

## 添付資料-6

成果3に係る第4回ワークショップ  
(2012年11月21日開催)の資料及び議事録

# The Project for Environmental Protection in Halong Bay

## **Agenda for Workshop on Proposed Mangrove Protected Areas under the Coastal Environment Protection Corridor for Halong Bay**

### **1. Objectives**

- (1) Explaining on proposed mangrove protected areas under the proposed Coastal Environment Protection Corridor for Halong Bay (CEPC), which have been examined by the Working Group-2 of the project, and
- (2) Receiving comments and opinions from the participants for further examination of the proposal

### **2. Participants**

- a) Representatives from the following organizations
  - Quang Ninh Dept. of Agriculture and Rural Development (DARD)
  - Sub-dept. of Forestry, DARD
  - Sub-Dept. Forestry ranger, DARD
  - Sub-dept. of Aquaculture, DARD
  - Halong Bay Management Department (HBMD)
  - QN Environmental Police Dept.
  - Halong City People's Committee
  - Special-use Forest Management Board, Halong City People's Committee
  - Forest Ranger Unit of Halong City
  - Quang Yen Town People's Committee
  - Hoanh Bo District People's Committee
  - Leader of Dai Yen Ward PC (Halong City)
  - Leader of Ha Khanh Ward PC (Halong City)
  - Leader of Hoang Tan Commune PC (Quang Yen Town)
  - Leader of Thong Nhat Commune PC (Hoanh Bo District)
  - Leader of Le Loi Commune PC (Hoanh Bo District)
  - Quang Ninh Tourism Association
  - Branch of Tourism Boat Association of Ha Long
  - Red-cross Association of Quang Ninh
  - Cultural-Art and Tourism College of Quang Ninh
  - Mangrove Ecosystem Research Center, Hanoi National University of Education
  - Natural Resource and Environment Research Center, Vietnam National University
  - Institute of Marine Environment and Resources (IMER)
  - Water natural source & Hydrometeorology Division, DONRE
  - Sub-Dept of Sea and Island, DONRE
  - Environmental Monitoring and Analysis Center, DONRE
- b) Project Management Board for the Project
- c) Members of Working Group-2
- d) JICA Expert Team

### **3. Time and venue**

- Time: 8:00 am - 11:30 am on 21 November (Wed.), 2012
- Venue: DONRE Meeting Room at 7th floor

### **4. Program**

Content	Person in Charge	Time
1. Reception	PMB and JET	8:00 – 8:30
2. Opening remarks	Dr. Hoang Danh Son, Head of PMB, (Deputy Director of QN DONRE)	8:30 - 8:35
3. Presentation on CEPC and proposed mangrove protected areas under CEPC	Mr. Tomoo Aoki (Land Use Expert of JET)	8:35 - 9:25
4. Presentation on mangrove and solutions for mangroves sustainable utilization and management	Dr. Hoang Van Thang (Director of Center for Researching Environmental and Resource, Hanoi National University, CRES),	9:25 - 9:35
5. Presentation on mangrove and solutions for mangroves sustainable utilization and management	Mr. Vu Manh Hung (Institute of Marine Environment and Resources (IMER))	9:35-9:45
6. Discussion	All the participants	9:45 - 11:20
7. Conclusion and closing remarks	Dr. Hoang Danh Son	11:20 - 11:30

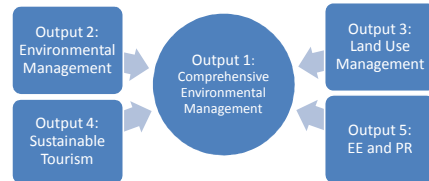
**Workshop  
on  
Proposed Mangrove Protected Areas  
under  
the Coastal Environment Protection Corridor for Halong Bay**

21 November, 2012

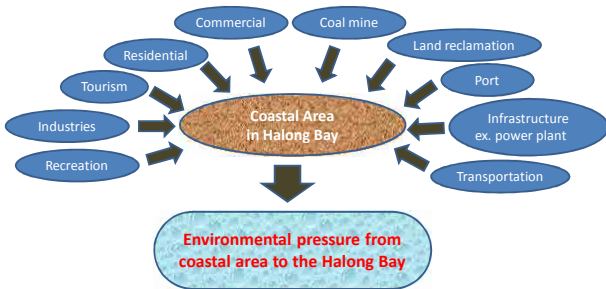
Working Group-2 (Land Use Management)

**Outline of the Project Activity  
- Output 3: Land Use Management-**

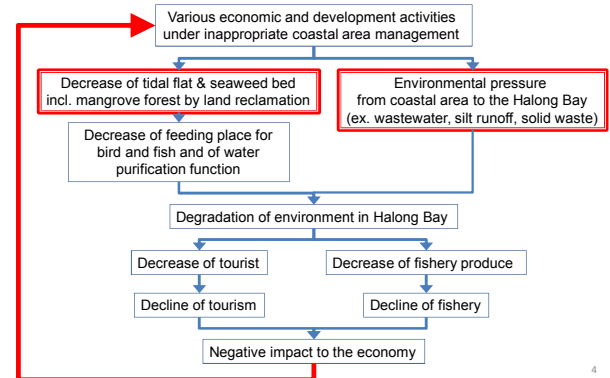
- ◆ Preparation of an Action Plan on land use management from viewpoint of environmental protection for Halong Bay
  - Including proposals of measures along the proposed Coastal Environment Protection Corridor for Halong Bay



**Various Land Use and Environmental Pressure from Coastal Area to the Halong Bay**



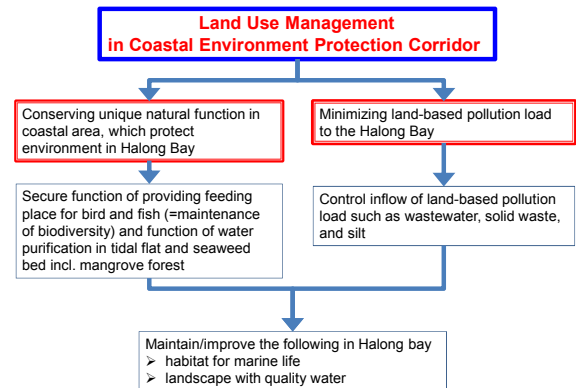
**Vicious Spiral under Inappropriate Coastal Area Management in Halong Bay**



**Concept of the Coastal Environment Protection Corridor (CEPC)**

- Spatial corridor along the coastal inland area of the Halong Bay subject to active management of land use and development for environmental protection for Halong Bay, functioning as environmental buffer between terrestrial development area and the Halong Bay, as conservation of biodiversity and ecosystem, and as securement of sustainable tourism.

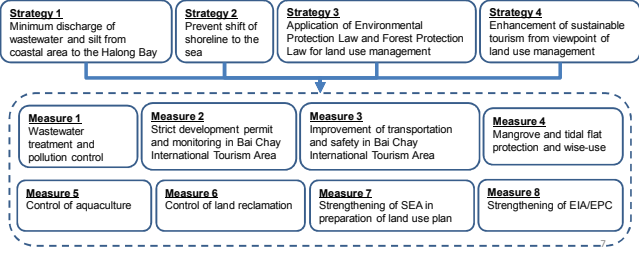
**Functions of CEPC**



### Framework of CEPC

**Vision** Harmonization between Coastal Area Development for Economic Growth in Quang Ninh Province and Environment Protection in Halong Bay as World Heritage Site

**Goal** Minimization of environmental pressure from coastal area to the Halong Bay with economic development in the coastal area, by complying with effluent standards and river water quality, as well as enhancement of environmental buffer function in the coastal area



### What the CEPC should be

Targets under the goal

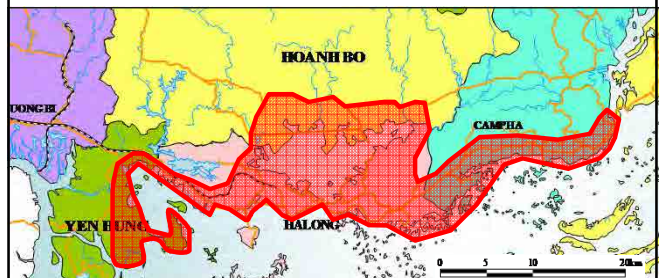
- 100% of domestic wastewater is treated to comply with effluent standard.
- 100% of industrial wastewater is treated to comply with effluent standard.
- Silt runoff and sedimentation are prevented directly from the coastal area due to coastal development, especially land reclamation site.
- The following major rivers of the corridor comply with river water quality standard such as Troi River and Lo Phong Stream.
- Remaining mangrove and tidal flat areas are protected and reforested in Binh Huong Estuary and Cua Luc Estuary, with legal background.

=> Considering the above, necessary measures have been examined.

### Various Factors to determine the Boundary of CEPC

- Administrative boundary
- Road (existing and planned)
- River
- Elevation (water depth)
- Shoreline
- Existing land use zoning boundary
- Current land use / development plan (ex. sewerage)
- Area to be environmentally protected (ex. mangrove)
- Tidal current

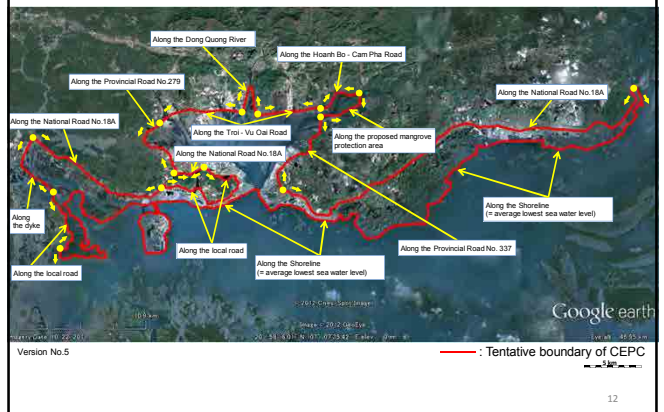
### Initial Conceptual Image of CEPC

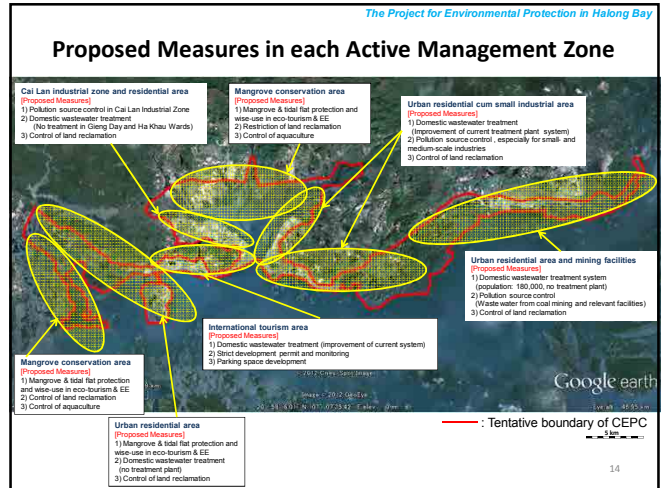
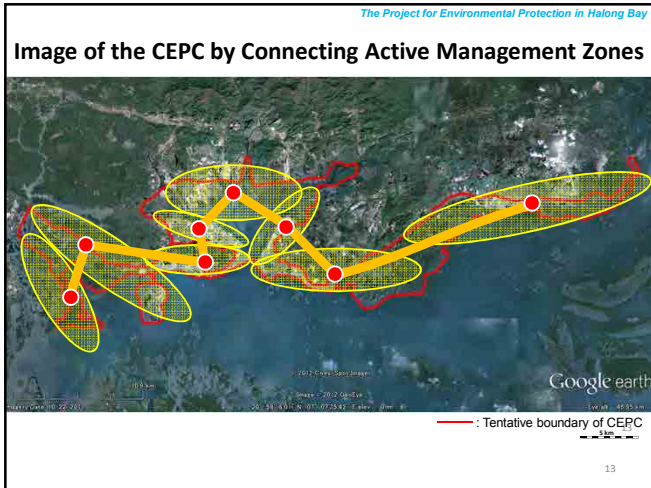


### Direction for Determination of CEPC Area

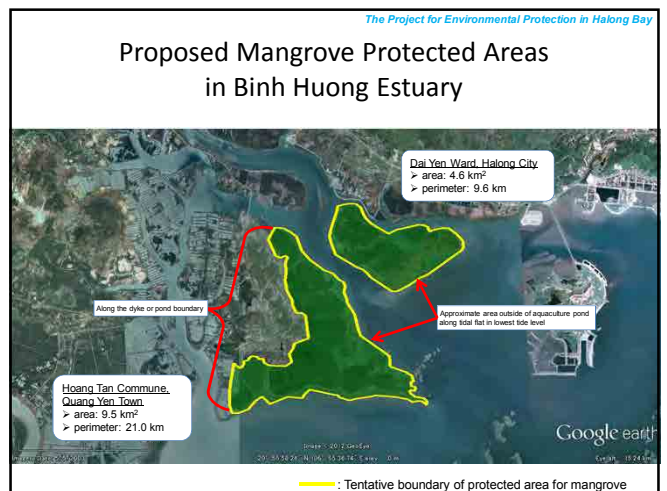
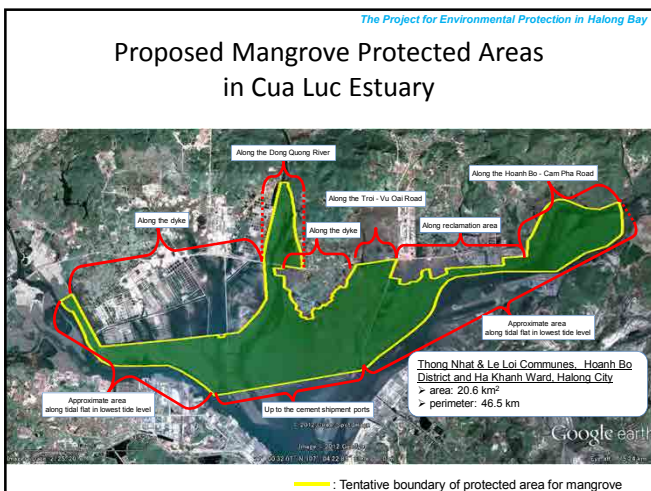
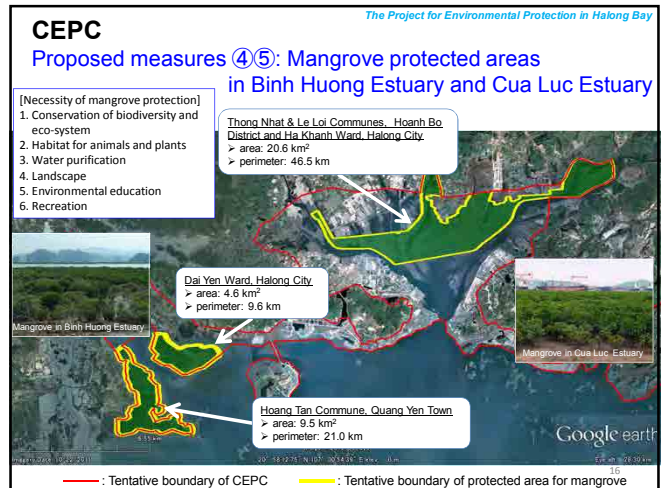
- Easier understanding for the general public and easier management for responsible organizations – ex. road and shoreline with legal basis
- More focusing on coastal area with narrowing down corridor width
- Include only area where CEPC have effect and meaningful from the viewpoint of its concept
- Exclusion of less potential area for development

### Boundary of the CEPC





- The Project for Environmental Protection in Halong Bay
- ### Proposed Measures for CEPC
- ① Wastewater treatment and pollution control
  - ② Strict development permit and monitoring (in Bai Chay International Tourism Area)
  - ③ Parking space development (in Bai Chay International Tourism Area)
  - ④ Mangrove and tidal flat protection and wise-use
  - ⑤ Control of aquaculture
  - ⑥ Control of land reclamation
  - ⑦ Strengthening of SEA in preparation of land use plan
  - ⑧ Strengthening of EIA/EPC
- 15



**CEPC**

**Proposed measures ④⑤: Mangrove protected areas in Binh Huong Estuary and Cua Luc Estuary**

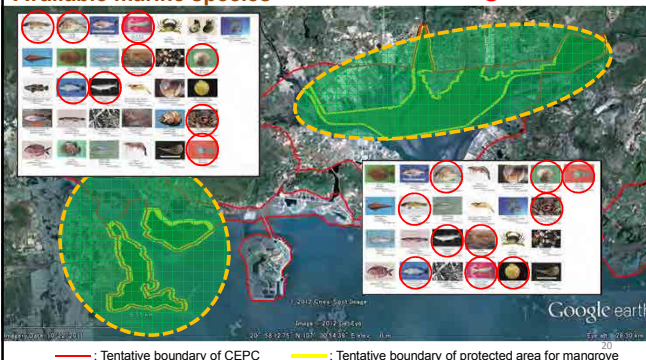
[Quick Report on Results of Preliminary Survey on Marine Species and Birds, Oct. 2012]

- Total surveyed fishermen: 443 fishermen
- Change in last 10 years:
  - Decrease of catch, less species, mangrove oyster increase much
- Possible reason of the change
  - Less mangrove & fishing ground due to construction of aquaculture pond & dykes
  - polluted water from the plants/factories and upstream
- Fishermen's intention:
  - Mangrove is important for marine species and for local livelihood (income)
  - Active protection & control and planting, necessity of support by government
- Bird species observed
  - Hoang Tan: 58, Dai Yen: 46, Cua Luc: 47

**CEPC**

**Proposed measures ④⑤: Mangrove protected areas in Binh Huong Estuary and Cua Luc Estuary**

**Available marine species** ○ : species for fishery



**CEPC**

**Proposed measures ④⑤: Mangrove protected areas in Binh Huong Estuary and Cua Luc Estuary**

**Average Annual Catch by Species (Main Species) (Unit: kg/group/year)**

Commune / Ward	Proposed Mangrove Protection Area in Binh Huong Estuary			Proposed Mangrove Protection Area in Cua Luc Estuary		
	Hoang Commune, Yen Town	Tan Quang	Dai Yen Halong City	Thong Commune, Bo District	Nhat Hoanh	Le Loi Commune, Hoanh Bo District
(1) Mangrove oyster	3662		4187	2058		1953
(2) White scallop	6152		-----	1323		454
(3) Blood arks	2500		1598	288		158
(4) Mud clam	212		324	160		46
(5) Greasy mud clam	256		188	497		454
(6) Mullet	433		454	343		139
(7) Gobies	284		452	290		124
(8) Ot fish	274		788	389		128
(9) Porgies	453		183	593		86
(10) Giantseaperch	628		282	963		25
(11) Greasy back shrimp	882		546	234		130
(12) White shrimp	179		262	358		130
(13) Mantis shrimp	339		282	205		143
(14) Octopus	104		272	92		174
(15) Mud crab- crab	103		291	138		-----
(16) Mud small crab	180		-----	199		101
(17) mangrove small crab	420		-----	132		129

Source: Preliminary Survey on Marine Species and Birds in the Proposed Mangrove Protection Areas, JICA Expert Team, 2012

**CEPC**

**Proposed measures ④⑤: Mangrove protected areas in Binh Huong Estuary and Cua Luc Estuary**

**④ Mangrove and tidal flat protection and wise-use**

- Legal designation as mangrove protected area
- Use in eco-tourism and environmental education
  - Community eco-tourism

**⑤ Control of aquaculture**

- Introduction/continuation/improvement of extensive aquaculture method

**④ Wise-use of Mangrove and Tidal Flat Area - Eco-tourism and Environmental Education -**



**Example of activities**

- Kayaking
- Learning on mangrove and marine species
- Observation and gathering aquatic life such as club in tidal flats
- Bird watching

Photos: Yanbaru Shizenjuku

**④ Wise-use of Mangrove and Tidal Flat Area - Eco-tourism and Environmental Education -**

**Trial Eco-tour in aquaculture pond of Quang Yen Town**

- 13 Oct. 2012
- 31 participants from PMB/DONRE, WG-3&4, DCST, Quang Yen Town, Youth Union, Tourism Boat Association, tourism college, volunteers, pond owner, and JET.

Activity	Time
(1) Move to the eco-tour site in Quang Yen Town	8:30 - 10:00
(2) Introduction on the eco-tour with safety instruction	10:00 - 10:30
(Group-1)	(Group-2)
(3) Eco-tour by kayak	10:30 - 11:45
(4)	Eco-tour by kayak
(5) Discussion and lunch	11:45 - 12:45
(6) Move from the eco-tour site to QN PPC inter-office	13:00 - 15:00
	15:00 - 16:00

#### ④ Wise-use of Mangrove and Tidal Flat Area - Eco-tourism and Environmental Education -

##### Trial Eco-tour in aquaculture pond of Quang Yen Town

➤ Eco-tour route: 1.8 km length, approx. 1 hour



#### ④ Wise-use of Mangrove and Tidal Flat Area - Eco-tourism and Environmental Education -

##### Trial Eco-tour in aquaculture pond of Quang Yen Town



#### ④ Wise-use of Mangrove and Tidal Flat Area - Eco-tourism and Environmental Education -

##### Trial Eco-tour in aquaculture pond of Quang Yen Town

➤ Comments and suggestions from the participants for future actual implementation

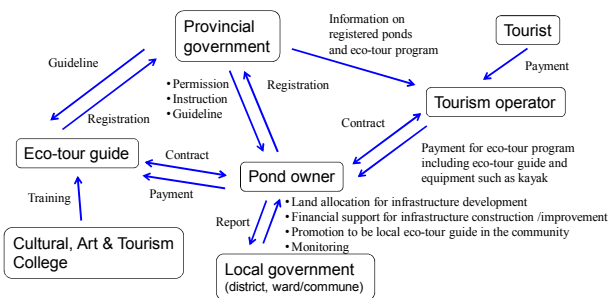
- Participation from local community with training
- Necessity of infrastructure improvement such as road, parking, toilet, and jetty for kayak
- On-site local restaurant with local specialties
- Preparation of the detailed map on eco-tour route
- Preparation of different eco-tour programs with combination of scientific, cultural, traditional, and historical aspects
- Preparation of safety plan
- PR and tourism promotion
- Combination of mangrove eco-tour and other tourism program
- Inclusion of opportunities such as mangrove planting and local lifestyle learning

#### Potential Management Model for Eco-tour in Aquaculture Pond

- Advantage
  - Safer operation than activity on the sea
  - The income from the eco-tour can be a motivation for the pond owner to maintain mangrove with the extensive aquaculture method.
  - Easier access to the pond
- Disadvantage
  - Type of mangrove species in the pond is limited (almost one species).

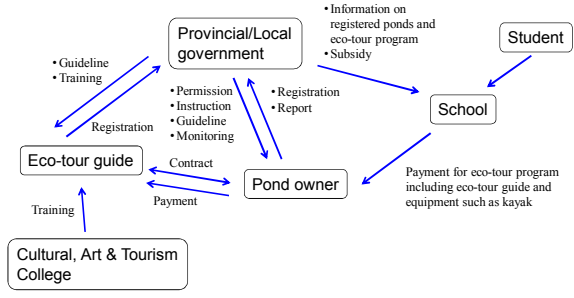
#### Potential Management Model for Eco-tour in Aquaculture Pond

• Relationship among relevant bodies for eco-tour business



#### Example of Management Model for Eco-tour in Aquaculture Pond

• Relationship among relevant bodies for environmental education



### Potential Management Model for Eco-tour in Aquaculture Pond

- Requirements
  - Institutional aspect
    - Development of certification system for eco-tour guide
    - Registration system of aquaculture pond for the eco-tour use
    - Guideline on development of eco-tour program
    - Guideline on facility design such as jetty for kayak and board walk
    - Monitoring system on eco-tour operation
  - Human resource
    - Training of certified eco-tour guide
  - Common infrastructure
    - Improvement of road near the pond
    - Parking space near the pond

### Example of Current Management Practice of the Mangrove Area in Ha Khanh Ward

- Contract between Special Forest Management Board and local households
  - Benefits for and provisions from the governmental side
    - ① Mangrove protection
    - ② Provision of technology on planting
    - ③ Provision of seedling for planting
  - Benefits for the local households
    - ① Allowance for mangrove planting, care, protection, and making fire separation line
    - ② Catching marine products from the mangrove area

### Items to be Examined and Implemented in Further Stage

1. Application to the national forest protected area system
2. Setup of management structure of the protected area with building management capacity
3. Maintenance of the mangrove and tidal flat
4. Plantation and increase/recovery of tidal flat area
  - Development of nursery

### Further Schedule for Activities of WG-2

Activities	Period
(1) Preparation of proposal documents for each measure and a draft action plan	- late Nov.
(2) Review of the draft action plan by relevant organizations	late Nov.
(3) Finalization of the action plan for CEM approval	early Dec.
(4) Final seminar of the project	mid Dec.
(5) Final CEM meeting	mid Dec.
(6) End of the project	mid Dec.



## RỪNG NGẬP MẶN & CÁC DỊCH VỤ

Hoàng Văn Thắng  
CRES, VNU

### Các dịch vụ hệ sinh thái

#### 1. Dịch vụ cung cấp

- Thực phẩm (cá, tôm, ngao, ngán...)
- Vật liệu xây dựng (gỗ, cọc, lá lợp...)
- Củi và than
- Nuôi trồng thủy sản
- Cây thuốc...
- Nguồn gen.



#### 2. Điều tiết

- Điều tiết khí hậu và hấp thụ các bon.
- Điều tiết dòng chảy
- Lọc nước và xử lý ô nhiễm
- Bảo vệ bờ biển và đê biển
- Chống xói lở
- Ngăn chặn sóng biển và giảm nhẹ thiên tai

Photo: HV Thang



#### 3. Văn hóa và tín ngưỡng

- Lễ hội truyền thống
- Vui chơi, giải trí và du lịch sinh thái
- Cảnh quan và không khí trong lành
- Giáo dục và nghiên cứu

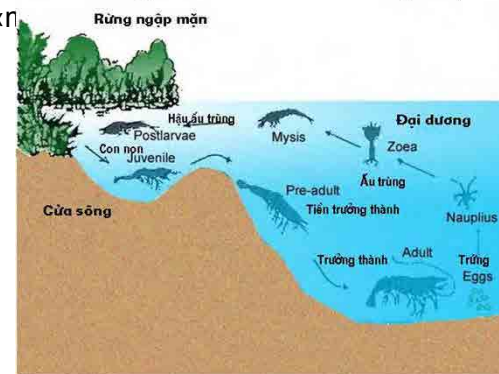
Photo: HV Thang



#### 4. Hỗ trợ

- Là nơi sống của nhiều loài trong đó có nhiều loài quý, hiếm
- Nơi sinh sản và ương trứng của nhiều loài thủy sinh
- Lưu giữ chất dinh dưỡng và chất rắn lơ lửng (phù sa) để hình thành châu thổ - lấn biển
- Chu trình dinh dưỡng...

■ **Nuôi dòng tôm, cua bè mĩ:** giai đ1n d1 tđ hũu ỹu trđng đĩn c7 thđ trđng thđnh cĩa tđn



**Cung cấp giềng, thức ăn cho các loài chim trong rừng ngập mặn**

- Các loại giềng vẹt nài, thức ăn vẹt nài sống trong các kênh rạch trong RNM là nguồn thức ăn quan trọng cho Ếu trắng, chim, cò, vẹt.
- Các vi sinh vật phân hủy mùn bã RNM tạo ra nguồn thức ăn giúp chết dinh dưỡng không những cho các loài vẹt thỏ mỏ, Ếu trắng, trong bối cảnh mực lượng dinh dưỡng chủ yếu cho các loài vẹt nài ở phía bắc RNM như các loài chim chèo ra.

**Cung cấp nguồn môi trường**

- RNM trên 4 triệu ha đã trở thành nguồn cung cấp phấn hoa cho ong mật. Sản lượng mật ong là 0,21kg trên 1ha RNM

**Tác dụng của RNM trong việc ứng phó với BĐKH và NBD**

**Hệ rễ trên mặt đất**

- Hấp thụ các bon
- Tích lũy phù sa (rễ)
- Cản sóng (rễ, thân, tán)
- Làm chậm dòng chảy
- Bảo vệ hệ động vật

HỒ RỄ CỦA CÂY MẮM (RỄ MẮM NGANG, RỄ DỨT ĐỂ VƯỢT TRÊN MẶT ĐẤT)

RỄ CHẰNG CHỊT CỦA CÂY ĐƯỚC

RỄ CHẰNG CHỊT CỦA CÂY MẮM

RỄ CHẰNG CHỊT CỦA CÂY SẦN

RỄ CHẰNG CHỊT CỦA CÂY BẦN

**Vai trò của RNM trong việc giảm sóng, bảo vệ đê biển và chống xói lở bờ biển**

❖ RNM làm giảm sóng khi có triều cường (ngày 18-20/11/1994)

**Có rừng ngập mặn**

**Không có rừng ngập mặn**

Ảnh hưởng của sự giảm sóng khác nhau giữa các loài RNM (a) và loài khác (b) ở Thụp Hố - Thị Bình

- Nhiều loài RNM rộng 1,5km thì sóng cao tới 1m ở ngoài biển và giảm xuống chỉ còn 0,05m khi tới chôn bãi biển.
- Nhiều loài khác thì sóng cao tới 1m ở ngoài biển và giảm xuống chỉ còn 0,75m khi tới bãi biển.

Nguồn: Y.Mazda, M.Magi, M.Kogo, P.N.Hồng, 1997

**Rừng ngập mặn trồng giúp phục hồi vùng đất bị thoái hóa trong các vùng biển**

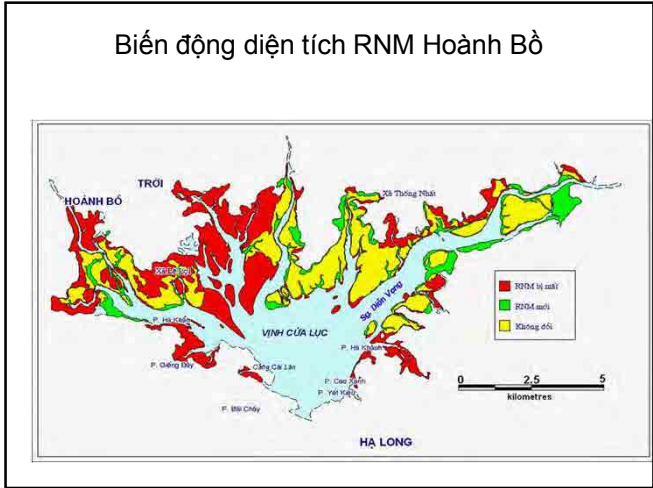
650m để quốc gia ở xã Thái Độ bị xói lở sau cơn bão số 7 với không có RNM bảo vệ. Đầu năm 2006 nhà nước đã chi 2 tỉ đồng để gia cố chỗ bị sạt lở

5km ở vùng biển x - Thị Bình các RNM bị thoái hóa toàn diện không bảo vệ được bờ biển số 7 làm xói lở (ảnh chụp 10/10/2005)

Công trình chắn sóng số 2, nhờ có rừng ngập mặn trồng từ năm 1997 mà vùng biển ở Bụng La không hề

**Thống kê rừng ngập mặn khu vực Vịnh Hạ Long**

Địa phương	Tổng	Rừng trồng	Rừng tự nhiên					
			Tổng	Hỗn giao	Mắm T.Loài	Đáng T.Loài	Sú T.Loài	Bần T.Loài
Uông Bí	66,43		66,43					66,43
Yên Hưng	3.011	50,21	2.961	565,74	14,29	1.932	138	310,97
Hoành Bồ	806	48,4	757,85	165,14		472	120,5	
Hạ Long	903		903,41	195,04	23,45	598,9	86,02	
Cầm Phá	1.461		1.461	950,8		76,02	434,8	



Rừng ngập mặn đảo Cô Tô



Rừng ngập mặn đảo Cô Tô



Rừng ngập mặn Quang Hanh



RNM khu vực Ba cửa



Rừng bần Quảng Yên



Rừng ngập mặn bảo vệ đê biển Yên Hưng



RNM Hoàng Tân-Yên Hưng



RNM ở Trới bị tàn phá



Dải RNM bảo vệ Vịnh Cửa Lục



RNM giảm tác động từ đất liền  
(Khu vực vịnh Cửa Lục)



**Một số mô hình bảo tồn**

- Bảo tồn dựa vào cộng đồng
- Đồng quản lý
- Tiếp cận hệ sinh thái



Hợp tác quốc tế trồng RNM ở QN



Xin chân thành cảm ơn!

## Rừng ngập mặn và vai trò “hành lang xanh” bảo vệ môi trường Vịnh Hạ Long

Người trình bày: Vũ Mạnh Hùng  
Phòng Sinh thái và Tài nguyên Thực vật biển

Hạ Long 11/2012



**•Đặc điểm của thực vật ngập mặn:**


- Rễ:** có một hệ thống rễ hoàn thiện thích nghi với điều kiện khắc nghiệt
- Thân:** là cơ quan chịu tác động của thủy triều và các nhân tố khí hậu khác
- Lá:** là cơ quan có hoạt động sinh lý mạnh mẽ nhất



- **Hiện tượng sinh con và trụ mầm:** đây là đặc điểm khá thú vị ở cây ngập mặn. Hạt của các loài cây này nảy mầm sau khi chín và không có kỳ nghỉ

-Hệ sinh thái rừng ngập mặn nằm trong mối tương tác giữa đất liền và biển, tập trung nhiều ở các vùng cửa sông ven biển nhiệt đới và á nhiệt đới. Đây là nơi giao thoa của hai môi trường khác nhau.

-Hệ sinh thái rừng ngập mặn hết sức đa dạng về mặt thành phần thực vật, cấu trúc rừng và tỉ lệ tầng trưởng. Ở Việt Nam, theo nghiên cứu của Phan Nguyên Hồng (1993) thì rừng ngập mặn có tới 94 loài cây ngập mặn khác nhau, trong đó 35 loài cây ngập mặn chính thuộc 20 chi của 16 họ và 40 loài tham gia thuộc 35 chi của 27 họ.



### Vai trò của rừng ngập mặn

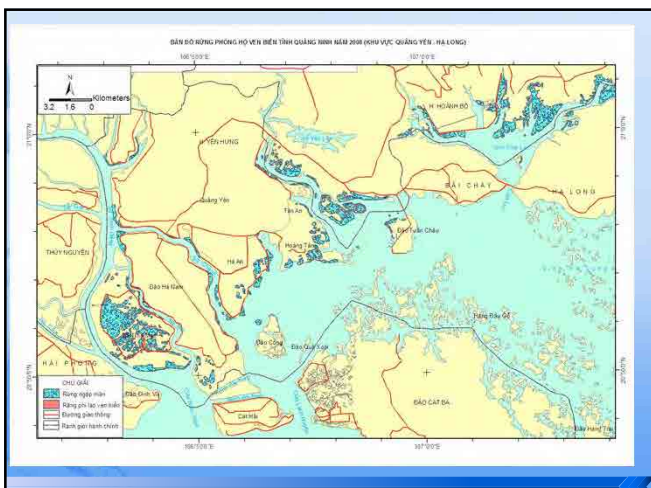
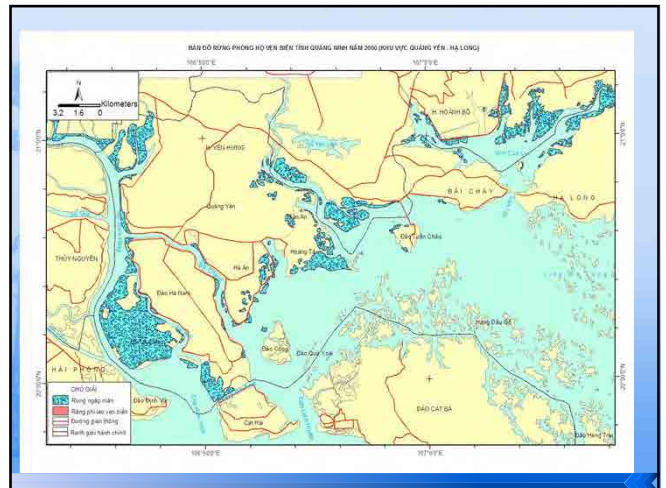
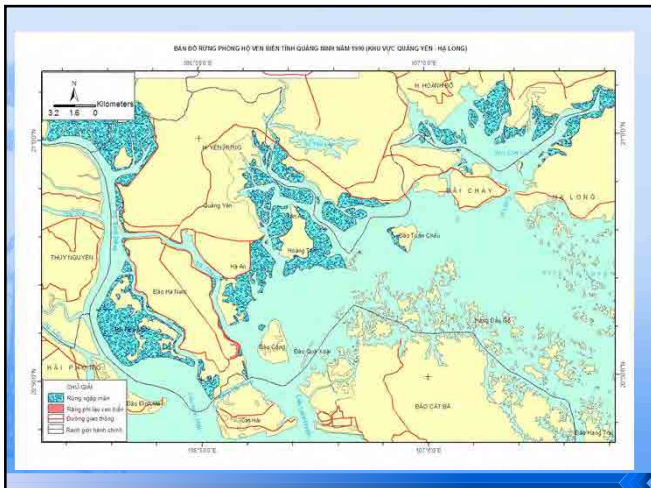
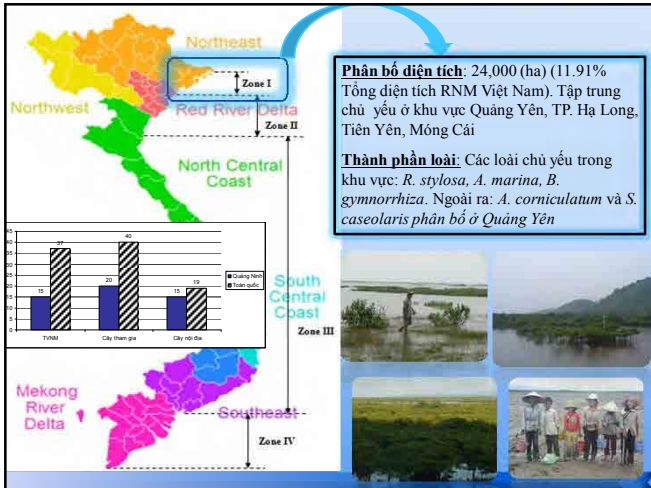
- Rừng ngập mặn là khu hệ rừng bảo hộ cho vùng đất mới, bờ đê biển và khu vực dân cư ven biển
- Rừng ngập mặn đóng quan trọng trong quá trình lấn biển của con người.
- Rừng ngập mặn đó là nơi sinh sản, nuôi dưỡng và cung cấp thức ăn cho các loài hải sản có giá trị thương phẩm.
- Rừng ngập mặn cung cấp chất hữu cơ và dinh dưỡng hình thành chuỗi thức ăn cho các loài thủy sản, làm tăng sản lượng thủy sản.
- Tự làm sạch môi trường

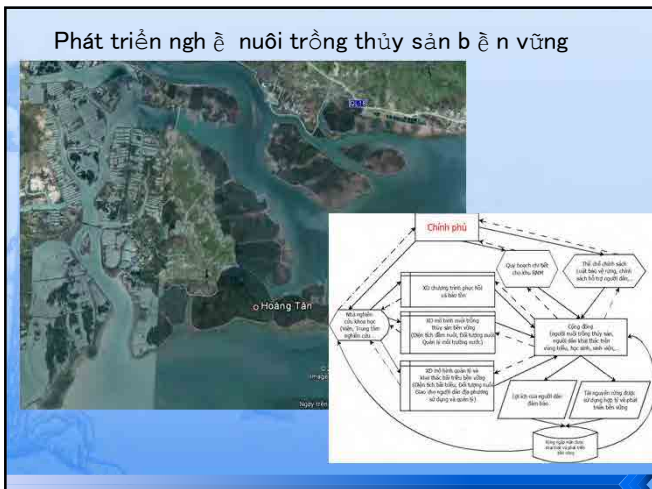
Rừng ngập mặn còn được ví như lá phổi xanh

Ngày nay, RNM có tiềm năng phát triển ngành du lịch sinh thái



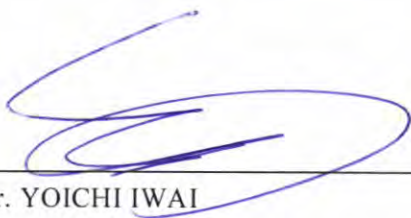
Qua đó, ta thấy hệ sinh thái RNM gắn liền với cuộc sống của chúng ta. Đóng vai trò quan trọng trong hệ sinh thái lớn trên trái đất.





