effect:**  
Starting April, 2006
- Disclosure of Project Activities**
  - In order to ensure transparency, the content of the projects will be disclosed to the public every fiscal year.
  - The effectiveness of the projects as well as whether the funds are being used properly will be assessed in the Shiga Prefecture Forest Council.



## Ordinance to promote Environmentally Conscious Agriculture



Authorization mark of  
“Environmentally Conscious  
Agricultural Products”



## BIWAKO BUSINESS MESSE



Started in 1998 and has been held every year,  
18th BIWAKO BUSINESS MESSE 1015 was  
held on 10 / 21-23.  
33, 080 visitors

## Omi Eco-Foster System



Cleaning activity by participants of the Omi Eco-Foster System

**Objectives:** Cleaning a public place by citizens and businesses as a volunteer with love and responsibility to improve the awareness of citizens.

**Notification:** the area of public place to the desired activities

**Conclusion of agreement with Shiga Pref.**



Thank you for your attention !



Lake Biwa

# 琵琶湖の水質保全に関する 滋賀県の取組

**Yukinori Kawashima**  
**Senior Technical Director**  
**Department of Lake Biwa and the Environment**  
**Shiga Prefecture**

1

本日の話題

## 琵琶湖の水質保全に向けた滋賀県の計画の例

- ❖ 「琵琶湖の環境保全」は課題が非常に多岐にわたっているため、常に基本計画を立案し、実行してきた。
- ❖ ハロン湾でもこのような考え方が重要と考えられるので、参考に情報提供する。

## 滋賀県の環境白書(公害白書)

- ❖ 前回のワークショップで、水環境改善に関する滋賀県の取組を説明したが、水質モニタリングとその公表が大事。
- ❖ そのため、水質モニタリングとその公表について、滋賀県の取組をより詳細に紹介する。

2

## 琵琶湖の環境保全に向けた基本計画

- ❖ 滋賀県では、琵琶湖の環境保全に向け、1972年以降、琵琶湖の環境保全に向けた基本計画を立ててきた。
- ❖ 「琵琶湖の環境保全」は課題が非常に多岐にわたっているため、このような基本計画を立案し、実行していくことが大切。

1972~1996

琵琶湖総合開発計画

1999~2010

マザーレイク21計画(第1期)

2011~2020

マザーレイク21計画(第2期)

3

## 琵琶湖総合開発計画（1972~1996）

- ❖ 1970年頃、日本は高度経済成長の中にあっただため、琵琶湖の急激な水質悪化、水需要の拡大が課題となっていた。
- ❖ このため、琵琶湖の水質保全、利水、さらにはインフラ整備を中心に据えた琵琶湖総合開発計画を策定した。

### 課題

- 琵琶湖の水質汚濁が深刻化。
- 高度経済成長の中、水資源の開発が必要。
- 渇水、浸水が頻発。

### 計画の内容

#### 保全

- 下水道の整備
- ごみ処理施設の整備
- 水質モニタリング 等

#### 利水

- 水道や工業用水道の整備 等

#### 治水

- 河川、ダム、砂防施設の整備 等

#### その他

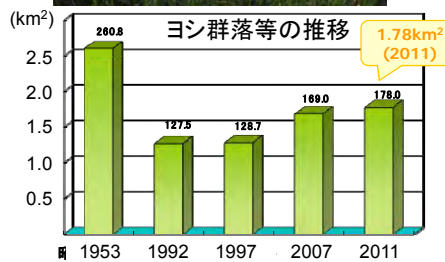
- 道路、港湾、公園の整備 等

4

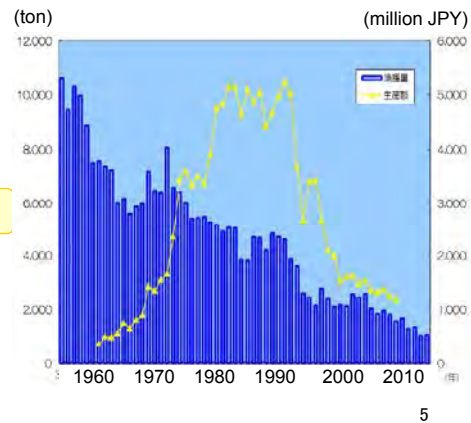


## マザーレイク21計画（第1期）（1999~2010）

- ❖ 琵琶湖総合開発の結果、下水道の整備、浸水や濁水の軽減、インフラの整備等が進んだ。
- ❖ 一方、琵琶湖の生態系の変化、自然の減少等が新たな課題として生じた。



琵琶湖における漁獲量と生産高の推移



5

## マザーレイク21計画（第1期）（1999~2010）

- ❖ このため、開発に重点を置いた計画から、「琵琶湖と人との共生」をテーマとしたマザーレイク21計画を策定。

### 基本理念

琵琶湖と人との共生（琵琶湖を健全な姿で次世代へ継承します。）

#### 水質保全

1960年代後半レベルの流入負荷を目指す。

#### 水源涵養

降水が浸透する森林・農地等を確保する。

#### 自然的環境・景観

生物生息空間（ビオトープ）をつなぎネットワーク化するための拠点を確保する。

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## マザーレイク21計画（第1期）（1999~2010）の取組例



### ❖ ヨシ群落の保全

琵琶湖らしい個性豊かな風景の維持、生態系の保全のために、ヨシの保全・活用を目指す。



### ❖ 環境学習の推進

環境教育副読本を活用した環境教育や身近な環境に触れながらの環境教育を実施。



### ❖ 魚のゆりかご水田

田んぼや排水路を魚が行き来できるようにし、かつての命溢れる田園環境を再生し、生きものと人との共生を目指す。

## マザーレイク21計画（第1期）（1999~2010）

- ❖ マザーレイク21計画（第1期）は目標達成が不十分。
- ❖ この課題を第2期に引き継いだ。

### 水質保全

1960年代後半レベルの流入負荷を目指す。

- 目標達成に近づいているが、環境基準は達成できていない。
- 難分解性有機物が増加している。
- 栄養塩（窒素、リン）のバランスが変化してきている。

### 水源涵養

降水が浸透する森林・農地等を確保する。

- 目標は達成できていない。
- 水源涵養に寄与する土地の確保、森林の維持管理が必要。

### 自然的環境・景観

生物生息空間(ビオトープ)をつなぎネットワーク化するための拠点を確保する。

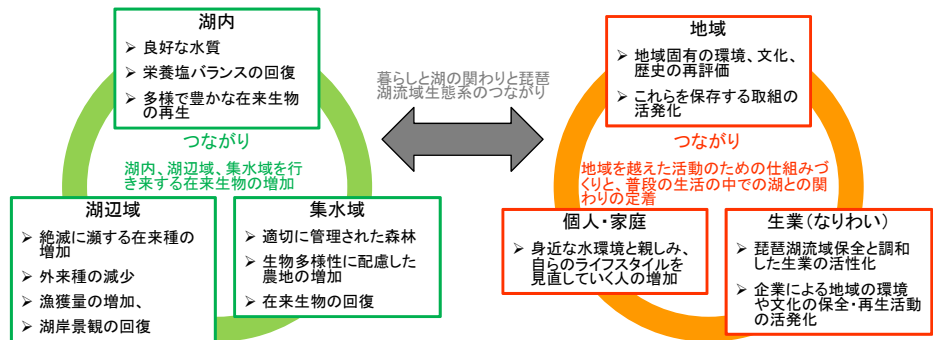
- 目標はほとんど達成できていない。
- 水陸移行帯の回復に関する強力な取組が必要。
- 水草の以上繁茂、植物プランクトンの変化が課題。

## マザーレイク21計画（第2期）（2011~2020）

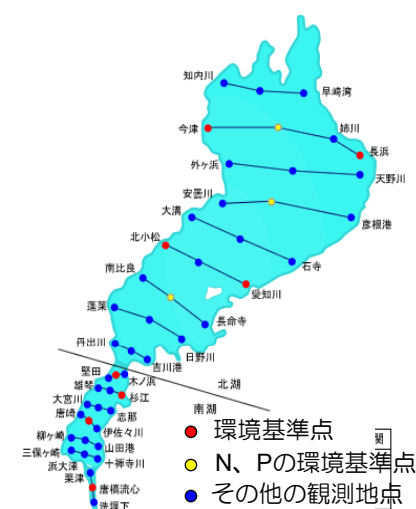
- ❖ マザーレイク21計画（第2期）では、「琵琶湖流域生態系の保全・再生」と「暮らしと湖の関わりの再生」の二つを計画の柱に据えた。
- ❖ 「水質保全」「水源かん養」「自然的環境・景観保全」という三つの柱を「琵琶湖流域生態系の保全・再生」として一つにまとめた。
- ❖ 「湖内」「湖辺域」「集水域」という「三つの場」に区分し、それらの「つながり」という考え方を打ち出した。
- ❖ さらに、「暮らしと湖の関わりの再生」を新たな柱に位置づけた。

### 琵琶湖流域生態系の保全・再生

### 暮らしと湖の関わりの再生



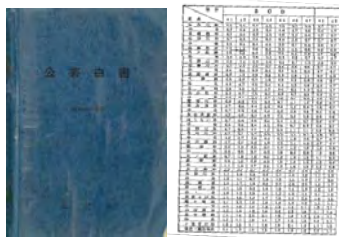
## 水質モニタリングの状況



- ❖ 図に示す54か所の水質モニタリングを実施。
- ❖ 水温、BOD、COD、N、P等は、12回/年の測定を実施。
- ❖ 水質分析費は約200,000ドル/年。（1ドル=115円）