**DISCUSSION RECORD  
ON  
THE FORTH WORKSHOP OF WG-2  
ON PROPOSED MANGROVE PROTECTED AREAS  
FOR  
THE PROJECT FOR ENVIRONMENTAL PROTECTION  
IN HALONG BAY**

21 Nov, 2012



---

Mr. YOICHI IWAI

Chief Advisor

JICA Expert Team

The Project for Environmental Protection  
in Halong Bay



---

Dr. HOANG DANH SON

Deputy Director

Department of Natural Resources and  
Environment

Quang Ninh Provincial People's Committee  
The Socialist Republic of Vietnam



In accordance with the Inception Report (Ic/R) for the Project for Environmental Protection in Halong Bay (the Project) in September 2010, the 4th Workshop of WG-2 was held on 21st November, 2012 in Meeting Room of Quang Ninh DONRE. The objective of workshop is explaining and getting comment on the proposed mangrove protected areas in the proposed Coastal Environment Protection Corridor for Halong Bay (CEPC), which have been examined by the Working Group-2 of the project.

The workshop was conducted with chairing by Dr. Hoang Danh Son, Deputy Director of DONRE, Head of PMB. This is a discussion record describing comments and opinions of the participants on the workshop. The list of attendants and the agenda of the workshop were attached in Attachment-1 and Attachment-2, respectively.

Dr. Hoang Danh Son, Deputy Director of Quang Ninh DONRE, Head of PMB, opened remark and introduce of environmental corridor and the importance of mangrove in environment protection of Halong Bay.

### **1. Presentations**

Mr. Aoki Tomoo, land use expert of JET, made a presentation on (1) outline of the proposed CEPC and (2) proposed mangrove protected area in the CEPC.

Dr. Hoang Van Thang, Director, Center for Environment and Resource Research (CRES), Hanoi National University showed a presentation on mangrove and solutions for mangrove sustainable utilization and management.

Mr. Vu Manh Hung, Expert, Institute of Marine Resource and Environment showed a presentation on mangrove and solutions for mangrove utilization and management.

### **2. Opinions and comments by participants in the workshop**

Some questions were raised from participants to WG-2 members for more clearer about proposed options. Based on answers of WG-2 members, several opinions and comments were given by participants as follows.

- (1) Dr. Hoang Danh Son, Deputy Director of DONRE, Head of PMB, commented that ideas on the proposed mangrove protected areas in the Mr. Aoki's presentation should be developed in the future.
- (2) Mr. Hoang Cong Dang, Deputy Director of DARD, commented as follows:
  - a) Comprehensive presentation on mangrove is agreeable with complement and comprehensive data.
  - b) The project needs more considerations as follows:
    - Current management procedure on mangrove needs to be added and modified with consideration of local people.
    - Local people on coastal area should be supported for their livelihood.
    - Developments of financial mechanism on restoration of mangrove to response climate change. So the mangrove can be sustainable development and the local people are responsible for mangrove protection.
    - Mechanism and policy for mangrove protection in which the benefit mechanism of local people is paid attention more should be clearer.
  - c) DARD has not provided updated data on mangrove since 2007 up to present. Study on change of the mangrove area from 1970 to 2010 by using SPOT satellite image shows that mangrove area has significantly decreased. Province will not allocate land for aquaculture activities and will not allow reclamation activities.
  - d) Decree No. 99 also illustrates that mangrove support for spawning ground of fish and absorb carbon.
  - e) Orientation of outputs in this project is the same as content of program which is being developed by DARD. Therefore, it is necessary to be supervised generally by PPC on measures.
  - f) Since Halong Bay is strongly influenced by current, remote buffer zone like mangrove in Dam Ha District is oriented.

- (3) Dr. Hoang Van Thang, Director, Center for Environment and Resource Research (CRES), Hanoi National University, commented and questioned as follows:
- a) It is important to take mangrove in belt of Halong Bay. Mangrove is considered as a protected area. It is the same as viewpoint of MARD. Biological corridor is needed to pay attention more.
  - b) What are criteria of the protected area?
  - c) What are the strongest pressures to Halong Bay? Since we have limited resource, we need to know which pressures should be considered highly with priority to solve.
- (4) Mr. Aoki, Land Use Management expert, JET, answered as follows:
- a) Pressures to Halong Bay mostly relate to water environment. Result of water sampling illustrates that pollution is caused by reclamation, and coal mining activities, and industry.
  - b) WG-2 is cooperating with WG-1 to consider measures regarding water environment from the viewpoint of land use management.
- (5) Mr. Yoichi Iwai, Team leader, JET, additionally answered as follows:
- a) I have been in Halong for 15 years. Pollution in Halong Bay is to mostly concern with sediment. I do not feel smell of sea and do not see seabird and dugong. There is no seaweed at sea bed. Hence, there is no spawning ground for fish. Halong Bay currently has low biodiversity.
  - b) Proposed coastal environment protection corridor is suitable for environmental strategy of Halong Bay to avoid major pollution caused from the land. Mangrove protection cannot separate from the economic development. Therefore, proposal of win-win is to introduce to be better development. This is concept of environment corridor which is one of proposals of the project.
- (6) Dr. Hoang Van Thang, Director, Center for Environment and Resource Research (CRES), Hanoi National University, commented as follows:
- a) We have experience on conservation of the Bai Tu Long Bay with coal mining for sustainable development. Win-win model was very hard choice because pollution from coal mining was strong.
- (7) Mr. Trieu Hai, Vice-chairman of Hoanh Bo District, CEM member, commented as follows:
- a) We should focus on the proposed measures No. 4 and No. 5 for mangrove protection.
  - b) There are two questions. Those are what the project can do and how to control aquaculture activities in mangrove area.
  - c) It is necessary to have policy and mechanism to control the following: influence of human activities through the economic development and cutting mangrove tree by local people for wood or other purposes, and making shrimp ponds.
  - d) Since understanding law and legal document is different among different provinces and cities, the project is requested to recommend PPC:
    - To issue decision for not to violate mangrove area inside the corridor.
    - To do not approve investment and aquaculture projects influencing mangrove
  - e) Local communities should be their raised awareness to understand the worth of the mangrove to protect it by themselves.
  - f) Suitable aquaculture techniques which do not affect to mangrove should be introduced. All aquaculture activities inside the corridor need to be checked then are requested compulsorily to apply these aquaculture techniques.
  - g) Any project which affect to the mangrove is requested to be recovered.
  - h) PPC is requested to issue decision to prohibit mangrove violation in the corridor.
  - i) Aquaculture forms in mangrove area should be proposed

- (8) Mr. Tran Thai Tuan, Vice-chairman, Provincial Red Cross Association, commented as follows:
- a) Provincial Red Cross Association has joined a project funded by ACTMANG from Japan for mangrove plantation since 1997. We realize that the survival rate of mangrove is too low and there are not enough budgets for looking after young mangrove tree and protect mangrove and applying technology for mangrove planting.
  - b) Communes or wards having mangrove area less than 500 ha do not budgeted for mangrove protection. Mangrove area should be allocated to local people for better protection.
- (9) Mr. Ha Xuan Kinh, Director, Forest Ranger Sub-Dept. of Halong City, commented as follows:
- a) This is the first time for me to approach idea for mangrove protection by the corridor.
  - b) I agree on Mr. Trieu Hai's comment on needing specific mechanism and policy for mangrove protection.
  - c) We have not detected and treated on mangrove destruction. Loss of mangrove area is caused by reclamation and creating shrimp ponds.
  - d) Policy and term for mangrove protection need to be improved.
  - e) Propaganda on mangrove protection should be strengthened further.
- (10) Mr. Pham Hong Tinh, Expert of Mangrove, Mangrove Ecosystem Research Center, Hanoi National University of Education, commented as follows:
- a) The project needs to highlight mangrove in river mouth because Mangrove in river mouth change very fast.
  - b) Area for mangrove restoration in which local people is culturing mangrove oyster is mentioned
  - c) Diversity of mangrove in the project area is very poor. It is necessary for scientists to contribute for increase of biodiversity. Maybe, we can bring some mangrove species to this area for planting to increase its diversity.
- (11) Mr. Vu Manh Hung, Expert, Institute of Marine Environment and Resource, commented as follows:
- a) Fund of mangrove development needs to develop.
  - b) When making plan for mangrove protection, benefit of local people should be considered.
  - c) Eco-tour can be organized for student for education during vacation in summer.
  - d) Budget for mangrove protection can get from a part of fishing or eco-tour.
  - e) Establishment of fund for mangrove is necessary.
- (12) Mr. Doan Manh Luong, Chairman, Quang Ninh Tourism Boat Sub-Association, commented as follows:
- a) Eco-tour is a good way to educate and spread environment protection. Eco-tour organization is main purpose for propaganda of mangrove protection to the local communities.
  - b) Eco-tour should be designed and appraised carefully to avoid degradation of landscape and mangrove.
- (13) Mr. Dao Van Tan, Expert of Mangrove, Expert of Mangrove, Mangrove Ecosystem Research Center, Hanoi National University of Education, commented as follows:
- a) When local communities are involved in the mangrove protection process, budget for local communities needs to consider.
  - b) Mangrove area can be allocated to local people for protection.
- (14) Dr. Hoang Danh Son, Deputy Director of DONRE, Head of PMB, concluded as follows:
- a) Mangrove plays an important role in environment protection. Mangrove protection and economic development should be combined suitably.
  - b) Value of mangrove for environment protection which should be recognized and is reason to propose to PPC for necessary protection.

- c) WG-2 considers all comments for mangrove protection from the participants to reflect in the corridor and its measures.

## Attachment-1

### List of Attendants

#### *[Counterpart and Stakeholders]*

1. Dr. Hoang Danh Son Deputy Director of DONRE, Head of PMB
2. Ms. Nguyen Thi Thu Thuy Deputy Director of Sub-Dept. for Environmental Protection, DONRE, Secretary of PMB
3. Ms. Phan Thi Hoang Hao Member of PMB, Sub-Dept. for Environmental Protection, DONRE
4. Mr. Nguyen The Thuc Deputy Head, Division of Planning and Financing, DONRE, Head of WG-2
5. Mr. Nguyen Nhu Hanh Deputy Head of Appraisal- License Section, Sub-dept. for EP, DONRE, Member of WG-2
6. Ms. Nguyen Thi Mai Anh Expert of Land use Registration Office, Quang Ninh DONRE, Member of WG-2
7. Ms. Vu Thi Tho Sub-Dept. of Sea and Island, DONRE
8. Mr. Nguyen Quang Duc Head of Water Resource Division, DONRE
9. Mr. Nguyen Cong Thai Deputy Director, HBMD
10. Mr. Nguyen Tien Tam Officer, HBMD
11. Ms. Vu Hong Phuong Deputy Director, EMAC, DONRE.
12. Mr. Trieu Hai Vice-chairman, Hoanh Bo District PC
13. Mr. Tran Dinh Giang Vice-chairman, Thong Nhat Commune, Hoang Bo District
14. Ms. Nguyen Thi Loan Officer, DONRE
15. Mr. Hoang Cong Dang Deputy Director, DARD
16. Mr. Pham Ngoc Hieu Officer, Sub-Dept. of Forestry, DARD
17. Mr. Mac Van Xuyen Director, Sub-Dept. of Forestry Ranger, DARD
18. Mr. Dang Quoc Hung Vice Head of DONRE, Halong City PC
19. Mr. Van Trong Hung Vice director, Quang Ninh Culture, Art and Tourism college
20. Mr. Le Van Thang Deputy Director, Management Board of Landscape, Environment, and Special Use Forest. Halong City PC
21. Mr. Ha Xuan Kinh Director, Halong City Forestry Ranger
22. Mr. Nguyen Phu Hung Officer, Ha Khanh Ward PC, Halong City PC
23. Ms. Nguyen Thi Bao Chairman, Quang Ninh Tourism Association
24. Mr. Doan Manh Luong Chairman, Quang Ninh Tourism Boat Sub-Association
25. Mr. Tran Thai Tuan Vice-chairman, Quang Ninh Red Cross Association
26. Mr. Dao Van Tan Expert of Mangrove, Mangrove Ecosystem Research Center, Hanoi National University of Education
27. Mr. Pham Hong Tinh Expert of Mangrove, Mangrove Ecosystem Research Center, Hanoi National University of Education
28. Dr. Hoang Van Thang Director, Center for Environment and Resource Research (CRES), Hanoi National University
29. Mr. Vu Manh Hung Expert, Institute of Marine Environment and Resources (IMER)

#### *[JICA Side]*

30. Mr. Yoichi Iwai Chief Advisor of JICA Expert Team
31. Mr. Tomoo Aoki Land Use Management Expert of JICA Expert Team
32. Mr. Atsushi Minami Coordinator of JICA Expert Team
33. Mr. Nguyen Thanh Phuong Technical Assistant of JICA Expert Team
34. Ms. Duong Thi Nhuan Interpreter of JICA Expert Team
35. Ms. Bui Thi Cuong Interpreter of JICA Expert Team

## Attachment-2

The Project for Environmental Protection in Halong Bay

### Agenda for Workshop on Proposed Mangrove Protected Areas under the Coastal Environment Protection Corridor for Halong Bay

#### 1. Objectives

- (1) Explaining on proposed mangrove protected areas under the proposed Coastal Environment Protection Corridor for Halong Bay (CEPC), which have been examined by the Working Group-2 of the project
- (2) Receiving comments and opinions from the participants for further examination of the proposal

#### 2. Participants

- Representatives from the following organizations
  - Quang Ninh Dept. of Agriculture and Rural Development (DARD)
  - Sub-dept. of Forestry, DARD
  - Sub-Dept. Forestry ranger, DARD
  - Sub-dept. of Aquaculture, DARD
  - Halong Bay Management Department (HBMD)
  - QN Environmental Police Dept.
  - Halong City People's Committee
  - Special-use Forest Management Board, Halong City People's Committee
  - Forest Ranger Unit of Halong City
  - Quang Yen Town People's Committee
  - Hoanh Bo District People's Committee
  - Leader of Dai Yen Ward PC (Halong City)
  - Leader of Ha Khanh Ward PC (Halong City)
  - Leader of Hoang Tan Commune PC (Quang Yen Town)
  - Leader of Thong Nhat Commune PC (Hoanh Bo District)
  - Leader of Le Loi Commune PC (Hoanh Bo District)
  - Quang Ninh Tourism Association
  - Branch of Tourism Boat Association of Ha Long
  - Red-cross Association of Quang Ninh
  - Cultural-Art and Tourism College of Quang Ninh
  - Mangrove Ecosystem Research Center, Hanoi National University of Education
  - Natural Resource and Environment Research Center, Vietnam National University
  - Institute of Marine Environment and Resources (IMER)
  - Water natural source & Hydrometeorology Division, DONRE
  - Sub-Dept of Sea and Island, DONRE
  - Environmental Monitoring and Analysis Center, DONRE
- Project Management Board for the Project
- Members of Working Group-2
- JICA Expert Team

#### 3. Time and venue

- Time: 8:00 am - 11:30 am on 21 November (Wed.), 2012
- Venue: DONRE Meeting Room at 7th floor

#### 4. Program

Content	Person in Charge	Time
1. Reception	PMB and JET	8:00 – 8:30
2. Opening remarks	Dr. Hoang Danh Son, Head of PMB, (Deputy Director of QN DONRE)	8:30 - 8:35
3. Presentation on CEPC and proposed mangrove protected areas under CEPC	Mr. Tomoo Aoki (Land Use Expert of JET)	8:35 - 9:25
4. Presentation on mangrove and solutions for mangroves sustainable utilization and management	Dr. Hoang Van Thang (Director of Center for Researching Environmental and Resource, Hanoi National University, CRES),	9:25 - 9:35
5. Presentation on mangrove and solutions for mangroves sustainable utilization and management	Mr. Vu Manh Hung (Institute of Marine Environment and Resources (IMER)	9:35-9:45
6. Discussion	All the participants	9:45 - 11:20
7. Conclusion and closing remarks	Dr. Hoang Danh Son	11:20 - 11:30

## 添付資料-7

成果4に係る第3回ワークショップ  
(2012年11月7日開催)の資料及び議事録

# The Project for Environmental Protection in Halong Bay

## **Agenda for Workshop on Strategies and Measures for Sustainable Tourism Development of Halong Area**

### **1. Objectives**

- (1) Explaining on draft proposal of strategies and measures for Sustainable Tourism Development (STD) of Halong Area, which have been examined by the Working Group-3 of the project, and
- (2) Receiving comments and opinions from the participants for further examination

### **2. Participants**

- a) PMB
- b) Representatives from the following organizations in Quang Ninh Province
  - PPC office (Ms. Vu Thi Hang, Expert, Tourism Section)
  - Dept. of Planning and Investment
  - Dept. of Culture, Sport and Tourism + Mr. Nguyen Dinh Chien, Head of Tourism Resources Section.
  - Dept. of Construction
  - Dept. of Transportation
  - Dept. of Agriculture and Rural Development
  - Dept. of Science and Technology
  - Dept. Education and Training
  - Halong Bay Management Department
  - Bai Tu Long National Park Management Board
  - Halong City People's Committee
  - Hoanh Bo District People's Committee
  - Cam Pha City People's Committee
  - Quang Yen Town People's Committee
  - Van Don District People's Committee
  - Provincial Women Union
  - Provincial Youth Union
  - Quang Ninh tourism association
  - Halong Tourist boat sub association
  - General Director of Indochina Junk Company
  - Quang Ninh Newspaper
  - Halong City Television
- c) Head of Working Group-1
- d) Head of Working Group-2
- e) Members of Working Group-3
- f) Head of Working Group-4
- g) JICA Expert Team (If it is possible, the members of the JICA Evaluation Team should be included).

### **3. Time and venue:**

- Time: 8:00 am - 11:00 am on 7 November, 2012 (Wednesday)
- Venue: Conference Hall B of Provincial Conference Centre

### **4. Agenda**

Content	Person in Charge	Time
1. Reception	PMB and JET	8:00 - 8:30
2. Opening remarks	Dr. Hoang Danh Son, Head of PMB, (Deputy Director of QN DONRE)	8:30 - 8:35
3. Presentation on the proposed strategies and measures for the STD of Halong area (1) Goal and vision (2) Strategies (3) Conceivable measures to be implemented for the STD (4) Outline of Action Plan for the STD	Mr. Tran Van Thuan, Head of WG-3, Deputy Head of Sea and Islands Sub-Department, DONRE	8:35 - 9:30
4. Discussion	All the participants	9:30 - 10:50
5. Conclusion and closing remarks	Dr. Hoang Danh Son	10:50 - 11:00

*End*



**Project for Environmental Protection in Halong Bay**

**WORKSHOP**

**PROPOSED STRATEGIES AND MEASURES FOR SUSTAINABLE TOURISM DEVELOPMENT OF HALONG AREA**



**Working Group-3  
(Environment and Tourism Resource Management)**

**7 November, 2012**

**Objectives of the Workshop**

1. Explaining the draft proposal of strategies and measures for Sustainable Tourism Development (STD) of Halong Area
2. Receiving comments and opinions from the participants for further examination on strategies and measures

2

**Formulation of Strategies and Measures**

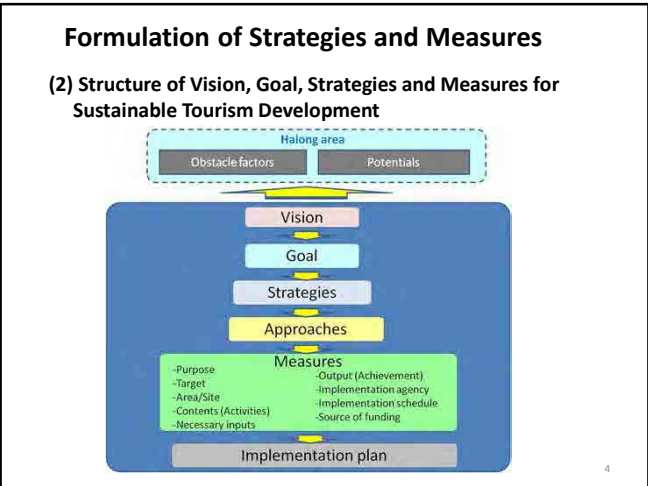
**(1) Tourism Development Direction in Quang Ninh Province**



3

**Formulation of Strategies and Measures**

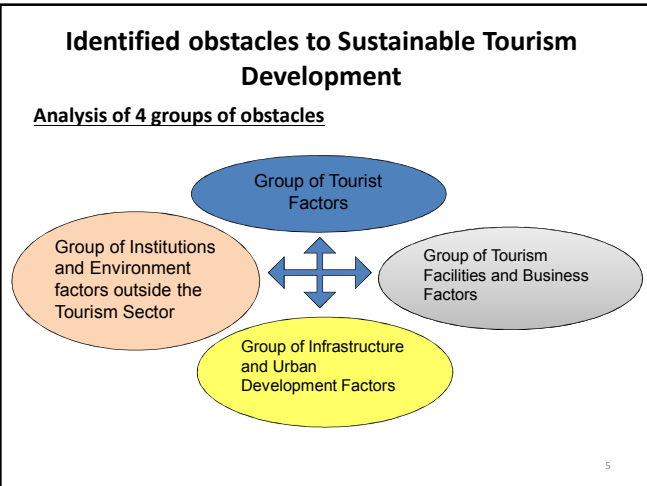
**(2) Structure of Vision, Goal, Strategies and Measures for Sustainable Tourism Development**



4

**Identified obstacles to Sustainable Tourism Development**

**Analysis of 4 groups of obstacles**



5

**Identified obstacles to Sustainable Tourism Development**

**Group of Tourist Factors**

- Rapid increase of tourists: in year 2011, 2.9 million tourist visiting Halong
- Wastes generated by tourists: each tourist discharges about 0.5 kg of waste and app 100 liters of wastewater/ trip(\*)
- Behaviors to cause degradation of tourism resources: trespassing, drawing, carving on stalagmites, stalactites causing degradation of biodiversity of the area



Source: (\*) Baseline survey for the Environmental Protection Project in Ha Long Bay, ITDR, 2011.

6

## Identified obstacles to Sustainable Tourism Development

### Group of Tourism Facilities & Business Factors

- Bai Chay tourist boat station receives 500 boats for landing, leaving, and anchoring 5,000 tourists arrive per day. (\*)
- Many boats, restaurants do not have equipment for collection and treatment of wastewater from domestic use, boat cleaning services, bilge; wastewater with oil is directly discharged into the Bay.
- Propeller of boats stirs up sediment in bottom making turbid and collides with the marine species, especially boat anchoring at coral reef, sea weed areas, etc.
- Oil scum spreads widely on the sea surface
- Consumption of special and rare sea products, etc.



Source: (\*) Pilot Project for Ecolabel for tourist boat in Halong Bay, ART Vietnam, 2011.

7

## Identified obstacles to Sustainable Tourism Development

### Group of Infrastructure and Urban Development Factors

- Mass activities of land reclamation to build urban area, industry-services projects: 43 land reclamation projects with total planned area of 7,600 ha of which 7,300 ha is sea reclamation and about 2,000 ha has been completed. (\*)
- Impacts:
  - Soil erosion, sediments in culverts, channels, sea;
  - Reduction of mangrove area: nearly 2,000 ha has been disappeared in the last 40 years



Source: Baomoi.com (2011), Quảng ninh: hạn chế "san dãi, lấp biển" lấy đất. Tại: <http://www.baomoi.com/Quang-Ninh-Han-che-san-doi-lap-bien-lay-dat/>

8

## Identified obstacles to Sustainable Tourism Development

### Group of Institutions and Environment factors outside the Tourism Sector

- Coal mining wastes
- Coal mining wastewater
- Wastewater from Industrial Zone, Complex, domestic wastewater from resident areas.
- Port, canal dredging activities



9

## Analysis of Advantages and Potentials of Sustainable Tourism Development

### Advantages:

#### 1) Strategic position

- Halong City is the center of politics, economy and culture of the Quang Ninh province as well as a big hub of the northern key economic region
- The government has been giving a special priority of state investments in building infrastructures and physical facilities contributed significantly to the economic growth of Halong City and Quang Ninh province.

#### 2) Brand name and image

- Twice officially recognized as **UNESCO World Natural Heritage** (1994: landscape value, 2000: value of geology and geomorphology)
- Recognized as one of the **New Seven Wonders**

### Potentials:

#### 3) Distinctive tourism resources and products

- Ecotourism tours to mangrove forests, tropical rain forests on limestone mountain and caves (**Environmental education and conservation activities**)
- Visiting floating villages including home stay and experience of daily life of local villages

10

## Analysis of Potentials of Sustainable Tourism Development

### 3) Distinctive tourism resources and products (Continue)

- Visiting coal mines to learn traditional mining technologies and history of mine industry
- Development of **handicraft and souvenir** (Huge demands for domestic and foreign tourists)
- Creation of **diversified tour programs** combination of existing nature and cultural tourism resources/sites within Halong area including Van Don district (Contributing **increasing the length of time and stay, reducing concentration of tourists in Halong Bay**)

### 4) Tourism facilities and infrastructures

- Development of aquarium in the costal of Halong Bay for tourism, conservation and educational purposes
- Development and improvement tourism service facilities including visitor center, information center and toilet in Halong area
- Development of Roadside station at suitable location along National Road No. 18.

11

## Formulation of Strategies and Measures

### (3) Methodology and process of formulating strategies and measures

- Review of relevant tourism development plans, master plans, projects and programs
- Update and review recent tourism data
- Revise proposed strategies and proposed appropriate strategies in consistency with following strategies and plans
  - Quang Ninh Tourism Development Plan (2011-2015)
  - Master plan of Halong City
  - Comprehensive Management Plan for the Halong Bay WHS
  - Vietnam Tourism Development Strategies to 2020
  - Relevant plans by local governments

12

## Formulation of Strategies and Measures

### (3) Methodology and process of formulating strategies and measures (Continue)

- Determination of framework for measure
- Collect projects and plans related to each strategy from relevant departments
- Prepare draft measures (at least 3 measures by each strategy) by WG members with support of JET, local expert and own department of WG members.
- Formulation of measures through discussion among WG members

13

## Formulation of Strategies and Measures

### (4) Vision and Goal

#### Vision

**Sustainable tourism destination:**  
**'Reconciliation' of tourism development and environmental protection in Halong Bay**

#### Goal

**Shift from Mass Tourism to Sustainable Tourism (low impact tourism)**

14

## Formulation of Strategies and Measures

### (5) Proposed 6 Strategies

- Strategy 1:  
Enhancement of management capacity for sustainable tourism development
- Strategy 2:  
Development of legal and institutional framework, and policy for supporting ecotourism
- Strategy 3:  
Protection of tourism resources
- Strategy 4:  
Development of sustainable tourism products
- Strategy 5:  
Upgrading service and quality of tourism facilities and business
- Strategy 6:  
Propaganda and promotion of sustainable tourism

15

## Formulation of Strategies and Measures

### (6) Proposed measures by strategy

Strategy 1:  
Enhancement of management capacity for sustainable tourism Development

Measure 1-1-1:  
Preparation of the zoning plan and management guideline for tourist development in Bai Chay and Hung Thang areas

Measure 1-1-2:  
Identification of solution for unfinished tourism development and pending tourism facilities, and preparation of effective approval and monitoring system of land leasing for tourism facilities and tourism development in Bai Chay and Tuan Chau

Measure 1-1-3:  
Preparation of tourism site management guideline for major islands in Halong Bay

16

## Formulation of Strategies and Measures

Strategy 1:  
Enhancement of management capacity for sustainable tourism Development

**Current Situation** Various negative issues identified in Bai Chay and Hung Thang areas



Illegal parking and car parking on sidewalk (Bai Chay)



Broken pavement of pedestrian Walk (Bai Chay)



Ongoing Halong Marina Project (Hung Thang area)

17

## Formulation of Strategies and Measures

Strategy 1:  
Enhancement of management capacity for sustainable tourism Development

### Measure 1-1-1 Preparation of the zoning plan and management guideline for tourist development in Bai Chay and Hung Thang area

- Checking and assessment of current land use, road and street sidewalk and existing tourist facilities and infrastructure
- Preparation of zoning plan for tourist areas
- Preparation of management guideline and safety measures for tourist
- Preparation of operation plan for management guideline
- Holding workshop on zoning plan and management guideline
- Implementation of zoning plan and management guideline



18

## Formulation of Strategies and Measures

Strategy 1:  
Enhancement of management capacity for sustainable tourism Development

**Current Situation** Negative tourism assets in Bai Chay and Tuan Chau Island



Unfinished accommodation (Tuan Chau Island)



Stopped operation (Bai Chay area)

19

## Formulation of Strategies and Measures

Strategy 1:  
Enhancement of management capacity for sustainable tourism Development

**Measure 1-1-2**  
Identification of solution for unfinished tourism development and pending tourism facilities, and preparation of effective approval and monitoring system of land leasing for tourism facilities and tourism development in Bai Chay and Tuan Chau

- Amendment of present law on development and land leasing
- Enforcement of penalty for land owner and developers
- Termination of contract agreement on land leasing and development
- QN PPC acquires neglected lands and unused facilities from land owners
- Proposing alternative plan for tourism development by DCST or relevant departments
- Proposed alternative land used for other tourism facilities
  - > Visitor center
  - > Roadside station
  - > Aquarium
  - > Handicraft center
  - > Green open space

20

## Formulation of Strategies and Measures

Strategy 1:  
Enhancement of management capacity for sustainable tourism Development

**Expected Situation after the Action (Output)**



Aquarium (Facilities including environmental education)



Roadside station (Parking, rest space, toilet, tourist information, etc.)

21

## (6) Formulation of Strategies and Measures

### 5) Proposed measures by strategy

Strategy 2:  
Development of legal and institutional framework, and policy for supporting ecotourism

Measure 2-1-1:  
Formulation of regulation on promotion of Ecotourism in Quang Ninh

Measure 2-1-2:  
Formulation of policy, institutional framework and incentives for promoting ecotourism activities

22

## Formulation of Strategies and Measures

Strategy 2:  
Development of legal and institutional framework, and policy for supporting ecotourism

### Current Situation

- Ecotours in Halong area are mainly visiting fishing villages, riding traditional boat by local community and kayaking organized by boat companies
- QNPPC gives priority to develop and promote ecotourism in Halong Bay and other areas
- No specific policy and legal system (decision) and incentives for development and promotion of ecotourism in QN.
- Ecotour guide system is not established.
- No ecotourism association in QN
- There are plans and projects for ecotourism in QN.
- Halong Environmental Education Association is in the process of establishment in Halong area.



Traditional boat tour by fishing villager



Visiting floating village



Kayaking in the Bay

23

## Formulation of Strategies and Measures

Strategy 2:  
Development of legal and institutional framework, and policy for supporting ecotourism

### Current Situation



Forest in Loi Am mountain in Hoanh Bo District (Potential site for ecotourism)



Ecoboat in Halong Bay



Trial mangrove ecotour in Quang Yen Town



Minh Chau Island in Van Don District (Potential site for ecotourism)

24

## Formulation of Strategies and Measures

### Strategy 2:

Development of legal and institutional framework, and policy for supporting ecotourism

#### Measure 2-1-1

#### Formulation of regulation on promotion of Ecotourism in Quang Ninh

For effective promotion of ecotourism in Halong area, Provincial government of Quang Ninh should establish legal system such as Decision on promotion of ecotourism in QN.

#### Preparation of Decision (Proposed)

- Establish working group and committee including academics, representatives of relevant tourism business operators and local communities
- Review and study relevant regulations on tourism and ecotourism
- Prepare draft regulation (Decision) on promotion of ecotourism
- Holding working group and committee meetings
- Finalization of Decision by DCST and the committee
- Submission of the finalized Decision to QN PPC for approval

25

## Formulation of Strategies and Measures

### Strategy 2:

Development of legal and institutional framework, and policy for supporting ecotourism

#### Expected Situation after the Action (Output)

After the Decision on promotion of ecotourism in QN is enacted, members from DCST, HBMD, relevant departments and stakeholders get together and discuss issues on promotion of ecotourism based on the Decision



26

## Formulation of Strategies and Measures

### Strategy 2:

Development of legal and institutional framework, and policy for supporting ecotourism

#### Measure 2-1-2

#### Formulation of policy, institutional framework and incentives for promoting ecotourism activities

#### Establishment of Ecotourism Association in QN or local level (Proposed)

- 1) Preparation of legal document
  - Mission, policy, activities, funding source
  - Membership and responsibilities
- 2) Members

QN: Members will be included DCST, HBMD, DONRE, DOET, Youth Union, Women Union, QN Tourism Association, Tourist Boat Association, etc.

Local level: Relevant depts. in local gov., tourism business operators, representatives of local communities, etc.

- 3) Preparation of action plan and schedule by established ecotourism association

27

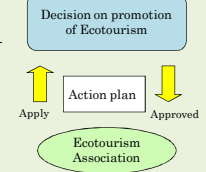
## Formulation of Strategies and Measures

### Strategy 2:

Development of legal and institutional framework, and policy for supporting ecotourism

#### Support for local ecotourism associations by QN PPC in the Decision (proposed)

- Technical support on preparation and implementation of ecotour
- Training of narrator
- PR on website and brochure
- Financial support



28

## Formulation of Strategies and Measures

### Strategy 2:

Development of legal and institutional framework, and policy for supporting ecotourism

#### Expected Situation after the Action (Output)

After approval of action plan submitted by Ecotourism Association, various ecotours are planned and implemented by local ecotourism operator in collaboration with Ecotourism association. Following measures are provided for support of local ecotourism operator by relevant sections at DCST, HBMD, other institutions and private tour companies.



Training for local narrator



Technical advice for implementation of ecotour



Seminar and workshop



Promotion of ecotours on QN Ecotourism website

29

## Formulation of Strategies and Measures

### 5) Proposed measures by strategy

#### Strategy 3:

Protection of tourism resources

##### Measure 3-1-1:

Control of tourist boat access and boat stay areas at major islands at peak time

##### Measure 3-2-1:

Training on use of wool knitted scourers, sorting waste and composting waste for floating villages

##### Measure 3-2-2:

Lecture on environmental protection and activities for fishing villages

##### Measure 3-2-3:

Monitoring of sea water quality by using secchi disk

##### Measure 3-3-1:

Upgrading operational capacity of local waste water treatment facility And sewerage collection system

30

## Formulation of Strategies and Measures

### 5) Proposed measures by strategy

Strategy 3:  
Protection of tourism resources

Measure 3-4-1:  
Development of guideline of inspection and monitoring of tourism resources and pollution level at tourist sites, wharf and jetties and anchoring sites in Halong Bay

Measure 3-4-2:  
Training of inspection and monitoring activities based on guideline

Measure 3-4-3:  
Reporting monitoring and inspection data and information to relevant departments and boat companies

31

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Current Situation



Two tour routes are very popular and congested with tourist boats at tourism peak time.

-Share of 2 routes: Route 1: 50%, Route 2: 43%  
-Ave. trips/tourist boat/day: 1.9 trips (during peak days, April-July 2012)



Congested with tourist boats at Thien Cung-Dau Go Jetty at tourism peak time

Congested with tourist boats at Ba Ham fishing village



32

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Measure 3-1-1 Control of tourist boat access and boat stay area at major islands at peak time

- Review of data on the number of tourist boat visiting major islands
- Survey on tourist boat at jetty of major islands during tourist peak season and peak time.
- Consideration of max. capacity (number) of tourist boats based on existing condition of jetty and its facilities
- Setting regulation on number of receiving tourist boats at each jetty and number boat for boat tour routes.
- Improvement of jetties and related facilities
- Preparation of operation and management plan
- Guidance to regulation to relevant depts. and boat companies.
- Training of staff in charge of control and safety for tourist boat
- Implementation of control and safety management for tourist boat based on operation and management plan

33

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Current Situation

Floating fishing villages in Halong Bay (Ba Ham, Vong Vieng, Cua Van, Cong Dam)

-Degrading water environment of Halong Bay are causing by living life of fishing villages such as dumping waste to the sea and lack of knowledge on importance of environmental protection



Floating houses in Cua Van fishing village



Primary school in Cua Van

34

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Measure 3-2-1 Training on used of wool knitted scourer, sorting waste, composting waste and composting waste for floating villages



Training on use of wool knitted scourer

### Measure 3-2-2 Lecture on environmental protection and activities for fishing villages



### Measure 3-2-3 Monitoring of sea water quality by using secchi disk



35

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Current Situation

Current demand of operational capacity for wastewater treatment in Bai Chay area is over the capacity of existing wastewater treatment facility (3,500m<sup>3</sup>/day).