## 水質モニタリング結果の公表

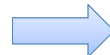
- ❖ 水環境改善について、企業や住民と問題を共有するためには、モニタリング結果の公表が重要。
- ❖ 滋賀県では、公表の仕方についても工夫している。
- ❖ 2003年までは、2~300ページの冊子を作成していたが、2004年からは読み易い形の本編とデータ集の資料編に分けて作成。
- ❖ 環境白書は本編が7,000部、資料編が280部作成し、無料で配布。
- ❖ 印刷費は約6,800ドル。



1973年の公害白書



本編



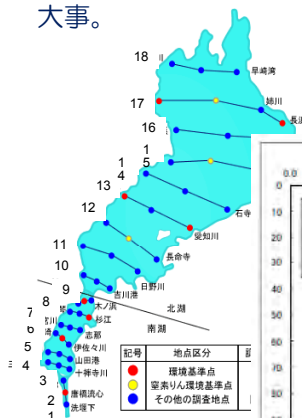
資料編



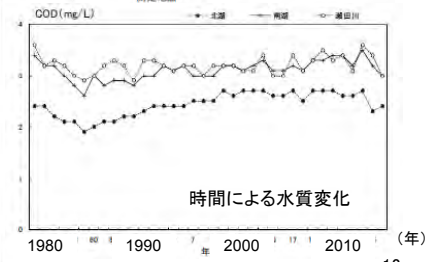
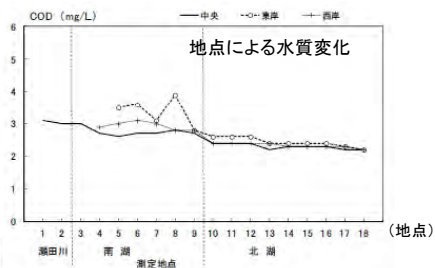
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## 水質モニタリングの状況

- ❖ 資料編には多くのデータを記載しているが、いろいろな視点でデータを分析。
- ❖ できるだけ多くの方に興味をもっていただき、問題を共有化することが大事。



水深による水質変化



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## 水質モニタリングの状況

- ❖ 滋賀県は、Lake Biwa Environmental Research Instituteを設立し、水質モニタリングだけでなく、それらを活用した琵琶湖環境保全の研究を実施し、政策にも反映している。
- ❖ Lake Biwa Environmental Research Instituteは「びわかぜ」という水質調査船も保有。様々な分析機器も搭載しており、迅速な水質調査を実施している。



Lake Biwa Environmental Research Institute

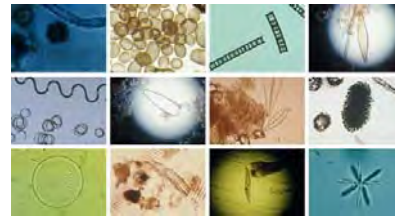


“BIWAKAZE”

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## Lake Biwa Environmental Research Institute

- ❖ 経緯 (History)
  - ・ 衛生環境センター (1977年設立)  
環境部門 (モニタリング)
  - ・ 琵琶湖研究所 (1982年設立)  
琵琶湖の水質形成過程などの研究



2つの研究機関を統合して設立 (1982年)  
さらに森林センターの試験研究部門を統合 (2014年)

- ❖ センターの業務
  - ・ モニタリング  
琵琶湖の水質モニタリング、大気モニタリング
  - ・ 調査解析  
化学物質のリスク評価、湖底環境 (北湖底層水)
  - ・ 政策課題研究  
魚類・生物多様性の保全、森林の管理、持続可能な社会等
- ❖ スタッフ (調査研究スタッフのみの数字、事務職員は含まない)
  - センター長、副センター長 (1名)
  - 総合解析部門 (Research) 16名
  - 環境監視部門 (monitoring) 21名



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- ❖ 以上が、琵琶湖の水質保全に関する取組の紹介です。
- ❖ クアンニン省に合った計画を立案するために、滋賀県としても協力していきたいと思えます。

*Thank you and Xin cảm ơn*

# 滋賀県の産業振興について

滋賀県商工観光労働部

商工政策課

山本 直矢

## はじめに

はじめに

I. 滋賀県の産業

II. 滋賀県の産業振興政策

III. 具体例：水環境ビジネス

IV. 具体例：観光

まとめ

## I. 滋賀県の産業

# 日本における滋賀県



〔47都道府県のうち〕

- 人口 **1,413千人** (2015年) **26位**
- 面積 **4,017.38km<sup>2</sup>** (2014年) **38位**
- 県内総生産 **5兆7695億円** (2012年) **23位**
- 1人あたり県民所得 **3,116千円** (2012年) **5位**

- ▶全国有数の人口増加県：自然人口増加率 0.03% **3位**
- ▶歴史文化の宝庫：重要文化財の指定件数 818件 **4位**
- ▶学習好きの県民性：1人当たり図書貸出数 8.62冊 **1位**
- ▶行動好きの県民性：行楽の年間行動者率 79.0% **1位**
- ▶新しいもの好き？：スマートフォン世帯普及率 70.0% **2位**
- ▶情報化が進む：光回線の世帯普及率 61.8% **1位**
- ▶北部は多雪地域：最深積雪の世界記録 **11.82m**
- ▶日本最大の湖・最古の湖 **琵琶湖**



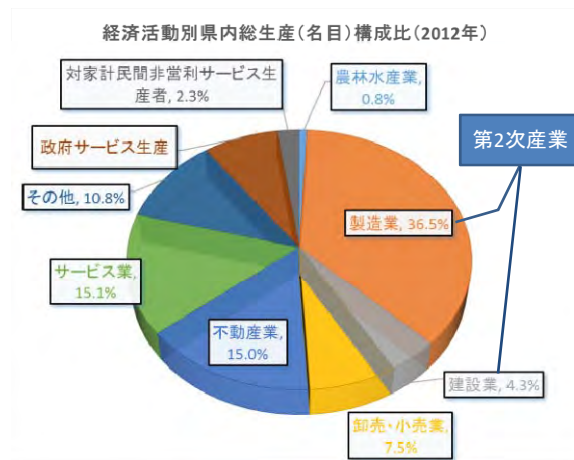
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## I. 滋賀県の産業

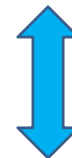
# 産業別の構成



- **滋賀県は、県内総生産に占める第2次産業（製造業、建設業）の割合が日本1位。**



滋賀県 40.9%



日本平均 23.5%

(資料) 滋賀県統計課「平成24年工業統計調査」、内閣府「平成24年度県民経済計算」

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 <p>家事・調理・冷暖房機器 ※1970年開設</p>	 <p>住宅 ※1961年開設</p>
 <p>空調機器 ※1970年開設</p>	 <p>衛生陶器 ※1962年開設</p>
 <p>自動車 ※1974年開設</p>	 <p>ディーゼルエンジン ※1942年開設</p>
 <p>自動車タイヤ ※1968年開設</p>	 <p>おいしさを笑顔に ビール ※1974年開設</p>
 <p>プリンター周辺機器 長浜キヤノン株式会社 ※1988年開設</p>	 <p>めん類 ※1973年開設</p>
 <p>In the side of your life. 医療機器 ※1977年開設</p>	 <p>ひらめき・はかどり・こちよき 文具 ※1980年開設</p>

## I. 滋賀県の産業

### 企業・産業を分類すると…



#### 大手企業群

- グローバル市場で活躍
- 様々な製造分野の事業所、それも、マザー工場や研究所が多数立地

#### 革新的中小企業群

- 大手企業との取引を通じて、高度な技術力、幅広い分野に対応できる展開力、確度の高い情報収集力を持つ

#### 地場関連産業

- 豊かな自然や歴史遺産・文化資産など地域の資源を活かした事業を展開

#### 地元需要関連産業

- 子育てや介護、教育、小売りなど、暮らしの安全・安心を支える事業を展開

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## II. 滋賀県の産業振興政策

### 産業政策の変遷



#### 1950年代まで

- ・ 農業中心の産業構造
- ・ 琵琶湖の豊富な水資源を背景に、主に繊維産業が発展



#### 1960～70年代：高度経済成長時代

- ・ 工業団地の造成による工場誘致
- ・ 電気・機械などの大企業の工場の立地
- ・ 大企業のサプライチェーンを支える中小企業が多数生まれるなど、加工組立型産業が集積



#### 1980～90年代：工業の量的拡大から質的向上へ

- ・ 理工系大学の誘致、滋賀県工業技術総合センターの設置による研究開発型企業の育成



#### 2000年代：グローバル化・IT化の進展

- ・ 産学官連携の推進、高付加価値産業の育成（環境産業、健康福祉産業、観光産業、バイオ産業、IT産業）



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## II. 滋賀県の産業振興政策 滋賀県工業技術総合センター



### □ 設立： 1985年

- \* 2009年に滋賀県窯業試験場(1927年設立)と統合され、現在の「滋賀県工業技術総合センター」に改編。

### □ 概要：

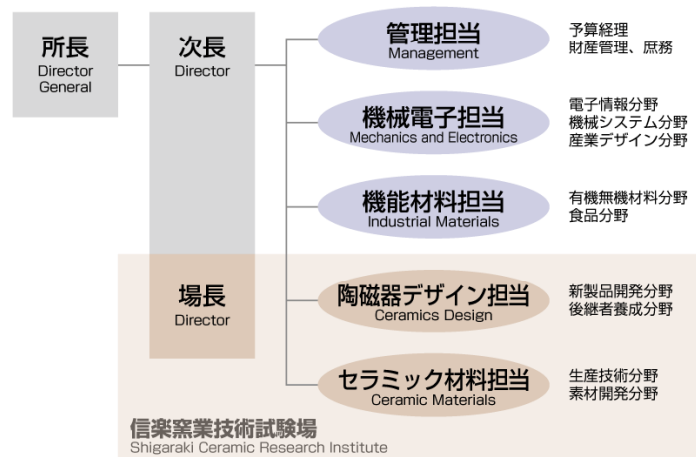
- ✓ 電子・機械・有機無機材料・食品・デザイン・窯業など広範な分野の研究開発用機器の開放拠点施設
- ✓ 業界ニーズに対応した技術開発の推進、その成果の技術移転、
- ✓ 新製品・新技術開発に対する相談指導、
- ✓ 産学官のコーディネート等

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## II. 滋賀県の産業振興政策 滋賀県工業技術総合センター



職員数： 33名



平成24年(2012年)4月現在

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### □ 技術相談

企業からの技術相談に対し、無料に対応。

#### <手法>

- ✓ 職員による技術相談・支援
- ✓ 大学教官等による技術指導
- ✓ 企業と大学とのコーディネート

### □ 企業大学等訪問

職員が県内企業や大学等を訪問し、技術シーズ・ニーズの把握と産学のマッチングを行う。

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### □ 試験機器利用

新製品の開発や生産技術の改良などに必要な試験分析機器を企業に対し約300種開放し、分析方法の指導やデータの解析の相談に対応する。

### □ 研究開発

産業界のニーズや社会的な要請に応えた研究開発や調査研究を行う。

### □ 人材育成・技術講習

研究成果や最新の技術、開放機器の使用方法等を企業に広く普及するため報告会・講習会を開催する。また、企業や大学から実習生を受け入れる。

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## II. 滋賀県の産業振興政策 滋賀県工業技術総合センター



### □ 依頼試験分析

主に工業材料の強度試験や成分分析など、企業の依頼に応じて試験・分析を行う。

### □ 技術情報の提供

技術情報を報告書やウェブサイトなどで定期的に発信する。

### □ 技術開発室レンタルラボ

企業の技術力向上、新分野の開拓、ベンチャー企業等の育成・支援を目的に技術開発室を整備・運営している。

### □ 研究会・フォーラムの開催・運営

県内大学等との密接な連携のもと、産学公が交流する場として8つの研究会等を組織し、人的ネットワークづくりや産学公の連携を支援する。(分野:ファインセラミックス、品質工学、酒造、ものづくりIT、デザイン、環境効率向上、屋上緑化陶製品開発、陶製照明器具)

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## II. 滋賀県の産業振興政策

## 取り巻く経済・社会の状況と本県の課題



〔取り巻く経済・社会の状況〕

国内：人口減少・少子高齢化の進行

世界：新興国市場の拡大

〔懸念される事態〕

- 県内市場の規模の縮小、労働力人口の減少
- 海外の商品等との競争の激化
- 県内製造業の海外現地生産へのシフト など

ここが重要ポイント!

〔課題〕

- 大手企業から、**モノづくりの拠点として選ばれ続けるための環境**をどう創り上げていくか。
- 県内外の**新たな需要をどのように開拓し、獲得**していくか。特に、**海外の成長をどのようにして取り込んでいくか。**
- **県内での経済（人・モノ・資金）循環**をどのように活発化していくか。
- 若者や女性、高齢者など、**多様な働き方のニーズに応じた雇用の場**をどのように創り上げていくか。

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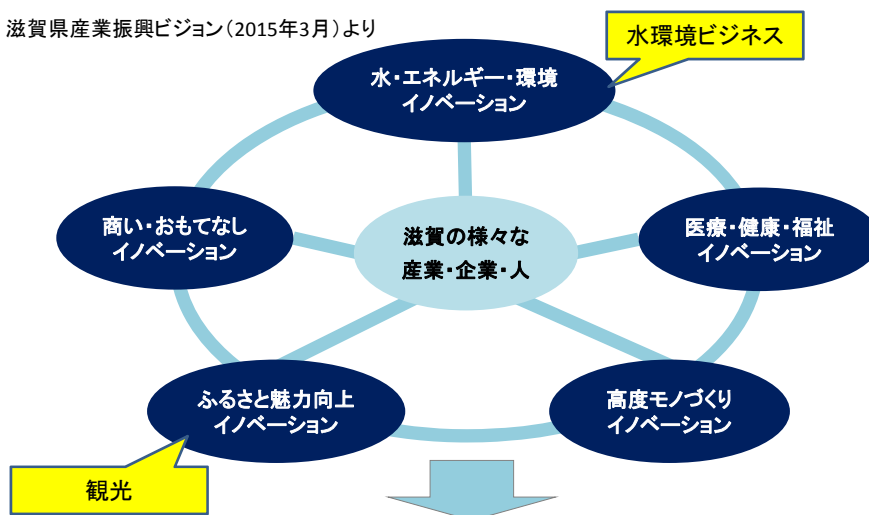
- 国内外の需要の開拓・獲得  
+
- 県内での経済循環の活発化



(今後の本県経済を牽引する産業)

- 国内外の課題解決に貢献する「成長産業」
- 地域の資源を活用した「魅力創造産業」
- 暮らしの安全・安心を支える「地域密着産業」

滋賀県産業振興ビジョン(2015年3月)より



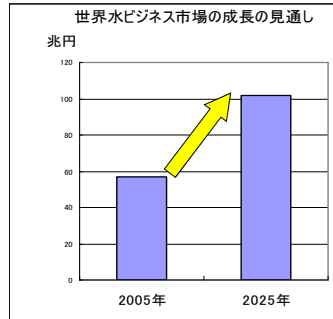
新たな価値の創造 ⇒ 社会や暮らしによりよい変化

(1) 世界の水資源および水ビジネスの状況

- アジア諸国をはじめとして、人口増加や都市化・工業化の進展とともに、世界的に水需要が急増する見込み。
- 河川・湖沼における水質汚染が深刻化
- 2025年の水ビジネス市場規模は100兆円規模の予測。

(2) 日本の地方自治体による水ビジネス

- 日本の大都市（横浜市、大阪市、北九州市等）は、これまでの上下水道の運営管理の実績や国際技術協力でのネットワークを活かした、上下水道インフラ等の海外展開の取り組みを進めている。



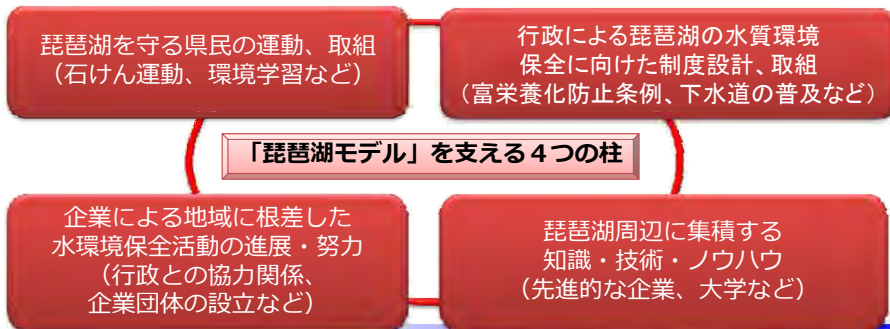
出典：最新水ビジネスの動向とカラクリがよ〜くわかる本（秀和システム 吉村和就氏著 2012年9月）をもとに作成

滋賀県が取り組んでいる「水環境ビジネス」とは

- 上下水道の設計構築・運営管理や海水淡水化や高度技術を用いた水処理関連のプラントなどのインフラ輸出を目指した「水ビジネス」とイメージされるものだけではなく、
- 水環境保全に係る水処理装置や分析機器の開発、モニタリング、汚水処理施設の管理運営や省エネルギー化など、水環境分野のビジネスを含めたもの。

- ◆ 滋賀県は、工場が集積し、全国屈指の「モノづくり県」として発展。琵琶湖の水を生活用水や産業用水などに広く活用しながらも、水質的には比較的良好な状態を維持。
- ◆ 県民、企業、大学、行政が連携しつつ、それぞれの立場から水環境保全に取り組み、ともに技術やノウハウを創出・蓄積。

琵琶湖モデルとして海外で適用を目指す



### Ⅲ.具体例：水環境ビジネス しが水環境ビジネス推進フォーラム



しが水環境ビジネス推進フォーラム（Shiga Water Environment Business Promotion Forum）は、産学官民の連携により新たなビジネスプロジェクト展開を目指すネットワーク組織。水環境関連の産業・研究機関の集積や、これまでの琵琶湖での水環境保全の取組を活かした水環境ビジネスの展開を図るため、2013年3月に設立した。

#### しが水環境ビジネス推進フォーラム（130団体）



### Ⅲ.具体例：水環境ビジネス 現在の取り組み例



国際協力事業（ベトナム・ハイフォン市）



日本国内向けセミナー（びわ湖環境ビジネスメッセ）



視察団受入（ベトナム建設省）



技術交流会（台湾・台南市）



見本市出展（VIETWATER）





□水環境ビジネス関連団体・団体数を25%増やす。

2014年度 120企業・団体

2019年度 150企業・団体

□水環境ビジネス関連の商談件数を創出する。

2015～2019年度累計 1,000件



「滋賀県人口減少を見据えた豊かな滋賀づくり総合戦略」より抜粋

21

イベント（びわ湖大花火大会）



自然（琵琶湖）



歴史的建造物（彦根城）



祭（大津祭）



エコツーリズム（針江地区）



スポーツ（ウォーターボール）



社寺（比叡山延暦寺）



地元食材（近江牛）



文化体験（忍者）



スポーツ（サイクリング）



歴史的景観（八幡堀）



22

滋賀県観光の強み

- 豊富な観光資源
- 恵まれた県外からのアクセス
- 大学等の立地
- 全国でも少ない人口増加県

滋賀県観光の弱み

- 低い認知度
- 不便な県内アクセス
- 宿泊・滞在型観光が少ない
- おもてなし意識の向上

滋賀県観光の課題

- 滋賀県は「よいもの」があるにもかかわらず知られていない
- 地域活性化に向けた戦略的な取組
- 滋賀の特性を活かした観光振興
- 多様な観光ニーズへの適切な対応
- 県をあげた「おもてなし」の雰囲気づくり・体制づくり