Causing flood and over flow of sewage during the rain due to insufficient maintenance and development of sewage system (clogged sewage by waste, broken sewage)



Bai Chay Wastewater Treatment facility



36

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Measure 3-3-1 Upgrading operational capacity of local waste treatment facility and sewage collection system

- Review of proposed feasibility study on improvement of waste water facilities and sewage system
- Survey on operational conditions of the existing waste water treatment facilities and sewage system
- Prepare the investment project
- Planning and design
- Conduct improvement work and construction work
- Operation and maintenance of the facilities

37

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Expected Situation after the Action (Output)



Image of circulation of water system



Treated wastewater from the wastewater treatment facility



38

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Current Situation

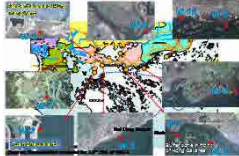
Pollution factors and impacts affecting tourism resources, tourist sites and natural environment in Halong Bay



Untreated wastewater flow into the Bay (next to the night market at Than Nien Beach)



Garbage and waste scattered near Than Nien Beach



Environmental monitoring sites in Halong Bay



Floating waste on the sea



Oil scum on surface of sea from tourist boat (Thien Cung-Dau Go Jetty)

39

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Measure 3-4-1 Development of guideline for inspection and monitoring of tourism resources and level of pollution at tourist sites, jetties and anchoring site in Halong Bay

- Design method of inspection and monitoring activities and select sampling sites
- Parameters for sample analysis
- Design guideline for inspection and monitoring at selected sites
- Holding workshop on guideline for inspection and monitoring activities

40

## Formulation of Strategies and Measures

Strategy 3:  
Protection of tourism resources

### Measure 3-4-2 Training of inspection and monitoring activities based on the guideline

- Preparation of training plan for inspection and monitoring activities
- Preparation of training manual
- Holding training workshop for inspection and monitoring activities
- Training by OJT

### Measure 3-4-3 Reporting monitoring and inspection data and information and relevant departments and boat companies

- Compilation of analyzed data and information and data input
- Preparation of reporting system
- Reporting to relevant departments and boat companies

41

## Formulation of Strategies and Measures

### 5) Proposed measures by strategy

Strategy 4:  
Development of sustainable tourism products

- Measure 4-1-1:  
Development of eco tour to Trang Luoi Liem and Hon Quyen Rong, Ba Ham Lake
- Measure 4-1-2:  
Development of community based ecotour in Cong Dam area, Cua Van, Vong Vieng (floating villages)
- Measure 4-1-3:  
Development of community based ecotour at Yen Lap Lake and Loi Am Mountain area
- Measure 4-1-4:  
Boat tour in mangrove area with mangrove planting in Quang Yen and Bai Chay bay
- Measure 4-1-5:  
Study tour for unique values of Halong area (landscapes, geography, geomorphology, biodiversity, culture and history)
- Measure 4-1-6:  
Development of nature and educational boat tour by tourist boat company

42

## Formulation of Strategies and Measures

### 5) Proposed measures by strategy

#### Strategy 4:

Development of sustainable tourism products

#### Measure 4-2-1:

Development of tour programs combining existing and new tourism sites in Halong area and its surrounding areas

#### Measure 4-3-1:

Training and issue of certificate for Halong Ecotour narrator

#### Measure 4-4-1:

Preparation of standard guideline for development, operation and marketing of ecotourism product for local tourism business

#### Measure 4-4-2:

Seminar and workshop for development, operation and marketing of ecotourism product for local tourism business

#### Measure 4-5-1:

Development of local original tourism products with design and quality guideline

#### Measure 4-5-2:

Training program on design, development and marketing for tourism products from utilizing available local resources

43

## Formulation of Strategies and Measures

#### Strategy 4:

Development of sustainable tourism products

#### Current Situation

Major tourism resources and attraction in Halong Bay area, but limited tour programs and attractions for international tourist destination



Tourist boat cruising in Halong Bay



Limestone cave (Thien Cung)



Than Nien Beach



Night market in Bai Chay

44

## Formulation of Strategies and Measures

#### Strategy 4:

Development of sustainable tourism products

#### Current Situation

Nature and Ecotourism sites:



Tran Luoi Liem (Halong Bay)



Mangrove forest (Quang Yen Town)



Loi Am Mountain (Hoanh Bo District)

45

## Formulation of Strategies and Measures

#### Strategy 4:

Development of sustainable tourism products

#### Current Situation

Historical and cultural tourism:



Production of traditional bamboo boat (Quang Yen Town)



Singing folk song (Vong Vieng fishing village)



Cua Ong Temple (Cam Pha Town)



Loa Am Pagoda (Hoanh Bo District)



Luu Khe Communal House (Quang Yen Town)



Cai Bau Temple (Van Don District)

46

## Formulation of Strategies and Measures

#### Strategy 4:

Development of sustainable tourism products

#### Development of Ecotour programs

#### Measure 4-1-1

Ecotour to Tran Luoi Liem, Hong Quyen Rong, Ba Ham Lake area

#### Measure 4-1-2

Community based ecotour in Cong Dam, Cua Van, Vong Vieng fishing villages

#### Measure 4-1-3

Community based ecotour at Yen Lap Lake and Loi Am Mountain Area



Fish farming at floating village in Cong Dam area



Vong Vieng



Yen Lap Lake



Resin from pine tree

47

## Formulation of Strategies and Measures

#### Strategy 4:

Development of sustainable tourism products

#### Development of Ecotour programs

#### Measure 4-1-4

Boat tour in mangrove area (Quang Yen Town)

- Kayaking in mangrove area
- Bird watching, study of marine species
- Environmental education

#### Measure 4-1-5

Study tour for unique values of Halong area (landscapes, Geography, geomorphology, biodiversity, culture and history)

#### Measure 4-1-6

Nature and educational boat tour by tourist boat company

- Targeting for environmental conscious tourist and students



Experiences in fishing with Fishermen (Photos from Indochina Junk)

Collecting waste in Vong Vieng (Photos from Indochina Junk)

48

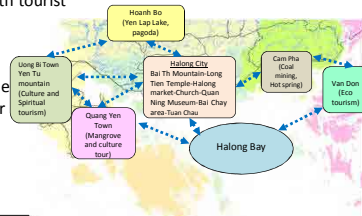


## Formulation of Strategies and Measures

Strategy 4:  
Development of sustainable tourism products

### Measure 4-2-1 Development of tour programs combining existing and new tourism sites in Halong area and its surrounding area

Optional tours combined with tourist boat tour in Halong Bay  
 -Halong city area tour (Half-day, One day)  
 -Yen Tu mountain and temple  
 -Mangrove-local culture tour (Quang Yen Town)  
 -Ecotourism/beach resort (Van Don)



49

## Formulation of Strategies and Measures

Strategy 4:  
Development of sustainable tourism products

### Expected Situation after the Action (Output)

- Increase length of stay for foreign tourist in Halong area 2 days -> 3-4days
- Increase the number of tourist areas visiting tourist areas outside of Halong city and economic benefit through tourism
- Cooperation among local governments and local tourism business sectors are strengthening in terms of promotion of local tourist sites and receiving tourists.

50

## Formulation of Strategies and Measures

Strategy 4:  
Development of sustainable tourism products

### Measure 4-3-1 Training and issues of certificate for Halong Ecotour narrator

- Design of nature and ecotour narrator certification system
- Development of training program and exam for ecotour narrator
- Preparation of trainers' ecotour narrator training manuals
- Implementation of narrator training
- Provision of the ecotour narrator certificate



51

## Formulation of Strategies and Measures

Strategy 4:  
Development of sustainable tourism products

### Current Situation

#### Tourism products sold in Halong area



Coral and shell products (Night market)



Pearl (Vong Vieng)



Coal art



Porcelain



Paintings (Vong Vieng)



Souvenirs sold at tourist boat

52

## Formulation of Strategies and Measures

Strategy 4:  
Development of sustainable tourism products

### Development of tourism products with utilizing local resources

#### Measure 4-5-1

#### Development of local original tourism products with design and quality guideline

- Identification of available and potential materials for development of tourism products
- Setting criteria on design and quality standard for local tourism product
- Development of design and quality guideline for local tourism product
- Establishment of committee for operation and management of design and quality guideline for local tourism product

#### Measure 4-5-2:

#### Training program on design, development and marketing for tourism products from utilizing available local resources

- Clarification of needs for support on design and product development
- Preparation of support program on design and product development for utilizing identified local resources
- Holding workshop
- Technical and financial support for selected potential local tourism products

53

## Formulation of Strategies and Measures

Strategy 4:  
Development of sustainable tourism products

### Expected Situation after the Action (Output)

- Design, quality, packaging and utilization of local resources for tourism products by local craftsmen and product producers are improved.



- Increase earnings from sales of tourism products in Halong area.

54

## Formulation of Strategies and Measures

### 5) Proposed measures by strategy

Strategy 5:  
Upgrading service and quality of tourism facilities and business

- Measure 5-1-1:  
Training on improvement of customer services and hospitality for local tourism business
- Measure 5-2-1:  
Encouragement of accommodation facilities in Halong area to apply Green Lotus Eco-label
- Measure 5-3-1:  
Finalization of developing Ecolabel for tourist boats in Halong Bay
- Measure 5-3-2:  
Recognition of "Blue Sail" tourist boats and PR on Ecolabel for tourist boat
- Measure 5-4-1:  
Development of tourist information counter and space for presenting feature of Halong Bay by applying audiovisual system in tourist information center at Bai Chay Tourist Wharf

55

## Formulation of Strategies and Measures

### 5) Proposed measures by strategy

Strategy 5:  
Upgrading service and quality of tourism facilities and business

- Measure 5-4-2:  
Installation of display on feature of history, culture and nature of Halong area at tourist information center in Bai Chay
- Measure 5-4-3:  
Development of roadside station in Bai Chay area
- Measure 5-4-4:  
Improvement of display at small exhibit space for tourist in Vong Vien floating village
- Measure 5-4-5:  
Utilization and updating tourism database at tourism information center including training
- Measure 5-4-6:  
Improvement, maintenance and management of toilet facilities for tourist at tourist sites and floating villages in Halong Bay, and Bai Chay area

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Current Situation

**Major constraints in the human resources for tourism sector (hotels, restaurants, tourism transports) in Halong area:**

- 40% of employees in tourism sector were trained, but not meeting requirements (Total employees: 25,000, DCST)\*
- Low-grade hotels, non-star hotel, guesthouse and restaurant:
- Lack of service skill and knowledge on customer service and hospitality
  - Provision of service is not equivalent to value and quality
  - Lack of management skill for managers and management staff in tourism sector

Source: \* Information Center/Focus on Human Resource Training: Right Direction for Green Growth (Article posted on 11/10/2012: <http://onp.vn/main.aspx?MNU=1475&Chitie=9726&Style=1>)

57

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Measure 5-1-1 Training on improvement of customer services and hospitality for local tourism business

- Needs survey on customers service and hospitality for training targets
- Preparation of contents for training program for target groups
- Nomination of trainers and lectures for training
- Preparation of materials for lecture and training
- Preparation of action plan for training program and schedule
- Conduct training programs



58

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Current Situation

**Green Lotus Eco-Label** is one of environmental protection standard and sustainable development measures using effective resources, energy, contribute to preserve heritage, develop industry, cultural-social locality and sustainable tourism development for applying tourism accommodation in Vietnam.

- The project for the Green Lotus Eco-label was planned and implemented by Hotel Dept., Ministry of Cultural, Sport and Tourism (MCST) from 2009 to 2012.
- First target hotel grade: 3-5 stars
- Second target hotel grade: all grades
- The Green Lotus Eco-label is one of important measures for contributing sustainable tourism development in Halong area.



59

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Measure 5-2-1 Encouragement of accommodation facilities in Halong area to apply Green Lotus label

- Holding meeting for preparation of guidance with authorized agency
- Arrangement of guidance (venue, materials, invitation)
- Customization/ harmonization of the standards/ criteria into the local context
- Holding workshops to introduce the Green Lotus Eco-label to local accommodation businesses
- Facilitating registration of local businesses in the Eco-label program



60

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Current Situation

Development of Eco-label system for tourist boat in Halong Bay was planned and implemented as a pilot project under the JICA Halong Project from 2011 to 2012.

Eco-label system for tourist boat is one of important Measures for enhancement of environmental protection in Halong Bay and contributing sustainable tourism development in Halong area.

Required criteria by label (Proposed):

- 1 Blue Sail label (9 baseline, 3 incentives criteria)
- 2 Blue Sail labels (10 baseline, 4 incentive, 2 advance criteria)
- 3 Blue Sail labels: (10 baseline, 6 incentive, 4 advance criteria)

Further development on the Eco-label system is required for introducing the Eco-label system for tourist boats in Halong Bay.



Workshop on the boat



Logo design of Blue Sail

61

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Measure 5-3-1

#### Finalization of developing Ecolabel for tourist boats in Halong Bay

- Tourist boat survey, case study and survey on international ecolabel
- Development of ecolabel criteria, procedure and logo based on outputs of the pilot project
- Formulation and finalization of legalization of Eco label
- Establishment of label awarding body
- Capacity development of authorized agency for Eco label certification



### Measure 5-3-2

#### Recognition of "Blue Sail" tourist boats and propaganda on Ecolabel for tourist boat

- Marketing and promotion of eco label
- Nomination and selection of "Blue Sail" tourist boat for awarding
- Facilitation of evaluation process of the awarding agency
- Preparation of prize and recognition ceremony
- Propaganda on recognition of "Blue Sail" tourist boats through mass media

## Formulation of Strategies and Measures

Strategy 4:  
Development of sustainable tourism products

### Expected Situation after the Action (Output)

- Increase the number of tourist boat in Halong Bay applying Ecolabel for tourist boat and receiving the Ecolabel
- Decrease impact to environment of Halong Bay by tourist boat
- Ecolabel for tourist boat gives an image of environmental conscious tourism transportation for tourist with quality service by staff and upgraded environmental friendly facilities and equipment.
- Eco-label for tourist boat contributes for "Green Growth strategy in Quang Ninh".

63

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Current Situation

#### Visitor facilities in Halong Bay and Hong Gai areas

TIC opens only weekday. TIC should be open in weekend, too.



Tourist information center at Bai Chay (DCST)



Tourist information center at Bai Chay Tourist Wharf (HBMD)

Only computers for internet? Not attractive space for visitor as visitor center.

64

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Current Situation

#### Visitor facilities in Halong Bay and Hong Gai areas



Public toilet near Thanh Nien Beach

Temporary closed.



Super ecology toilet (Operated only tourism season)



Public toilet (Titop Island)



Display of traditional fishing gears (Vong Vieng Fishing village) 65

Not safe for visitor to access. No water running, need maintenance regularly.

## Formulation of Strategies and Measures

Strategy 5:  
Upgrading service and quality of tourism facilities and business

### Upgrading visitor facilities in Halong Bay and Hong Gai area

#### Measure 5-4-1

#### Development of tourist information counter and space for presenting feature of Halong Bay by applying audiovisual system in tourist information center at Bai Chay Tourist Wharf



Visitor friendly TIC

#### Measure 5-4-3

#### Development of roadside station in Bai Chay area

- Development of the roadside station is proposed by Output-3 (Land use plan)
- Design and location of the roadside station need to have coordination with DOT, DCST and relevant departments.



Image design of roadside station

66

## Formulation of Strategies and Measures

Strategy 5:

Upgrading service and quality of tourism facilities and business

### Expected Situation after the Action (Output)

#### Roadside station in Bai Chay in Halong area:

Roadside station is a rest facility for driver and visitors coming to the area including car park, information counter, exhibition space, rest room, meeting hall, restaurant, shop selling local products and souvenir and work place to develop and process local specialty products.

- Benefit for local business and community groups to participate in community development and selling local products at the roadside station
- Increase employment opportunity and revenue from selling products.



Roadside station in Japan



Shop selling local products



Information desk

67

## Formulation of Strategies and Measures

### 5) Proposed measures by strategy

Strategy 6:

Propaganda and promotion of sustainable tourism

Measure 6-1-1:

Development of brand name and slogan of sustainable tourism destination for Halong area

Measure 6-1-2:

Propaganda on media, press conference for brand name, logo and slogan of sustainable tourism destination for Halong area

Measure 6-2-1:

Updating information and data on floating villages, other major tourist sites in Halong Bay on existing website of HBMD

Measure 6-3-1:

Development of tourism information and promotion materials for tourist and tour company

Measure 6-3-2:

Promotion on sustainable tourism destination of Halong area through mass media

Measure 6-3-3:

Holding promotion seminars and events for sustainable tourism destination of Halong area in Halong, Hanoi, Ho Chi Min and other areas

68

## Formulation of Strategies and Measures

Strategy 6:

Propaganda and promotion of sustainable tourism

### Current Situation

#### Brand name and slogan of Halong area

#### Current image of Halong Bay area:

- Tourist destination of World Natural Heritage Site
- Tourist boat cruise on the Bay
- Unique landscape of karst islands
- Halong carnival (Recognized only for domestic)

#### Logo:

- Cock and hen islets
- Sails of traditional Junk tourist boat

#### Slogan:

No slogan is prepared.



Halong Carnival



Logo of DCST



Halong Bay with Junk tourist boat



Cock and hen islets

69

## Formulation of Strategies and Measures

Strategy 6:

Propaganda and promotion of sustainable tourism

### Measure 6-1-1

#### Development of brand name and slogan of sustainable tourism destination for Halong area

- Preparation of plan of brand name, logo design and slogan
- Design of local brand logo (Subcontract to designer)
- Receiving comments and opinions on design of brand naming, logo and slogan from relevant stakeholders
- Revising and finalization of brand name, logo design and slogan
- Submission of prepared brand name, logo design and slogan to QN PPC for approval and registration
- Preparation of regulation on usage of brand name, logo design and slogan and licensing system

*Incredible, enjoyable, memorable, sustainable tourism destination, Halong (Catch phrase, sample)*

70

## Formulation of Strategies and Measures

Strategy 6:

Propaganda and promotion of sustainable tourism

### Measure 6-1-2

#### Propaganda on media, press conference for brand name, logo and slogan of sustainable tourism destination for Halong area

- Preparation of plan for PR and press conference
- Design of PR on brand name, logo and slogan for media (Subcontract to designer)
- PR on brand name, logo and slogan for media
- Arrangement of venue for press conference



Press conference of New 7 Wonder

71

## Formulation of Strategies and Measures

Strategy 6:

Propaganda and promotion of sustainable tourism

### Current Situation

#### Promotion and marketing for Halong area by DCST

#### Tourist information materials:

##### 1) For consumer (visitor):

- Tourist map, brochure and guide book are prepared in Vietnamese, English
- Information materials are not sufficient in terms of contents, design, quality, interpretation in other languages.
- Tourist map, hotel and restaurant guidebook are not updated.
- No brochure or tour guidebook by type of activity

##### 2) For media and tourism business operator:

- Use same materials for promotion and marketing of Halong area to media and tourism business operator
- Necessary to develop various tourism information and promotion materials



## Formulation of Strategies and Measures

Strategy 6:  
Propaganda and promotion of sustainable tourism

### Measure 6-3-1 Development of tourism information and promotion materials for tourist and tour company

- Preparation of plan and work schedule for development of tourism information materials (Tourist map and leaflet of general tourist information for Halong area, leaflets on area specific information tourism product, eco tour, activities, DVD)
- Collecting data and information for development of materials
- Photo shooting
- Design of information materials (translating foreign languages)
- Development and printing of material



Ecotour brochure

73

## Formulation of Strategies and Measures

Strategy 6:  
Propaganda and promotion of sustainable tourism

### Measure 6-3-2 Promotion on sustainable tourism destination of Halong area through mass media

- Preparation of plan for PR activities
- Design and description of PR on sustainable tourism destination
- Propaganda for mass media

### Measure 6-3-3 Holding promotion seminars and events for sustainable tourism destination of Halong area in Halong, Hanoi, Ho Chi Min and other areas



Promotion event (in Japan)

74

## Formulation of Strategies and Measures

### 6) Evaluation of proposed measures for priority measure

#### Criteria

- Suitability for achieving strategy
- Any projects/programs are planned and ongoing related to measures
- Needs
- Effectiveness
- Realization
- Sustainability

#### Rating

A=High, B=Medium, L=Low

Objectively verifiable indicators in the Project Design Matrix

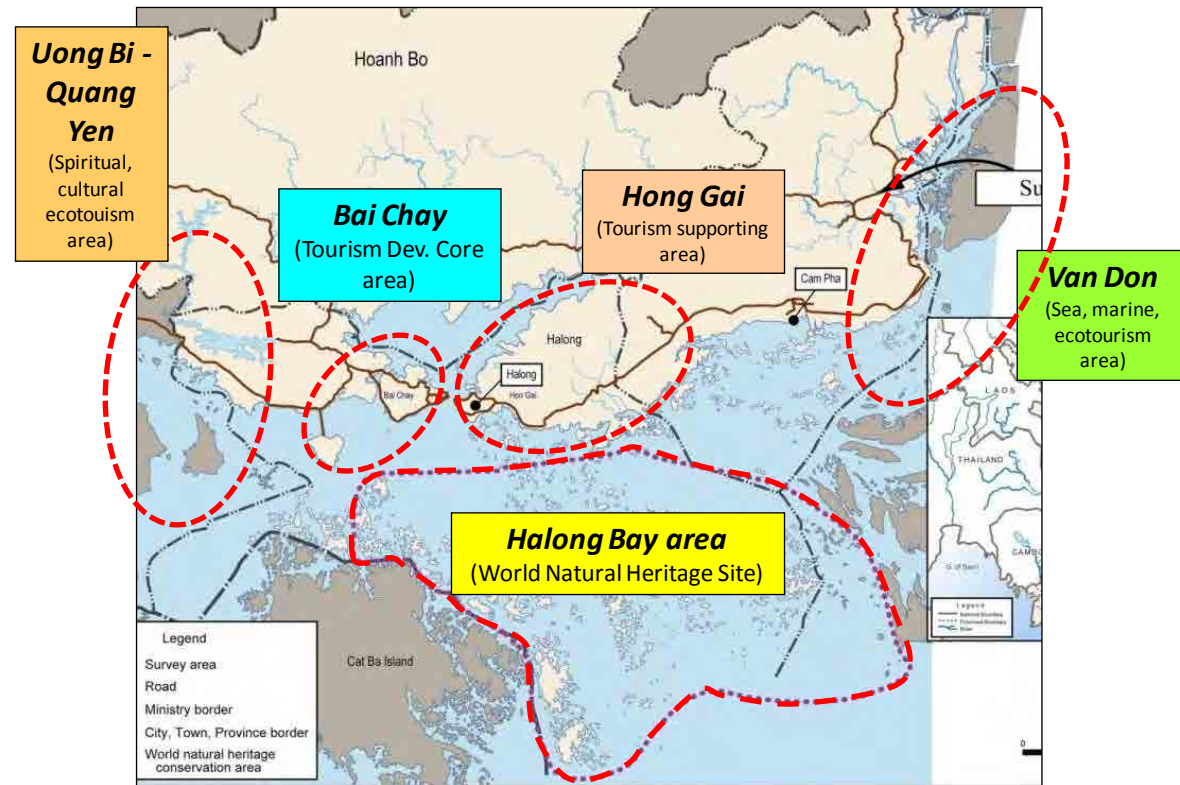
3 measures under each strategy for sustainable tourism in the Halong area are submitted to QNPPC by 2013.

75



## Draft Proposal of Strategies, Approach and Measures for Sustainable Tourism Development of Halong Area

### Tourism Development Direction in Quang Ninh Province



### Vision and Goal

#### Vision

**Sustainable tourism destination:**

**'Reconciliation' of tourism development and environmental protection in Halong Bay**

#### Goal

**Shift from Mass Tourism to Sustainable Tourism (low impact tourism)**

### Strategies

### Structure of Vision, Goal, Strategies and Measures for Sustainable Tourism Development



#### Strategy 1

Enhancement of management capacity for sustainable tourism development

#### Strategy 2

Development of legal and institutional framework, and policy for supporting ecotourism

#### Strategy 3

Protection of tourism resources

#### Strategy 4

Development of sustainable tourism products

#### Strategy 5

Upgrading service and quality of tourism facilities and business

#### Strategy 6

Propaganda and promotion of sustainable tourism

## Strategy 1 Enhancement of Management Capacity for Sustainable Tourism Development

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 1-1 Development of tourism area management plan for Halong area	Measure 1-1-1: Preparation of the zoning plan and management guideline for tourist development in Bai Chay and Hung Thang areas	Bai Chay area has been rapidly developed as the core tourism area in Halong city and the gate way to Halong Bay. In Hung Thang area located in the west of Bai Chay area, large scale hotel and commercial development has been planned and implemented by private sector. In fact, hotel and commercial area and tourism development areas in Bai Chay and Hung Thang areas are not properly controlled and managed according to the land use plan. For sustainable tourism development in Bai Chay and Hung Thang areas, it is necessary to develop zoning plans for tourism areas and facilities and amenity spaces in these areas. For effective operation and management of zoned area in terms of tourism facility development, related infrastructure and tourism activities, preparation of management guideline in each selected zone is indispensable. The guideline helps to control illegal actions and manage tourism development activities for responsible agencies and stakeholders.	Bai Chay, and Hung Thang areas	<ul style="list-style-type: none"> <li>Review of current land use, road and transportation network, existing tourism facility, infrastructure development and relevant legal documents</li> <li>Analysis and assessment of tourism resources and tourism demands</li> <li>Preparation of policy for zoning</li> <li>Development of special zoning plan with functional zones</li> <li>Core area development plan</li> <li>Development of tourism network plan</li> <li>Identification of management issues on tourism development and activities</li> <li>Setting guideline in each zoned area</li> <li>Operation plan of guideline</li> <li>Maps and drawings</li> </ul>	QN PPC, Halong City, DCST and related local government authorities, local tourism business	Zoning plan will guide and control function and development of tourism facilities in zoned area in Bai Chay area. Prepared guidelines for zoned areas can control and manage development of tourism facilities and sites, signage and amenity space, access road and pedestrian walkway, etc which helps for sustainable tourism development of Halong area.	Halong City, DOC, DCST, DPI	Short term	Government (Quang Ninh PPC)	Emergency/needs: A Realization: B Sustainability: A Total: A
	Measure 1-1-2: Identification of solution for unfinished tourism development and pending tourism facilities, and preparation of effective approval and monitoring system of land leasing for tourism facilities and tourism development in Bai Chay and Tuan Chau	Tourism and commercial development in Halong City, especially Bai Chay and Tuan Chau are important for contributing economy of Halong City as well as QN province. Tourism development in Bai Chay and Tuan Chau was booming in the past and attracted private investors. Large areas along the coastal area were reclaimed for development of hotels, commercial and tourism related facilities. In Bai Chay and Tuan Chau area, there exists unfinished construction of hotels and tourism related facilities and pending tourism facilities in the private leasing lands. These facilities are negative assets for sustainable tourism development in Halong area. It is necessary to find effective solution for this issue.	Bai Chay, and Tuan Chau island	<ul style="list-style-type: none"> <li>Survey of current condition of unfinished buildings, not utilized and pending tourism facilities</li> <li>Review of legal documents for land leasing and land development</li> <li>Confirmation of reasons for unfinished or delayed construction of building and pending tourism facilities</li> <li>Preparation of possible solutions for resume building construction and clearance of unfinished buildings</li> <li>Preparation of effective approval and monitoring system for land leasing and building construction</li> </ul>	QN PPC, Halong City, DOC and related local government authorities, developer, investor, local tourism business	Unfinished planned tourism facilities can be removed or resumed to be developed by applying identified solution. Prepared approval and monitoring system of land leasing for tourism facility and tourism development can prevent for standstill of development of tourism facilities and helps for effective utilization of tourism assets and sustainable tourism development in Halong area.	Halong City, DOC, DCST, DPI	Short/mid term	Government (Quang Ninh PPC)	Emergency/needs: A Realization: B Sustainability: B Total: B+
	Measure 1-1-3: Preparation of tourism site management guideline for major islands in Halong Bay	Major islands in Halong Bay such as Thien Cung-Dau Go cave, Sung Sot cave, Titop Island are very popular tourist sites for tourist accessed by tourist boat. Especially, during tourist peak season and peak time, tourist wharf in Bai Chay and jetties at islands are crowded with tourist boats and tourists. Increasing the number of cruising tour and tourist will cause direct impact to the caves, sea water quality and nature environment in islands. It is necessary to have tourist management guideline to control and reduce impact at major island for sustainable tourism management in Halong Bay.	Thien Cung-Dau Go, Sung Sot, Titop island, Me Cung	<ul style="list-style-type: none"> <li>Inspection and monitoring conditions of tourist resources, facilities and tourist areas at each island</li> <li>Clarification of negative factors at each island</li> <li>Estimation of carrying capacity for tourist at each island</li> <li>Preparation of tourism management guideline</li> <li>Workshop on prepared guideline</li> </ul>	HBMD, tourist boat operators, tourists	HBMD can effectively control and manage tourist sites, facilities and tourism resources with sustainable manner according to tourism site management guideline. Negative impacts on tourism resources, sea water and nature environment caused by congestion of tourist boats and tourists landing islands will be reduced during the tourist peak time and season.	HBMD	Short term	Government (Quang Ninh PPC)	Emergency/needs: A Realization: A Sustainability: A Total: A

## Strategy 2 Development of legal and institutional framework, and policy for supporting ecotourism

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 2-1 Institutional framework and policy for Ecotourism development	Measure 2-1-1: Formulation of regulation on promotion of Ecotourism in Quang Ninh	Currently, QN PPC gives priority to development and promotion of ecotourism in Halong Bay and other areas, Quang Ninh province in Tourism Development Plan of Quang Ninh Province and Socio-economic Plan of Halong City. However, there is no legal document or system to support ecotourism activities. To encourage promoting ecotourism in regional and local level, provincial government should establish an official regulation such as decision on promotion of ecotourism should be established by provincial government. The regulation shall be included formulation of basic policy on ecotourism by responsible agency in QN province, establishment of ecotourism association, measures to promote the development of ecotourism in local areas and conservation of natural tourism resources and environment.	Quang Ninh province, Halong area	<ul style="list-style-type: none"> <li>Review and study of relevant regulations tourism and ecotourism</li> <li>Establish working group and committee including academics, representatives of relevant tourism business operators and local communities for preparation of regulation</li> <li>Preparation of work plan and schedule</li> <li>Preparation of draft regulation on promotion of ecotourism</li> <li>Holding working group and committee meetings</li> <li>Finalization of the regulation by DCST and the committee</li> <li>Submission of the finalized regulation to QNPPC for approval</li> </ul>	QNPPC, DCST, HBMD, relevant depts. in local government s, tourism business operator (Ecotourism)	Enacted regulation (Decision) on promotion of ecotourism is an effective measure to support and promote followings, protection of natural environment through ecotourism, tourism promotion, regional development, promotion of environmental education. DCST and relevant sections in local governments are able to develop and promote ecotourism activities with involvement of tourism business operators and local communities based on the regulation.	DCST, HBMD	Short term	Government (Quang Ninh PPC)	Emergency/needs: A Realization: A Sustainability: A Total: A-
	Measure 2-1-2: Formulation of policy, institutional framework and incentives for promoting ecotourism activities	The official regulation (decision) on promotion of ecotourism will include various rules, actions, institutional and promotional measures on ecotourism for provincial, local governments and tourism business operators. The responsible agency for the regulation, DCST is necessary to formulation of basic policy and strategy on ecotourism promotion and incentives for promotion of ecotourism, establishment of ecotourism association, development of mechanism on technical and financial support for training of ecotourism narrator, implementation of ecotour program, PR of ecotourism programs in coordination with relevant governmental agencies based on the regulation.	Quang Ninh Province, Halong area	<ul style="list-style-type: none"> <li>Establish expert team on basic policy and strategy on ecotourism promotion from external resource</li> <li>Establish working group and committee including academics, experts on relevant fields, representative of relevant tourism business operators and local communities for preparation of basic policy and strategy on ecotourism promotion</li> <li>Preparation of work plan and schedule</li> <li>Formulation of basic policy and strategy on ecotourism promotion</li> <li>Establishment of ecotourism association in QN province or local areas</li> <li>Development of incentives to promote ecotourism for ecotour operators and relevant stakeholders</li> <li>Development of technical and financial support for training of ecotourism narrator, implementation of ecotour program, PR of ecotourism programs</li> <li>Holding working group and committee meetings</li> <li>Finalization of basic policy and strategy by DCST and the committee</li> <li>Submission of the finalized basic policy and strategy, document for establishment of ecotourism association in QN province to QNPPC for approval.</li> </ul>	QNPPC, DCST, HBMD, relevant depts. in local government s, tourism business operator (Ecotourism), local communities	Established basic policy and strategy on ecotourism promotion for Halong area or QN province will encourage for promotion of ecotourism activities. Ecotourism association in QN province or local areas is responsible not only to promote ecotourism activities not only for promoting ecotourism activities but also to coordinate various stakeholders related to ecotourism activities, regional development and environmental education. In addition, local communities and tourism business operators can receive financial and technical support on ecotour development and training of ecotourism interpreter.	DCST, HBMD	Short/Mid term	Government (Quang Ninh PPC)	Emergency/needs: B Realization: B Sustainability: A Total: B+





### Strategy 3 Protection of Tourism Resources

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 3-1: Optimum operation and management of tourist boat	Measure 3-1-1: Control of tourist boat access and boat stay areas at major islands at peak time	Jetties at popular islands and caves such as Thien Cung-Dau Go cave, Sung Sot cave and Titop islands are very congested with many tourist boats at peak time for cruising tour. The number of cruising tours visiting these sites are continues to increase. In terms of reduce impact on nature environment and caves at these sites and safety for cruising tour, it is necessary to control the number of tourist boats access to these islands during peak time based on study on carrying capacity of tourist sites.	Halong Bay, Thien Cung, Dau Go, Sung Sot, Ti Top	<ul style="list-style-type: none"> <li>Review of data on the number of tourist boat visiting major islands</li> <li>Survey on tourist boat at jetty of major islands during tourist peak season and peak time.</li> <li>Consideration of max. capacity (number) of tourist boats based on existing condition of jetty and its facilities</li> <li>Preparation of operation and management plan</li> <li>Implementation of control and safety management for tourist boat based on operation and management plan</li> </ul>	HBMD, tourist boat	Control of tourist boat access and boat stay areas at major islands at peak time will reduce direct impact to sea water and nature environment around and in the major islands. It also contributes sustainable management of tourism resources.	HBMD	Short term	Government (Quang Ninh PPC)	Emergency/needs: A Realization: B Sustainability: B Total: B+
Approach 3-2: Strengthen of environmental protection for people in floating fishing villages	Measure 3-2-1: Training on use of wool knitted scourer, sorting waste and composting waste for floating villages	Workshop on introducing wool knitted scourer and composting waste for floating fishing villages were conducted by JICA Grass root project in cooperation with Women's Union. Using wool knitted scourer is to reduce using amount of water for washing dishes and detergent, and is less impact on water environment as well as to contribute for protection environment. Composting organic waste from fishing villages is to reduce the volume of waste and the volume of transporting waste from fishing villages to waste dumping sites in Halong Bay and a composting factory at inland area. These activities are feasible measures to reduce negative impact on water environment and help to protect environment of Halong Bay by floating villages.	Floating villages (Ba Ham, Vong Vieng, Cua Van and Cong Dam)	<ul style="list-style-type: none"> <li>Evaluation of activities on wool knitted scourer, sorting waste and composting waste supported by JICA Grass root project</li> <li>Preparation of training programs on activities</li> <li>Purchasing materials for training programs</li> <li>Conduct trainers training by responsible organizations/groups</li> <li>Conduct workshop for each activities at floating villages</li> </ul>	Villagers	Reduce impact to sea water and fishes by discharging washed water and also volume of water for washing, which can also reduce expenditure for water.	Women's Union, HMBD, Villagers	Short term	Government (Quang Ninh PPC)	Emergency/needs: B Realization: A Sustainability: A Total: A-
	Measure 3-2-2: Lecture on environmental protection and activities for fishing villages	People on floating villages are lack of knowledge and awareness on environmental protection in Halong Bay. A part of activities for enhancement of awareness on environmental protection in Halong Bay, an importance and necessity of environmental protection in Halong Bay was taught for elementary school pupil by JICA Grass Roots project. Enhancement of awareness on environmental protection is important not only for school children but for adults and women in floating villages. Therefore, continuous efforts on providing lecture on environmental protection for villages are indispensable.	Ditto	<ul style="list-style-type: none"> <li>Preparation of themes and contents by theme for lecture</li> <li>Preparation of presentation materials for lecture</li> <li>Development of materials using lecture</li> <li>Preparation of lecture schedule</li> <li>Implementation of lecture</li> </ul>	Villagers	Knowledge and awareness on environmental protection for villagers in floating villages are enhanced. Activities on environmental protection by villagers are promoted.	HBMD, Halong Environmental Education Association, NGO, University	Short/Mid/Long term	Government (Quang Ninh PPC)	Emergency/needs: B Realization: A Sustainability: A Total: A-
	Measure 3-2-3: Monitoring of sea water quality by using secchi disk	Secchi disk is a tool for monitoring sea water quality by measuring water transparency and turbidity. Trainings on monitoring of water transparency and turbidity by using secchi disk were conducted by JICA Grass root project at fishing villages in Halong Bay. It is important to measure transparency and turbidity of sea water around floating village for monitoring water quality in Halong Bay. This activity will keep collecting data on water transparency and turbidity around floating villages and enhance awareness on environmental protection. Monitoring of transparency of water using secchi disk should be more promoted at floating villages.	Ditto	<ul style="list-style-type: none"> <li>Provision of secchi disk and materials for keeping records</li> <li>Preparation of training plan and schedule for monitoring of sea water using secchi disk</li> <li>Conduct training programs on secchi disk for villagers</li> </ul>	Ditto	Monitoring data contributes for analysis of water quality (water transparency and turbidity) and aware of importance of water quality in Halong Bay for villagers.	HBMD, Villagers	Short/Mid/Long term	Government (Quang Ninh PPC)	Emergency/needs: B Realization: A Sustainability: B Total: B+
Approach 3-3: Improvement of local waste water treatment facilities with proper management	Measure 3-3-1: Upgrading operational capacity of local waste water treatment facility and sewerage collection system	There are currently two waste water treatment plants in Cai Dam (Bai Chay) and Ha Khanh wards of Halong city. However, the total capacity of the facilities is not sufficient to handle the existing level of waste water drainage in the city, particularly Bai Chay tourist area dues to exceeding number of lodging and other tourist facilities. Current drainage system in Bai Chay is designed without separation of surface water which causes overload of operational capacity especially during heavy rains. To solve these issues, upgrading of operational capacity of waste water treatment facility by development of new waste water facility and improvement of drainage system in coastal areas in Halong City are indispensable.	Bai Chay and Ha Khanh wards, other areas in Halong City	<ul style="list-style-type: none"> <li>Survey on operational conditions of the existing waste water treatment facilities in Halong</li> <li>Survey at sources of waste water</li> <li>Develop the investment project for approval management)</li> <li>Planning and design</li> <li>Conduct improvement work and construction works</li> <li>Operation and maintenance of the facilities</li> </ul>	Local households and tourism businesses in Halong City	Waste water will be collected and handled more thoroughly that reduce pollution, especially in Bai Chay tourist area.	DOC, Halong City	Short/mid term	Government (DONRE), ODA Loan	Emergency/needs: A Realization: A Sustainability: A Total: A