「滋賀県「観光交流」振興指針より抜粋

基本方針

「観光交流」を通じて、活力ある地域社会の実現を目指す

～ 訪れてよし、迎えてよし、地域よしの「観光・三方よし」 ～

基本目標と戦略

**目標1**  
観光地「滋賀」の認知度向上

戦略

- ✓ 琵琶湖・滋賀をキーワードとしたブランドの創造と発信
- ✓ ターゲットを意識した継続的な情報発信強化

**目標2**  
「滋賀ならではの」素材や強みを活かした特色のあるツーリズムの展開

戦略

- ✓ 滋賀の特色を際立たせる誘客活動の推進
- ✓ 学生や地域住民等による「観光交流」の推進

**目標3**  
来訪者、居住者双方がともに満足できる「観光交流」推進の体制づくり

戦略

- ✓ 来訪者を温かく迎える人材の育成
- ✓ 「観光交流」推進に向けた基盤の整備

多様な主体による協働の推進

県・びわこビジターズビューロー・市町・観光関連団体・観光事業者・県民など

「滋賀県「観光交流」振興指針より抜粋

観光ブランド「ピワイチ」の取組

- ✓ 「ピワイチ」とは、「琵琶湖を1周する」という言葉を短縮したもの。
- ✓ 旅行会社による県内を周遊・体感するツアー企画を「ピワイチツアー」として認定し、滋賀を巡る旅づくりを展開する。



ロケツーリズムによる誘客の推進

- ✓ 映画やドラマなどの映像作品が滋賀県で製作されるよう取組を進める。
- ✓ 映像製作者に対する情報提供や、手続のワンストップサービスを提供する。

訪日教育旅行の推進

- ✓ 台湾や東南アジアをターゲットとして、訪日教育旅行の誘致を行う。

広域連携によるインバンド観光プロモーション

- ✓ 他の府県と連携して、海外の旅行エージェントやメディアを対象とするFAMトリップを行う。

ターゲットを意識した継続的な情報発信

- ✓ ウェブサイトやSNSを活用した発信を行う。
- ✓ 歴史、自然、生活文化、食などの魅力をテレビ・雑誌・ネットなどメディアミックスにより発信。



観光交流を担う人材育成

- ✓ 県内各地でのボランティアガイドの研修を支援し、人材育成を行う。による活動を支援する。

外国人観光客受入環境の整備

- ✓ 民間企業と連携して外国人向けガイドブックを作成する。
- ✓ 無料Wi-Fiスポットの整備促進



□観光宿泊者を20%増やす。

2014年度 331万人  
2019年度 400万人

□観光入込客数を6%増やす。

2014年度 4,675万人  
2019年度 5,000万人

□観光消費額を7%増やす。

2014年度 1,579億円  
2019年度 1,700億円



「滋賀県人口減少を見据えた豊かな滋賀づくり総合戦略」より抜粋

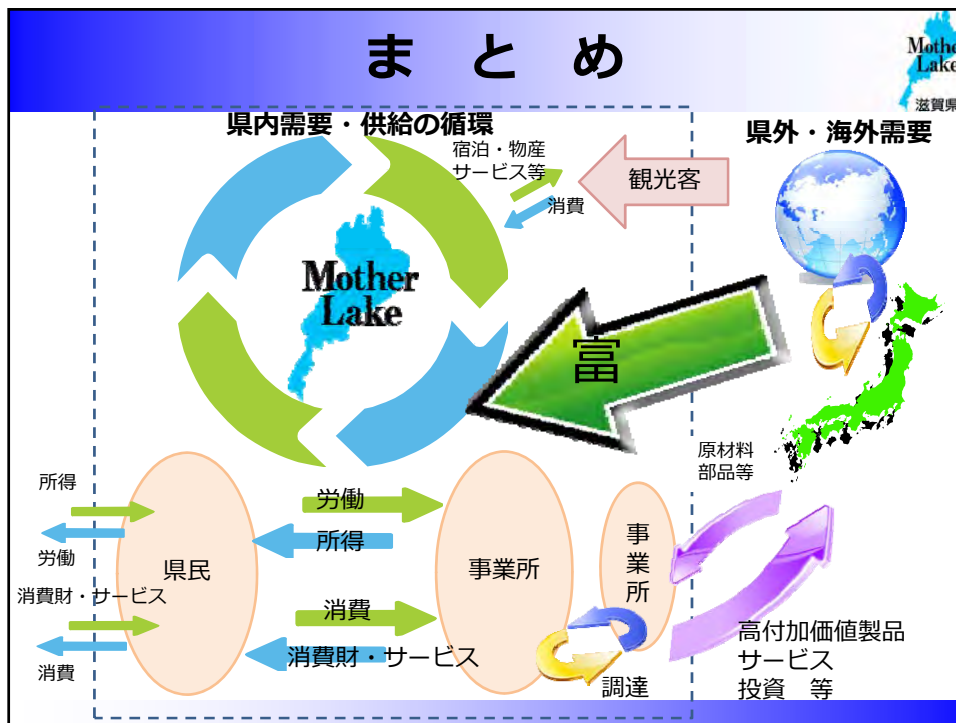
# ま と め

- 人口減少・少子高齢化の進行やグローバル化の進展により、国内外で経済・社会の構造的な変化が進んでいる。
- 滋賀県の強みを活かしながら、本県経済の「エンジン」となる産業の創出・振興を図り、国内外の需要を開拓していく必要がある。
- 国内外から取り込んだ人・モノ・資金を県内で循環させる社会づくりが重要である。



世界にはばたく成長エンジンと地域経済循環の絆で形づくる“滋賀発の産業・雇用”の創造

# ま と め



ご清聴ありがとうございました。

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**Training Workshop for Green Growth and Experiences  
in Quang Ninh Province**

**Presentation of JICA Expert Team**

**[Introduction of JICA Project and Some Topics]**

18th May 2016

**JICA Expert Team**

Nippon Koei Co., Ltd. in association with  
International Lake Environment Committee Foundation (ILEC)

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**Contents of Presentation**

- (1) Introduction of JICA Technical Cooperation Project for Green Growth Promotion in Halong Bay Area
- (2) Topics Offered:  
Introduction of Concepts Applied or Customized for JICA Project in Halong Bay Area

2

## **Introduction of JICA Technical Cooperation Project for Green Growth Promotion in Halong Bay Area**

3

## **Project Design**

### **Background of the Project under JICA Technical Cooperation**

- The Government of Vietnam has set the National Green Growth Strategy (NGSS) in 2012.
- Quang Ninh PPC has set the Green Growth Action Plan (GGAP) in 2015 according to the NGSS.
- Quang Ninh PPC has requested JICA to support the Project for Promotion of Green Growth in the Halong Bay Area, and both sides have concluded the Record of Discussion (R/D).
- JICA has started the technical cooperation for the Project from October 2015.

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## Project Design

### Project Purpose and Outputs Defined in R/D

#### < Overall Goal >

Green Growth is promoted in Quang Ninh Province through transition from brown to green economy.

#### < Project Purpose >

Green growth is promoted in Halong Bay Area through the implementation of environmentally sustainable policies in the key industrial sectors and implementation of development policies in tourism sector.

#### < Output 1 >

Policy framework and priority action plan for the realization of green growth in Halong Bay Area is put in place by refining the existent Provincial Green Growth Action Plan

#### < Output 2 >

Environmentally and financially sustainable policies for selected key industries are developed and implemented as pilot activities.

#### < Output 3 >

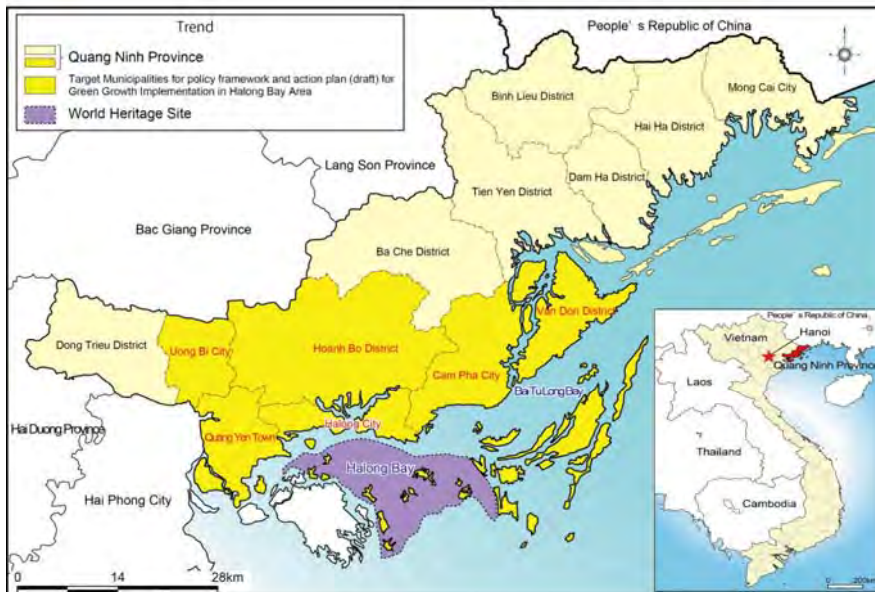
Development policies to stimulate sustainable tourism sector growth are implemented as pilot activities.