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 3-4 Strengthen inspection and monitoring of pollution level at sea port and anchoring sites in Halong Bay	Measure 3-4-1: Development of guideline of inspection and monitoring of tourism resources and pollution level at tourist sites, wharf and jetties and anchoring sites in Halong Bay	According to result of water quality monitoring by WG-1 in cooperation with EMAC and HBMD, water quality at tourist jetty for Thien Cung cave and Tuan Chau Island were degraded and impacted to tourism activities. Due to increasing number of cruising tours by tourist boat for visiting these areas, water environment at jetty and anchoring sites in Halong Bay will be expected more degraded and polluted. The same degraded tourism resources have been found in the region. Under the these circumstances, it is necessary to prepare guideline for inspection and monitoring of pollution level as well as monitoring system for sustainable management of tourism resources and sites at main tourist sites, tourist wharf, jetty and anchoring sites and conduct regular inspection and monitoring of water quality based on the guideline. The framework of guideline needs to be discussed WG-1.	Bai Chay Tourist wharf, Jetties and anchoring sites and other tourism sites in Halong Bay	<ul style="list-style-type: none"> <li>Method of inspection and monitoring activities</li> <li>Sampling site</li> <li>Parameters for sample analysis</li> <li>Information sharing among concerned agencies</li> <li>Workshop on monitoring and evaluation of tourism resources, tourism sites and facilities</li> <li>Identification of prevention and solution measures for pollution sources and factors</li> <li>Schedule for inspection and monitoring</li> </ul>	HBMD, DONRE, tourist boat, tourist	HBMD and DONRE can conduct efficient inspection and monitoring of water quality and reduce impact to water by tourist boats and other factors. - Establishing system to avoid further damage of tourist facilities and sites and maintain tourist facilities and sites, monitoring and evaluation data contribute for improvement of tourist facilities and sites, and identification of potentials for development of tourism product	HBMD and DONRE	Short term	Government (Quang Ninh PPC)	Emergency/needs: A Realization: A Sustainability: A Total: A
	Measure 3-4-2: Training of inspection and monitoring activities based on guideline	Inspection and monitoring activities for Halong Bay are conducted mainly by HBMD, DONRE and Environmental Police Dept. After the guideline is prepared, allocation of sufficient number of staff for inspection and monitoring activities, and training for inspection and monitoring staff needs to be planned and conducted by HBMD and DONRE based on the guideline.	Bai Chay Tourist wharf, Jetties and anchoring sites in Halong Bay	<ul style="list-style-type: none"> <li>Preparation of training plan for inspection and monitoring activities</li> <li>Preparation of training manual</li> <li>Purchase of equipment for training program</li> <li>Holding training workshop for inspection and monitoring activities</li> <li>Training by OJT (Inspection, monitoring and sample analysis)</li> </ul>	HBMD, DONRE	Improve technique and knowledge for inspection and monitoring for staff in charge of inspection and monitoring	HBMD, DONRE	Mid term	Government (Quang Ninh PPC)	Emergency/needs: B Realization: A Sustainability: B Total: B+
	Measure 3-4-3: Reporting monitoring and inspection data and information to relevant departments and boat companies	After collected inspection and monitoring data are analyzed, these data and information shall be put in database, provided and shared among relevant departments and boat companies. Reporting results of inspection and monitoring data on water quality to relevant departments and boat companies will inform current situation of water quality in Halong Bay and enhance awareness of protecting water environment for relevant departments and boat companies.	Designated place for information provision and reporting to be decided by DONRE and HBMD	<ul style="list-style-type: none"> <li>Compilation of analyzed data and information</li> <li>Data input in the database</li> <li>Summary of analyzed data and information</li> <li>Preparation of reporting system</li> <li>Reporting and information provision</li> </ul>	HBMD, DONRE, tourist boat	Reporting of analyzed results of monitoring and inspection helps to identify negative impacts on water environment and sustainable management of Halong Bay	HBMD, DONRE	Mid/Long term	Government (Quang Ninh PPC)	Emergency/needs: B Realization: B Sustainability: A Total: B+

## Strategy 4 Development of Sustainable Tourism Products

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 4-1 Development of ecotourism program	Measure 4-1-1: Development of eco tour to Trang Luoi Liem and Hon Quyen Rong, Ba Ham Lake	Trang Luoi Liem is an island with unspoiled white sandy beach. Hon Quyen Rong is an island with white sandy beach and access to karst lake. Two islands are located near Vong Vieng floating village and easy access and landing. Ba Ham Lake is a "closed lake" surrounded by limestone mountains and forests on Dau Be Island with beautiful landscape and flora and fauna, and habitat of golden hair monkey and flying squirrel. These islands have potential sites for development of eco tour.	Trang Luoi Liem and Hon Quyen Rong and Ba Ham Lake	<ul style="list-style-type: none"> <li>Conduct detailed site survey</li> <li>Evaluation of tourism resources and nature environment</li> <li>Preparation of possible eco tour programs</li> <li>Development of ecotourism attractions and activities</li> <li>Provision of required facilities and improvement for operation of eco tour, including environmentally friendly accommodation and transportation facilities</li> <li>Training of eco tour narrator</li> <li>Establishment of organization structure for operation and management</li> <li>Implementation plan for eco tour</li> <li>Preparation and conduct pilot eco tour for inviting tourism related stakeholders (DCST, local gov., tour operators, tourist boat operators, local communities) and tourists</li> </ul>	Local communities, HBMD, tour operators, tourist	Trang Luoi Liem and Hon Quyen Rong, Ba Ham Lake become ecotourism site for domestic and foreign tourists with enjoy sandy beaches, small trekking and exploring beautiful nature scenery by kayaking.	HBMD and tourist boat company	Short/mid term	Private (boat companies, tour operators) and Government (HBMD)	Emergency/needs: B Realization: C Sustainability: A Total: B
	Measure 4-1-2: Development of community based ecotour in Cong Dam area, Cua Van, Vong Vieng (floating villages)	In Cong Dam, Cua Van, Vong Vieng areas, there are floating fishing villages with beautiful scenery of surrounding islands. Green Halong Environmental Program has been carried out by tourist boat company, Indochina Junk since 2009 with support of villages in Cong Dam. This program includes mangrove planting, garbage collection, demonstration of traditional fishing, boat tour by villager. In addition to Cong Dam fishing village, other fishing villages and their surrounding areas are suitable for further development and promotion of community based tourism including development of handicraft, traditional fishing and cultural activities.	Cong Dam area, Cua Van, Vong Vieng	<ul style="list-style-type: none"> <li>Conduct detailed site survey</li> <li>Evaluation of tourism resources and nature environment</li> <li>Preparation of possible ecotour programs</li> <li>Development of ecotourism attractions and activities</li> <li>Provision of required facilities and improvement for operation of eco tour, including environmentally friendly accommodation and transportation facilities</li> <li>Training of ecotour narrator</li> <li>Establishment of organization structure for operation and management</li> <li>Implementation plan for ecotour</li> <li>Preparation and conduct pilot ecotour for inviting tourism related stakeholders (DCST, local gov., tour operators, tourist boat operators, local communities) and tourists</li> </ul>	Communities in Cong Dam, Cua Van, Vong Vieng, tourists, HBMD, tourist boat companies	Cong Dam area (floating fishing village) becomes attractive ecotour destination for tourist visiting fishing village, caves and mangrove planting areas and experience life of traditional fishing village. Other fishing villages (Cua Van, Vong Vieng) are also attracted community based ecotour areas for foreign and domestic tourists. Income of Cong Dam and other fishing villages will increase through ecotour.	HBMD and tourist boat company in cooperation with Cong Dam, Cua Van, Vong Vieng villages	Short/mid term	Private (boat companies, tour operators) and Government (HBMD)	Emergency/needs: B Realization: B Sustainability: C Total: B-
	Measure 4-1-3: Development of community based ecotour at Yen Lap Lake and Loi Am Mountain area	Yen Lap Lake was created by construction of dam in this area, which is good access from National Road 18. Loi Am Mountain is accessed by boat on Yen Lap lake. Main tourism resources and attractions in Loi Am Mountain are a green forest, pineapple trees, Loi Am Pagoda situated on the top of mountain and trekking in the forest. Local villages living in this area offers grilled chicken for visitors. This area has a potential for development of community based eco tour with involvement of local community.	Yen Lap Lake and Loi Am Mountain, Halong city	<ul style="list-style-type: none"> <li>Conduct detailed site survey</li> <li>Evaluation of tourism resources and nature environment</li> <li>Preparation of possible community based ecotour programs</li> <li>Development of community based ecotourism attractions and activities</li> <li>Provision of required facilities and improvement for operation of community based ecotourism facilities, including homestay, B&amp;B and local tour guides and programs</li> <li>Establishment of organization structure for operation and management</li> <li>Implementation plan for community based ecotourism development program</li> <li>Preparation and conduct pilot community based ecotour for inviting tourism related stakeholders (DCST, local gov., tour operators, tourist boat operators, local communities) and tourists</li> </ul>	Local communities, tour operators, tourist, DCST	Yen Lap Lake and Loi Am Mountain area becomes a popular community based ecotour site in Halong city with enjoying beautiful scenery of lake and mountains, trekking in forest, and reaching to Loi Am Pagoda, guided by local guide. Possible to provide activity of pineapple tree in the forest.	DCST, Halong city in cooperation with local community	Short/mid term	Private (tour operators) and Government (DCST)	Emergency/needs: A Realization: B Sustainability: B Total: B+
	Measure 4-1-4: Boat tour in mangrove area with mangrove planting in Quang Yen and Bai Chay bay	Vast mangrove areas are still remaining in Quang Yen town and Bai Chay bay, Halong area. Mangrove areas is a suitable place for development of ecotour programs with combination of riding traditional boat and kayaking and mangrove planting and learning of ecosystem of mangrove area. Ecotour in mangrove area can enhance an importance of protecting mangrove area in Halong area for local people and tourists and help to increase mangrove area. Mangrove area can be seen in various birds so that it is good place conducting the bird watching.	Mangrove areas in Quang Yen town, Bai Chay bay	<ul style="list-style-type: none"> <li>Conduct detailed site survey</li> <li>Evaluation of tourism resources and nature environment</li> <li>Preparation of possible ecotour programs</li> <li>Development of ecotourism attractions and activities</li> <li>Provision of required facilities and improvement for operation of ecotour, including environmentally friendly accommodation and transportation facilities</li> <li>Training of ecotour narrator</li> </ul>	Local communities, tour operators, tourist, DCST, DONRE	Mangrove boat tour becomes one of ecotour programs in Halong area. Tourists can learn importance of mangrove and its ecosystem. Local community has opportunity to engage operation of mangrove tour and expects to increase income through mangrove tour.	Quang Yen town, Halong city, local community in cooperation with tour operator	Mid term	Private (boat companies, tour operators) and Government (HBMD)	Emergency/needs: B Realization: A Sustainability: A Total: A-

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
				<ul style="list-style-type: none"> <li>Establishment of organization structure for operation and management</li> <li>Implementation plan for ecotour</li> <li>Preparation and conduct pilot ecotour for inviting tourism related stakeholders (DCST, local gov., tour operators, tourist boat operators, local communities) and tourists</li> </ul>						
	Measure 4-1-5: Study tour for unique values of Halong area (landscapes, geography, geomorphology, biodiversity, culture and history)	Halong area has various natural, marine, cultural and historical resources. Existing tourism resources can be created as study tour for students and foreign tourist with support of guiding by professionals and academic researchers.	Me Cung, Master Cave, cultural sites, monuments and forests in Halong area	<ul style="list-style-type: none"> <li>Conduct detailed survey on tourism resources</li> <li>Plan of study tours with concerned departments and organizations</li> <li>Preparation and conduct pilot study tour for inviting concerned stakeholders</li> <li>Operation and management for study tour</li> <li>Marketing of study tour</li> </ul>	Local communities, Vietnamese students and foreign tourists	Students and foreign tourists can learn and understand nature, historical and culture of Halong area through study tours. Nature, historical and cultural values of Halong area will be enhanced by study tour.	HBMD, DCST in cooperation with relevant local gov.	Mid/Long term	Private (boat companies, tour operators) and Government (HBMD)	Emergency/needs: B Realization: B Sustainability: B Total: B
	Measure 4-1-6: Development of nature and educational boat tour by tourist boat company	Halong Bay has a high potential for ecotourism development, particularly ecotours by boat. However, there are currently limited boat companies specialized in this type of business; most of them offer boat cruising tours to main attractions and destinations in the bay. Ecotours by boat would allow geo-travellers (environmental conscious tourists) to explore and appreciate the beauty and outstanding values of natural tourism attractions in the bay, thus contribute to environmental education and conservation efforts. Ecotours by boat are considered as one of sustainable tourism products to be developed promoted by boat companies with support of floating villages in Halong Bay.	Cong Dam area, Trang Luoi Liem, Quyen Rong, Ba Ham, Cua Van, Vong Vieng	<ul style="list-style-type: none"> <li>Conduct detailed site survey</li> <li>Evaluation of tourism resources and nature environment</li> <li>Preparation of possible cruising ecotour programs</li> <li>Development of ecotourism attractions and activities.</li> <li>Identify boat companies for supporting and participating ecotour</li> <li>Training of ecotour narrator</li> <li>Implementation plan for ecotour</li> <li>Preparation and conduct pilot ecotour for inviting tourism related stakeholders (DCST, local gov., tour operators, tourist boat operators, local communities) and tourists</li> </ul>	Halong Boat Association, boat companies, local people of floating villages	Ecotour by boat becomes one of ecotour programs in Halong area. Tourists can learn importance of ecosystems and other natural values of local tourism attractions in the bay. Local community has opportunity to engage operation of eco boat tour and expects to increase income through the tours.	Halong Boat Association, boat companies, local people of floating villages	Mid term	Private (boat companies, tour operators) and Government (HBMD)	Emergency/needs: B Realization: B Sustainability: A Total: B+
Approach 4-2 Creation of tour network	Measure 4-2-1: Development of tour programs combining existing and new tourism sites in Halong area and its surrounding areas	There are many tourism resources, sites and attractions in Halong area. However most of local and foreign tourists visit only major tourist sites such as Halong Bay area and Yen Tu in Uong Bi City. The length of stay for tourists in QN is less than 2 days. Tour program combining various tourist sites have not been developed and promoted in QN. Development of tour program combining various tourist sites can extend the tourist's length of stay in Halong area and reduce congestion of tourist in Halong Bay during the tourist peak season as well as increase revenue from tourism in other areas within the tour routes by tourist visiting tourist sites in the tour programs.	Halong area and other tourism areas in QN	<ul style="list-style-type: none"> <li>Conduct survey on existing tour programs and tourist sites in Halong area and its surroundings</li> <li>Evaluation of tourism resources, tourism attraction, tourism infrastructure and natural environment</li> <li>Development of possible tour programs combining tourist sites</li> <li>Preparation of plan for upgrading and improvement of visiting sites for operation of tour programs</li> <li>Development of signage and tourism resource interpretation board in various language at sites</li> <li>Preparation of tour brochure</li> <li>Preparation and conduct monitor tour for new tours programs for inviting tourism related stakeholders (DCST, local gov., tour operators, local communities)</li> <li>Implementation plan and guideline of tour programs</li> <li>Marketing and promotion of developed tour programs by DCST in coordination with local gov., local tourism business operator and local communities</li> </ul>	Local communities, tour operators, tourist, DCST	Tour program with combining tourist sites increases length of stay for local and foreign tourist in Halong area (Foreign tourist: 2 days -> 3-4days) The tour program increases the number of tourist visiting tourist areas outside of Halong city and economic benefit through tourism In addition, cooperation among local governments and local tourism business sectors are strengthening in terms of promotion of local tourist sites and receiving tourists.	HBMD, DCST in cooperation with relevant local gov. and tour operator, local communities	Short/Mid term	Government (DCST) and private	Emergency/needs: B Realization: A Sustainability: B Total: B+
Approach 4-3 Establishment of nature and ecotourism narrator certification and training system	Measure 4-3-1: Training and issue of certificate for Halong Ecotour narrator	In the current tourism guide license, there is no guide license specified for nature and ecotourism. Besides existing guide license, for promoting eco tourism in Halong, it is necessary to establish nature and eco tourism narrator certificate scheme by DCST in cooperation with concerned departments. Local people have an opportunity to become nature and eco tourism narrator, which helps to increase income for local people. After the nature and eco tourism narrator certification system is established, responsible agency (DCST) or other organization authorized by DCST, has to conduct training programs for the nature and eco tourism narrator for issuing the certificate.	Halong area	<ul style="list-style-type: none"> <li>Review of current tour guide license system</li> <li>Review of nature and ecotourism guide training and certification programs</li> <li>Design of nature and ecotourism narrator certification system</li> <li>Development of training program and exam for ecotour narrator</li> <li>Preparation of trainers' ecotour narrator training manuals</li> <li>Advertizing narrator training programs by responsible agency</li> <li>Preparation of detailed training programs including training materials and schedule.</li> <li>Budget allocation and fee for training and certification</li> <li>Implementation of narrator training</li> <li>Provision of the ecotour narrator certificate</li> </ul>	Local communities, DCST, HBMD	Ecotourism tour is secured in term of service quality and guiding skill by establishment of nature and ecotourism narrator. Quality and contents of nature and ecotourism tours are improved. Interpretation, operation and management for nature and ecotourism tour will be secured. Increase employment and income of local communities by training of nature and ecotourism narrator.	DCST, HBMD, University, training institutions	Short/Mid term	Private (boat companies, tour operators) and Government (HBMD)	Emergency/needs: A Realization: A Sustainability: A Total: A

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 4-4 Training on ecotourism product development and marketing for local tourism business	Measure 4-4-1: Preparation of standard guideline for development, operation and marketing of ecotourism product for local tourism business	Most of ecotourism activities such as kayaking, swimming, cave exploring, nature trekking on islands are planned, organized and implemented by boat companies with support of local communities at floating villages in Halong Bay. There is not standard guideline and regulation on operation, management and marketing of eco tourism products for local business operators. To encourage local tourism operators and communities for participating ecotourism product development, it is necessary to develop standard guideline on development, operation, management and marketing of eco tourism products.	Halong area	<ul style="list-style-type: none"> <li>Confirmation of current situation of eco tourism products</li> <li>Needs assessment for development, operation and marketing of ecotourism product development</li> <li>Preparation of draft guideline for development, operation and marketing</li> <li>Comments on draft guideline by local tourism operators and relevant departments</li> <li>Formulation of the guideline for development, operation and marketing of ecotourism product development</li> <li>Workshop on presenting guideline for development, operation and marketing of ecotourism product development</li> </ul>	Local tourism business, HBMD, DCST, Quang Ninh Tourist Association, boat companies	The guideline helps to develop, operate and marketing of ecotourism products for local tourism business operators, travel agents and boat companies.	HBMD, DCST, local gov. authorities	Short/mid term	Private tourism enterprises), Government (DCST)	Emergency/needs: B Realization: A Sustainability: B Total: B+
	Measure 4-4-2: Seminar and workshop for development, operation and marketing of ecotourism product for local tourism business	To promote eco tourism product development by local tour operators, boat companies, communities with support of DCST, QN Tourism Association and local NGOs, seminar and workshop on operation and marketing of eco tourism product development should be planned and held.	Halong area	<ul style="list-style-type: none"> <li>Preparation of agenda and schedule for seminar and workshop</li> <li>Confirmation of lectures and eco tourist expert</li> <li>Preparation of material for seminar and workshop</li> <li>Arrangement of venue and sending invitation letters</li> <li>Implementation of seminar and workshop</li> </ul>	Ditto	Seminar and workshop will contribute to encourage for development, operation and marketing of ecotourism product by local tourism business operators. The number of ecotourism products will be increased and the ecotourism products will be diversified in Halong area.	HBMD, DCST	Mid term	Private tourism enterprises), Government (DCST)	Emergency/needs: B Realization: A Sustainability: B Total: B+
Approach 4-5 Development of tourism products with utilizing local resources	Measure 4-5-1: Development of local original tourism products with design and quality guideline	Current tourism products sold in Halong area are mostly not utilized local materials. Most off those products are coming from other areas and imported from China through the border town of Mong Cai. Tourism products such as handicrafts and souvenirs in Halong area are very limited kinds and not attractive in terms of design and quality for tourist. To increase sales of tourism products in Halong area, it is necessary to identify potential local materials for development of local oriented tourism products in Halong area. It is also necessary to improve design and quality of tourism product by introducing design and development guideline for tourism products in Halong area.	Halong area and other destinations in Quang Ninh province	<ul style="list-style-type: none"> <li>Survey for local tourism product</li> <li>Interview survey with souvenir shop</li> <li>Identification of available and potential materials for development of tourism products</li> <li>Evaluation of design and quality for local tourism product</li> <li>Setting criteria on design and quality standard for local tourism product</li> <li>Quality control system for local tourism product</li> <li>Seminar and workshop for improvement and development of local tourism product</li> <li>Development of design and quality guideline for local tourism product</li> <li>Establishment of committee for operation and management of design and quality guideline for local tourism product</li> </ul>	Souvenir shop, handicraft shop, DCST, Quang Ninh Tourism Association, tourist	Design and quality guideline for local tourism product helps to improve existing local tourism products and develop quality local tourism products by utilizing local resources for local producers and companies. The guideline can control the quality of local tourism products to meet the standard for tourist.	DCST	Short/mid term	Private (trading companies) and Government (DCST)	Emergency/needs: A Realization: A Sustainability: B Total: A-
	Measure 4-5-2: Training program on design, development and marketing for tourism products from utilizing available local resources	Existing local tourism products in Halong area are not sufficient in terms of design, quality, packaging, marketing and promotion. Support program provides technical support and guidance for local craftsman, product producers, shop owners to utilize local materials for development of tourism products, improve and upgrade design, development, marketing and sales promotion.	Ditto	<ul style="list-style-type: none"> <li>Clarification of needs for support on design and product development</li> <li>Preparation of support program on design and product development for utilizing identified local resources</li> <li>Holding workshop on design, product development and marketing for local tourism product</li> <li>Technical and financial support for selected potential local tourism products</li> </ul>	Souvenir shop, handicraft shop, DCST, Quang Ninh Tourism Association, tourist	Design, quality, packaging and utilization of local resources for tourism products by local craftsmen and product producers are improved. Marketing and sales promotion for tourism products by local producers and souvenir shops owners are improved. Attractive and quality local tourism products are developed and promoted in Halong area.	DCST	Mid term	Private (trading companies) and Government (DCST)	Emergency/needs: B Realization: A Sustainability: B Total: B

## Strategy 5 Upgrading Service and Quality of Tourism Facilities and Business

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 5-1 Training on customer services and hospitality for tourism business	Measure 5-1-1: Training on improvement of customer services and hospitality for local tourism business	Halong Bay is the UNESCO World Heritage site and international tourist destination. However, level of customer service and hospitality by managers and staff of low grade hotels, non-star and small guest house, restaurants in Halong city are not meeting requirement for customers due to lack of knowledge and skills on customer service and hospitality. By increasing the number of tourist visiting Halong area, especially Halong City, it is necessary to provide training program for managers and staff of low grade hotels, non-star and small guest house restaurants in Halong city of in order to improve level of customer service, hospitality as well as communication skill in English.	Halong area	<ul style="list-style-type: none"> <li>Needs survey on customers service and hospitality for training targets</li> <li>Preparation of contents for training program for target groups</li> <li>Nomination of trainers and lectures for training</li> <li>Preparation of materials for lecture and training</li> <li>Preparation of action plan for training program and schedule</li> <li>Conduct training programs</li> </ul>	Hotel, guesthouse, restaurant, souvenir shop	By conducting training on customer services and hospitality for manager and staff of small hotel and restaurants in Halong city, level of customer service, hospitality and communication skill in English for those who had training and improve level of satisfaction for customer service by tourist visiting Halong area as a whole.	DCST, Quang Ninh Tourism Association	Short/mid/long term	Private (tourism enterprises), Government (DCST)	Emergency/needs: A Realization: A Sustainability: B Total: A-
Approach 5-2 Introduction of Ecograding system for accommodation (Green Lotus)	Measure 5-2-1: Encouragement of accommodation facilities in Halong area to apply Green Lotus Eco-label	Green Lotus Eco-label is one of environmental protection standard and sustainable development measures using effective resources, energy, contribute to preserve heritage, develop industry, cultural-social locality and sustainable tourism development for applying tourism accommodation in Vietnam. The project for the Green Lotus Eco-label was planned and implemented by Hotel Dept., Ministry of Cultural, Sport and Tourism (MCST) from 2009 to 2012. After the approval of the Green Lotus Eco-label, demonstration of Green Lotus Eco-label will be applied first for 3 to 5 star hotels and then for all accommodation in Vietnam. The Green Lotus Eco-label is one of important measures for contributing sustainable tourism development in Halong area.	Halong city	<ul style="list-style-type: none"> <li>Holding meeting for preparation of guidance with authorized agency</li> <li>Arrangement of guidance (venue, materials, invitation)</li> <li>Customization/ harmonization of the standards/ criteria into the local context</li> <li>Holding workshops to introduce the Green Lotus ecolabel to local accommodation businesses</li> <li>Facilitating registration of local businesses in the ecolabel program</li> </ul>	Hotel, DCST, travel agent	After introducing the Green Lotus Eco-label for accommodation in Halong area, holding guidance on applying Green Lotus Eco-label for hotels in Halong area will encourages understand objectives of the Eco-label and many classified star hotels for applying the Eco-label. It is expected negative impacts to the nature environment for Halong Bay form accommodation will be reduced and enhance awareness of environmental protection and sustainable tourism management and development through the Green Lotus Eco-label for hotel industry.	VNAT, DCST	Mid term	Private (hotel enterprises), Government (DCST)	Emergency/needs: B Realization: B Sustainability: B Total: B
Approach 5-3 Development of Ecolabel "Blue Sail" for tourist boats and controlled operation of tourist boats in Halong Bay	Measure 5-3-1: Finalization of developing Ecolabel for tourist boats in Halong Bay	Development of Eco-label system for tourist boat in Halong Bay was implemented as a pilot project under the JICA Halong Project. Eco-label system for tourist boat is one of important measures for enhancement of environmental protection in Halong Bay and contributing sustainable tourism development in Halong area. However, it is still necessary to conduct further work for legalize the Eco-label system, capacity development for authorized agency for Eco-label and marketing and promotion of Eco-label for tourist boats.	Halong Bay, Halong city	<ul style="list-style-type: none"> <li>Finalization of Eco label for tourist boats in Halong Bay</li> <li>Development of awarding criteria and procedure</li> <li>Formulation and finalization of legalization of Eco label for tourist boats</li> <li>Establishment of committee for awarding</li> <li>Capacity development of authorized agency for Eco label certification</li> </ul>	Tourist boat companies, boat operators, travel agent, DCST, HBMD	Certification system of Eco label for tourist boats in Halong Bay is officially complete and approved by QN PPC.	DONRE, DCST, HBMD	Short/mid term	Private boat enterprises, Government (DCST)	Emergency/needs: A Realization: A Sustainability: A Total: A
	Measure 5-3-2: Recognition of "Blue Sail" tourist boats and propaganda on Ecolabel for tourist boat	After Eco label "Blue Sail "is certified for tourist boats, authorized agency is responsible to monitor for "Blue Sail" tourist boats and award among certified "Blue Sail" tourist boats based on performance of eco label activities and propaganda on Eco label including awarded tourist boats, which are necessary measures for sustainability of Eco label for tourist boat.	Ditto	<ul style="list-style-type: none"> <li>Marketing and promotion of Eco label for tourist boats</li> <li>Nomination and selection of "Blue Sail" tourist boat for awarding</li> <li>Facilitation of evaluation process of the awarding agency</li> <li>Preparation of prize and recognition ceremony</li> <li>Propaganda on recognition of "Blue Sail" tourist boats through mass media</li> </ul>	"Blue Sail" tourist boat operators and companies	Monitoring activities for certified "Blue Sail" tourist boat is able to check the sustainability of eco-label activities by "Blue Sail" tourist boat. Commendation of "Blue Sail" tourist boat will be incentive for active participation of eco label and propaganda for "Blue Sail" Tourist boats. Propaganda on Eco label will increase the number of "Blue Sail" tourist boat. "Blue Sail" eco label will be apply to other areas in Vietnam.	Ditto	Mid/long term	Private boat enterprises, Government (DCST)	Emergency/needs: B Realization: A Sustainability: A Total: A-
Approach 5-4 Upgrading facilities in Halong Bay and Hong Gai area	Measure 5-4-1: Development of tourist information counter and space for presenting feature of Halong Bay by applying audiovisual system in tourist information center at Bai Chay Tourist Wharf	Existing tourist information center (TIC) managed by HBMD at Bai Chay Tourist Wharf is not effectively used as TIC. The TIC basically provides information on crusing tour programs in Halong Bay and unique features of Halong Bay as UNESCO natural heritage site for tourists. Therefore it is necessary to improve its function as TIC.	Tourist information center in Bai Chay Tourist wharf or other designated location	<ul style="list-style-type: none"> <li>Review of required function for tourist information center (TIC)</li> <li>Plan of renovation work of TIC</li> <li>Design of renovation plan</li> <li>Necessary equipment and facilities</li> <li>Cost estimation of renovation work and equipment</li> <li>Preparation of display</li> <li>Implementation of renovation work</li> </ul>	HBMD, DCST, tourist, tour operator,	Tourist can receive information on tourist boat cruising and unique feature of Halong Bay from the tourist information center (TIC) at Bai Chay Tourist Wharf before tourist participating cruising tour. Awareness on environmental protection in Halong Bay for tourist is enhanced by presenting information and activities of environmental protection in Halong Bay at TIC.	HBMD in cooperation with DCST	Mid term	Government (HBMD)	Emergency/needs: B Realization: B Sustainability: B Total: B
	Measure 5-4-2: Installation of display on feature of history,	There is a tourist information center (TIC) in Bai Chay operated by DCST. To enhance function of TIC and provide diversified tourism information on Halong area, TIC should	Tourist information center in	<ul style="list-style-type: none"> <li>Review of required function for tourist information center (TIC)</li> <li>Preparation of improvement plan of TIC</li> </ul>	HBMD, DCST, tourist, tour	Function of TIC will be improved by improvement of TIC. Tourist visiting TIC will receive not only tourist	DCST in cooperation with HBMD	Mid term	Government (DCST)	Emergency/needs: C Realization: B

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
	culture and nature of Halong area at tourist information center in Bai Chay	be improved to provide information of history, culture, nature, tour routes and local tourism attractions in and around Halong area by putting display or audio visual system at TIC.	Bai Chay	<ul style="list-style-type: none"> <li>Collection of necessary information of improvement plan</li> <li>Design of display</li> <li>Necessary materials and equipment</li> <li>Cost estimation of improvement plan and equipment</li> <li>Preparation of display and presentation system</li> </ul>	operator,	information of Halong Bay, but also various information on history, culture and nature, and tour programs in and around Halong area.	and relevant local gov. authorities			Sustainability: B Total: B-
	Measure 5-4-3: Development of roadside station in Bai Chay area	Bai Chay area is limited parking space for tourism transport and private cars for visiting Halong Bay. During tourism peak season and weekend, main road in Bai Chay area is congested with cars and buses which is negative impact to tourist and tourism activities. To reduce traffic and increase parking space, development of roadside station with parking facility along the main street of Bai Chay area. Roadside station is a rest facility for driver and visitors coming to the area including car park, information counter, exhibition space, rest room, meeting hall, restaurant, shop selling local products and souvenir and work place to develop and process local specialty products. The roadside station is multi-function visitor facility and benefit not only visitors but also for local business operators and communities.	Bai Chay (to be selected)	<ul style="list-style-type: none"> <li>Setup working team for development of roadside station</li> <li>Case study on function and design of roadside station</li> <li>Preparation of concept plan for roadside station</li> <li>Feasibility study on development of roadside station</li> <li>Selection of site for development of roadside station</li> <li>Preparation of scope of work for subcontract work</li> <li>Design of basic plan for roadside station (Subcontract work)</li> <li>Review of basic plan by working team, DCST and relevant agencies</li> <li>Design of internal space (information, exhibition, visitor service, meeting rooms, event hall, restaurant and café, shop, toilet) and exterior space (Parking, open space, garden) (Subcontract work)</li> <li>Detailed design of building and infrastructure (Subcontract work)</li> <li>Construction work (building, external space) (Subcontract work)</li> <li>Operation and management plan (Subcontract work)</li> <li>Preparation of staff training plan and conduct training</li> </ul>	DCST, DOT, Tourist, Tourism business operator, local communities	Roadside station becomes a main tourist service facility in Bai Chay area to provide parking space, event space, restaurant, café and exhibition, shops for local products and tourism information in Halong area. Roadside station is benefit for local business and community groups to participate in community development and selling local products at the roadside station. Increase employment opportunity and revenue from selling products.	DOC, DOT, DCST in cooperation with Halong City, other local gov. authorities and tourism business operators	Short/mid/long term	Government (DCST, DOT, Halong City)	Emergency/needs: A Realization: B Sustainability: B Total: B+
	Measure 5-4-4: Improvement of display at small exhibit space for tourist in Vong Vien floating village	Vong Vieng floating village becomes very popular tourist sites for cruising tour. Most of visitors to the village are foreign tourist. Small exhibition space at floating tourist facility at the village has potential tourist facility to serve foreign tourist for presenting local culture, traditions, lifestyle and unique feature of nature environment in Vong Vien. This space is as suitable for presenting an information display on environmental protection and sustainable tourism development of Halong Bay.	Vong Vieng floating tourist facility	<ul style="list-style-type: none"> <li>Review of required display (information, products, photos, etc)</li> <li>Preparation of improvement plan for display</li> <li>Collection of necessary information and display materials</li> <li>Design of display</li> <li>Cost estimation of development of display</li> <li>Preparation of display</li> </ul>	Villagers, operators of facility	Small exhibition space becomes core of tourist facility at Vong Vien floating village. Tourist visiting Vong Vien village understand culture, traditional fishing, lifestyle and unique feature of nature environment in Vong Vien. Additionally, tourist enhances awareness on environmental protection and sustainable tourism development by visiting the exhibition space.	Operator of facility	Short/mid term	Government (HBMD)	Emergency/needs: B Realization: B Sustainability: B Total: B
	Measure 5-4-5: Utilization and updating tourism database at tourism information center including training	Tourism resource database (TRD) system was developed under activities of WG-3. TRD system plans to transfer into the database of DCST for utilizing tourism data at the tourist information center after the project. Before the transferring the TRD to DCST, utilization and updating of TDR including training for operation of TRD need to be discussed with the responsible section of DCST.	Tourist information center in Bai Chay	<ul style="list-style-type: none"> <li>Preparation of TRD utilization and transferring TDR into database of DCST</li> <li>Training on operation and updating data</li> <li>Conduct data collection and survey</li> <li>Updating of TRD</li> </ul>	Tourism information center and section in charge of database (DCST)	Tourism information center can extract and rearrange necessary information and data on tourism resources and facility through TRD. TRD can use for tourist information searching for visitors, preparation of tourist map and brochure and tour programs for TIC.	DCST	Short/mid term	Government (HBMD, DST)	Emergency/needs: B Realization: A Sustainability: B Total: B+
	Measure 5-4-6: Improvement, maintenance and management of toilet facilities for tourist at tourist sites and floating villages in Halong Bay, and Bai Chay area	There are two public toilets at area along Bai Chay beach. These toilets are not properly maintained and sufficient to serve foreign tourists. There were found many defects and no water running at existing toilets at major tourist sites and tourist service facilities in floating villages. Toilet is basic service facility for tourist so that existing toilet facilities should be improved and properly maintained at tourist sites. Additional public toilet should be developed at the area along Bai Chay beach.	Bai Chay area, Titop island, Cua Van and Vong Vieng floating tourist facilities, Thien Cung, Dau Go, Sung Sot	<ul style="list-style-type: none"> <li>Survey on condition of toilet facilities at tourist sites and tourist facilities at floating villages</li> <li>Improvement and management plan for public toilet and signboard</li> <li>Selecting site for additional toilet facility</li> <li>Design of public toilet</li> <li>Cost estimation (design, improvement, development, management)</li> <li>Planning and design</li> <li>Conduct improvement work and construction works</li> <li>Operation and maintenance of toilet facilities</li> </ul>	Tourists, management agency for facility at tour sites, tour operators	Sanitary condition on the Bai Chay beach area and level of satisfaction using toilet facility by tourists will be increased. Clean and maintained toilet facility gives good image on tourist site.	Halong city, facility operators	Short/mid term	Government (DONRE, HBMD)	Emergency/needs: B Realization: B Sustainability: A Total: B+





## Strategy 6 Propaganda and Promotion of Sustainable Tourism

Approach	Measure	Purpose (Reason)	Area/site	Contents (Activities)	Target	Output (Achievement)	Implementing agency/ organization	Implementation schedule	Source of funding	Evaluation
Approach 6-1 Development of brand name and image creation for sustainable tourism destination in Halong area (Halong Bay)	Measure 6-1-1: Development of brand name and slogan of sustainable tourism destination for Halong area	Creating brand name, logo and slogan for sustainable tourism destination of Halong area is one of effective measures to appeal and promote for creating image of Halong area as sustainable tourism destination in Vietnam and overseas.	Halong area	<ul style="list-style-type: none"> <li>Discussion with concerned departments and stakeholders on development of brand name, logo design and slogan</li> <li>Preparation of plan of brand name, logo design and slogan</li> <li>Design of local brand logo (Subcontract to designer)</li> <li>Receiving comments and opinions on design of brand naming, logo and slogan from relevant stakeholders including representative of local communities and tourism business operators</li> <li>Revising and finalization of brand name, logo design and slogan</li> <li>Submission of prepared brand name, logo design and slogan to QN PPC for approval and registration</li> <li>Preparation of regulation on usage of brand name, logo design and slogan and licensing system</li> </ul>	Tourism business companies, DCST, relevant sections at local gov.	Image and attractiveness of Halong area as sustainable tourism destination is enhanced by creating brand name, logo design and slogan for sustainable tourism destination of Halong area. Created brand name, logo design and slogan will be utilized for authorized local tourism product and tour programs, which is beneficiary for tourism product producers, shop owners and tourism business operators.	DCST in cooperation with HBMD and relevant dept. and Halong city and relevant local governments	Short term	Government (HBMD, DCST)	Emergency/needs: A Realization: A Sustainability: B Total: A-
	Measure 6-1-2: Propaganda on media, press conference for brand name, logo and slogan of sustainable tourism destination for Halong area	Brand name, logo and slogan of sustainable tourism destination for Halong area should be given publicity through propaganda on newspaper, TV and magazines and press conference in order to promote image of Halong area as sustainable tourist destination.	Halong city in Halong area, Hanoi and Ho Chi Minh	<ul style="list-style-type: none"> <li>Preparation of plan for propaganda and press conference</li> <li>Design of propaganda on brand name, logo and slogan for medias (Subcontract to designer)</li> <li>Propaganda on brand name, logo and slogan for medias</li> <li>Arrangement of venue for press conference</li> </ul>	Halong area	Halong area will be recognized the tourist destination with sustainable tourism products for travel medias, tourism industries and tourists.	Ditto	Mid/long term	Government (HBMD, DCST)	Emergency/needs: B Realization: A Sustainability: B Total: B+
Approach 6-2 Development of information and data of tourist information on websites for tourist and market needs	Measure 6-2-1: Updating information and data on floating villages, other major tourist sites in Halong Bay on existing website of HBMD	HBMD is responsible for collect and provide information on floating villages and other tourist sites in Halong Bay on the website of HBMD. The current website is limited information on tourism resources including floating villages in Halong Bay. To enhance value of Halong Bay and provide more information on tourism resources for Halong Bay for tourist, HBMD should update information and data of tourism resources, facilities on the website regularly. For updating the information on website, data and information in tourism resource database (TRD) developed under the project can be used.	Halong bay	<ul style="list-style-type: none"> <li>Confirmation of updating data and information</li> <li>Collecting necessary data and information for updating of website</li> <li>Conduct survey on collecting necessary data and information</li> <li>Preparation of data and information for website</li> <li>Updating work for data and information on the website</li> </ul>	HBMD, Quang Ninh Tourism Association, tourism business operators, tourist	Tourist and users will receive update information and data on tourism resources, facilities, tour programs and events through the website. Attractiveness of Halong Bay as UNESCO World Natural Heritage Site will be enhanced by updating website.	HBMD	Short term	Government (HBMD, DCST)	Emergency/needs: B Realization: A Sustainability: B Total: B+
Approach 6-3 Promotion and marketing for Halong area as sustainable tourism destination	Measure 6-3-1: Development of tourism information and promotion materials for tourist and tour company	In Halong area, tourist information materials such as tourist map, brochure and guide book are not sufficient in terms of contents, design, quality, interpretation in other languages. Tourist information materials is used and provided not only tourist but also tourism business operators (travel agents, hotels and transportation companies) for promotion and marketing of Halong area. Therefore, it is necessary to develop various tourism information and promotion materials including tourist map, leaflet of tour programs, tourism resources, and tourism products (handicraft), ecotour and general tour guidebook.	Halong area	<ul style="list-style-type: none"> <li>Preparation of plan and work schedule for development of tourism information materials (Tourist map and leaflet of general tourist information for Halong area, leaflets on area specific information, tourism product, eco tour, activities, DVD)</li> <li>Cost estimation of tourism information materials</li> <li>Preparation of contents and specification of each materials</li> <li>Collecting data and information for development of materials</li> <li>Photo shooting (Subcontract to photographer)</li> <li>Design of information materials (translating foreign languages)(Subcontract to design office)</li> <li>Producing and printing of materials</li> </ul>	Hotels, tour operator, tourists, DCST and HBMD, Quang Ning Tourist Association	By created various tourist information and promotion material, DCST and tour companies can promote Halong area as sustainable tourism destination for various markets and countries. Tourist can have diversified tourism information and tourism attraction including eco tours from tourist information materials. Length of stay for tourists and number of repeater to Halong area will be increased.	DCST, HBMD, relevant local gov. authorities	Short/mid term	Government (HBMD, DCST), Private (tourism enterprises)	Emergency/needs: B Realization: A Sustainability: B Total: B+
	Measure 6-3-2: Promotion on sustainable tourism destination of Halong area through mass media	Using mass medias such as newspaper, TV, magazine for PR is effective measures for promotion of tourist destination in general. Promotion through mass medias should be conducted with taking into consideration of target promoting market for Halong area and timing.	Halong area	<ul style="list-style-type: none"> <li>Preparation of plan for propaganda activities (Selection of mass media)</li> <li>Design and description of PR on sustainable tourism destination (Subcontract to design office)</li> <li>PR (Advertisement) for mass medias</li> </ul>	Ditto	Halong area will be recognized not only UNESCO World Natural Heritage site with enjoying tourist boat tour in Halong Bay but also sustainable tourism destination through PR on mass media. Length of stay for tourist in Halong area will increase.	Ditto	Mid/long term	Government (HBMD, DCST)	Emergency/needs: B Realization: A Sustainability: B Total: B+
	Measure 6-3-3: Holding promotion seminars and events for sustainable tourism destination of Halong area in Halong, Hanoi, Ho Chi Min and other areas	Holding seminars and events are most effective measure for promotion campaign of tourist destination inviting target stakeholders such as MCST, DCST, relevant departments in QN PPC, local governments, tourism business operators, NGOs. Seminars and events should be held in Halong City, Hanoi, Ho Chi Min and other cities in overseas. For holding promotion seminar and event, various promotion materials should be prepared and provided for invitees.	Halong city in Halong area, Hanoi and Ho Chi Minh, other cities in overseas	<ul style="list-style-type: none"> <li>Preparation of contents (activities) and schedule for seminar and event</li> <li>Preparation of promotion materials (posters, banners, PR DVD, brochure, souvenir, etc)</li> <li>Preparation of presentation and exhibition materials for seminar and event</li> <li>Preparation of exhibition space</li> <li>Arrangement of venue and sending invitation letters</li> <li>Confirmation of presenters and lectures</li> <li>Propaganda for seminar and event</li> <li>Implementation of seminar and workshop</li> </ul>	Ditto	Halong area will be recognized as sustainable tourism destination with diversified tourism products. Awareness of environmental protection for Halong area will be enhanced. Investment for sustainable tourism development with partnership of local tourism business will be promoted and increased.	Ditto	Mid/long term	Government (HBMD, DCST)	Emergency/needs: B Realization: B Sustainability: B Total: B

**DISCUSSION RECORD  
ON WORKSHOP FOR OUTPUT-4 - WG-3  
THE PROJECT FOR ENVIRONMENTAL PROTECTION  
IN HALONG BAY**

7 November 2012



---

Mr. YOICHI IWAI  
Chief Advisor  
JICA Expert Team  
The Project for Environmental  
Protection in Halong Bay



---

Dr. HOANG DANH SƠN  
Head of PMB  
Deputy Director of Department of Natural  
Resources and Environment  
Quang Ninh Provincial People's Committee  
The Socialist Republic of Vietnam

In accordance with the Inception Report (Ic/R) for the Project for Environmental Protection in Halong Bay (the Project) in September 2010, the workshop of WG-3, Output-4 was held on 7<sup>th</sup> November 2012 in Meeting Hall B of the Provincial Conference Centre to discuss on Strategy and Measures for Sustainable Tourism Development of Halong Area. The workshop was presided by Dr. Hoang Danh Son, Deputy Director of DONRE, Head of PMB. This is a discussion record describing comments and opinions of the participants in the workshop. The list of attendants and the agenda of the workshop session were attached in Attachment-1 and Attachment-2, respectively.

### **1. Presentation by WG-3**

Mr. Tran Van Thuan, Head of WG-3 on behalf of WG-3 presented the draft Strategy and Measures for Sustainable Tourism Development of Halong Area.

### **2. Comments by participants**

(1) Comments by Dr. Hoang Danh Son, Deputy Director of DONRE, Head of PMB

Dr. Son appreciated the presentation of WG-3 and explained on definition of sustainable tourism development, ecotourism, and proposed the participants giving the comments for completion of the Draft proposal by WG-3.

(2) Comments by Mr. Trinh Dang Thanh, Deputy Director of the DCST

Mr. Thanh appreciated the presentation of WG-3. It mentioned to many state management contents such as institutions and policies as well as the proposed solutions in the future. He had some following suggestions:

- 1) Mong Cai City should be included in the proposal of the WG-3.
- 2) Currently, DCST is assigned by QN PPC to work with the consultants to prepare the Master plan on Tourism Development for period 2012-2020 and direction to 2030. If Phase 2 of the Project is approved, JET should share with DCST for Quang Ninh tourism development.
- 3) Currently, Quang Ninh Province has planned to relocate the floating fishing village living in the Bay for settlements on land. In the future, there are only their production activities on the Bay. Therefore, presentation on the impact by fishing villages on environmental of Halong Bay should be replaced by the impact of infrastructure development on the Bay. Some articles said that foreign visitors have rated the fishing village on the Bay is the most beautiful villages in the World. Therefore, although these fishing villages will be relocated on land but the traditional beauty of their cultural life will be preserved. The Project should refer the direction of QNPPC and show theoretical points to protect this opinion.
- 4) Impact of residential areas living around the Bay belongs to Halong City, Cam Pha City, Van Don District and Quang Yen Town should be mentioned in the presentation. Floating garbage on the Bay is not only from tourists, tourist boats but also from the coastal area. Solutions of propaganda to raise awareness of the people living along the coastal area should be proposed.
- 5) The number of tourist boats in the Bay pretty crowded about 500 boats including more than 100 overnight stay boats with messy operation status is one of the causes of accidents at sea. Therefore, the

number of boats, criteria for tourist boat and enterprises participating in the tourism activities including aesthetic criteria must be planned.

6) Agreed with opinions of Dr. Hoang Danh Son that sustainable tourism development should be based on the four following issues: (i) economic development; (ii) local culture promotion, (iii) interests balance of stakeholders, and (iv) environmental protection.

7) Proposed investment by international organization in environmental protection for Halong Bay

(3) Comments by Mr. Ngo Dinh Dung, Head of Culture and Information, Quang Yen Town

Mr. Dung agreed with the surveys of WG-3. In the short time, WG-3 worked hard seriously to give proposals including strategies and solutions. He suggested that WG-3 should refer to the master plan for tourism development in Quang Ninh Province which is under establishment by international consultant. Some following contents should be added in the draft proposal.

1) Tourism products to suit each type of visitor should be developed.

2) For long term, facilities of quarrying and cement production should be relocated to outside center area of Halong City

3) Anchorage and wharf for tourist boats should be re-planned. Relocation of floating village on the Bay is difficult but need to implement to get the beauty of the Bay.

4) Construction of wastewater treatment plants in coastal areas of Halong City, Van Don, Mong Cai, Uong Bi and Quang Yen.

5) Construction of parking areas to reduce traffic congestion.

6) Construction of standard public toilets at tourist sites of 4 tourist center of the province.

7) The branding name of Quang Ninh tourism as “Green Tourism” should be developed including specific criteria. Responsibility of the local people should be attached in the tourism product for sustainable tourism development.

8) Resources and capital for implementation by the period consists of the central governmental source, local government and business source.

9) Continuing study to expand to four tourism centers of the Province during the period 2013-2015. It should be evaluated and replicated after the ending.

(4) Comments by Mr. Ngo Van Hoi, Deputy Director of the Department of Education and Training:

Mr. Hoi appreciated the efforts of WG-3 in the preparation of proposed strategies and measures for sustainable tourism development. He said that Halong Bay is one of the natural wonders of the World. It is an objective of tourism development and also is an objective of protection. Therefore, it is difficult to value preservation of Halong Bay. Some following contents were suggested by Mr. Hoi:

1) The measures to solve the problems due to increasing tourists in Halong Bay

2) Strategies should mention to other tourism areas of Quang Ninh to connect with Halong tourism area in future. Tourism products and the measures in spiritual tourism areas in Dong Trieu District and Uong Bi City should be develop. It is an important factor to extend the stay time of the tourists.

3) When a new road section connecting National 18A to Road 5B is completed, the travel time from Hanoi to Quang Ninh will be shortened. The overnight stay time of visitors can be reduced but luxury

tourists may be increased at the same time. This effect should be analyzed by the Project.

4) WG-3 should collaborate with Hai Phong City to develop sustainable tourism in the Halong - Cat Ba area.

5) Fishing village relocation has not mentioned in the presentation. It is necessary to improve role of local people in production and introduction of local products to create the new products for tourists.

6) Development of stopover stations. The necessary information or instruction for visitors and promotion contents for Halong can be placed in the stations or in the waiting house before boarding.

7) For quality enhancement of service products, the management of boats operation in the harbors and anchorages should be strengthened.

8) Expanding international cooperation for sustainable development of tourism of Quang Ninh.

9) We would like JICA to study further and cooperate with Quang Ninh in the development of eco-tourism because Japan has experience in this field.

(5) Comments by Mr. Tran Thanh Tung, Expert of DONRE, WG-1 member

Mr. Tung agreed with the methodology and the approaches of WG-3. The proposal is in accordance with the context of Quang Ninh Province when it is moving from brown development into green development to promote its infinite value. Some following contents should be added in the proposal:

1) Evaluation of the role of tourism sector in the economic development of Quang Ninh Province

2) Assessment of challenges, conflicts of socio-economic development for environmental protection in Quang Ninh. For this content, WG-3 should refer to the documents of the Master Plan on Economic and Social Development in Quang Ninh.

3) Use of modeling methods to evaluate the impact of the tourism products and tourism type on the environment of Halong Bay.

4) Implementation organization of measures such as the resolution of housing and jobs for fishermen when they are replaced to live on land.

5) Advocacy and socialization strategy of sustainable tourism development. Basically, tourism activities related to individuals and private company. The tourists and local people are individuals.

6) It should be divided into periods to implement the strategies and measures.

(6) Comments by Mr. Nguyen Lam Nguyen, Head of Cultural-Social & Tourism Division, DPI

1) Some documents and plans of Quang Ninh that are referred by WG-3 to the draft proposal have adjusted and amended. Therefore, WG-3 should refered the amended and new documents. For example, Decision No. 2178 dated 28<sup>th</sup> August 2012 of the People's Committee of Quang Ninh Province on the relocation of fishing villages on the Bay. DPI presided to appraise the relocation of fishing village. The relocation must be completed on 31<sup>st</sup> May 2014. The compensation and resettlement option were prepared fully by QN PPC.

2) Some works and constructions that have been completed and will be developed such as Cultural Center, City Square at Coc 3, Library and Ecological Museum on the eastern Halong will reduce density of tourists in Bai Chay area.

3) The function of tourism business and services will be separated from the duties of the HBMD. This will change the role of HBND in some measures in the Proposal.

(7) Comments by Mr. Tadashi Suzuki, JICA Vietnam office

- 1) Each strategy and measure plays the important role in the proposal. After finalization, the proposal will be submitted to QN PPC for approval and implementation. Therefore, feasibility and priority of the each strategy and measure must be considered.
- 2) It is necessary to analyze the effectiveness and costs for implementation of the measures.

(8) Comments by Mr. Ha The Nam, Deputy Director of the Department of Science and Technology

- 1) Mr. Nam appreciated the draft proposal by WG-3. It fits with the trend of social-economic development of Quang Ninh. After approval, it will be a legal basis to Quang Ninh for tourism development in short, medium and long terms.
- 2) In addition to increasing tourists, the population growth is also an obstacle factor for sustainable tourism development in Halong area.
- 3) In fact, in addition to HBMD, there are many other agencies involved in the Halong Bay management. Quang Ninh should have an agency for overall management to carry out several tasks in different agencies for Halong Bay.
- 4) It is necessary to strengthen the check, inspection and sanctions to handle strictly the violations of environmental protection.
- 5) Regulation development for eco-tourism implementation
- 6) Operation of fishing, aquaculture, coal mining, cement production, power plants impacts strongly on the environment of Halong Bay. It must be assessed properly. The measures should be proposed to manage these issues.

(9) Comments by Mr. Vu Ngoc Than, Deputy Director of the Management Board of Bai Tu Long National Park

Mr. Than agreed with the proposal of WG-3. The approach is concrete and feasible.

- 1) However, he suggested that to reduce the load for Halong, Hoang Bo and Van Don should be includes in the proposal.
- 2) Measures for treatment of environment effects from surrounding areas should be proposed.
- 3) Propaganda program to raise awareness for the people and supervision as well as handling should be considered.
- 4) Implementation mechanism should be proposed in the representation.

(10) Comments by Ms. Nguyen Thi Bao, Chairman of Quang Ninh Tourism Association

Ms. Bao agreed to the proposal of WG-3. It is suitable for the development of the tourism industry. She suggested some following contents:

- 1) The criteria for the classification of hotel, including the criteria for clean energy use and fuel should be developed.
- 2) Focusing on development of Institutional frame.

- 1) Criteria development of green hotel
- 2) The number of tourist boat should be planned.
- 3) Strengthening measures to check and handle the violations of the environment. At the moment, some restaurants discharge directly the waste into the bay.
- 4) Improving the dissemination and mobilization as well as education for communication.
- 5) For development strategy of tourism products, in order to reduce the load of visitors to Halong, Halong area should include neighboring areas. Eco-tourism area should include the Ngoc Vung and Quan Lan islands.

(11) Comments by Ms. Vu Thi Hang, expert, Tourism Section, QN PPC

- 1) Tomorrow, a meeting of QN PPC will be conducted to collect the comments to finalize the draft environment development for tourism business and management of tourism activities in the Bay. WG-3 should update more information from the meeting.
- 2) The draft mention the zoning, however, the statistics are weak.
- 3) Development of evaluation criteria for strategies and measures implementation.

(12) Comments by Ms. Nguyen Thi Kim Thai, Chief Editor of Radio & Television of Halong City

- 1) Currently, price of overnight stay tour on the Bay is very high. It is only consistent with international visitors and not attractive the domestic tourists.
- 2) The quality of tourism services in Halong is not high. It depends on three factors: service people, quality, and tourism route.
- 3) Planning to move fishing villages in Halong Bay on land is a pity. Fishing villages on the Bay is as a tourism resource. Visit to fishing village on the Bay is a unique tourism product which is very precious. Many foreign tourists have enjoyed the visiting. Besides, the fishermen used to live on the sea in many generations. Therefore, we should strengthen more management rather than relocation.
- 4) Organization of eco-tours, mangrove-tours and spiritual tourism is very interesting. However, strategy to improve the guides and training as well as develop information centers should be proposed to provide information to visitors.

(13) Comments by Mr. Nguyen Dinh Chien, Head of Tourism Resources Development, DCST

Mr. Chien appreciated and thanked JET for supporting to WG-3. This is a publication for tourism Quang Ninh sector to reference. He suggested that facilities of sea transportations, fishing and aquaculture and seafood processing as well as other factors are obstacles for sustainable tourism development. Some measures should be suggested in the Proposal.

(14) Explanation by Mr. Go Kimura, JET:

- 1) Measure 3-1-1 is proposed to solve the problem in increasing tourists in the tourism sites.
- 2) Thanked for comments by representatives of the DCST about management regulation for tourist boats. We will refer to it.



3) Thanked for comments by participant on the development of eco-tourism. We understand that in order to implement this proposal, it is necessary to have the cooperation of all related levels, departments and as well as the people living in surrounding areas.

(15) Comments by Mr. Senro Imai, Team leader of the Terminal Evaluation Mission of JICA

1) Mr. Imai appreciated the proposal of WG-3 with large quantities of rich content including 6 strategies and 40 measures. This is meaningful work. He would like to know the feedback from the QNPPC for proposal approval soon. However, two following things should be considered: (i) Priority order for proposals. The more necessary measures should be put in the top and (ii) Consider the feasibility and appropriateness of each measure.

2) WG-3 coordinated with other groups in the project, such as collaboration with WG-2 in the development of ecotourism in the CEPC. However, the feasibility should be considered in detail.

(16) Comments by Mr. Yoichi, Iwai, Team leader of JICA Expert Team

1) In order to develop the sustainable tourism in Halong Bay, the safety factor for tourists must be considered before the environmental protection factor.

2) To promote and maintain the well-known value of the World Natural Heritage Site of Halong Bay, the development of brand name of Halong tourism must be proposed by WG-3.

3) The spiritual tourist areas in the Dong Trieu and Uong Bi should be integrated with 22 tourism resources that are investigated to create the sequence of tourism sites in the area.

4) The plan for tourism development is under completion, JET would like the proposal to be integrated in the provincial planning.

### **3. Conclusion by Dr. Hoang Danh Son**

(1) Thanked the Japanese Experts for supporting WG-3 to make this proposal. Thanked to participants and their comments to the draft proposal.

(2) The draft proposal will be completed based on comments by participants soon to submit to QNPPC.

The meeting ended at 11:30.

*End*

**List of Attendants***[Counterpart and Stakeholders]*

- |                               |   |
|-------------------------------|---|
| 1. Mr. Hoang Danh Son         | Deputy Director of DONRE, Head of PMB                                 |
| 2. Ms. Nguyen Thi Thu Thuy    | Deputy Head of Sub-Dept. of EP, Secretary of PMB                      |
| 3. Ms. Nguyen Thu Huyen       | Head of Administration Section, Sub-Dept. of EP, PMB Member.          |
| 4. Ms. Phan Thi Hoang Hao     | Staff of Administration Section, Sub-Dept. of EP, PMB Member.         |
| 5. Ms. Vu Thi Hang            | Expert, Tourism Section, QN PPC                                       |
| 6. Mr. Nguyen Lam Nguyen      | Representative of Quang Ninh DPI                                      |
| 7. Mr. Nguyen Dinh Chien      | Representative of Quang Ninh DCST                                     |
| 8. Mr. Dang Hung              | Deputy Director of Transportation Department                          |
| 9. Mr. Ha The Nam             | Deputy Director of Department of Science & Technology                 |
| 10. Mr. Ngo Van Hoi           | Deputy Director of DOET   |
| 11. Mr. Vu Ngoc Than          | Deputy Head of National park of Bai Tu Long                           |
| 12. Ms. Dang Thi Viet Huong   | Representative of DARD  |
| 13. Mr. Nguyen Tien Tam       | Deputy Head of EM of HBMD   |
| 14. Ms. Nguyen Thi Kim Phuong | Vice chairwoman of PC of Cam Pha City                                 |
| 15. Ms. Le Thu Hoai           | Deputy Head of Cultural-Information Division, PC of Cam Pha City      |
| 16. Ms. Nguyen Thu Thanh      | Deputy Head of Cultural-Information Division, PC of Cam Pha City      |
| 17. Mr. Ngo Dinh Dung         | Head of Cultural-Information Division, PC of Quang Yen Town.          |
| 18. Mr. Ho Van Tuan           | Deputy Head of Cultural-Information Division, PC of Van Don District. |
| 19. Ms. Nguyen Thi Bao        | Chairwoman of Quang Ninh Tourism Association                          |
| 20. Ms. Le Thu Thuy           | Head of Propaganda & Education Division of Provincial Women Union     |
| 21. Ms. Ngo Thi Bich Hai      | Organization and Check Division of Provincial YU                      |

- |                              |   |
|------------------------------|---|
| 22. Mr. Tran Thanh Tung      | Expert of DONRE, WG-1 member                                |
| 23. Ms. Nguyen Thi Thu Trang | Expert of DPI, WG-3 member                                  |
| 24. Ms. Nguyen Thi Van       | DCST, WG-3 member   |
| 25. Mr. Tran Van Thuan       | Deputy Head of sub-Dept of Sea-Island, DONRE, WG-3 member   |
| 26. Ms. Pham Thu Trang       | Reporter of Quang Ninh Newspaper                            |
| 27. Ms. Nguyen Thi Kim Thai  | Chief editor of Radio and Television Station of Halong City |
| 28. Mr. Tran Khanh           | Camera man of Radio and Television Station of Halong City   |

*[JICA Side]*

- |                             |  |
|-----------------------------|--|
| 29. Mr. Tadashi Suzuki      | JICA Vietnam office                            |
| 30. Mr. Nguyen Vu Tiep      | JICA Vietnam office                            |
| 31. Mr. Senro Imai          | JICA Headquarter in Japan                      |
| 32. Mr. Jiro Iguchi         | Evaluation Consultant of JICA                  |
| 33. Ms. Do Hoang Ngan       | Translator of JICA Evaluation Mission          |
| 34. Mr. Yoichi Iwai         | Chief Advisor of JICA Expert Team              |
| 35. Mr. Tomoo Aoki          | Land use management expert of JICA Expert Team |
| 36. Mr. Go Kimura           | Tourism expert of JICA Expert Team             |
| 37. Mr. Minami Atsushi      | Coordinator of JICA Expert Team                |
| 38. Mr. Nguyen Thanh Phuong | Technical Assistant of JICA Expert Team        |
| 39. Ms. Duong Thi Nhuan     | Translator of JICA Expert Team                 |
| 40. Ms. Bui Thi Cuong       | Translator of JICA Expert Team                 |
| 41. Ms. Tran Mai Lan        | Translator of JICA Expert Team                 |
| 42. Ms. Ha Thi Minh Phuong  | Secretary of JICA Expert Team                  |

## The Project for Environmental Protection in Halong Bay

### Agenda for Workshop on Strategies and Measures for Sustainable Tourism Development of Halong Area

**1. Objectives**

- (1) Explaining on draft proposal of strategies and measures for Sustainable Tourism Development (STD) of Halong Area, which have been examined by the Working Group-3 of the project, and
- (2) Receiving comments and opinions from the participants for further examination

**2. Participants**

- a) PMB
- b) Representatives from the following organizations in Quang Ninh Province
  - PPC office (Ms. Vu Thi Hang, Expert, Tourism Section)
  - Dept. of Planning and Investment
  - Dept. of Culture, Sport and Tourism + Mr. Nguyen Dinh Chien, Head of Tourism Resources Section.
  - Dept. of Construction
  - Dept. of Transportation
  - Dept. of Agriculture and Rural Development
  - Dept. of Science and Technology
  - Dept. Education and Training
  - Halong Bay Management Department
  - Bai Tu Long National Park Management Board
  - Halong City People's Committee
  - Hoanh Bo District People's Committee
  - Cam Pha City People's Committee
  - Quang Yen Town People's Committee
  - Van Don District People's Committee
  - Provincial Women Union
  - Provincial Youth Union
  - Quang Ninh tourism association
  - Halong Tourist boat sub association
  - General Director of Indochina Junk Company
  - Quang Ninh Newspaper
  - Halong City Television
- c) Head of Working Group-1
- d) Head of Working Group-2
- e) Members of Working Group-3
- f) Head of Working Group-4
- g) JICA Expert Team (If it is possible, the members of the JICA Evaluation Team should be included).

**3. Time and venue:**

- Time: 8:00 am - 11:00 am on 7 November, 2012 (Wednesday)
- Venue: Conference Hall B of Provincial Conference Centre

**4. Agenda**

Content	Person in Charge	Time
1. Reception	PMB and JET	8:00 - 8:30
2. Opening remarks	Dr. Hoang Danh Son, Head of PMB, (Deputy Director of QN DONRE)	8:30 - 8:35
3. Presentation on the proposed strategies and measures for the STD of Halong area (1) Goal and vision (2) Strategies (3) Conceivable measures to be implemented for the STD (4) Outline of Action Plan for the STD	Mr. Tran Van Thuan, Head of WG-3, Deputy Head of Sea and Islands Sub-Department, DONRE	8:35 - 9:30
4. Discussion	All the participants	9:30 - 10:50
5. Conclusion and closing remarks	Dr. Hoang Danh Son	10:50 - 11:00

## 添付資料-8

成果 2 に係る第 4 回ワークショップ  
(2012 年 12 月 7 日開催) の資料及び議事録

**Agenda of WG-1 Environmental Management Workshop (Output-2)**

&lt;Draft&gt;

- 1. Date:** December 7th (Fri), 2012  
**2. Time:** 8:30 – 11:30  
**3. Venue:** Meeting Hall B, Provincial Conference Center of Quang Ninh

**4. Expected Participants:**

1. Sub-department of Environment Protection of DONRE
2. Water Resource Management & Hydro-geological Section
3. Inspection Division of DONRE
4. Sub-department of Sea and Islands
5. Environment Monitoring and Analysis Center
6. Inspection Dept. of QN Province
7. Department of Industry and Trade (DOIT )
8. Dept. of Health of QN Province
9. Department of Construction
10. Dept. of Agriculture and Rural Development (DARD)
11. Inspectors of DCST
12. Halong Bay Management Department
13. Economic Zones Management Board
14. Provincial Environmental Police
15. 14 City/Town/District DONREs
16. PMB
17. Other WGs representatives
18. WG-1 members
19. JICA Expert Team

**5. Objectives of the Meeting:**

The objectives of the workshop are to share and discuss the following final outcomes of WG-1:

- 1) Integrated Environmental Monitoring Implementation Plan (IEMIP)
- 2) Implementation Plan of Inspection and Check (including Study on Environment Pollution Incidents)

**6. Program of the Meeting:**

The meeting will proceed according to:

Items	Time	Person in Charge
1. Opening Remark	8:30 – 8:40	Dr. Hoang Danh Son, Head of PMB, (Deputy Director of QN DONRE)
2. Concept of Interaction between Environmental Monitoring and Water Pollution Control toward better water environment management	8:40-8:50	Mr. Kengo Naganuma (JICA Expert Team)
3. Integrated Environmental Monitoring Implementation Plan	8:50 – 9:20	Ms. Do Thi Ni Tan, WG-1 leader (Environmental Monitoring and Analysis Center of QN DONRE)
4. Implementation Plan of Inspection and Administrative Guidance	9:20 – 9:50	Mr. Tran Thanh Tung, WG-1 member (Administration Division of QN DONRE)
5. Study on Environmental Pollution Incidents	9:50 – 10:10	Mr. Shoji Tadashi (JICA Expert Team)
6. Discussion	10:10 – 11:20	All the participants
7. Closing Remark	11:20 – 11:30	Dr. Hoang Danh Son
<i>Luncheon (After lunch, the afternoon session, “Final Technical Training of PSD” is conducted.)</i>	-	-

End

**WORKSHOP OF WORKING GROUP 1 (OUTPUT 2)**

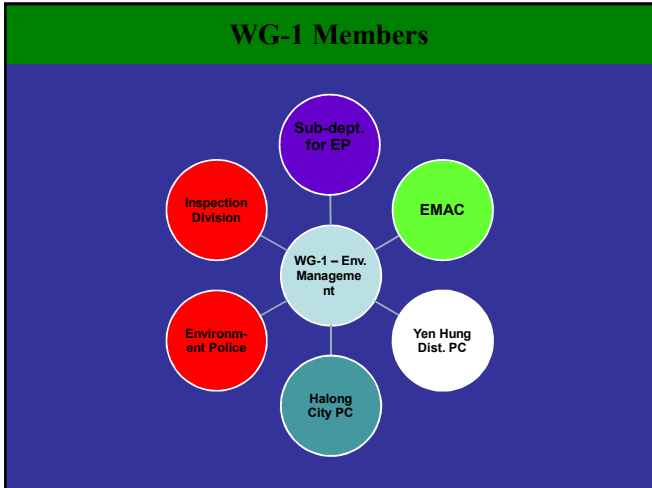
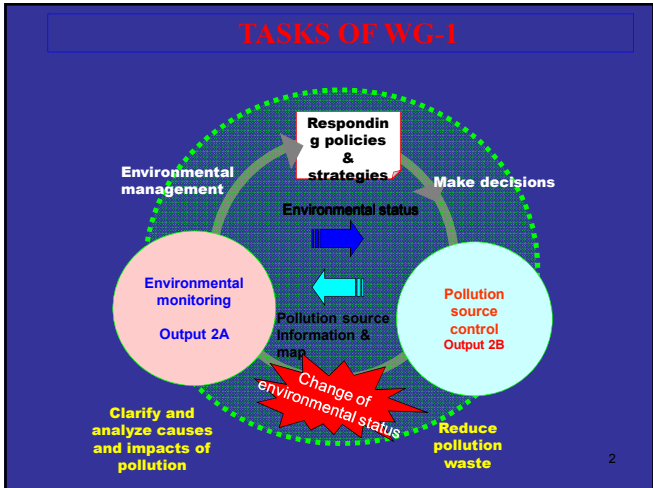
**ENVIRONMENTAL MANAGEMENT**

**Integrated Environmental Monitoring Implementation Plan (IEMIP)**

7 December 2012

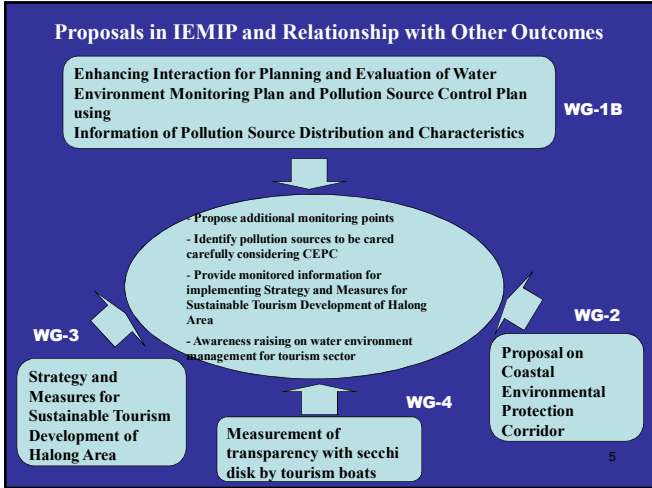
**JICA EXPERT TEAM**

1



3. Summary of Outputs related to Integrated Environmental Monitoring Implementation Plan

4



1. Summary of Outputs related to Integrated Environmental Monitoring Implementation Plan
- (1) Enhancing Interaction for Planning and Evaluation of Water Environment Monitoring Plan and Pollution Source Control Plan using Information of Pollution Source Distribution and Characteristics
    - ➡ Propose additional monitoring points
  - (2) Cooperating with Coastal Environmental Protection Corridor (CEPC) prepared by WG-2
    - ➡ Propose measurement on control of water pollution sources and identify main pollution sources
  - (3) Cooperating with Strategy and Measurement for Sustainable Tourism Development of Halong Area by WG-3
    - ➡ Assist sharing information on environment monitoring
- 6

(1) Enhancing Interaction for Planning and Evaluation of Water Environment Monitoring Plan and Pollution Source Control Plan using Information of Pollution Source Distribution and Characteristics

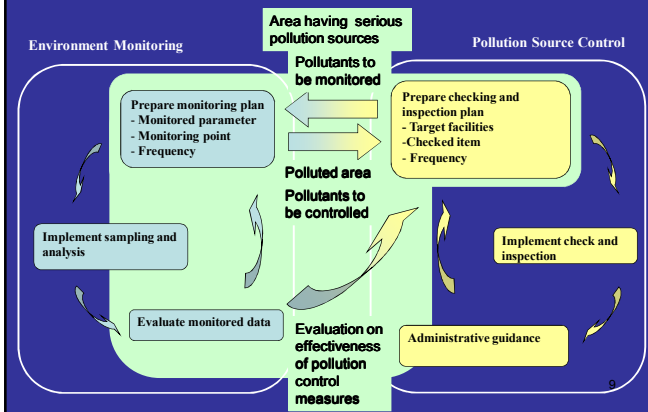
➔ Propose additional monitoring points

### Water Quality Monitoring Network

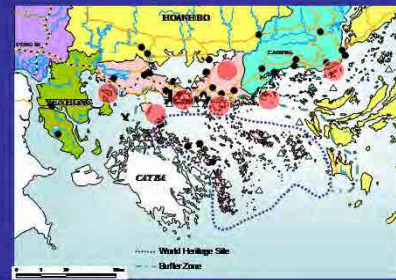


Note: ● Monitoring points by Quang Ninh DONRE ▲ Monitoring points by HMBD  
Source: JET

### Enhancing Interaction for Planning and Evaluation of Water Environment Monitoring Plan and Pollution Source Control Plan

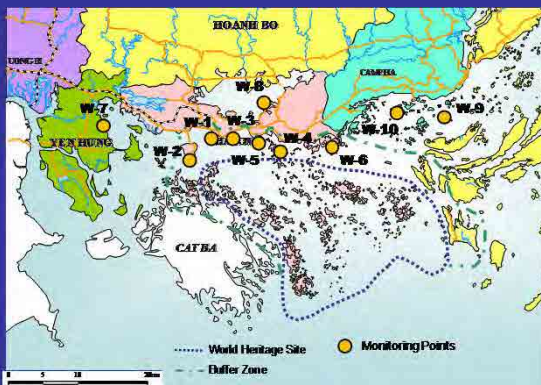


### Area to be Monitored Considering Relationship between Monitoring Points and Pollution Sources

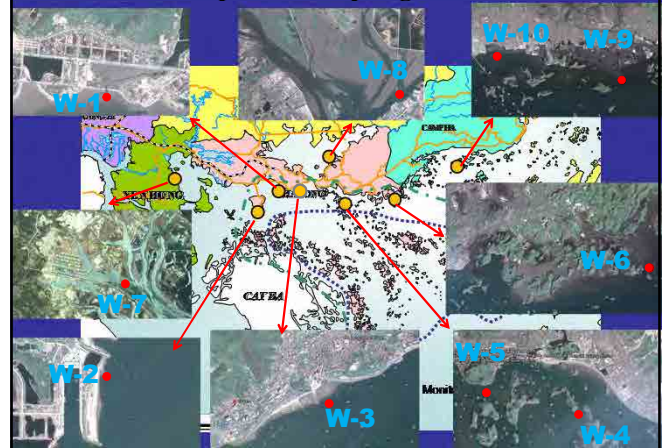


1. Water quality of Lo Phong stream is impacted by coal mining activities, which needs checking.
2. Impacts caused by domestic wastewater from reclaimed urban areas need checking.
3. Impacts cause by shrimp ponds in Yen Hung need checking.