Halong Bay Area

Halong City, Cam Pha City, Van Don District, Hoanh Bo District, Quang Yen Town and Uong Bi City

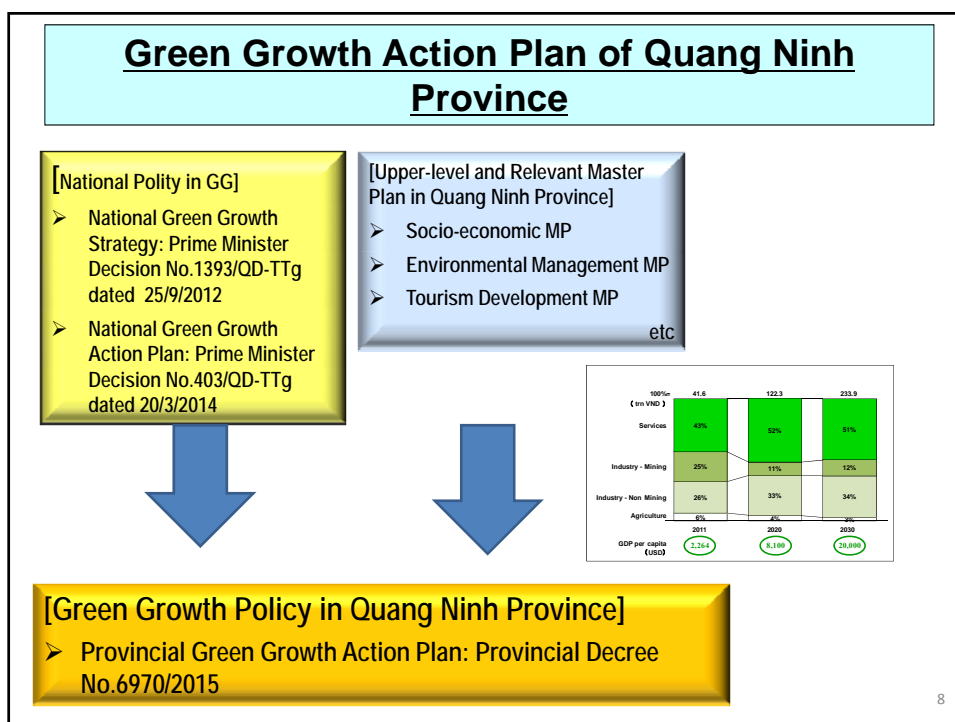
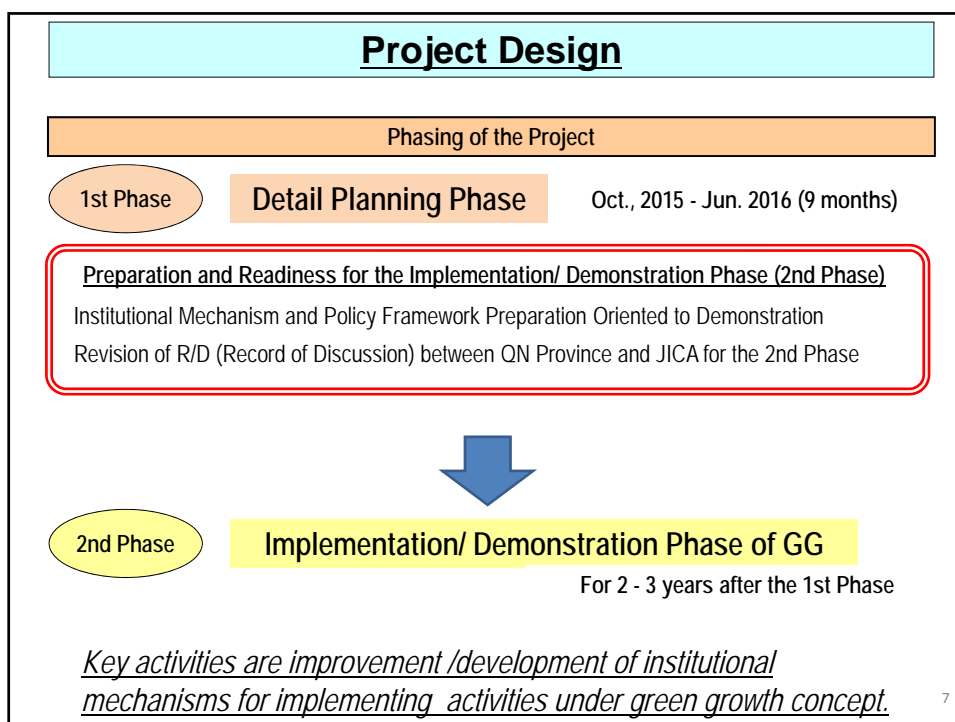
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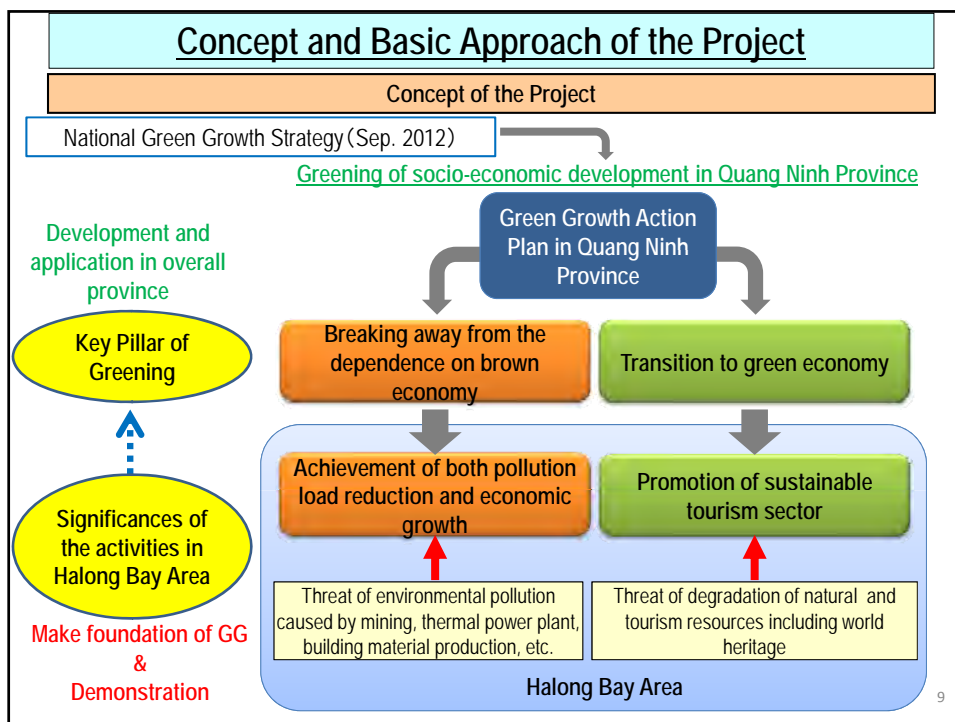
## Project Area



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### Report on progress of study

Work Item	2015			2016		
	10	11	12	1	2	3
Kick-off meeting	●					
1st Workshop		●				
Analysis of current status	▬					
Review of green growth policy	▬					
Selecting long list of pilot activity			▬			
Selecting short list of pilot activity				▬		

Remark: The above shows the progress as of the end of March 2016.

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## **GG Action Plan of Quang Ninh Province**

Indicators Defined in GG Action Plan of Quang Ninh Province

### **Reducing the intensity of GHG emissions**

- Reduce 7.02 million t CO<sub>2</sub> equivalent of GHG emissions by 2020, corresponding to 22.5% compared with 2010 level.

### **Greening production**

- a) 100% of industrial parks and industrial clusters with satisfactory centralized wastewater treatment systems; b) 100% of new business and manufacturing establishments equipped with wastewater treatment devices satisfying environmental standards.
- a) 80% of manufacturing enterprises satisfying environmental standards; b) 50% of manufacturing enterprises adopting clean technologies.
- Zero (0) case of arising serious environmental pollution in the province in any new establishments.
- 50% of establishments achieving environmental management certificate (certified ISO 14001) in the province.

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## **GG Action Plan of Quang Ninh Province**

Indicators Defined in GG Action Plan of Quang Ninh Province

### **Greening lifestyles and promoting sustainable consumption**

- 60% of grade III or higher and 40% of grade IV, V and craft villages having wastewater collection and treatment system which meet standards
- 100% of urban areas meeting green urban standards.
- a) 100% of collection and processing of domestic solid waste in urban areas; b) 80% of collection and treatment of domestic solid waste in rural residential areas and craft villages; c) 100% of collection and treatment of medical waste, d) promotion of waste recycling industries with processing 30 % of collected recyclable waste.
- 35 – 45 % of sharing the public transportation in large/ medium urban areas.
- 55 % of the provincial area by forest coverage..

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## **Challenges on Pilot Activities**

- The pilot activities related to environmental management of manufacturing industries in the Project would need the improvement of financial mechanism. In the course of the activities, a new financial/ funding mechanism is expected to be developed, or the existing financial mechanism is expected to be improved.
- Provincial GG action plan declares the efforts for reducing the GHG. In these contexts, the activities for energy saving and management would be suitable as the priority activities from both the viewpoints of GHG reduction and measurable evaluation.
- The orientation of the provincial GG action plan indicates the transition of economic growth from the traditional industries to the service sector, especially to tourism sector. Thus the pilot activity in tourism sector under the Project will contribute to both the realization of the provincial orientation of GG and the solution of the constraints.