### Additional Water Quality Monitoring Activity

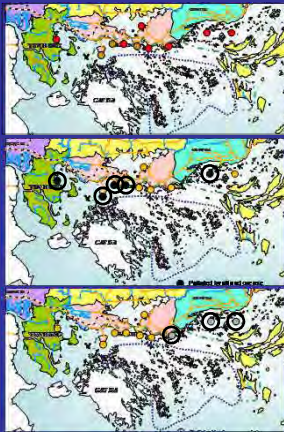


### Proposed Sampling Points



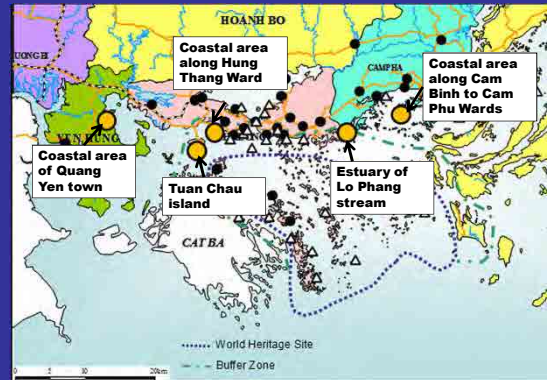


## Water Quality Monitoring Results



- Organic substance impacts were observed at all sampling points (●)
- Oil and grease impacts were observed at the points in the area where vessels operating frequently (●)
- Heavy metals impacts were observed at the points relate to coal mining activities (●<sub>13</sub>)

## Proposed Additional Monitoring Points based on the Water Quality Monitoring Results



14

(2) Cooperating with Coastal Environmental Protection Corridor (CEPC) prepared by WG-2

➔ Propose measurement on control of water pollution sources and identify main pollution sources

15

## What the CEPC should be

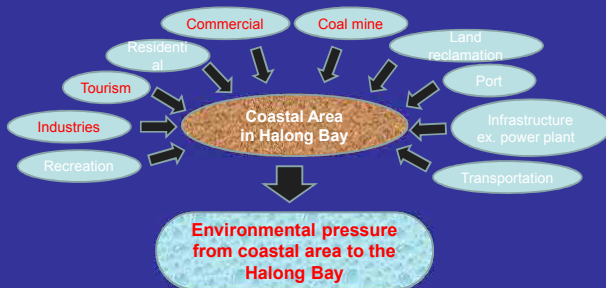
Targets under the goal

1. 100% of domestic wastewater is treated to comply with effluent standard.
2. 100% of industrial wastewater is treated to comply with effluent standard.
3. Silt runoff and sedimentation are prevented directly from the coastal area due to coastal development, especially land reclamation site.
4. The following major rivers and lakes of the corridor comply with river water quality standard: Chank river, Troi river, Yen Lap lake, Dien Vong river, Lo Phong stream, Cao Van Dam and Mong Duong river
5. Remaining mangrove and tidal flat areas are protected and reforested in Binh Huong Estuary and Cua Luc Estuary, with legal background.

=> Considering the above, necessary measures have been examined.

16

## Various land use and environmental pressure from coastal area to the Halong Bay

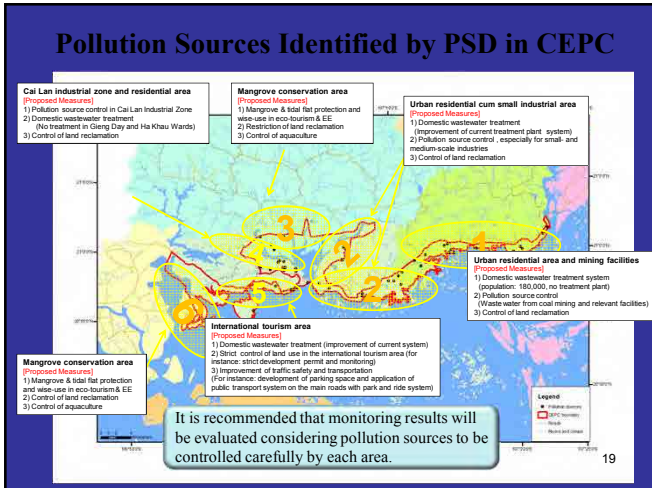


17

## Pollution Sources Identified by PSD in CEPC



18



(3) Cooperating with Strategy and Measurement for Sustainable Tourism Development of Halong Area by WG-3

Assist sharing information on environment monitoring

20

- ### Strategies, Approaches and Measures for Developing Sustainable Tourism
- Strategy 1: Enhancement of management capacity for sustainable tourism development
  - Strategy 2: Development of legal and institutional framework, and policy for supporting ecotourism
  - Strategy 3: Protection of tourism resources
  - Strategy 4: Development of sustainable tourism products
  - Strategy 5: Upgrading service and quality of tourism facilities and business
  - Strategy 6: Propaganda and promotion of sustainable tourism

### Strategy 3: Protection of tourism resources

**Current Situation**  
**Pollution factors and impacts affecting tourism resources, tourist sites and natural environment in Halong Bay**

Untreated wastewater flow into the Bay (next to the night market at Than Nien Beach)

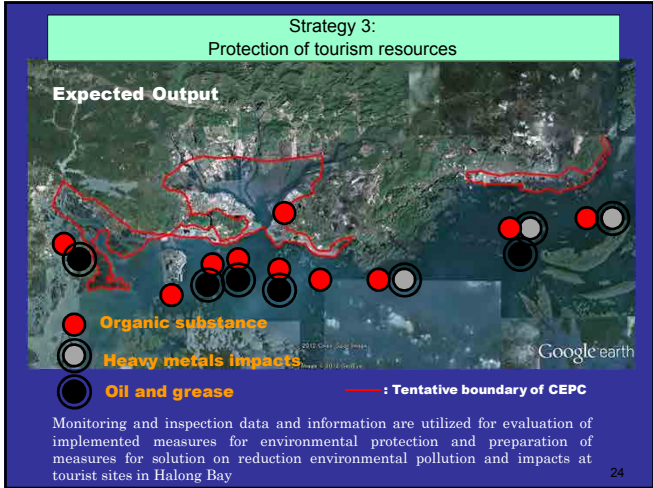
Garbage and waste scattered near Than Nien Beach

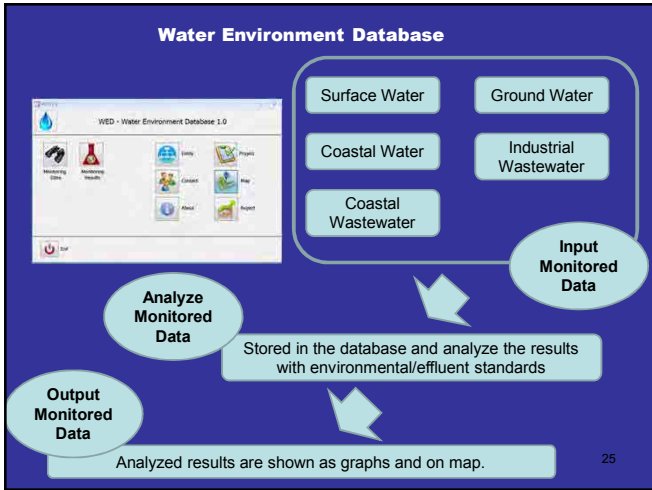
Floating waste on the sea

Oil seum on surface of sea from tourist boat (Thien Cung-Dau Go Jetty)

22

- ### Strategy 3: Protection of tourism resources
- Necessary Actions (Measures) be Taken**
- Measure 3-4-1**  
 Development of guideline for inspection and monitoring of tourism resources and level of pollution at tourist sites, jetties and anchoring site in Halong Bay
  - Measure 3-4-2**  
 Training of inspection and monitoring activities based on the guideline
  - Measure 3-4-3**  
 Reporting monitoring and inspection data and information and relevant departments and boat companies
- 23





### Water Environment Database

Source: BT

No.	Area	Proposed Measures (Tentative)
1	Concerned organizations	A number of organizations in Quang Ninh Province will use the Database, representatively: a) Quang Ninh DONRE b) Halong Bay Management Department c) Halong City DONRE d) District/town DONREs e) Provincial Environmental Police Department Among organizations involved in the environment management, Quang Ninh DONRE is a center player and a main user of the Database.
2	Parameters to be inputted	Parameters designated by > QCVN 08:2008/BTNMT: National technical regulation on surface water quality, > QCVN 09: 2008/BTNMT: National technical regulation on underground water quality, > QCVN 10: 2008/BTNMT: National technical regulation on coastal water quality, > QCVN 14: 2008/BTNMT: National technical regulation on domestic wastewater, and > QCVN 40: 2011/BTNMT: National technical regulation on industrial wastewater.
3	Frequency of update of data/information	Data will be updated every quarter of a year.

### Water Environment Database

**Graph showing change of analytical results year by year**

**Export results and show on map by GIS system**

*Thank you very much for your kind attention!*

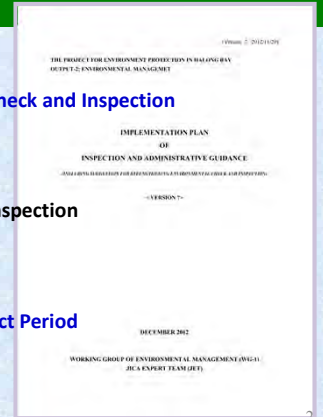
**OUTPUT-2 ENVIRONMENTAL MANAGEMENT  
(POLLUTION SOURCE CONTROL)**

**IMPLEMENTATION PLAN  
OF  
ENVIRONMENTAL CHECK AND INSPECTION**

**DECEMBER 5, 2012  
JICA EXPERT TEAM**

**Points to Discuss**

1. Chronology
2. Definition of Environmental Check and Inspection
3. Pollution Sources
4. Units Concerned and Roles
5. Current Status of Check and Inspection
6. Compliance Status by Entities
7. Initial Implementation Plan
8. Achievement during the Project Period
9. Focal Challenges in the Future



**1. Chronology**

- Implementation Plan of Environmental Inspection and Administrative Guidance

- Feb. 2011**
  - Developed the Initial Plan, after reviewing the status of current environmental check and inspection by DONRE.
- Feb. 2012**
  - Assessed the progress status of activities along the implementation plan, like PSD development, OJT of check and inspection, technical trainings, etc.
  - Compiled the interim version of the implementation plan.
- Nov. 2012**
  - Assessed the achievement of activities during the project period.
  - Clarified focal challenges for the future
  - Compiling the final version of the implementation plan.

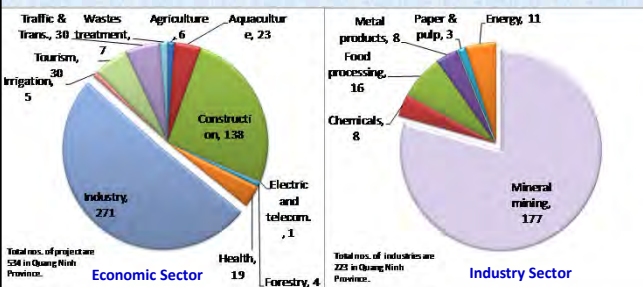
**2. Definition of Environmental Check and Inspection**

**Environmental Check and Inspection is a central management activity for DONRE's Pollution Source Control.**

- Check**
  - Supervision and examination activities conducted by Sub-Department of EP, grounded on Law on Environment Protection.
- Inspection**
  - Supervision and examination activities conducted by Inspection Division, grounded on Inspection Law, Law on Environment Protection and others.

**3. Pollution Source in Quang Ninh**

- 534 pollution source projects in Quang Ninh Province.
- Of them, actual pollution source project which are subject to EIA approval and discharges wastewater account for 310 projects.
- Halong Area (Halong City, Cam Pha Town and Hoanh Bo District) accommodates a total of 197 projects (64 %).

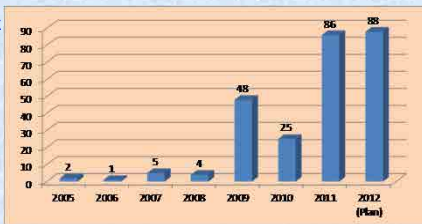


**4. Units Concerned and Roles**

Units	Activities and Tasks
Sub-Department of EP	Carry out environmental check for pollution sources and give recommendations.
Inspectorate	Carry out environment-specialized inspection to give and impose administrative sanctions against violations, if they founded out.
District Level PCs	Carry out environmental specialized inspection and environmental check for EPC registration projects to give recommendations and to impose administrative sanctions against violations.
Environment Management and Analysis Center (EMAC)	Carry out measurement and analysis for checking the compliance status to the national standard.
Water Resources Management Division	Carry out and assist in the environmental check and inspection related wastewater discharge and groundwater exploitation.

## 5. Current Status of Check and Inspection

### Environmental Check by Sub-Department of EP



### Environmental Inspection by Inspectorate

In 2011

- Onspection Division has carried out the environmental-specialized inspection for a total of 18 entities.
- As a result, a total of 531 million VND have been imposed against a variety of infringements.

7

## 6. Compliance Status

Items	Status
Environmental authorization	97% of checked projects obtain EIA or EPC, but many of them have not submitted necessary renewals.
Provision of wastewater treatment facilities	84 % of checked projects are equipped with wastewater treatment facilities. However, only 38 % of them can treat wastewater to meet with the national effluent standards.
Payment of wastewater fee	37 % of checked projects pay industrial wastewater fees but the remaining 56 % don't pay.
Wastewater discharge license	14 % of checked projects have taken license but the remaining don't have.
Self-environment monitoring	28 % of checked projects submit but the remaining don't submit.

8

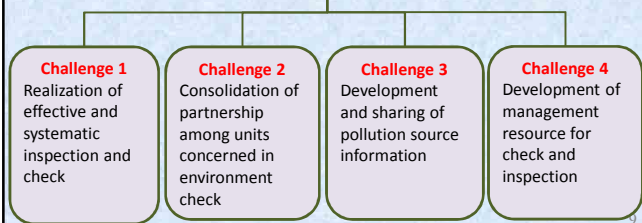
## 7. Initial Implementation Plan

### - Proposed Framework

Formulated on Feb. 2011

"Effective Environmental Check and Inspection" is needed to promote environmental compliance by entities.

#### Improving of environmental check and inspection



9

## 7. Initial Implementation Plan

### - Proposed Actions

#### Challenge 1 Effective and systematic inspection and check

- Setup of implementation criteria and planning of implementation of environmental check
- Setup of criteria for implementing environmental inspection
- Setup for criteria for imposing rigorous sanctions

#### Challenge 2 Partnership among units concerned

- Constructing of strong regime for environmental check by Sub-Department of EP
- Setup of a standing committee for environment check and inspection

10

## 7. Initial Implementation Plan

### - Proposed Actions

#### Challenge 3 Pollution source information

- Refining of pollution source database
- Updating data record in the database
- Sharing of pollution source information to partner units

#### Challenge 4 Management resource for check and inspection

- Organizing of internal trainings
- Organizing of technical trainings

11

## 8. Achievement during the Project Period

### - Related Activities Implemented during the Project Period

#### 1. PSD Development

- 1<sup>st</sup> Pollution Source Survey in DONRE Office (Oct. 2010 to Dec. 2010)
- 2<sup>nd</sup> Pollution Source Survey in Halong City (Sep. 2011 to Feb. 2012)
- 3<sup>rd</sup> Pollution Source Survey in Cam Pha and Hoanh Bo (June 2012 to Aug. 2012)

#### 2. Training Need Analysis

- Questionnaire Survey and Analysis (July 2010 to Oct. 2010)

12

## 8. Achievement during the Project Period

### - Related Activities Implemented during the Project Period

#### 3. Seminar on Environmental Inspection and Administrative Guidance (Feb. 23, 2010)

- Lecture on legal system and regulation in Japan
- Lecture on management and treatment technology

#### 4. OJTs for environmental check and inspection

- Halong Beer and Beverage JSC (Jun. 29, 2011)
- Khe Sim One Member Company (Jul. 7, 2011)
- Cai Lan Vegetable Oil Company Ltd. (Nov. 15, 2011)
- Mao Khe Coal Co., Ltd. (Feb. 8 to 10, 2012)
- Lessons-learnt in OJTs have been shared in the meeting and set forth in the Implementation Plan.

13

## 8. Achievement during the Project Period

### - Related Activities Implemented during the Project Period

#### 5. Wastewater Management Handbook (Feb. 28, 2012)

- The handbook was compiled and handed over as information resources for self-learning and technical training for the future.
- The handbook is comprised of: Section 1 of Guideline of Industrial Wastewater Treatment, and Section 2 of Wastewater Treatment Technology Manual.

14

## 8. Achievement during the Project Period

### - Assessment

#### Challenge 1

Effective and systematic inspection and check

- The annual implementation plans for check and inspection have been formulated every year.
- The numbers of environmental check have been increased at the level of around 90 times a year.
- The criteria for the implementation of check and inspection have been becoming clear.

#### Challenge 2

Partnership among units concerned

- Necessary partnerships have come to be constructed, based on the communications among persons concerned, although special organizations were not formed.

15

## 8. Achievement during the Project Period

### - Assessment

#### Challenge 3

Pollution source information

- The pollution source information system (like PSD, PST and PSM) using computers have been developed, potentially resulting into helpful tools for the implementation of check and inspection.

#### Challenge 4

Management resource for check and inspection

- Training need analysis has clarified more opportunities for training to be necessary.
- Numbers of relevant knowledge have been transferred through lectures and OJTs during the project.
- The wastewater management handbook has been compiled and distributed as resource information.

16

## 9. Focul Challenges in the Future

1.

To upgrade the quantity and quality of the environmental check and inspection

- To set up clear criteria for the implementation of check and inspection.
- To set up clear criteria for the imposition of sanctions in the shape of official documents.
- To set up and utilize internal training and other technical trainings to expand specialized knowledge and skills of persons concerned.

17

## 9. Focul Challenges in the Future

2.

To utilize and upgrade the pollution source information system for the environmental management

- To start and ensure a sustainable operation of the PSD for Halong Area.
- To update the database, supplementing additional data on pollution sources, especially sources located outside Halong Area.
- To upgrade the function of the PSD so as to cover all pollution sources including sources with EPC registration.
- To identify unauthorized pollution sources and input relevant data.

18

*THANK YOU FOR YOUR KIND ATTENTION*

## STUDY ON ENVIRONMENT POLLUTION INCIDENTS

DECEMBER 5, 2012  
JICA EXPERT TEAM

1

### Points to Discuss

1. Outline of the Study
2. Situation of Environment Pollution Incidents
3. Legal Setup
4. Current Measures
5. Discussion on Measures



2

### 1. Outline of the Study

#### Objective

- To clarify the risk and actual situations of the incidents
- To study preventative measures against environment pollution incidents in the Halong Area.

This is just a preliminary study to be used for further discussion.

#### Definition

- Oil spills from ships, storage tanks and other related facilities
- Mudslides of coal waste piles
- Hazardous substance leak from production, transport and storage facilities

#### Data Collection

- Data collection in Halong City and Hai Phong City: From Oct. 2011 to Dec. 2011

3

### 2. Situation of Environment Pollution Incidents - Possible Pollution Source

#### Possible Pollution Sources

- Oil spills: B12 Oil Port, 130 – 150 ships/year
- Coal mudslides: Coal mines and coal processing industries, 101 projects in total
- Hazardous substances leaks: Oil and toxic, 33 projects in total.

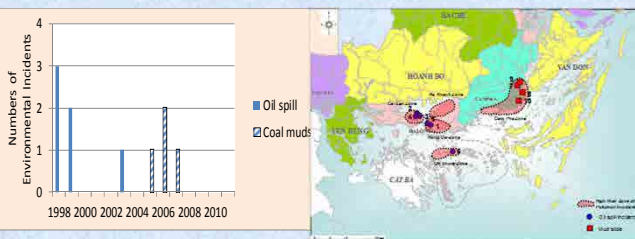


4

### 2. Situation of Environment Pollution Incidents - Actual Incidents

#### Actual incidents

- 10 incidents (oil spills 6 and coal mudslides 4), since 1998
- No report for hazardous substance leaks



5

### 3. Legal Setup

#### Law on Environment Protection

- Only general guidance for environment pollution incidents in the Chapter 9
- Based on the rule "Polluter-Pay-Principle (PPP)"

#### Quang Ninh Province

- Decision No.1379/2011/QĐ-UBND; Organizing of Provincial Command Board for Natural Disaster Prevention and Response
- DONRE is not a member of this command board.

#### Hanoi City (for reference)

- Preparing the Decision "Regulation on Prevention, Response to and Remedy of Environmental Incidents in Hanoi City"

6



#### 4. Current Measures

Category	Preventative Measure	Emergency Response
Oil spills	Periodical inspection against vessel and oil related-facilities	Now, DONRE is waiting for the approval of PPC.
Coal mudslides	Periodical check and inspection against subject facilities (by DONRE)	Nothing special
Hazardous substance leaks	Periodical check and inspection against subject facilities (by DONRE)	Nothing special

7

#### 2. Discussion on Measures (for coal mudslides and haz substance leaks)

Action 1  
Recording system for environment pollution incident

- Assigning a unit and officer in charge
- Forming the data sheet for recording

Action 2  
Identification of possible high-risk pollution sources

- Setting up criteria for selecting special high-risk projects
- Identifying projects with special high-risk

Action 3  
Review and improvement of environmental check items

- Review and modify the environmental check list

8

#### 2. Discussion on Measures (for coal mudslides and haz substance leaks)

Action 4  
Regulations associated with environment pollution incidents

- Setting up a regulation specialized in environment pollution incidents
- Extending the coverage of the Provincial Command Board for Natural Disaster Prevention and Response

Action 5  
Emergency Response Plan against Environment Pollution Incidents

- Developing an integrated plan for emergency response to incidents (except for oil spills)
- Providing facilities and materials for emergency response
- Conducting drills for emergency response

9

THANK YOU FOR YOUR KIND ATTENTION

10

2

(Version B: 2012/11/20)

**THE PROJECT FOR ENVIRONMENT PROTECTION IN HALONG BAY  
OUTPUT-2: ENVIRONMENTAL MANAGEMENT**

**STUDY REPORT  
ON  
ENVIRONMENT POLLUTION INCIDENTS IN HALONG AREA  
<DRAFT B>**

**DECEMBER 2012**

**WORKING GROUP OF ENVIRONMENTAL MANAGEMENT (WG-1)  
JICA EXPERT TEAM (JET)**



## Table of Content

### List of Table and Figure

### Abbreviation

### Summary

<b>1. Introduction</b> .....	<b>1</b>
1.1 General .....	1
1.2 Scope of the Study .....	1
1.3 Methodology of the Study.....	2
<b>2. Situations of Environment Pollution Incidents</b> .....	<b>2</b>
2.1 Possible Pollution Sources in Halong Area .....	2
2.2 Environment Pollution Incidents in Halong Area .....	4
2.3 Oil Spill Incidents in Hai Phong Port Area.....	7
2.4 Emergency Response for Environment Pollution Incidents .....	8
<b>3. Legal Setup for Environment Pollution Incidents</b> .....	<b>10</b>
3.1 Provisions in Law on Environment Protection .....	10
3.2 Regulations Associated with Environment Pollution Incidents.....	10
<b>4. Analysis of Environment Pollution Incidents and Measures</b> .....	<b>12</b>
4.1 General .....	12
4.2 Geographical Distribution of Environment Pollution Incidents .....	12
4.3 Current Measures against Environment Pollution Incident .....	13
<b>5. Discussion on Measures against Environment Pollution Incidents</b> .....	<b>14</b>
5.1 Issues to be Addressed.....	14
5.2 Measures against Environment Pollution Incidents .....	15

### Annex:

1. List of Natural Disasters in Halong Area
2. Decree on Organization of Provincial Command Board for Natural Disaster Prevention and Response (No 1379/QD-UBND, May 2011)
3. Regulation (Draft) on Prevention, Response to and Remedy of Environmental Incidents in Hanoi City
4. Profile of Plan of Oil Spill Response in Quang Ninh Province

## **List of Table and Figure**

Table 1	List of Visited Institutes
Table 2	List of Environment Pollution Incidents in Halong Area
Table 3	List of Oil Spill Incidents in Hai Phong Port Area
Table 4	List of Oil Spill Response Equipment of Petrol Company B12
Table 5	Representative Structure of Emergency Response Plan
Table 6	Applicable Technologies for Hazardous Substance Leaks
Figure 1	Location of Coal Mining and Coal-Related Industries
Figure 2	Possible Sources of Hazardous Substance Leaks
Figure 3	Scene of Oil Spill in Sinking of Bac Dang Giang Cargo (No.6)
Figure 4	Scene of Coal Mudslide at Cao Son Coal Mine (No.9)
Figure 5	Locations of Environment Pollution Incidents in Halong Area
Figure 6	Numbers of Environment Pollution Incidents in Halong Area
Figure 7	Numbers of Oil Spill Incidents in Hai Phong Port Area
Figure 8	High-Risk Zones in Environment Pollution Incidents in Halong Area

### **Abbreviation**

DARD	Department of Agriculture and Rural Development
DONRE	Department of Natural Resources and Environment
DOSTE	Department of Science Technology and Education
JICA	Japan International Cooperation Agency
MONRE	Ministry of Natural Resources and Environment
NOSRCEN	Northern Oil Spill Response Center
PC	People's Committee
PPC	Provincial People's Committee

## Summary

### **1. Introduction**

1.1 WG-1 has studied measures against environment pollution incidents in the Halong Area, collecting relevant data/information from associated institutes located in not only the Halong Area but also Hai Phong and Hanoi City, as the Activity 2-7 defined in Output-2. As a result of analysis and examination, preliminary suggestions have been made on measures against environment pollution incidents.

1.2 In the Halong Area, the prevention of water pollution is very crucial to preserve the water environment quality of the area of Halong Bay designated as the world heritage and its surrounding water courses. While the water pollution is caused by pollution sources continuously discharging polluted water, the environment pollution incidents happening unexpectedly is another cause for pollution.

1.3 This study has focused on the environment pollution incidents like oil spills, coal mudslides and hazardous substance leaks, excluding just natural disasters like flooding, landslides, etc. During this study, we encountered difficulties in collecting data/information, because reliable information sources are not in place.

### **2. Situations of Environment Pollution Incidents**

2.1 In Halong Area, many possible sources of oil spill incidents comprising fixed and moving sources are existing in B12 oil port, sea and river port and fish port and anchoring area. Representatively, B12 port annually receives 130 to 150 oil transport ships with a total amount of 1.8 to 2.0 million tons.

2.2 Based on stored data in the QN Pollution Source Database developed in this project, a total of 101 sites have been identified as possible sources of coal mudslides and a total of 33 sites as possible sources of hazardous substance leak in the Halong Area.

2.3 As far as we could collect, the total numbers of incidents in the Halong Area were 10 cases in terms of total environment pollution incident over the past 14 year.

2.4 It has been known that certain preventative measures against environment pollution incidents have been already taken as routine tasks of competent authorities in respective sectors. They are vessel inspection against ship, oil-related facilities, etc. performed in the port area, environment check and inspection against coal mines and hazardous substance production and storage firms.

2.5 Meanwhile, in the event of oil spills, combat

forces takes action for emergency responses, mobilizing special equipment and materials. Historically, coal mudslides have been dealt by emergency response organized mainly by PPC in Halong Area.

### **3. Legal Setup for Environment Pollution Incidents**

3.1 The Law on Environment Protection stipulates series of legal guidance in the chapter 9 (Prevention of and Response to Environmental Incidents; Remedying Environmental Pollution and Rehabilitation of Environment). In localities, provincial and district people's committee are responsible for planning of, preventing of and responding to the incidents, and leading remedy and rehabilitation.

3.2 In the aspect of legal and institutional matter, Quang Ninh Province has set up the Provincial Command Board based on the decree (No.1379/QD-UBND, May 2011). It appears that this Command Board focuses on mainly natural disasters like flooding, unlike the case of Hai Phong City. It is not clear whether the environment pollution incidents (oil spills, coal mudslides and hazardous substance leaks) are governed by this Command Board. DONRE is not assigned as a constituent member of this Command Board.

3.3 In terms of coal mudslides and hazardous substance leaks, regulations dedicated to the emergency response against incidents are not in place in Quang Ninh Province, at present.

### **4. Analysis of Environment Pollution Incidents and Measures**

4.1 Based on the collected data/information, several high-risk zones of environment pollution incidents have been identified in Halong Area. Zones of Cai Lan Port and industrial park, and Hong Gai are in the high-risk with oil spills and zones of Ha Khanh and Cam Pha are in the high-risk with coal mudslides. Off shore zones of Halong Bay is in the high-risk with both coal refuse disperse and oil spills.

4.2 Although incident of hazardous substance leaks has not been reported up to now, this does not necessarily imply that the Halong Area has no risk of hazardous substance leaks, because a number of production and storage facilities handling hazardous substances exist in this area.

4.3 In terms of preventative measures to contain the occurrence of environment pollution incident, competent authorities (Department of Transport, Port Authority, DONRE and other sector departments)

have already set up certain supervision and/or inspection against possible pollution sources (facilities and vessels) as their routine tasks.

4.4 At the present, Quang Ninh Province has no systematic contingency plan against oil spills but it has been preparing the “Plan of Oil Spill Response in Quang Ninh Province” to get the approval from MONRE. It is expected that this emergency response plan against oil spill will be launched as soon. However, in terms of coal mudslides and hazardous substance leaks, regulations dedicated to the emergency response against environment pollution incident are not in place in Quang Ninh Province, at present.

### **5. Discussion on Measures against Environment Pollution Incidents**

5.1 Concerning oil spill incident, DONRE (specifically, Sub-Department of Sea and Islands as a responsible unit) has been completing the “Plan of Oil Spill Response in Quang Ninh Province”, and now the approval work from MONRE is under way. Because this plan is the result of decision-making made by Quang Ninh PPC, and is of the comprehensive character, encompassing necessary measures against oil spills, this study report does not repeat the discussion on oil spills.

5.2 The working hours allocated to the survey and study of this environment pollution incident in the Output-2 are so limited that precise and deep baseline survey and examination are not allowed. Therefore, this section raises preliminary ideas on measures for solving current weaknesses in the response against environment pollution incident. DONRE is expected to supplement some actual and detail schemes to push forward with these actions suggested here, if necessary prior to actual implementation.

5.3 Measures against environment pollution incident are divided to two (2) approaches; preventative measures to control the outbreak of incidents, and emergency response in the event of incident outbreak to contain to the minimum damage, as set forth below:

5.4 **Action 1:** Recording System for Environment Pollution Incident; to designate a unit in charge and to keep records of data/information on environment pollution incidents (coal mudslide and hazardous substance leak) happening. Action 1 includes component actions: 1) Assigning a unit and officer in charge, 2) Forming the data sheet for recording, and 3) Recording data/information of incident in the past.

5.5 **Action 2:** Identification of Possible High-Risk Pollution Sources; to identify possible pollution sources of environment pollution incident with high-risk (of coal mudslides and hazardous substance leaks) which are strictly supervised in the environmental check. Action 2 includes components actions: 1) Setting up criteria for selecting special high-risk projects, and 2) Identifying projects with special high-risk.

5.6 **Action 3:** Review and Improvement of Environmental Check Items; to review and improvement a present environmental check list, by examining the inclusion of environmental check items necessary for preventative measures against environment pollution incidents. Action 3 includes specific action: Review and modify the environmental check list.

5.7 **Action 4:** Regulations Associated with Environment Pollution Incidents; to establish regulations enabling emergency response against environment pollution incidents. Action 4 includes component actions: 1) Regulation specialized in environment pollution incidents, and 2) Extending the coverage of Provincial Command Board for Natural Disaster Prevention and Response.

5.8 **Action 5:** Emergency Response Plan against Environment Pollution Incidents; to develop and implement an emergency response plan to environment pollution incidents. Action 5 includes component actions: 1) Development of an integrated plan for emergency response to incidents, 2) Provision of facilities and materials for emergency response, and 3) Conducting drills for emergency response.







## **1. INTRODUCTION**

### **1.1 General**

In the Halong Area, the prevention of water pollution is very crucial to preserve the water environment quality of the area of Halong Bay designated as the world heritage and its surrounding water courses. While the water pollution is caused by pollution loads continuously discharging polluted water, the environment pollution incidents happening unexpectedly is one of another event which may cause water pollution.

In the Halong Area (including Halong City, Cam Pha Town and Hoanh Bo District) of the subject area for this study, it is presumed that oil-related facilities and vessels (stationary and moving), hazardous chemical production, storage and transport facilities, coal waste piles resulting from open-cut mining, etc. are possible sources of the environment pollution incidents.

In response to the Activity 2-7 defined in Output-2 (Environmental Management) of this Project, this is a report for the study on the incidents in the Halong Area, aiming to clarify the risk and actual situations of the incidents and analyze the organizational and regulatory regime, and, as a result, to study and suggest basic approaches for strengthening preventative measures against environment pollution incidents in the Halong Area.

### **1.2 Scope of the Study**

The Law on Environment Protection (No. 52, enacted in 2006) defines that the “Environmental Incident” means any catastrophic event or risk which occurs in the course of human activities, or any sudden natural occurrence which causes serious environmental pollution, degradation or change (Article 3-8).

In this project, the environment pollution incidents are defined as follows, considering that the Output-2 (Environmental Management) of this Project focuses on just the water environment management relating with socio-economic activities, excluding natural disasters. Hence, the environment pollution incident is, in this study, defined to be environmental incidents occurring caused by oils, toxic chemicals, hazardous waste, residues (including coal waste), etc. which seriously threaten to human lives, property, environment and people's daily life.

Along with the definition of the environment pollution incident, this study has specifically examined the incidents, belonging to the following categories:

- Oil spills from ships, storage tanks and other related facilities,
- Mudslides of coal waste piles, and
- Hazardous substance leak from production, transport and storage facilities.

While the Halong Area is subject to this study, the port area of Hai Phong City has been surveyed as the typical area facing at the high risk of oil leakage. Together, legislative matters on environmental incidents in Hanoi City have been surveyed, because it has been discussing the setup of the regulation for prevention of and response to incidents, in recent.

Based on the definition of the environment pollution incidents, natural disasters like flooding, inundation and landslides are basically excluded from this study. However, some of major events are listed in this study as reference information in parallel with the environment pollution incidents; because it is obvious that they give serious impact also to the water environment.

### 1.3 Methodology of the Study

Different kinds of institutes relating to the environment incidents have been visited to collect necessary data/information. They are mass media, state management authorities, emergency response institutes, research institutes, etc., as enumerated in **Table 1**.

Through these visits, data/information like records of environment incidents in the past and plans and regulations of prevention against and response to the environment incident have been collected. As a result of analysis of collected data/information, characters and tendencies of the environment pollution incidents in the Halong Area have been clarified. Based on this, the direction of measures against the environment pollution incident has been discussed.

**Table 1 List of Visited Institutes**

No.	Institutes	Collected Data/Information
1	Quang Ninh Newspaper	Records and documents on environment pollution incidents in the Halong Area
2	Quang Ninh Television	
3	New articles on internet websites	
4	Board of Natural Incident Prevention of Quang Ninh	Regulation on the function of Provincial Command Board for Natural Disaster Prevention and Rescue
5	VINACOAL	Recovery activities for mud slide incident
6	Peoples Committees of Halong, Cam Pha and Hoanh Bo	Actions and countermeasures against environment incidents
7	Quang Ninh Port Authority	Actions and countermeasures against oil spill incidents
8	Petrol B12 Company	Actions and countermeasures against oil spill incidents
9	Quang Ninh DONRE	Actions and countermeasures against environment incidents
10	Hai Phong Port Authority	Actions and countermeasures against oil spill incidents in the Hai Phong
11	Hai Phong DONRE	Actions and countermeasures against oil spill incidents in the Hai Phong
12	Institute of Maritime Research	Actions and countermeasures against environment incidents

Concerning oil spill incidents, QN DONRE (specifically, Sub-Department of Sea and Islands is in charge) has been working to get the approval from MONRE for the Response Plan against Oil Spill Incidents in Quang Ninh Province. Because many and diverse data/ information regarding oil spill incidents are available, they are conveniently used for this study.

## 2. SITUATIONS OF ENVIRONMENT POLLUTION INCIDENTS

### 2.1 Possible Pollution Sources in Halong Area

#### (1) Oil Spills

Quang Ninh Province has great potential for economic development, especially for sea port and tourism development. Cai Lan Port is a traffic node of waterway with high density of vessels into the Port. In addition, operations of hundreds of tourism boat in Halong Bay increase the risk of collision and incident, possibly causing oil spills.

Along with the above activities, there are other activities including trade, transportation and oil transshipment at sea. Management of these activities are difficult, because they take place on wide range of waters, while human resources, facilities and conditions for prevention and response to the environmental incidents of sectors and localities are very short and weak. In addition to oil spills at the sea, there are oil spills on river system, in mainland and in the gas pipelines that located along the coast.

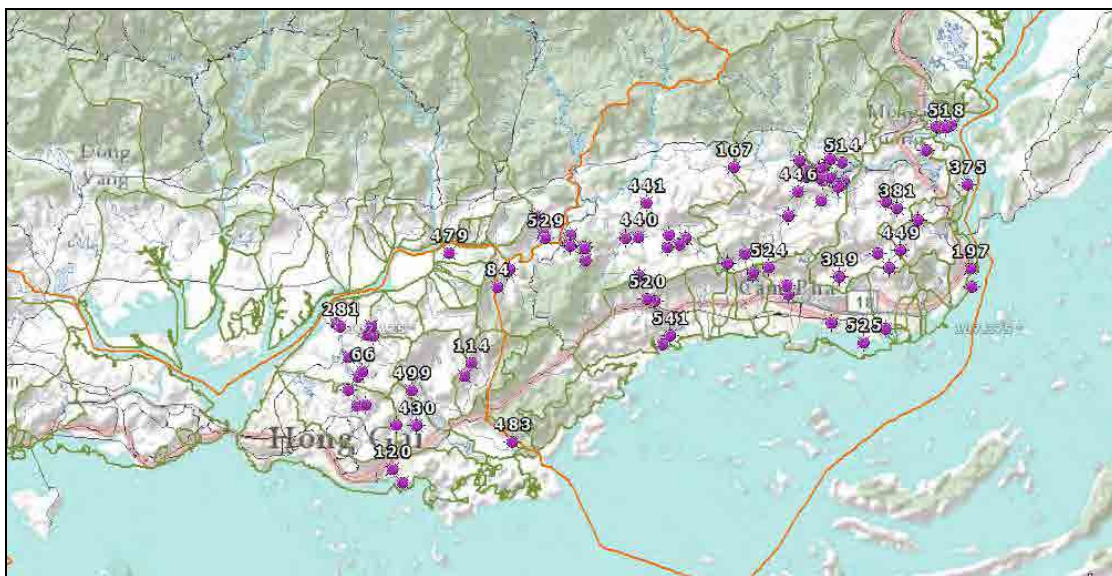
In Halong Area, possible sources of oil spill incidents comprising of fixed and moving sources are as follows:

- B12 Oil Port: Every year, 130 - 150 ships, receiving 1.8 - 2.0 million tons/year.
- Sea and River Port: Cai Lan, Cua Ong, Hon Net, Cam Pha, Hong Gai and Tourist wharf in Bay Chay.
- Petrol Retailing Ships: Halong City 10 ships, Cam Pha 8 ships and Hoanh Bo 3 ships.
- Fish Port and Anchoring Areas: Halong 970 ships, Cam Pha 322 ships and Hoanh Bo 37 ships.