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## **Challenges on Pilot Activities**

- The concept of green growth is quite new for the local authorities and residents, and the various ideas are being raised among the stakeholders. In order to foster a common sense of green growth through the Project, the pilot activities related to environmental awareness and education are proposed to be included.
- Besides, the mining sector in the province is a big contributor for both the economic growth and the environmental pollution load, and the current situation of this sector has been briefly reviewed. However, the mining sector is considered to be unsuitable to nominate the priority activity under the Project, since i) this sector is being managed and administrated mainly by National State (central government), ii) the scale of countermeasures would be enormous and hardly manageable as the GG pilot activities, and iii) the sector is putting self-reliance efforts to manage the pollution load.

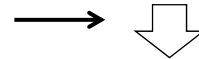
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## Selecting Process of Pilot Activities

Overall Concept: SEDP Master Plan  
Other master plans  
Provincial GG action plan  
Provincial resolution

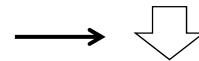
Lake Biwa Model

Criteria for preparing long list



Preparing Long List

Criteria for preparing short list



Process and required period and process

Preparing Short List

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### Example: Enhancement of provincial funding and financial mechanism for Green Growth

Item	Contents
Objectives and Expected Outcomes/ Benefit	<ul style="list-style-type: none"> <li>- Improve the existing funding mechanism such as Environmental Protection Fund, Science and Technology Fund, etc. to facilitate usage of the funds for environmental management and economical development</li> <li>- Develop a green growth implementation program to facilitate allocation of provincial budget for green growth</li> </ul>
Outline of Activity (Draft)	<p>For green growth implementation, financial mechanism which can be used for activities related to green growth should be enhanced. Currently, Quang Ninh Province has the funds to support environmental management and economical development, such as Environmental Protection Fund or Science and Technology fund. To facilitate usage of these funds, it is recommended to conduct required activities such as dissemination of funds to the target stakeholders, and support for application. In addition, based on the reviewing results of the existing funds, a proposal for improvement of funding mechanism and trial implementation plan in Phase 2 will be prepared, and submit to PPC. After getting approval from PPC, the proposed improved funding process will be trialed.</p> <p>Enhancement of allocation of provincial budget will be also required. For enhancement of allocation of budget, a program for allocation of the budget is required. Therefore, in Phase 2, a green growth program will be prepared to achieve the targets for task on greening production in the provincial green growth action plan such as increasing rate of enterprises observing effluent standards.</p>

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**Example: Promotion of incentives for energy saving and management such as ESCO project, subsidy, etc.**

Item	Contents
Objectives and Expected Outcomes/Benefit	<ul style="list-style-type: none"> <li>- Obtain experiences on planning and implementing of energy efficiency / energy saving measures</li> <li>- Identify available financial source for implementing energy efficiency measures</li> </ul>
Outline of Activity (draft)	<p>Quang Ninh Province issued the Decision 708/2016/QĐ-UBND on Energy Efficiency and Savings Program in Quang Ninh province, period 2016 – 2020. The decision aims at save 8%-10% total energy consumption compared to forecast energy demand as per National Electricity Development Master Plan (decision 1208/QĐ-TTg dated 21/7/2011). The target sector of the decision is wide, such as industrial enterprises, governmental building, transportation, public lightning, and agricultural sector. In Halong Bay Area, industrial enterprises and governmental building would be main targets on energy saving. To realize policy on energy saving, for these target, it is recommended to implement pilot activities for energy saving. For such pilot activities, it is necessary to identify available financial source. Under this pilot activity, available financial mechanism, such as ESCO project, subsidy etc, will be reviewed, and pilot activity on energy efficiency and saving will be implemented.</p>

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**Example: Improvement of Tourist Information (TIC, website, map and event calendar, etc.)**

Item	Contents
Objectives and Expected Outcomes/Benefit	Expanded tourism activities, industries, businesses and services throughout the Quang Ninh Province, particularly ecotourism.
Outline of Activity (Draft)	<p>Currently, tourist information in Quang Ninh Province is provided by different entities without coordination and cooperation . As a result, the visitors are discouraged to visit other tourist sites or explore urban attractions available in Ha Long. Improvement of tourist information provision and delivery are expected to encourage the visitors to visit more places of interests, experience more activities, and spend more time and money in Quang Ninh Province including Ha Long Bay.</p> <p>It is absolutely necessary to establish a responsible mechanism for marketing and promotion of tourism which is a single destination management organization as described in the Tourism Development Master Plan for Quang Ninh Province (Decision No: 1418/QĐ-UBND). As creation of a new organization needs sufficient time to consider roles and responsibilities by avoiding conflicts with existing ones, it is recommended to start with establishment of a cooperation mechanism among concerned parties to test effectiveness and efficiency. Through trial and error process for providing and delivering effective tourist information, detailed roles, responsibilities and financial arrangement of the destination management organization could be recognized among concerned parties.</p>

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**Example: Promotion of ecotourism using cultural/historical assets (Yen Tu, Uong Bi, Quang Yen)**

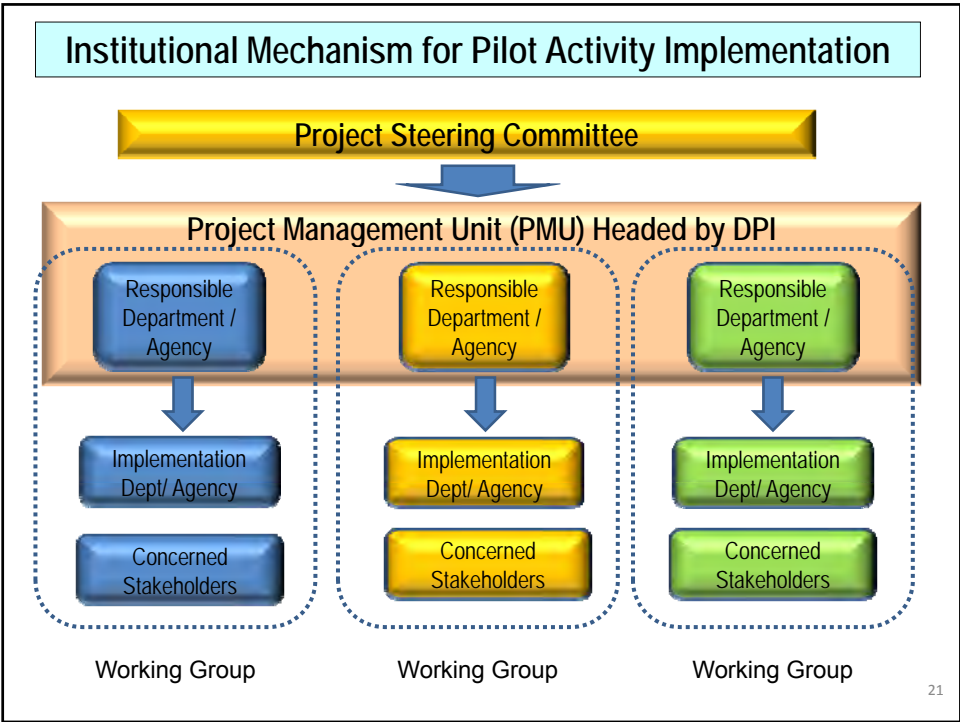
Item	Contents
Objectives and Expected Outcomes/Benefit	Diversified tourism activities offered to visitors in Quang Ninh Province. Recognition of Quang Ninh Province as an ecotourism destination in the world tourism marketplace. Expanded and diversified employment in the tourism sector.
Outline of Activity (Draft)	<p>Currently, tourist activities in Ha Long Bay area are exclusively focused on cruise and its complementary products. However, the numbers of boats and visitors at popular tourist attractions (caves, floating villages, islets, etc.) at peak hours are already overcrowded. As a result, tourism activities in Ha Long Bay is reaching saturation point. It is necessary to develop and promote additional tourism activities to reduce negative impact on Ha Long Bay as well as to expand tourism revenue by taking into account the taste and interest of the current visitors to Ha Long Bay.</p> <p>As most of visitors to Ha Long Bay are interested in unique natural wonder, ecotourism must be the same direction. Quang Ninh Province has abundant natural, cultural and historical tourism resources that can be effectively used for ecotourism.</p> <p>This pilot activity will attempt to realize objectives of Quang Ninh Green Growth Action Plan (Decision No.6970/KH-UBND) by adding value not only to the forest and mangrove but also to the tangible and intangible cultural and historical assets as well as agricultural products in the province.</p> <p>Promotion of ecotourism is also emphasize in the Tourism Development Master Plan in Quang Ninh (Decision No: 1418/QD-UBND).</p>

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**Example: Regular publication of environmental report (White book)**

Item	Contents
Objectives and Expected Outcomes/Benefit	<ul style="list-style-type: none"> <li>- Improve comprehension of green growth strategy and the provincial GGAP</li> <li>- Improve comprehension on progress and effectiveness of administrative measures on pollution reduction and tourism sector development, and current status of regional environment as tourism resources</li> <li>- Share good practice and lessons learned through the implemented activities</li> </ul>
Outline of Activity (Draft)	<p>For proceeding of green growth with reducing pollution load and promotion of tourism sector development in Quang Ning Province, various stakeholders need to cooperate, based on the accurate comprehension of information on progress and effectiveness of administrative measures on pollution reduction and tourism sector development, and current status of regional environment as tourism resources. As one of measures to urge accurate comprehension of such information among the concerned stakeholders, publishing of the environmental report (white book) by local authority is recommended.</p> <p>It is expected that the report to be prepared will have the following information;</p> <ol style="list-style-type: none"> <li>(a) Outline of the provincial GGAP and status of achievement of indicators</li> <li>(b) Current environmental status of Halng Bay Area and its gap from desirable status</li> <li>(c) Good practice and lessons learned through the implemented activities</li> <li>(d) Expected role and proposed activities for the concerned stakeholders</li> </ol>

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**Topic Offered:**  
**Introduction of Concepts Applied or Customized for JICA Project in Halong Bay Area**

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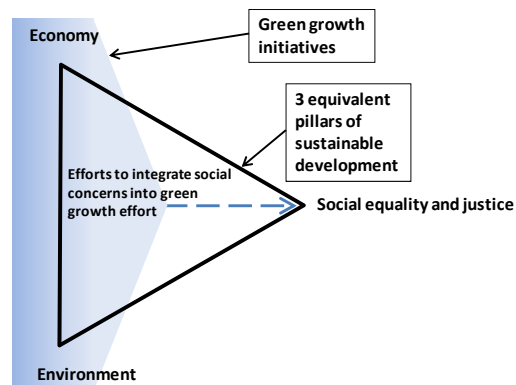
## What is green growth?