## (2) Coal Mudslides

The Halong Area (especially Halong City and Cam Pha Town) is a leading producing site of coals in Vietnam. Therefore, many waste coal piles are found in sites of coal mines. It has been reported that several coal mudslides happened in the past, influencing physical assets and human lives in nearby areas.

Although exact numbers of sites possibly to cause coal mudslides, it may be presumed that coal mines and coal processing firms have waste coal piles. As shown in **Figure 1** prepared by using data from the PSD, there are a total of 101 entities or sites located in the Halong Area (Halong City and Cam Pha Town) and some of them are possible sources to cause coal mudslides.



Source: JET

**Figure 1 Location of Coal Mining and Coal-Related Industries**

## (3) Hazardous Substance Leaks

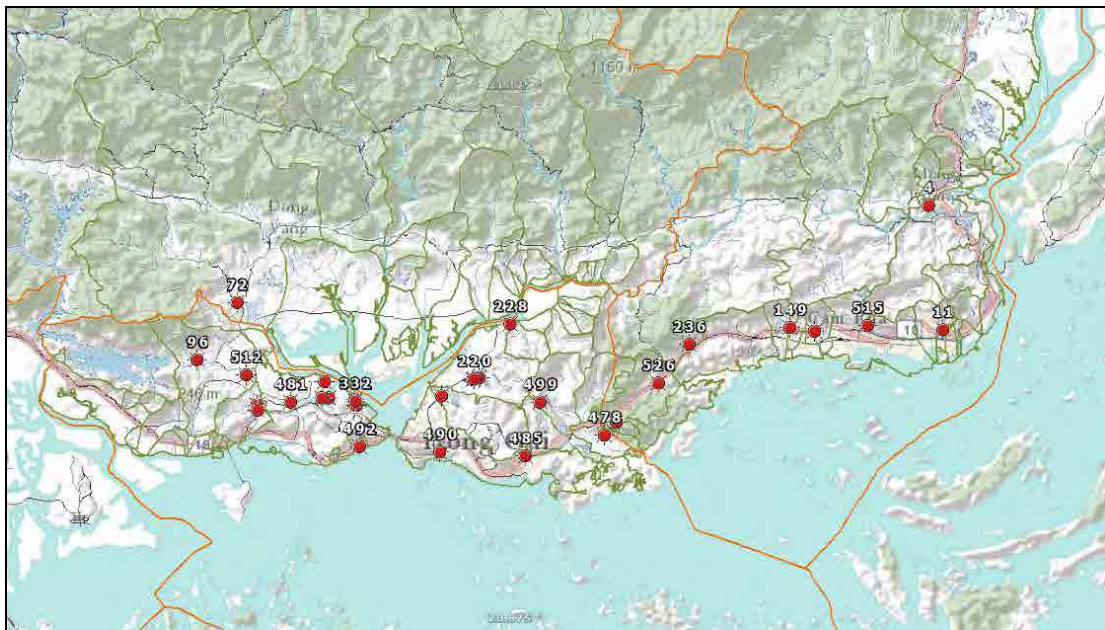
Internationally, groups of oils and hazardous substances (like cyanide, acid/alkali, heavy metals, pesticides, etc.) are dealt as possible causative substances for the environment pollution incidents. The assumption that entities belonging to certain industrial categories possibly

discharge hazardous substance has been placed. In this study, the following industries are considered to be possible sources of hazardous substance leaks:

- Food processing, pulp production, oil and lubricant producing, chemical manufacturing, fabricated metal manufacturing and hospital.

It has been known widely that coal mines and coal-related industries discharge wastewater containing heavy metals. However, these industries are excluded from possible sources of hazardous substance leak, because the environmental pollution incidents are considered to be the pollution incidents caused accidentally.

**Figure 2**, prepared based on the data outputted from the PSD, shows a total of 33 pollution sources possibly cause hazardous substance leak.



Source: JET

**Figure 2 Possible Sources of Hazardous Substance Leaks**

## 2.2 Environment Pollution Incidents in Halong Area

There are no reliable information sources for the environment pollution incidents in the Halong Area. Even Quang Ninh DONRE which has vast responsibilities for the environmental management is not endowed with reliable records of environment pollution incidents happening in the Halong Area in the past. By aggregating all of data and information collected from various visited institutes, a total of 10 incidents have been identified since 1998, as shown in **Table 2**.

Among them, 6 incidents are oil spill and 4 are coal mudslides. If other incidents (like flooding, land slide, fire, etc.), as shown in **Annex 1**, besides the environment pollution incidents are added, the total numbers come to be 28 incidents.

Internationally, groups of hazardous substances (like cyanide, acid/alkali, heavy metals, pesticides, etc.) are dealt as possible causative substances for the environment pollution incidents. In the Halong Area, any report on such incidents caused by hazardous substances has been not found at present.

**Figure 3** and **4** shows representative incident scenes of oil spill incidents and coal mudslide.

**Table 2 List of Environment Pollution Incidents in Halong Area**

Title	Incident Category	Date of Incident	Site of Occurrence	Causative Unit	Incident Scale	Cause and Responses
1. Vegetable oil leakage	Oil leakage (Vegetable oil)	Sep. 7, 1998	Water area near the old ferry station	Hoan Chau Ltd Company	About 1,000 m <sup>2</sup> of surface water near the office of Port Authority was polluted by vegetable oil.	The ship discharging oil was arrested based on the request from DOSTE, thereby receiving an administrative sanction with amount of 1.5 Million. Rescue team and equipment from B12 company was mobilized to clean the area.
2. Oil leakage at Cua Luc Straight	Oil leakage	Oct. 18, 1998	Water area around B12 and Cai Lan Port	Not identified	About 10,000 m <sup>2</sup> of surface water from Cai Lan Port to B12 Port was contaminated by discharged oil.	B12 Petrol Company participated in cleaning operation by the request from DOSTE. Afterward, B12 requested for the payment of expenses from the provincial budget.
3. Oil leakage around water body of Petrol B12 port.	Oil leakage	Nov. 21, 1998	Water area around B12 Port	Not identified	Oil leakage with thin layer covered about 6,000 m <sup>2</sup> around the B12 Port.	B12 company participated in cleaning operation by the request from DOSTE.
4. Oil leakage at B12 Storage	Oil leakage	Mar 10, 1999	B12 Oil storage area	B12 Company	About 10 m <sup>3</sup> of diesel oil were spilled, causing oil pollution around B12 port and Cua Luc Bay	B12 company respond to the incident by using floating net and chemical spray to dissolve oil leakage.
5. Oil leakage at Port Authority area	Oil leakage	June 7, 1999	Water area around office of Port Authority	Not identified	About 500 m <sup>2</sup> from Ben Doan to Old Ferry Station	The DOSTE and the Port Authority formulated 3 working teams including: investigation of pollution source; damage assessment and treatment. While checking several ships in the area, no polluter was found. Rescue team form B12 was mobilized and about 200 liters oil were collected.
6. Sink of Bach Dang Giang Cargo	Oil leakage (by cargo sinking)	Jan. 31, 2003	Hon Phao Dai Island in Halong bay area, about 13 nautical miles from Bai Chay side.	Vinashin	A thin layer oil leakage covered about the area of 500 m <sup>2</sup> .	Quang Ninh PC mobilized a rescue team form B12 to the site. The team was equipped with two tug boat, 300 m floating net, floating storage 70 m <sup>3</sup> , chemical, oil absorption materials, etc. After 12 days, the ship was rescued. Diesel tanks with capacity of 1.600 tons were in safety condition.
7. Waste rock slide from Cao Son Coal Mine	Coal mudslide	Sep. 17, 2005	Group 68 Area 4 Mong Duong Commune, Cam Pha	Cao Son Coal Mine	Waste rock from Cao Son Coal Mine slide to residential areas due to heavy rain. As a result, garden of 5 households were damaged, the stream was stuck, and water flew into the houses.	Cao Son Coal Mine has paid compensations, Although its amount was not enough, reportedly.
8. Mud slide at Khe De area Cua Ong, Cam Pha	Coal mudslide	Jul. 31, 2006	Area 1 Cua Ong Commune Cam Pha	Coc 6 Coal Mine	Dyke No 1, 2,3 of Khe De were broken. About 1.000 m <sup>3</sup> mud slide was caused over the dyke. 6 houses were collapsed; 7 cows were killed; and some motorbikes were damaged.	Coc 6 Coal Mine gave initial compensation for 7 damaged houses with amount of 3 million each. A new dyke with investment of 22 billion was constructed to protect resident area.
9. Waste rock slide at Cao Son Coal	Coal mudslide	Aug. 19, 2006	G9 Coal Seam Cao Son Coal	Cao Son Coal Mine	500,000 m <sup>3</sup> waste rock slide destroyed the supporting dyke and the	This accident cost about 10 billion according to Vinacoal.

Title	Incident Category	Date of Incident	Site of Occurrence	Causative Unit	Incident Scale	Cause and Responses
Mine			Mine		coal transportation system	
10. Run-off from Coc 6 Mine	Coal mudslide	July 1, 2007	Group 67 area 5, Cam Phu Commune, Cam Pha	Coc 6 Coal Mine	Water run from Coc Sau Coal mine broken a wall and collapsed the house. 3 people died.	

Source: JET



Source: Collected by JET

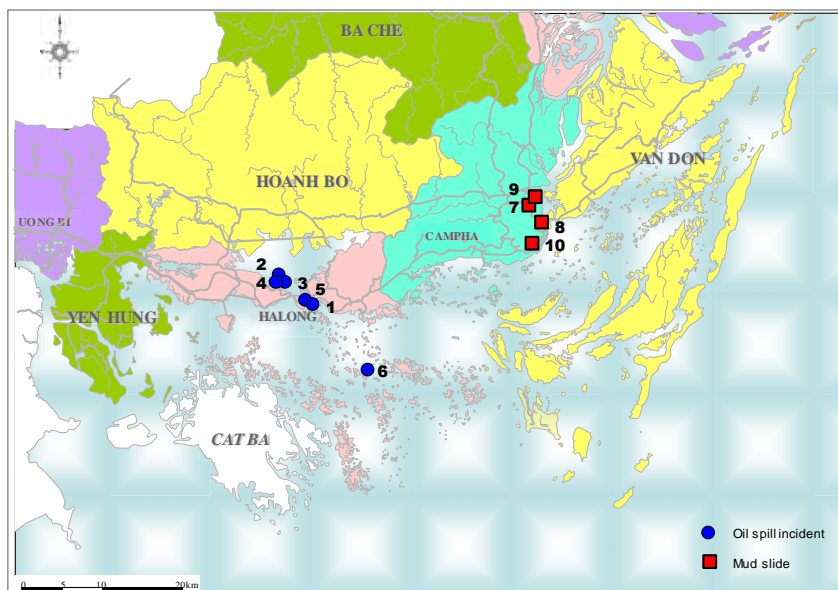
Figure 3 Scene of Oil Spill in Sinking of Bach Dang Giang Cargo (No.6)



Source: Collected by JET

Figure 4 Scene of Coal Mudslide at Cao Son Coal Mine (No.9)

Figure 5 shows locations where environment pollution incidents happening in the past in the Halong Area. The entrance of Bay Chay Bay is a place where frequent oil spill incidents happen. It is presumed that pollution sources for these oil spills are oil facilities and vessels for fuel, lubricant and vegetable oil used in Cai Lan Port Area, Cai Lan Industrial Park, commercial areas in Hong Gai. Oil spill incident has been found in the offshore zone of Halong Bay caused by oil reshipment in Halong Bay. Meanwhile, the coastal zone along Cam Pha Town has suffered from several coal mudslides caused by coal waste piles nearby.

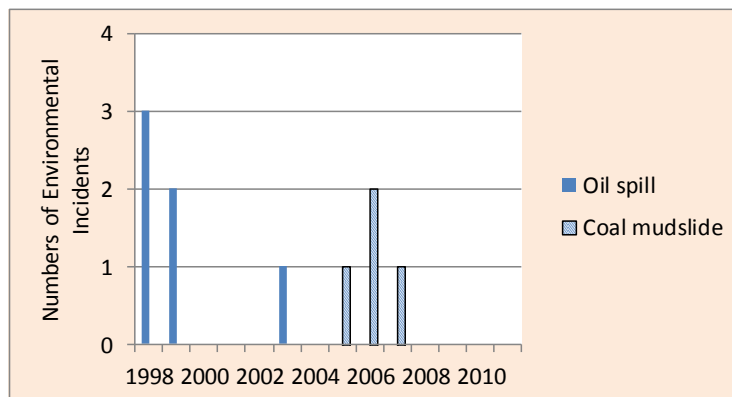




Source: JET

**Figure 5 Locations of Environment Pollution Incidents in Halong Area**

As shown in **Figure 6**, this survey result means that there have been no oil spill incidents since 2004, and no coal mudslides since 2008. While these data shows no any incident since 2008, there are no realistic measures whether this reflects the true fact or not.



Source: JET

**Figure 6 Numbers of Environment Pollution Incidents in Halong Area**

Lake Yen Lap and the Dien Von River are major sources for domestic water for urban centers of the Halong Area. Fortunately, no environment pollution incident has not been reported around these water source areas. Thus, it is assessed that no urgent pollution risk exists in such water sources in the Halong Area, at present.

### 2.3 Oil Spill Incidents in Hai Phong Port Area

Hai Phong Port with larger scale than Cai Lan Port is located in the same economic zone of Northern Vietnam as the Halong Area. Hai Phong Port Area is selected as the subject area to learn lessons on measures against oil spills, because it is presumed that Hai Phong Port Area is in the similar situation on the occurrence of and response to oil spill incidents to the Halong Area encompassing Cai Lan port.

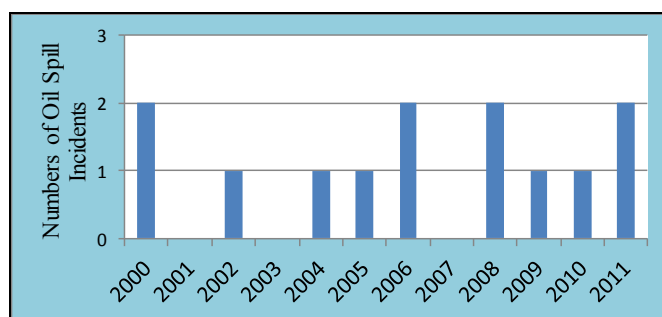
According to the collected records, Hai Phong Port Area has experienced a total of 13 oil spill incidents since 2000, as shown in **Table 3** and **Figure 7**.

**Table 3 List of Oil Spill Incidents in Hai Phong Port Area**

Title	Date	Site	Incident Scale	Response
1. Oil spill from the Grace Ship ( Korea)	Mar 31, 2000	Hai Phong Port	4 m <sup>3</sup> of wastewater oil was discharged out without any treatment.	Hai Phong Port Authority has carried out inspection and applied the sanction against the violation
2. Oil spill from Kirovs Klees ( Russia)	May 8, 2000	Water way to Cua Cam Port, Hai Phong	3 m <sup>3</sup> oil spill was happened, during the demolition of the ship.	Hai Phong Port Authority has carried out inspection and applied the sanction against the violation
3. Oil spill from the ship Zinzin	Jul. 2, 2002	Hai Phong Port	6 m <sup>3</sup> of oil contaminated wastewater was discharged out, because of miss operation.	Hai Phong Port Authority has carried out inspection and applied the sanction against violation.
4. Oil spill from the My Dinh ship sunk on the way from Hai Phong to Quang Ninh	Dec. 22, 2004	Near Cat Ba Island	A part of 200 m <sup>3</sup> diesel and fuel oil were leaked.	An urgent meeting of Commander Board for rescue and disaster prevention of Hai Phong was organized. They requested the ship owner and authorities to pull out all diesel and then taken up the ship.
5. Oil spill from the ship Zo Myong (DPR Korea)	Aug. 16, 2005	Hai Phong Port	2.5 m <sup>3</sup> of oil contaminated wastewater was discharged out.	Hai Phong Port Authority has carried out inspection and applied the sanction against violation

Title	Date	Site	Incident Scale	Response
6. Oil spill from the ship Van My ( Vietnam)	Apr. 15, 2006	Hai Phong Port	2.0 m <sup>3</sup> of oil contaminated waste water was discharged out because of miss operation.	Hai Phong Port Authority has carried out inspection and applied sanction against the violation
7. Waste oil illegal discharging of HB2 Ship- Hai Binh Co. Ltd from Thai Binh Province	May 18, 2006	Kinh Thay River, Dai Yen commune, An Duong, Hai Phong City	About 2 tons of waste oil was discharge to the river.	The ship was arrested and the penalty was imposed (no information on the amount of penalty).
8. Oil spill from XITONA ( Mongolia)	Aug. 19, 2008	Hai Phong Port	2.5 m <sup>3</sup> of oil contaminated wastewater was discharged out.	Hai Phong Port Authority has carried out inspection and applied sanction against the violation
9. Oil spill from the ship HADACO 15 ( Mongolia)	Nov. 7, 2008	Hai Phong Port	3.0 m <sup>3</sup> of oil contaminated wastewater was pumped out because of miss operation.	Hai Phong Port Authority has carried out inspection and applied sanction against the violation
10. Oil spill from PIONEER SEA (Malta)	May 15, 2009	Hai Phong Port	Ballast water contaminated with oil was discharged out.	Hai Phong Port Authority has carried out inspection and applied sanction against the violation
11. Oil spill from incident of Shun An Xing Ship sunken (Chinese)	May 14, 2010	5.5 km from Hon Dau Island, Do Son Hai Phong	Oil leakage covered the sea area of about 10,000 m <sup>2</sup> . The ship carried 70 ton of diesel oil and lubricant when it sunk to the sea.	Hai Phong PC issued an urgent letter to request the North Oil Spill Response Center (NOSRCEN), Military force, and Rescue Force of Hai Phong port to participate on response activities. The NOSRCEN has sent 3 rescue ships, 52 rescue mans with absorbs material to the site. They collected 700 liters oil.
12. Oil spill from Thinh Hung Ship ( Viet Nam)	Jan. 31, 2011	Bach Dang River, near Hai Phong Port	90 tons of diesel oil spilled out while the ship was hit on rock	Hai Phong Port Authority has carried out inspection and applied sanction against violation
13. Oil spill from the Ship Bach Dang 01 sunken by hitting with Minh Tuan Ship	Jul. 17, 2011	Floating signal No 41 and 42. Water way to Dinh Vu Island, Hai Phong City	100 m <sup>3</sup> of diesel were spill out.	The Authority of Haiphong has mobilized rescue team to the site. Detail of response action was not recorded. On 18 July 2011, the Bach Dang ship was taken up.

Source: JET



Source: JET

**Figure 7 Numbers of Oil Spill Incidents in Hai Phong Port Area**

## 2.4 Emergency Response for Environment Pollution Incidents

### (1) General

Mitigation measures against environment pollution incident are taken by two (2) ways; one is preventative measure before the incident, and another is emergency response in the event of incident outbreak.

Concerning oil spills in the port area, periodical site inspections to vessels and other facilities

are carried out as a routine task of Port Authority. Meanwhile, on coal waste piles at open-cut mines, DONRE (and other management agencies) and other competent authorities conduct supervisions on the routine base, providing the instruction on preventative countermeasures. Production, storage and transport facilities handling hazardous substances are subject to the periodical environmental inspection and check of DONRE (and other environment management authority).

As understood from the above, preventative measures against environment pollution measures are carried out by competent authorities as routine tasks. Meanwhile, combat force and equipment have been mobilized as emergency responses in the event of incident outbreaks, as below.

## (2) Halong Area

As for oil spill incidents in the Halong Area, Petrol Company B12 works as a leading force for emergency response against oil spill, based on the instruction of Command Board of Natural Disaster Prevention and Response of Quang Ninh or Quang Ninh Port Authority. In response to the degrees of incidents, Company 128 located in Hai Phong City that belongs to Northern Oil Spill Response Center (NOSRCEN) participates in the joint action, if necessary.

Meanwhile, DOSTE used to play a role in the surveillance of oil spills at the site to measure and assess incidents in the past. In the event of oil spill incident happens, Petrol Company B12 takes actions at the site, mobilizing their equipment as shown in **Table 4**. Besides these, Provincial Military Command, Provincial Boarder Military Command and Quang Ninh Port Authority owns equipment and facilities to be used for oil spill response.

**Table 4 List of Oil Spill Response Equipment of Petrol Company B12**

No.	Items	Dimensions
1	700m pipes	For water and bubble supply for fuel tank and barges
2	Pumps	3 sets with flow capacity of 162 m <sup>3</sup> /h
3	Fire –fighting water tank	500 m <sup>3</sup>
4	Bubble tanks	2 sets, capacity 50 m <sup>3</sup>
5	Fire trucks	2 sets
6	Tug boat with anti-fire	1 set
7	Canoe	1 set, capacity 30 CV
8	Floating	2sets, 560m
9	Boat	With 7 men
10	Oil absorbent and dispersant	
11	Oil skimmer	
12	Communication equipment	Telephone communication equipment, camera monitoring equipment

Source: JET

To prevent from coal mudslides from waste piles, owners of mine operations install drainage ditches around waste piles and carry out tree planting on the slopes, etc., as preventative measures. In the event of coal mudslides, Provincial (or District People’s Committee) and/or Command Board of Natural Disaster Prevention and Response mobilize task forces and equipment.

### **(3) Hai Phong Port**

In Hai Phong Port Area, NOSRCEN located in Hai Phong City is a main force against oil spill combat at the site. NOSRCEN is organized by mainly forces of Company 128 and is situated in the office of Company 128.

NOSRCEN works for oil spill responses in not only Hai Phong but also Northern Vietnam including Quang Ninh and Quang Binh. Recently, it has been reinforced to the large extent with the provision of modern equipment and its manpower is well educated with regular drills.

## **3. LEGAL SETUP FOR ENVIRONMENT POLLUTION INCIDENTS**

### **3.1 Provisions in Law on Environment Protection**

The Law on Environment Protection (No. 52, enacted in 2006) defines that environmental incident means any catastrophic event or risk which occurs in the course of human activities, or any sudden natural occurrence which causes serious environmental pollution, degradation or change (Article 3). As seen from this definition, the Law on Environment Protection aims to deal with environmental incidents defined in the broader sense, including ones caused by natural disasters.

With respect to environment pollution incidents, the Law on Environment Protection stipulates series of legal guidance in the chapter 9 (Prevention of and Response to Environmental Incidents; Remediating Environmental Pollution and Rehabilitation of Environment). Responsibilities of bodies related to environment pollution incidents may be summarized as follows:

Responsibilities of causative (or potential causative) body are as follows. The Law applies the rule of “Polluters-Pay-Principle (PPP)” in the economic aspect to the environment pollution incidents:

- To prepare plans of prevention of and response to the incidents in its territories,
- To take urgent measures at the site,
- To inform promptly a competent administrative unit,
- To take measures to remedy environmental pollution and rehabilitate the environment, complying with administrative unit’s requests, and
- To compensate for damage.

Governments at all levels have series of responsibilities, within the scope of their respective duties and powers. In localities, provincial and district people’s committee are responsible for planning of, preventing of and responding to the incidents, and leading remedy and rehabilitation:

- To prepare plans of prevention of and response to the incidents in its region,
- To mobilize manpower and equipment to response the incident in its region, and
- To lead the assessment of environmental damages, remediating the pollution and rehabilitating the environment.

As understood from the above, the Law on Environment Protection indicates general guidance for environmental incidents. However, it is assessed that the Law does not refer to such clear and specific stipulations that entities and governmental units at all levels can immediately take measures against incidents.

### **3.2 Regulations Associated with Environment Pollution Incidents**

### **(1) Quang Ninh Province**

Quang Ninh PC has enacted the Decision of “Organizing of Provincial Command Board for Natural Disaster Prevention and Response” (No.1379/QD-UBND, May 2011), as shown in **Annex 2**. Department of Agriculture and Rural Development (DARD) submitted the proposal for this Decree. This decree is mainly based on not the Law on Environment Protection but the flood control ordinances (dated August 24, 2000).

This Board (headed by Vice President of Quang Ninh PC), as the General Commander, has designated a total of 27 officers. All the officers are mainly engaged in natural disaster causing flooding, and no officer engaged in the environment (like DONRE officer) is placed. Thus, it may be assessed that this Command Board is of a character focusing on just natural disaster like flood protection, landslide, etc.

As understood from the above, specific regulations and institutions dedicated to environment pollution incidents have not been established yet, in Quang Ninh Province.

### **(2) Hai Phong City**

In Hai Phong City, the Decree for Command Board of Natural Disaster Prevention and Response (No.800/QD-UBND, May 2009) has been enacted. This Command Board is comprised of three (3) units, as follows:

- Flood and storm prevention,
- Search, prevention and rescue of earthquake and tsunami, and
- Oil spill prevention

The unit of oil spill prevention is led by Vice Head of Navy Force and Vice Director. Vice Director of DONRE is assigned as Vice Head of this unit. Some members of the unit come from Company 128 belonging to NOSRCEN.

As obvious from the above, unlike Quang Ninh Province, Hai Phong City has set up specific institutions dedicated to oil spill incidents.

### **(3) Hanoi City**

Hanoi City is now preparing a draft document, as attached in **Annex 3**, to issue the regulation specialized in prevention of and response to environmental incident.

This draft regulation specifically defines respective responsibilities of organizations relating to environmental incidents like causative units, establishments, people’s committee at all levels, fire-fighting department, police, etc.

In this draft regulation, DONRE is positioned to play a leading role in the locality in the prevention of and response to environment pollution incidents. The major tasks of DONRE are summarized, as follows:

- To lead and guide People's Committees of districts, towns to develop plans for the prevention of, response to, and remedy and handling of environmental incidents.
- To instruct professional knowledge and skills in investigation and verification of environmental incidents, assessment and determination of damages, completion of legal documents; to request owners of establishment causing environmental incidents to compensate for damages caused at the request of the People's Committees of districts and towns.
- To preside over the organization of education, professional training on the plans for prevention, response to, and remedy of environmental incidents for specialized forces of district-level People's Committees; to organize the propaganda, public education,

dissemination of knowledge on risks, threats of environmental incidents for proactive prevention and response.

- To preside over and coordinate with other departments, sectors and related agencies for handling environmental incidents occurred in the area of inter-districts, inter-provinces and report to the City People's Committee.
- To promptly report to the City People's Committee and MONRE on the serious and extremely serious environmental incidents for their direction, and propose emergency measures to respond to the incidents; Periodically every 6 months and annually, report the implementation status and results of implementation of plans for prevention, response to, and remedy and handling of environmental incidents by the People's Committees of districts, and of inter-provincial environmental incidents.

#### 4. ANALYSIS OF ENVIRONMENT POLLUTION INCIDENTS AND MEASURES

##### 4.1 General

As discussed in the section 1.2, this study covers the environmental incident associated with the water environment management, excluding ones caused by natural disaster. Thus, three (3) categories of incidents are considered in view of causative substances, as follows:

- |                              |  |
|------------------------------|--|
| - Oil spills                 | Fuel oils, crude oils, lubricant oils, vegetable oils and others       |
| - Coal mudslides             | Waste coal piles   |
| - Hazardous substances leaks | Oils, cyanides, acids and alkalis, heavy metals, pesticides and others |

Among them, mudslides might be, in general, not considered to be an environment pollution incident. It is, however, included in this study, taking account of: i) mudslides are one of frequent incidents in the Halong Area, and ii) they tend to be caused by anthropogenic activities and to impose great influences to the water environment nearby.

In terms of preventative measures to contain the occurrence of environment pollution incident, competent authorities (Port Authority, DONRE and other sector departments) have already practiced certain supervision and/or inspection as their routine tasks. Hence, the important is that these regulatory tasks need to be strengthened to ensure their effects.

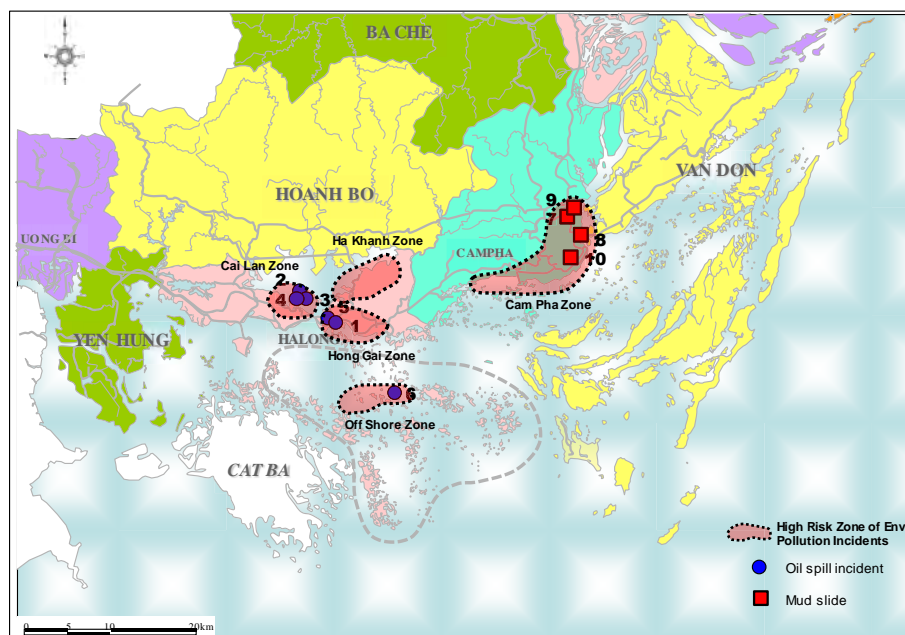
##### 4.2 Geographical Distribution of Environment Pollution Incidents

Reliable data/information sources on past environment pollution incidents are not in place at the present, thereby resulting into no archive for incident records. Nevertheless, numbers of incidents have been found out through interviews with mass-media and associated agencies in this survey.

Based on the analysis on collected data/information and the result of the pollution source survey conducted by Output-2, a number of high-risk zones, as shown in **Figure 8**, have been found, as follows:

- |                                    |   |
|------------------------------------|---|
| - Cai Lan Port and Industrial Zone | High-risk of oil spills from oil transport and storage facilities and vessels in the port, and of hazardous substance leakage to be caused by production and transport industries |
| - Ha Khanh Zone                    | High-risk of mudslides from coal waste piles of coal mines  |
| - Hong Gai Zone                    | High-risk of oil spills from oil transport and storage facilities and vessels for port and commercial.  |

- Off shore Zone            High-risk of oil spills and coal refuse disperse to be caused by reshipment at the offshore
- Cam Pha Zone            High-risk of mudslide from coal waste piles of coal mines



Source: JET

**Figure 8 High-Risk Zones in Environment Pollution Incidents in Halong Area**

As seen from this figure, high-risk zones in environment pollution incident are located along the coast of Halong Bay. These water courses are one of important resources for the tourism. In these high-risk zones, the environment pollution incidents are caused by oil spills and mudslides of coal waste piles, according to incident records in the past.

At present, there is no report of environment pollution incident in the areas of Lake Yen Lap and the Dien Von River which are major sources for domestic water supply in the Halong Area.

It has been known internationally that hazardous substances are a potential cause for environment pollution incidents, in case they leak in the course of production, transportation and storage. In the meantime, no report in the Halong Area has been found in this account.

### 4.3 Current Measures against Environment Pollution Incidents

#### (1) Overview

As a result of the analysis of collected data/information, it is assessed that response against environment pollution incidents (coal mudslides and hazardous substance leaks) are not activated satisfactorily, at present. Together, Quang Ninh Province does not setup regulations specialized in prevention of and response to environmental incident, at the present.

Specific analysis results are set forth below:

#### (2) Oil Spills

Management activities to prevent oil spill are carried out. They are the periodical inspection on oil-related facilities conducted by DOT and DONRE and the inspection on vessels by Port Authority. Although it is not clear if current periodical inspections conducted by DONRE and Port Authority are appropriate or not, it is the fact that, some incidents among oil spill incidents in the past were caused by miss-operation and/or physical deficiency of related facilities.

Oil spills generated from transport and storage facilities and vessels have been responded by mainly Quang Ninh Port Authority and Petrol Company B12. They can be also supported by the mobilization of NOSRCEN, if incident scales are beyond their capacity.

At the present, Quang Ninh Province has no clear and authorized contingency plan against oil spills. As of July 2012, Quang Ninh Province has been preparing the “Plan of Oil Spill Response in Quang Ninh Province” to get the approval from MONRE.

### **(3) Coal Mudslides**

Coal waste generating from open-pit mining causes different environmental problems in the Halong Area. This is because some of urban centers in the region are sited next to mining zones. In a long history, the region has suffered from several cases of mudslide of coal waste piles. In case of coal mudslide, damage of human lives and properties are a serious problem rather than water pollution.

Thus, certain preventative measures like the installation of the installation of safe slope and scarcement for waste coal piles, rain ditches, tree planting, etc. have been already taken to reduce incidents since the past. DONRE is involved in such preventative measures, conducting periodical environmental check and inspection.

### **(4) Hazardous Substance Leaks**

In the Halong Area, there is no report registered up to today, regarding environment pollution incidents caused by hazardous substance leak. Actually, the management of hazardous wastes is one of routine tasks of provincial DONRE and district DONREs.

### **(5) Legal Setup for Emergency Response**

Quang Ninh Province has the regulation for the Provincial Command Board for Natural Disaster Prevention and Response (No.1379/QD-UBND, May 2011). In this regulation, prevention and response against incidents are focusing on mainly flooding, landslides, etc. caused as natural disaster. Even so, in the Halong Area, certain parts of environment pollution incidents (like oil spills and coal mudslide) have been responded historically by means of available equipment and materials, mobilizing necessary manpower from associated institutes and agencies.

## **5. DISCUSSION ON MEASURES AGAINST ENVIRONMENT POLLUTION INCIDENTS**

### **5.1 Issues to be Addressed**

As mentioned in the above, different issues have been identified in environment pollution incidents of three (3) categories. The purposes of measures against environment pollution incidents are to minimize the occurrence of and damages brought by environment pollution incidents in the Halong Area, thereby to preserve the water environment of rivers, coasts and bays. This report discusses measures and basic approaches responding to environment pollution incidents which Quang Ninh PC and DONRE should tackle.

Concerning oil spill incident, DONRE (specifically, Sub-Department of Sea and Islands as a responsible unit) has been completing the “Plan of Oil Spill Response in Quang Ninh Province”, and now the approval work from MONRE is under way. Because this plan is the result of decision-making made by Quang Ninh PPC, and is of the comprehensive character, encompassing necessary measures against oil spills, this study report does not repeat the discussion on oil spills. For reference, the outline of the “Plan of Oil Spill Response in Quang Ninh Province” is shown in **Annex 4**.

As for coal mudslides and hazardous substance leaks, different problems and constraints have

---



been emerged based on the analysis of current situation and practices, as follows:

- Data/information on environment pollution incidents (coal mudslides and hazardous substance leaks) which happened in the Halong Area have not been recorded appropriately.
- Possible sources with a high-risk of environment pollution incident (coal mudslides and hazardous substance leaks) have not been clarified.
- Environmental checks which aim the prevention of environment pollution incident (coal mudslides and hazardous substance leaks) have not been enforced enough.
- Regulation to promote the emergency response against environment pollution incidents (coal mudslides and hazardous substance leaks) is not in place.
- Manual for emergency responses against environment pollution incident (coal mudslides and hazardous substance leaks) has not been established.

## 5.2 Measures against Environment Pollution Incidents

### (1) Overview

As for coal mudslides and hazardous substance leak, problems and constraints in measures against environment pollution incidents have been clarified in the section 5.1. Based on these results, series of basic measures to strengthen response against environment pollution incidents have been examined.

The working hours allocated to the survey and study of this environment pollution incident in the Output-2 are so limited that precise and deep baseline survey and examination are not allowed. Therefore, this section 5.2 raises preliminary ideas on measures for solving current weaknesses in the response against environment pollution incident.

In such view, series of actions to strengthen response against environment pollution incidents are suggested as below, aiming to encourage the starting-up of actual activities by DONRE for working on environment pollution incidents. From such context, DONRE is expected to supplement some actual and detail schemes to push forward with these actions suggested here, if necessary in the course of the implementation.

Measures against environment pollution incident are divided to two (2) approaches; preventative measures to control the outbreak of incidents, and emergency response in the event of incident outbreak to contain to the minimum damage.

For preventative measures:

- Recording System for Environment Pollution Incident (Action 1)
- Identification of Possible High-Risk pollution Sources (Action 2)
- Review and Improvement of Environmental Check Items (Action 3)

For emergency response:

- Regulations Associated with Environment Pollution Incidents (Action 4)
- Development and Implementation of Emergency Responses Plan against Environment Pollution Incidents (Action 5)

It is assumed that all the measures examined here will be completed within about five (5) years.