- Green growth means fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies (OECD)
- Green growth is efficient in use of natural resources, minimizing pollution and environmental impacts, resilient on natural hazards, and strengthening role of environmental management and natural capital in addressing and preventing natural disasters (World Bank)

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## What is green growth?

- Green growth is not another name for sustainable development. Green growth emphasizes the inter-relatedness of economic and environmental concerns. Thus, green growth policies aim to identify the complementarities between economic and environmental challenges in a way that highlights the opportunities for new sources of economic growth (OECD)



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## Green Growth Action Plan of Quang Ninh Province

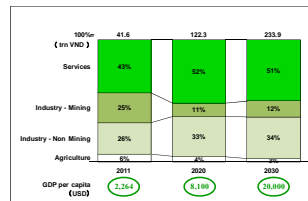
### [National Policy in GG]

- National Green Growth Strategy: Prime Minister Decision No.1393/QĐ-TTg dated 25/9/2012
- National Green Growth Action Plan: Prime Minister Decision No.403/QĐ-TTg dated 20/3/2014

### [Upper-level and Relevant Master Plan in Quang Ninh Province]

- Socio-economic MP
- Environmental Management MP
- Tourism Development MP

etc

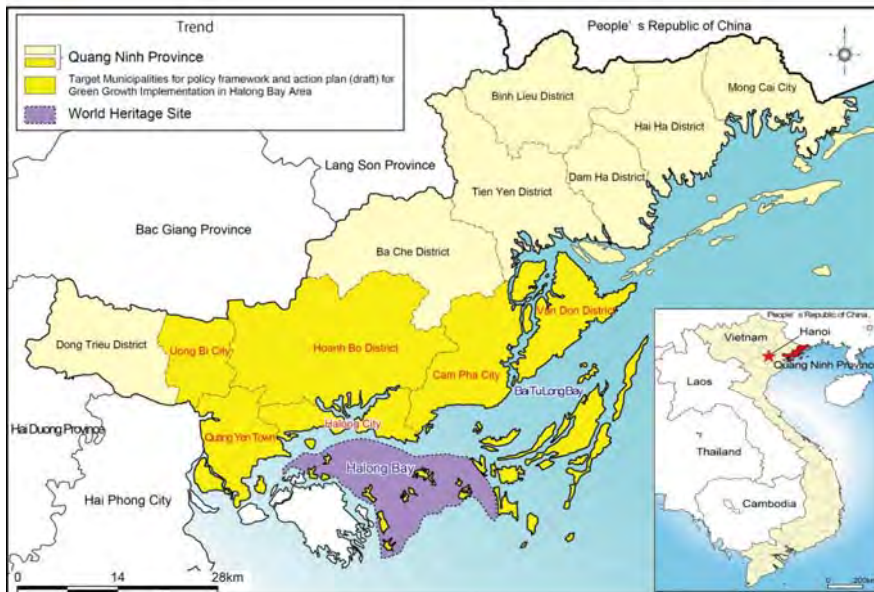


### [Green Growth Policy in Quang Ninh Province]

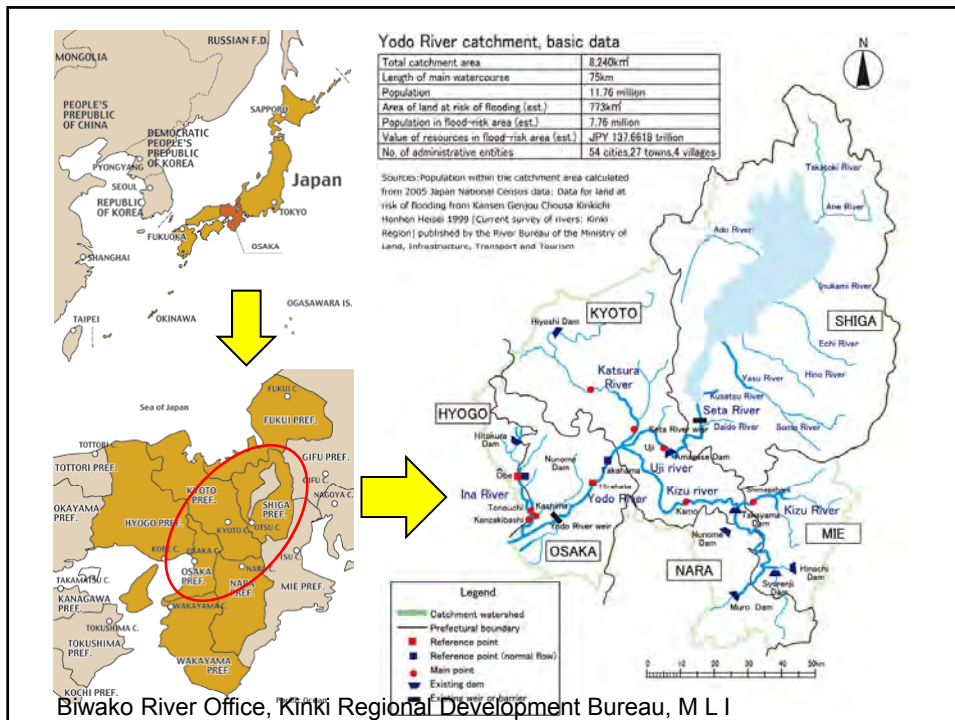
- Provincial Green Growth Action Plan: Provincial Decree No.6970/2015

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## Project Area



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## Introduction of Lake Biwa Model

### History of Lake Biwa

- 1970
  - Environmental pollution had become obvious (Water Pollution, Air pollution, etc.)
- Early 1970s
  - Enactment of Pollution Prevention Ordinances
  - Start of White Book Issuance and Disclosure
  - Lake Biwa Comprehensive Development Plan** during 1972-1996 (twice extended)
- 1970s-90s
  - Diversity of Environmental Issues
  - Formulation of Regional Environment Comprehensive Plan, Establish ILEC, etc.
  - Formulation /Launch of Mother Lake 21 Plan** Phase 1 during 1997- 2010
- 2000s~
  - Integration of policies in multi-sector wide for Lake Biwa management
  - Actions for global issues, various stakeholder cooperation, etc.
  - Formulation /Launch of Mother Lake 21 Plan** Phase 2 from 2011 ~

## Introduction of Lake Biwa Model

### Basic Plan for Environment Conservation of Lake Biwa

- Basic Plans have been continuously established for Environment Conservation of Lake Biwa in Shiga since 1972.
- Planning and implementation of Basic Plan is important because “Environment Conservation of Lake Biwa” has much various kinds of tasks and issues to be tackled.

1972~1996    The Lake Biwa Comprehensive Development Plan

1999~2010    Mother Lake 21 Plan (The 1st period)

2011~2020    Mother Lake 21 Plan (The 2nd period)

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## Introduction of Lake Biwa Model

### Lake Biwa Comprehensive Development Plan (1972~1996)

- Rapid water quality pollution of Lake Biwa and increase of water demand were triggered by rapid economic growth in Japan in 1970.
- Lake Biwa Comprehensive Development Plan were established with aiming water quality protection and utilization of its water resource, as well as infrastructure development.

#### Problems

- Serious water quality pollution in Lake Biwa
- Need of water resource development to cope with rapid economic growth
- Frequent occurrence of drought and flood

#### Contents of Plan

##### Conservation

- Development of sewage system
- Development of solid waste treatment facilities
- Water quality monitoring, etc.

##### Water utilization

- Water supply for domestic and industrial use, etc.

##### Flood control

- River improvement, development of dam and erosion control facility, etc.

##### Others

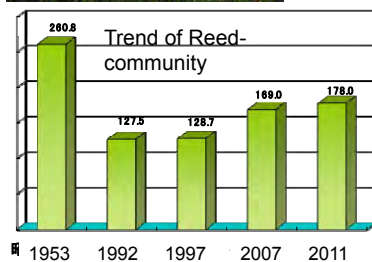
- Development of road, port, park, etc.

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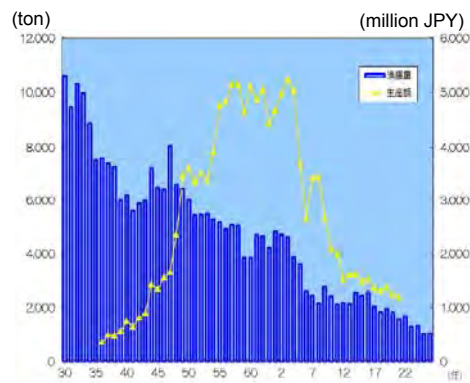
## Introduction of Lake Biwa Model

### Mother Lake 21 Plan (The 1st period) (1999~2010)

- Lake Biwa Comprehensive Development Plan led development of sewage system, decreasing of occurrence of drought and flood, and development of other infrastructure.
- On the other hand, new problems occurred such as change of ecosystem of Lake Biwa and reduction of natural resources.



### Trend of fish catch and output



## Introduction of Lake Biwa Model

### Mother Lake 21 Plan (The 1st period) (1999~2010)

- Mother Lake 21 Plan with theme of “Symbiosis between Lake Biwa and the people” was established in stead of the previous plan which had been oriented to development.

#### Guiding Principle

Symbiosis between Lake Biwa and the people  
(Bequeathing a clean Lake Biwa to future generations)

#### Protecting Water Quality

Reduce the inflowing pollution load to that of the latter part of 1960s

#### Increasing water resource conservation capacity

Keep adequate areas of forests and farmlands for water resource conservation by rainfall infiltration

#### Preserving the Natural Environmental and Scenic Landscape

Preserve core area for developing biotope network for sustaining regional ecosystem

## Introduction of Lake Biwa Model

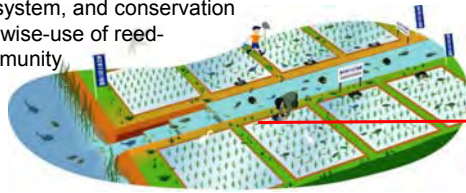


### ❖ Conservation of Reed-community

Maintaining unique scenery of Lake Biwa, protection of ecosystem, and conservation and wise-use of reed-community

### ❖ Promotion of environmental education

Conducting environmental education with specific text book in immediate environment



### • Paddy functioned as “cradle” for fish

Symbiosis between people and other living things are aimed by restoring paddy field and drainage function as biotope for fishes and other aquatic organisms

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## Introduction of Lake Biwa Model

### Evaluation of Mother Lake 21 Plan (1st period, 1999~2010)

**Protecting Water Quality** Reduce the inflowing pollution load to that of the latter part of 1960s

- Targets had almost achieved but environment standards had not observed yet.
- Low-degradable organic substances are increasing.
- Balance of nutrients (N, P) is being changed.

**Increasing water resource conservation capacity** Keep adequate areas of forests and farmlands for water resource conservation by rainfall infiltration

- All of the targets had not achieved yet.
- For achieving target, it was considered to require keeping land and maintain forest in good condition for water resource conservation.

**Preserving the Natural Environmental and Scenic Landscape** Preserve core area for developing biotope network for sustaining regional ecosystem

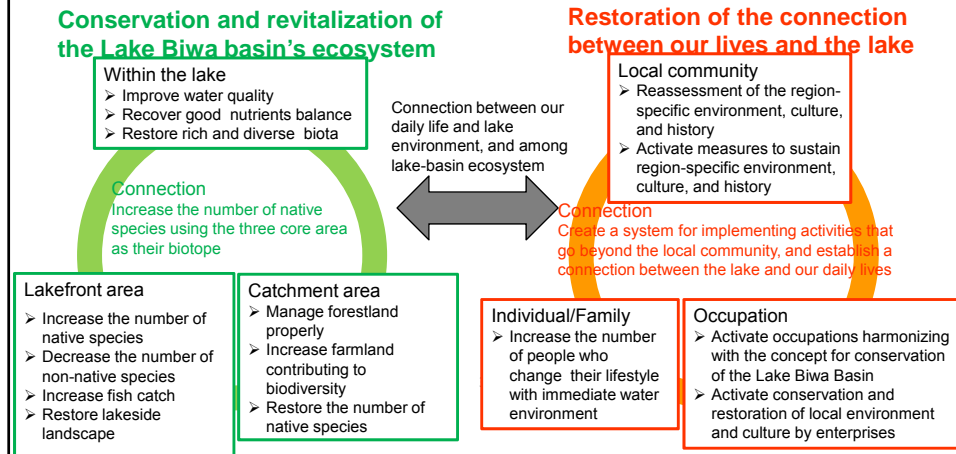
- Targets had been scarcely achieved.
- Activities for restoring well-environment in ecotone area would be required.
- Abnormal overgrowth of waterweed and changing of dominant species of phytoplankton were main issues to be tackled.

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## Introduction of Lake Biwa Model

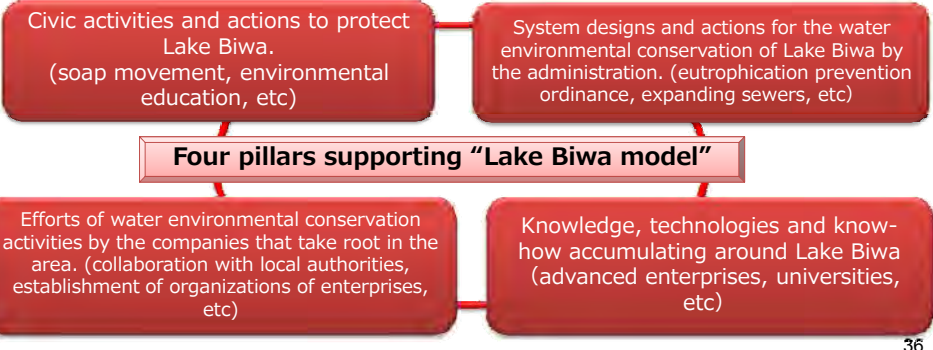
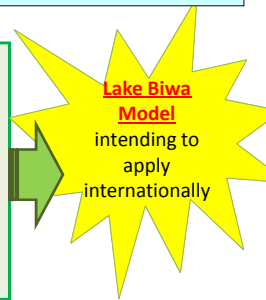
### Mother Lake 21 Plan (The 2nd period) (2011~2020)

- In Mother Lake 21 Plan (The 2nd period), “Conservation and Revitalization of the Lake Biwa basin’s ecosystem” and “Restoration of the connection between our lives and the lake” were set as two principles.



## Introduction of Lake Biwa Model

- Shiga has been prominently developed as “**Manufacturing prefecture**” by accumulating factories. Water resources of Lake Biwa has been used widely for domestic and industrial purposes, and **water quality of the lake has been maintained in satisfactory level**.
- Technologies and know-how have been created and accumulated** for water environment conservation, in collaboration among citizens, enterprises, universities, and local governments.



## Introduction of Lake Biwa Model

**International cooperation  
(Haiphong, Vietnam)**



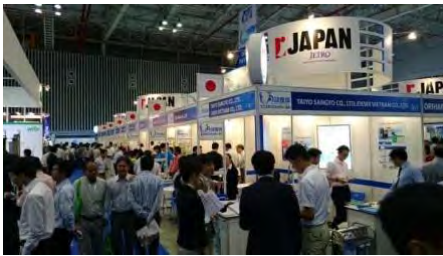
**Seminars in Japan  
(Biwako environmental  
business messe)**



**Delegation (MOC, Vietnam)**



**Exhibit at trade fair (VIETWATER)**



**Technical cooperation (Tainan city, Taiwan)**



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## Apply Lake Biwa Model for the Project

### Conceptual Diagram Mother Lake 21

*Overall concept of Biwako model is being applied for various policy fields.*

- Mother Lake 21 Plan**

  - Empathy (broad emotional identification between people and region)
  - Coexistence (synergies between conservation and active lifestyles)
  - Common Property (Sharing Lake Biwa with future generations)

"Mother Lake 21 Plan" is the guidelines for taking over good environment of Lake Biwa to next generation.



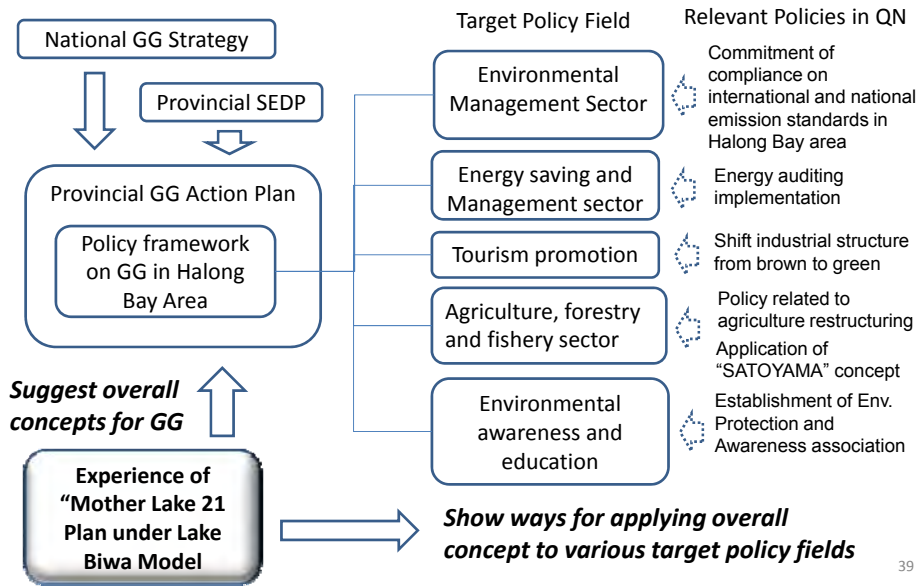
Policy Field	Relevant Administrative Measures
Water quality management	Biwako water quality conservation plan
Environmental education and awareness	Provincial ordinance on environmental education promotion
Forest conservation	Provincial ordinance on forestation around Lake Biwa
Environmental-friendly agriculture	Provincial ordinance on environmental-conscious agriculture promotion
Tourism promotion	Action plan of provincial tourism promotion guidelines
Environmental business promotion	Biwako environmental business messe Shiga water environment business promotion forum

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## Apply Lake Biwa Model for the Project

### Possible Application of Mother Lake 21 Concept to Halong Bay Area



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**Toward Green and Environment-sustainable  
Development for Halong Bay Area...**

**Thank you**

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