### (2) Recording System for Environment Pollution Incident (Action 1)

Objective: To designate a unit in charge and to keep records of data/information

	on environment pollution incidents (coal mudslide and hazardous substance leak) happening.
Justification:	Through the data gathering of this study, it has been clarified that data/information of environmental pollution incidents in the past have not been recorded systematically. This data recording is necessary as a minimum condition for measures to learn many things from past incidents and manage environment pollution incidents.
Component activities:	<p>1) Assigning a unit and officer in charge Sub-Department of EP assigns a unit and officer in charge of keeping records of data/information on environment pollution incidents.</p> <p>2) Forming the data sheet for recording An officer in charge forms the data sheet for recording, including: place, data/time, size of incident, effect of incident, response taken, environmental influence and so forth.</p> <p>3) Recording data/information of incident in the past By using the prepared data sheet, an assigned officer makes the records for incidents in the past.</p> <p><i>Remark:</i> By using the format prepared as above, the task of recording keeping data/information of incidents will be performed by an assigned officer, as a regular work.</p>
Leading unit:	Sub-Department of EP
Period for action:	About 10 months
Necessary expenses:	Man-hour 10 man-month

### (3) Identification of Possible High-Risk Pollution Sources (Action 2)

Objective:	To identify possible pollution sources of environment pollution incident with high-risk (of coal mudslides and hazardous substance leaks) which are strictly supervised in the environmental check.
Justification:	<p>In this project, the preliminary study have selected the following possible pollution sources with risk, based on the data/information collected in the PSD:</p> <ul style="list-style-type: none"> <li>- For coal mudslides: A total of 101 projects in coal mines and coal-related industries.</li> <li>- For Hazardous substance leaks: A total of 33 projects in industries handling oil and hazardous substances.</li> </ul> <p>As preventative measures against coal mudslides and hazardous substance leaks, projects containing special high-risks must be identified and be supervised with special cares in the environmental check conducted by DONRE.</p> <p>The identification of possible pollution sources with high-risk is necessary to select possible projects with special high-risks.</p>
Component activities:	<p>1) Setting up a criteria for selecting special high-risk projects At the present, a total of 134 projects in the Halong Area have been</p>

chosen as high-risk projects. Considering the enforcement capacity of DONRE in the environmental check, certain numbers of special high-risk projects requiring special supervisions should be identified, according to a certain criteria. Thus, a criteria for selecting special high-risk projects should be first developed, containing; category of pollution risk, estimated scale of pollution, estimated frequencies of pollution, surrounding environmental conditions, influence to the environment and human health, economic damages and so forth.

#### 2) Identifying projects with special high-risk

By using the criteria developed, DONRE identifies projects with special high-risk from a total of 134 projects. This selection should be made, based on data/information stored in the PSD. Site surveys to supplement data/information on projects and others should be made, if necessary.

#### *Remark:*

Identified projects means that they belong to possible sources which need special supervisions to prevent environment pollution incident. Periodical environment checks are conducted as a regular task of DONRE. DONRE should perform the environmental check against these identified projects by using the modified check list, giving a high-priority to them.

Leading unit:	Sub-Department of EP
Period for action:	About 24 months
Necessary expenses:	Man-hours 18 man-month

#### **(4) Review and Improvement of Environmental Check Items (Action 3)**

Objective:	To review and improvement a present environmental check list, by examining the inclusion of environmental check items necessary for preventative measures against environment pollution incidents.
Justification:	By identifying possible sources with special high-risk, prioritized environmental check will be implemented. Commonly, DONRE conducts the site investigation of the environmental check, using the Check List enumerating different items to be checked at the site. Considering the check for possible sources of incident, the present check list for site investigation should be reviewed and modified, if necessary.
Component activities:	<p>1) Review and modify the environmental check list</p> <p>Considering the check for possible sources with high-risk, the present check list for site investigation should be reviewed. The check list should contain series of data/ information necessary for preventing incidents and should be modified, if they are not enumerated in the present list.</p> <p>Check items to be surveyed at the site are representatively, as follows:</p> <ul style="list-style-type: none"> <li>- For coal mudslides: Height, slope angle, etc. of waste piles, installation and dimensions of drain ditch, scarcement and tree planting and so forth.</li> </ul>

- For hazardous substance leaks: Properties and volume of substances, status of storage, status of legal registrations and so forth.

Leading unit: Sub-Department of EP  
 Period for action: 12 months  
 Necessary expenses: Man-hour 6.0 man-month

#### **(5) Regulations Associated with Environment Pollution Incidents (Action 4)**

Objective: To establish regulations enabling emergency response against environment pollution incidents.

Justification: Based on past experiences, it has been known well that emergency response against environment pollution incidents must be taken in the full cooperation of many concerned units, like Provincial PC, DONRE, District PC, Police Department, Military Unit and so forth. While the Law on Environment Protection (No. 52) defines only general roles and responsibilities of units concerned in the chapter 9, detail involvements of various units should be defined depending on the characters, scales, sites, etc. of the incident actually happening.

Meanwhile, Quang Ninh Province has already enacted the Decree on the Provincial Command Board for Natural Disaster Prevention and Response (No.1379/QD-UBND, May 2011). However, this command board does not appear to include the response against environment pollution incidents.

As set forth above, appropriate legislation system is required to clearly define organizations involved in emergency response and respective roles.

Component activities: 1) Regulation specialized in environment pollution incidents  
 Hanoi City has been discussing the setup of the regulation specifying emergency measures against environment pollution incidents. In draft regulation of Hanoi City, roles of different units are defined specifically, depending on the scales of incidents. In Quang Ninh Province, such regulation is necessary to ensure respective roles and responsibilities of Quang Ninh PC, DONRE, district PCs, commune PCs, Fire-fighting Department, other related departments, etc. So, DONRE should work on to establish new regulations to govern emergency response against environment pollution incident.

2) Extending the coverage of Provincial Command Board for Natural Disaster Prevention and Response

In the Decree on the Provincial Command Board for Natural Disaster Prevention and Response (No.1379/QD-UBND, May 2011), it is not defined that a representative of DONRE is participated in this command board, unlike the case of Hai Phong City organizing a unit specialized in oil spills. In this connection, it is advisable that the regulation on the Provincial Command Board be re-examined in view of its scope of incidents and constituent members.

Leading unit: DONRE and Sub-Department of EP  
 Period for: About 18 months

action:

Necessary Man-hour 30 man-month  
expenses:

**(6) Emergency Response Plan against Environment Pollution Incidents (Action 5)**

Objective: To develop and implement an emergency response plan to environment pollution incidents

Justification: Emergency response plan against environment pollution incidents is not in place at present in Quang Ninh Province, except for the “Plan of Oil Spill Response” that are now under preparation by Sub-Department of Sea and Islands.

Prime objectives of emergency response against environment pollution incidents are to minimize the damages of environment and human health caused by incidents. To this end, an integrated plan of how to respond to incidents is necessary to ensure the emergency actions in the event of the incident outbreak.

The development of the emergency response plan and its implementation are called for avoiding serious damages to be caused by environment pollution incidents.

Component activities: 1) Development of an integrated plan for emergency response to incidents

First of all, an emergency response plan should be developed. Specific response operations applied to actual incidents are different, depending on the characters and scales of incidents and surrounding conditions. In view of three (3) categories incidents (hazardous substance leaks and mudslides), contents of integrated plan commonly adopted are enumerated in the table below, as example, and should be subject to the detail examination at the time of initiating this undertaking, taking account of various conditions of the Halong Area.

**Table 5 Representative Structure of Emergency Response Plan**

Stage of Incident and Measure	Specific Item
1. At the normal time	
a. Establishing the notification route and communication system	- Communication and notice system with associated units, administrative units, general citizen groups, etc.
b. Implementing preventative measures of environmental incidents	- Awareness raising on prevention of incident for general citizens, enterprises and associated organizations
e. Provision of equipment and materials for response operations	- Oil fence, skimmers, adsorbent, chemicals, pumps, trucks, etc.
f. Drills for emergency responses	- Periodical drills for trainings and inspections of equipment and materials
2. At the time of incident (emergency response at site)	
a. Carrying out communication and notice	- Hearing from a detector, person in charge of causative enterprise and persons associated with incident - Notification to up-layer units, cooperating units, etc.
b. Investigating incident	- Identifying causative substances and pollution sources by means of various database - Taking and measuring/analyzing samples - Checking continuous monitoring results

c. Assessing the incident's influence	- Assessing the area to be affected by incident - Predicting the expanded influential area
d. Carrying out containing measure	- Selecting a containing measure in response to the character and scale of incident, and surrounding conditions - Carrying out the selected containing operation - Safety control during the containing operation at site
3. At the time of post-incident	
a. Assessing the environmental effects at the time of the post-incident	- Assessing the environmental effects at the time of post-incident by eye-observation and/or measurement/analysis
b. Estimating the expenses necessary for remedy and rehabilitation	- Calculating the expenses required for response operation, the economic damages caused by the incident and the expenses to recover the environment - Consulting the charge and compensation for the expenses among related parties.
c. Recording the incident and response operation	- Keeping the record, including the cause, situations, applied response operation, etc. and archiving it

Source: JET

Not only Quang Ninh Province but also districts and other administrative units need to formulate an integrated plan to be adopted for their respective areas. Because the preparation of an emergency response plan requests certain specialized knowledge and skills, first of all, DONRE leading the measures against environment pollution incidents in the locality should fulfill in formulating the model version for the whole province. This will help other local agencies establish promptly respective integrated plan for prevention of and response to incident for their respective areas.

2) Provision of facilities and materials for emergency response

Equipment and materials for hazardous substance leak are not in place, at present. Thus, chemicals necessary for treating hazardous substances and equipment to be used for the treatment should be provided.

The following table shows typical treatments applicable for hazardous substance leak in Japan. As implied from this, response against hazardous substance leak are dealt by applying diverse treatment technologies, taking account of conditions at site. Therefore, it is considered that associated institutes need to learn knowledge and skills related to handling of hazardous substance at site in the event of leakage.

**Table 6 Applicable Technologies for Hazardous Substance Leaks**

Category		At Incident Source	In Inlet	In Main River or Water Body
Oil spills		Oil skimmer Oil adsorbent Gelation agent	Oil fence Oil adsorbent Oil skimmer Gate operation (shut-open)	Oil fence Oil adsorbent
Hazardous substance	Cyanides	Chemical treatment	Chemical treatment	Dilution

leak	Acid & alkali	Chemical treatment	Chemical treatment	Dilution
	Heavy metals	Chemical treatment Adsorption treatment	Chemical treatment Adsorption treatment	Dilution
	Pesticides	Adsorption treatment	Adsorption treatment	Dilution

Source: JET

### 3) Conducting drills for emergency response

In actual emergency response against incidents, appropriate activities of persons concerned including communications among persons are the most important for dealing with incident effectively. This is because emergency responses are usually taken in the cooperation of several units and are taken flexibly in response to specific conditions at the site. Meanwhile, some response operations require very specialized knowledge and skills with employing special equipment and chemicals. To ensure appropriate response operations at site in the event of incidents, it is recommendable that periodical drills be conducted in the cooperation of associated units.

Leading unit:	DONRE and Sub-Department of EP
Period for action:	About 3 years
Necessary expenses:	Man-hour 30 man-month (plus 60 man-month of sub-contractor) About 100,000 USD for equipment and materials for hazardous substance leak.

End





## **ANNEX**

- Annex 1: List of Natural Disasters in Halong Area
- Annex 2: Decree on Organization of Provincial Command Board for Natural Disaster Prevention and Response (No 137/QĐ-UBND, May 2011)
- Annex 3: Regulation (Draft) on Prevention, Response to and Remedy of Environmental Incidents in Hanoi City
- Annex 4: Profile of Plan of Oil Spill Response in Quang Ninh Province

### Annex 1 List of Natural Disasters in Halong Area

Incident	Category	Date	Place	Causative Unit	Scale and Impact
1. Three tourist boats sink due to Ice rain and storm	Storm	Nov. 22, 2006	Halong Bay area	Bien Ngoc boat; Boat QN 1456 and QN 1250	5 people on the boat were died.
2. Land slide	Mud slide	Jul. 1, 2007	The access road to Bai Chay Bridge - Hon Gai side	Natural disaster	There was a crack with 5 cm in wide and 30 m in long at the access road to Bai Chay Bridge. 18 households were temporary relocated to avoid land slide.
3. Fire at oil boat at Cua Ong Port	Fire	Nov. 16, 2007	Fish port of Cua Ong Ward, Cam Pha	Son Lam Ltd, Area No 8 Cua Ong Ward	A man died, the boat was totally burned.
4. Flooding at group 7, Lan Ga Area, Cam Dong commune, Cam Pha District due to heavy rain water run from Thong Nhat Coal Company	Flooding	May. 19, 2008	Group 7, Lan Ga Area, Cam Dong Commune, Cam Pha District	Thong Nhat Coal Company	10 houses were being in un-safe condition, two houses were collapsed; a man was injured.
5. Fire at the boat when it just loaded 1000 liter of diesel	Fire	June. 23, 2009	Petrol station No 7, Hai Tan Commune, Hai Ha District	Le Van Kim - the Boat's owner	The boat was completely fired. The fuel supply station was damaged. Two men were injured. It was estimated about 100 million lost.
6. Flooding at Cao Xanh Area	Flooding	May. 10, 2010	Resident area No. 3 and Lo Bat Resident area, Cao Xang Ward	Natural disaster	Water run into the house, because the drainage was stuck
7. Land slide at area 1 bai chay ward	Land slide	May 10, 2010	Group 4 Area 1 Bai Chay Ward	Halong Tourist and Service JSC	path walk, handrail and courtyard of 6 house were collapsed. People have to move away temporary.
8. Fire at the oil board (empty tank) when the board was repairing	Fire at oil board	May 29, 2010	Cualuc Bay, Yetkieu Commune, Halong City which is 400 meter from Bai Chay Bridge	The Boat QN 3018 of Bach Dang Company	The boat was broken. The other nearby boat was sunk. One man died and three others were injured.
9. Flooding at Hong Hai and Bach Dang Ward, Halong City	Flooding	June 7, 2010	Group 8 area 2 Hong Hai Ward and Cau Dat area Bach Dang Ward	Drainage stuck due to construction at Halong High school and construction at Lanbe Cot 8 Road	Water deep 1 m in resident area. Some furniture and electric equipment were damaged, water run into the house.
10. Flooding at Gieng day area	Flooding	June 7, 2010	Resident area 1, 4 and 6 of Gieng Day Ward	Project management Unit of Major Project of Quang Ninh and Quang Ninh Cement JSC	Rain water run into the resident houses because soil from construction site load over the drainage system.
11. Land slide and support wall was broken due to heavy rain	Land slide	Aug. 16, 2010	Group 2 Area 7, Hong ha Commune, Halong City and Area 4 Cam Thanh Commune, Cam Pha District	Natural disaster	Three people died, two people were injured. Two houses were corrupted.
12. Flooding at Ha Long	Flooding	Aug. 18, 2010	Hong Hai, Bach Dang and Cao Thang Ward	Natural disaster	Road to Group 1, area 71, Hong Hai, Kenh Liem and Bai Muoi were dipped 1m in water. Flooding over many houses.

Incident	Category	Date	Place	Causative Unit	Scale and Impact
13. Flooding at Ha Long due to heavy rain	Flooding	Aug. 25, 2010	Cao Thang, Bai Chay, Hong Ha, Bach Dang	Natural disaster	Bai Muoi area Cao Thang Ward was dipped 40 cm in water. Many household goods damaged.
14. Flooding at Hatu Ward	Flooding	Aug. 30, 2010	Area No 4, 7 and 9 along Sec Lo Stream, Ha Tu Ward	Nui Beo Coal Company	Mud and water run over the bank of the stream. Houses and road along the stream were deep in water.
15. Fire on tourist boat at Halong	Fire	Jan. 10, 2011	Hon Gai Harbor	Thanh Hung boat QN4339	All furniture was burned. The lost estimated about 100 million dong.
16. Flooding at Area 1 Cua Ong Commune Cam Pha Town due to rain water run from dumping site of Coc 6 Coal Mine	Flooding	Sep. 13, 2011	Area 1 Cua Ong Commune Cam Pha Town	Coc 6 Coal mine and the Hanoi Construction Company - the contractor of the Road 18 A improvement project.	The stream was stuck because the gate is nearly close as a result of recently road construction 7 households were deep in water. Most of equipment like TV, Refrigerator and electric equipment were damaged.
17. Flooding at Area 1 Cua Ong Commune Cam Pha Town due to rain water run from dumping site of Coc 6 Coal Mine.	Flooding	Oct. 1, 2011	Area 1 Cua Ong Commune Cam Pha Town	Coc 6 Coal mine	The stream was stuck because the gate is nearly close as result of recently road construction. More than 10 house hold was flooded and have to remove (Temporary Relocate) form the site
18. Mud slide at Bai Chay	Mud slide	Nov. 5, 2011	Group 6 Area 6 Bai Chay Halong	Viet My - Halong JSC	Nearly 30 m <sup>3</sup> mud was slide into resident area. Mud flowed over the road and the garden of 3 households.

Source: JET

**Annex 2: Decree on Organization of Provincial Command Board for Natural Disaster Prevention and Response**

(No 1379/QĐ-UBND, issued by The Quang Ninh People Committee.)

**Date: 19 May 2011**

**Decree**

**On Organization of Provincial Command Board for Natural Disaster Prevention and Response**

Pursuant to the Law on Organization of People Council and People committee

Review to the request of Department of Agricultural and Rural Development by document No 455/NN-PTNT dated 13/ April 2011

**Decide:**

Article 1: To consolidate and assign the duty for member of the Provincial Commander Board for Natural Disaster Prevention and seeking – recurring, as attached here with.

Article 2: Every year, members of Provincial Command Board for Natural Disaster Prevention and Response responsible for arranging time to check preparation campaign against storm and flood, together with committee to campaign against and overcome the consequence of disaster (storm, flood, erosion)

This decision come in to effect since the singed date and will be change for decisions No: 664/QĐ-UBND; 1728/QĐ-UBND; 3159/QĐ-UBND and 1032/QĐ-UBND.

Article 3: Head of the office of the Provincial people committee, Director of Provincial Departments; Chairmen of Local Districts and person listed above carry out their duty as regulated in this decision

**List of members of the Provincial Command Board for Natural Disaster Prevention and Response**

1. Mr. Do Thong, Vice-President of the People committee, Head in charge of general command.
2. Mr. Chu Van Tuyen, Director of Department of Agriculture and Rural Development, Vice head in charge of Campaign against storm and flood.
3. Mr. Tran Thanh, Commander of Provincial Military Force, Vice head in charge of Rescue Finding
4. Mr. Chu The Ky, Deputy General Provincial Border Guard, Vice head in charge of checking and guiding board on sea to the storm preventing place in case of storm, directly monitor Co To District...
5. Mr. Nguyen Minh Hong, Director of Information and Communication, commissioner, in charge of ensuring communication for Commander Board for Natural Disaster Prevention and Risking rescue of Quang Ninh.
6. Mr. Hoang Cong Dang, Deputy Director of Department of Agriculture and Rural Development, commissioner in charge of natural disaster prevention in forestry field.
7. Mr. Dinh Trong Ly, Deputy Director of Department of Agriculture and Rural Development, commissioner in charge of natural disaster prevention in fishery field, directly monitor Van Don District.
8. Mr. Vuong Dinh Viet, Deputy Director of Department of Agriculture and Rural Development, commissioner in charge of natural disaster prevention in irrigation field, directly monitor Yen Hung District.

9. Mr. Tran Duc Dien, Deputy Director of Department of Agriculture and Rural Development, commissioner in charge of disaster prevention in agricultural field.
10. Mr. Nham Ngoc Tam, Deputy Provincial Police Department, commissioner in charge of ensuring security before, during, and after natural disaster, directly monitor Ha Long city.
11. Mr. Nguyen Tuan Phuong, Deputy Director of Provincial radio and televisions station, commissioner in charge of communicating in Provincial radio and televisions station about weather news, public powers from The Quang Ninh People committee, from Commander Board for Natural Disaster Prevention and Risking rescue of Quang Ninh. , update changes in disaster areas, directly monitor Dam Ha district.
12. Mr. Dang Hung, Deputy Director of Department of Transportation and, commissioner in charge of Campaign against storm and flood in transportation field, ensure against erosion, bridge, ferry, board safety after disaster, and directly monitor Binh Lieu District.
13. Mr. Nguyen Xuan Ky, Secretary of Ho Chi Minh Provincial Communist Youth Union, commissioner in charge of youth work, ready to rescue and dykes protection, directly monitor Dong Trieu District.
14. Mr. Tran Thai Tuan, Vice-President of Provincial Red cross, commissioner in charge of relief and donations supporting disaster areas, directly monitor Hoanh Bo District.
15. Mr. Nguyen The Thinh, Director of Department of Labour Invalid and Social Affair, commissioner in charge of works related to institutional policies for disaster areas, directly monitor Ba Che District.
16. Mr. Vu Dinh Tan, Deputy Director of Department of Power of Quang Ninh, commissioner in charge of ensuring electricity for producing activities, ensuring electricity when necessary, directly monitor Cam Pha town.
17. Mr. Nguyen Tien Hung, Deputy Director of Health Department, commissioner in charge of ensuring prophylactic and disease prevention and treatment after flood, directly monitor Uong Bi town.
18. Mr. Nguyen Ba Luan, Vice-President of Provincial Association of Farmers, commissioner in charge of monitoring and guiding farmers prevent flood and reduce disaster, directly monitor Tien Yen District.
19. Mr. Nguyen Van Minh, Director of Finance Department, commissioner in charge of ensuring finance and budget for Commander Board for Natural Disaster Prevention and Risking rescue of Quang Ninh. and solve, overcome consequence of flood and natural disaster, directly monitor Hai Ha District,
20. Mr. Vu Thanh Lam – Vice General Director of Vietnam Mining – Mineral Corporation, commissioner in charge of ensuring secure of Disaster prevention in companies member, in cooperate with committee to secure for citizen around Mining dumping site.
21. Mr. Nguyen Trong Len – Deputy Director of Department of Plan and Investment, commissioner in charge of planning to recover damage after disaster, directly monitor Mong Cai city.
22. Mr. Truong Cong Ngan – Head of New Rural Building, commissioner in charge of disaster prevention in new rural building field.
23. Mr. Nguyen Tien So, Director of Provincial Hydro meteorological Centers, commissioner in charge of weather forecast, flood forecast, provide information for Provincial radio and televisions station and Commander Board for Natural Disaster Prevention and Risking rescue of Quang Ninh. .
24. Mr. Do Ba Son, Director of Diving Rescue and Underwater Sport Center, belong to Department of Culture, Sport and Tourism, commissioner in charge and take part in underwater rescue.

25. Mr. Vu Hai San, Chief of Provincial military Commander, commissioner in charge of rescue finding, is responsible for general provincial rescue finding for monitoring by Commander Board for Natural Disaster Prevention and Risking rescue of Quang Ninh. .

26. Mr. Vu Dinh Thanh, Vice Director Viettel branch in Quang Ninh, commissioner in charge of communicating for online meeting between Organization for General environment incident Response and Commander Board for Natural Disaster Prevention and Risking rescue of Quang Ninh. .

27. Mr. Pham Dinh Hoa, Director of Irrigation, commissioner and Head of Administration of Commander Board of Commander Board for Natural Disaster Prevention and Risking rescuing of Quang Ninh. , in charge of: giving direction, organize “online team 24/24”, receiving information from the center government and transfer information to all the members. Make annual report to the People committee of Quang Ninh and Commander Board for Natural Disaster Prevention and Risking rescuing of Quang Ninh.

End

**Annex 3: Regulation (Draft) on Prevention, Response to and Remedy of Environmental Incidents in Hanoi City**

HANOI CITY PEOPLE’S COMMITTEE

SOCIALIST REPUBLIC OF VIETNAM

Independence – Freedom – Happiness

No. /2011/QD-UBND

Ha Noi, date .....2011

**DECISION**

On promulgation of the Regulation on prevention, response to and remedy of environmental incidents in Hanoi city

**HANOI CITY PEOPLE’S COMMITTEE**

Pursuant to Law on Environmental Protection dated 29 November 2005;

Pursuant to the Law on Organization of People’s Council and People's Committee dated 26 November 2003;

Pursuant to the Ordinance on Hanoi Capital dated 28 December 2000;

Pursuant to the Decree No. 92/2005/ND-CP dated 12 July 2005 of the Government detailing the implementation of a number of articles of the Ordinance on Hanoi Capital;

At the proposal of the Director of Hanoi DONRE in the Statement No. /TTr-STNMT dated.....2011 regarding the promulgation of the “Regulation on prevention, response to and remedy of environmental incidents in Hanoi city”; Appraisal Report by Department of Justice at the document No. 1147/STP-VBPQ dated 26 June 2010;

**DECIDES:**

**Article 1:** To promulgate together with this Decision the “Regulation on prevention, response to and remedy of environmental incidents in Hanoi city”.

**Article 2:** This Decision will take effect after 15 days from the date of signing.

**Article 3:** The Chief Administrator of the Hanoi City People’s Committee Office; Directors of departments, agencies and sectors in Hanoi City; Chairpersons of People’s Committees of districts, towns; Heads of organizations and individuals concerned shall be responsible for implementing this Decision.

ON BEHALF OF HANOI CITY PEOPLE’S  
COMMITTEE

FOR CHAIRMAN

VICE CHAIRMAN

**REGULATION**

On prevention, response to and remedy of environmental incidents in Hanoi city

(Promulgated together with Decision No..... / 2011/QĐ-UBND dated..... 2011 of the Hanoi City People's Committee)

**CHAPTER I  
GENERAL PROVISIONS****Article 1.** Scope of Application

This Regulation prescribes the contents of activities and responsibilities of organizations and individuals in the prevention of and response to environmental incidents, and remedy of their consequences in Hanoi City.

**Article 2.** Subjects of application

1. Organizations and individuals inside and outside Vietnam, directly or indirectly cause environmental incidents, in addition to the implementation of the provisions in this Regulation must also comply with the provisions of the laws on chemical safety management, fire prevention, nuclear safety and radiation safety of the Socialist Republic of Vietnam. In cases where international treaties which the Socialist Republic of Vietnam has signed or acceded to provide otherwise, the provisions of such international treaties shall be applied.

2. The central and local State agencies based in Hanoi City directly or indirectly causing environmental incidents are also subject to the provisions of this Regulation and other relevant regulations.

**Article 3.** Interpretation of terms

In this Regulation, the following terms shall be construed as follows:

1. Extremely serious environmental incidents mean environmental incidents occurring in large quantities caused by the storage, fire, transportation, production, leakage of toxic chemicals, hazardous waste, radioactive substances on a large scale, involving multiple districts or dense populated urban areas which seriously threaten to human lives, property, environment and people's daily life.

2. Response to environmental incidents means the implementation of immediate, urgent measures and the use of resources, facilities/means, equipment to timely handle with, eliminate or minimize the spreading and leakage of contaminants into the environment to minimize the risk of environmental damage.

3. Remedy of the consequences of environmental incidents means the activities to clean up major parts of soil, water, air environment, regional ecosystems that are under pollution and measures to limit damages, restore living environment and the environment after environmental incidents.

4. Establishments mean production, business and services establishments, transportation means, and equipment having potential to cause environmental incidents.

5. Owners of establishments mean the heads of organizations, agencies, units, fully responsible for legal aspects of all activities of the establishments.

6. Field Commanders/On-site Commanders mean the persons assigned or appointed directly to the command of all rescue operations at the place of environmental incidents. Rights and responsibilities



of Field commanders are specified in the plan for rescue/response to environmental incidents of each establishment; concentrated industrial parks, clusters; local authorities and the units participating in the rescue and remedy of environmental incidents.

7. Priority areas for protection mean dense residential areas; city center area, water source area for living and production activities; historical places rated; ecological tourist areas; entertainment areas; aquaculture zones, and national security and defense area.

## **CHAPTER II ORGANIZATION OF THE PREVENTION OF AND RESPONSE TO ENVIRONMENTAL INCIDENTS**

### **Article 4.** Prevention of environmental incidents

The implementation of measures to prevent environmental incidents of organizations and individuals in Hanoi City shall be carried out in accordance with Article 86 of the Law on Environmental Protection.

### **Article 5.** Receiving and processing information on environmental incidents

#### 1. Focal point agencies to receive information on environmental incidents:

The establishments causing environmental incidents or detecting environmental incidents shall promptly report to one of the following agencies:

##### a) City level:

- The city People's Committee;
- Department of Natural Resources and Environment (focal point is Environmental Protection Agency);
- The city Police (focal point is the Environmental Police Department).

##### b) District and Town levels:

- People's Committees of districts and towns (focal point is DONREs of districts and towns);
- District Police (focal point is Environmental Police Team);

##### c) Commune, Ward, Township levels:

- People's Committees of communes, wards, townships where environmental incidents occur;
- Commune/ward/township Police

##### d) Coordination units:

- Fire Fighting and Protection Police;
- Road traffic police and waterway traffic police;
- The military units located in the city.

#### 2. Processing of information on environmental incidents:

a) After receiving information on environmental incidents, the agencies receiving such information shall be responsible for appointing staff to conduct field investigation at the location of incidents; being proactive in coordinating rescue operations with the establishments and other agencies involved according to their available capacity, and at the same time, timely report to and advise People's Committees at district, town and commune levels and the City People's Committee for their direction

and coordination of rescue operations and remedy of consequences.

b) Providing accurate information in time so that organizations, communities, religious institutions and people in the affected areas can actively prevent environmental incidents and coordinate to remedy the consequences.

**Article 6.** Organization and implementation of the response to environmental incidents

Based on the scope and extent of the environmental incidents occurred, the organization and implementation of the rescue/response to environmental incidents will be conducted at two levels, as follows:

1. Rescue/response to environmental incident occurring at an establishment – Establishment level:

a) Owner of establishment causing environmental incident shall have to urgently mobilize and direct their manpower, means, equipment, or manpower, means, equipment specified in the contract for response to environmental incidents to promptly respond to it.

Owner of establishment causing environmental incident shall have to take urgent measures to ensure safety for persons and property; organize the rescue of persons and property and promptly inform such to People's Committees of commune, ward, town or police station where the incident occurs.

b) In case environmental incidents exceed abilities and resources of establishment, Owner of establishment must urgently report them to their superior management agencies, People's Committees of communes, wards and towns for their support.

c) In case of serious environmental incidents or incidents occurred in the priority areas for protection, to promptly respond to such incidents, Owner of establishment shall have to mobilize necessary forces and means to rescue immediately, at the same time report to People's Committees of districts, towns where environmental incidents occur to be directed for the rescue in time.

d) If an environmental incident occurs on a scale involving two or more establishments or communes, wards, townships, the owners of such establishments, heads of People's Committees of communes, wards of the localities where such incident occurs shall have to collaborate with one another in responding to it.

2. Rescue/response to environmental incidents occurring outside of the establishment causing the incidents - Regional level:

a) If environmental incidents occur beyond the area of the establishment causing the incidents, exceed the response capacity of the establishment; incidents occur due to natural disasters, vehicle crashing incidents/accidents; incidents occurred in other provinces causing direct effect, Chairman of the City People's Committee shall be responsible for directly presiding over or immediately appointing field commanders for organizing rescue actions as planned, and urgently mobilize necessary resources of establishments, ministries, branches, sectors in the area, and military forces to timely rescue the incidents and remedy their consequences.

b) In the event of serious environmental incidents or incidents occurred in the priority areas for protection, or incidents related to the areas of two districts, townships, for timely rescue, Heads of agencies in charge of field commanders are allowed to mobilize necessary forces and means for prompt rescue, and at the same time, report to the City People's Committee for their direction and coordination of the rescue operation.

c) In the event of extremely serious environmental incidents, the City People's Committee is to promptly report to the National Committee for Search and Rescue for their direction and coordination with concerned agencies to organize the rescue response and remedy of consequences. The organization of the rescue/response to extremely serious environmental incidents shall comply with the provisions of the law on state of emergency.

d) If environmental incidents occur due to collision, sinking of ships, boats, barges, oil transportation vehicles, and hazardous chemicals in rivers, especially for the types of oil with light components, high risk of fire, oil spill occurred near the coast, special attentions should be paid to the plan for coordination, organization/mobilization of forces and means to ensure fire and explosion protection and evacuation of people out of danger area.

e) In the course of organization of the response to environmental incidents at the above-said levels, field commanders must actively handle and timely report the development of incidents, and propose necessary recommendations to competent authorities and take responsibility for their decisions.

**Article 7.** Development of emergency response forces to environment incidents

1. The functional agencies as stipulated in Clause 1, Article 5 of this Regulation shall be responsible for building up forces, equipment, facilities for forecasting and warning of environmental incidents as assigned.

2. Production, business, services establishments are responsible for formulating, developing plans for prevention of and response to environmental incidents at establishments.

**CHAPTER III  
REMEDY OF CONSEQUENCES OF ENVIRONMENTAL INCIDENTS**

**Article 8.** Responsibility for assessment and determination of damages caused by environmental incidents

1. Environmental incidents occurred in the area of districts, towns shall be handled by People's Committees of districts, towns in coordination with concerned agencies and owners of establishments causing environmental incidents to carry out assessment, determination of damages and settlement of damage compensation.

2. Environmental incidents occurred in the area of two or more districts, towns shall be handled by the City People's Committee in coordination with concerned agencies and owners of establishments causing environmental incidents to carry out assessment, determination of damages and settlement of damage compensation.

3. Environmental incidents occurred in the city area related to an adjacent province shall be handled by the City People's Committee in coordination with the People's Committee of the province affected by such environmental incidents and owners of establishments causing environmental incidents to carry out assessment and determination of damages and settlement of damage compensation.

4. For extremely serious environmental incidents, the City People's Committee in coordination with MONRE, relevant agencies, along with owners of establishments causing environmental incidents shall carry out assessment, determination of damages and require the owners of establishments to pay indemnities for damages; for special cases, it is recommended to establish the State-level Appraisal Council and report to the Prime Minister for consideration and decision.

**Article 9.** Determination of damages and settlement of damage compensation

1. The settlement of damage compensation should be conducted expeditiously, strictly; specialized consultants may be hired for this work, including international consultants in case the party causing environmental incidents is a foreign legal entity. Where necessary, the City People's Committee shall propose the National Committee for Search and Rescue to direct, instruct functional agencies to apply the measures prescribed by the law to deal with the consequences, compensation of damages caused by environmental incidents.

2. The City People's Committee is to request the ministries, agencies, sectors, and the governing unit of establishments located in the city area to be responsible for coordinating with the City People's Committee to request the owners of establishments causing environmental incidents to implement fully, promptly the responsibilities for compensation of damages as stipulated in Section 2 of Chapter

XIV of the Law on Environmental Protection, the Civil Code and other related provisions of law.

**CHAPTER IV**  
**RESPONSIBILITIES OF ORGANIZATIONS AND INDIVIDUALS**  
**FOR ENVIRONMENTAL INCIDENTS**

**Article 10.** Responsibilities of owners of establishments

1. To prepare plans for responding to environmental incidents which may occur at the establishments and submit to competent authorities for approval. To sign agreement or contract for the response to environmental incidents with other appropriate agencies, units.
2. To take responsibilities for environmental incidents caused by their establishments; initiatively mobilize resources, self-organize and command the rescue in time and effectively when incidents occur. Promptly report to the People's Committees of communes, wards, townships or police station where the incidents occur.
3. To take responsibility for compensation of damages when causing environmental incidents as prescribed in Clause 2, Article 7 of this Regulation.
4. Owners of vehicles and equipment that have the potential to cause environmental incidents are required to buy insurance for environmental pollution; insurance rates are corresponding to the level of damages caused by environmental incidents or in accordance with the law on insurance.

**Article 11.** Responsibilities of People's Committees of communes, wards and townships

1. To develop plans for prevention of, response to, and remedy and handling of environmental incidents (annually) in their area and submit to People's Committees of districts and towns for approval. To organize the dissemination of the plans to owners of establishments and residents for them to actively prevent and rescue/respond to environmental incidents, and publicize in-charge phone numbers so that residents can timely inform about environmental incidents occurred in their area.
2. Upon receiving the information from establishments, owners of transportation vehicles causing environmental incidents in the area, promptly and initiatively mobilize necessary forces to respond to incidents; to organize the evacuation of people out of the environmental incident-affected area, and immediately report to People's Committees of districts and towns for their direction and coordination in the rescue/response to and remedy of environmental incidents.

**Article 12.** Responsibilities of People's Committees of districts and towns

1. To develop plans for coordination of the prevention of, response to, and remedy and handling of environmental incidents (annually) in district area and the priority areas for protection under their management and submit to the City People's Committee for approval. To organize the dissemination of the plans to establishments and residents for them to actively prevent and rescue/respond to environmental incidents, and publicize in-charge phone numbers so that residents can timely inform about environmental incidents occurred in their area.
2. Upon receiving the report of People's Committees of communes, wards, townships or information from owners of establishments, owners of transportation vehicles causing environmental incidents and of the organizations and citizens in the area, timely and initiatively mobilize necessary forces to respond to incidents; to organize and direct People's Committees of communes, wards or townships to carry out the plan for rescue and remedy of incidents, and at the same time, immediately report to the City People's Committee for their direction and coordination in the rescue/response to environmental incidents and remedy of their consequences.
3. To direct the investigation and verification of environmental incidents occurred in the area of districts, towns, or request to the competent local authorities; to give proposal to the City People's Committee and concerned departments, sectors on measures to prevent and rescue, to minimize damages caused by environmental incidents. To announce to people the results of remedy of

environmental incidents and damage compensation rates by the owners of establishments causing incidents for their information, monitoring and check.

4. To actively coordinate with other departments, agencies, sectors of the City and authorized agencies to handle environmental incidents occurring in their area or areas bordering adjacent districts; to report to the City People's Committee in case of exceeding the authorization given.

**Article 13.** Responsibilities of relevant departments

1. Department of Natural Resources and Environment:

a) To lead and guide People's Committees of districts, towns to develop plans for the prevention of, response to, and remedy and handling of environmental incidents.

b) To instruct professional knowledge and skills in investigation and verification of environmental incidents, assessment and determination of damages, completion of legal documents; to request owners of establishment causing environmental incidents to compensate for damages caused at the request of the People's Committees of districts and towns.

c) To preside over the organization of education, professional training on the plans for prevention, response to, and remedy of environmental incidents for specialized forces of district-level People's Committees; to organize the propaganda, public education, dissemination of knowledge on risks, threats of environmental incidents for proactive prevention and response.

d) To preside over and coordinate with other departments, sectors and related agencies for handling environmental incidents occurred in the area of inter-districts, inter-provinces and report to the City People's Committee.

e) To promptly report to the City People's Committee and MONRE on the serious and extremely serious environmental incidents for their direction, and propose emergency measures to respond to the incidents; Periodically every 6 months and annually, report the implementation status and results of implementation of plans for prevention, response to, and remedy and handling of environmental incidents by the People's Committees of districts, and of inter-provincial environmental incidents.

2. Other Departments, sectors: to base on their functions and duties to coordinate with DONRE and People's Committees of districts to timely mobilize forces/manpower, means, equipment for handling and remedy of the consequences of environmental incidents occurred in the city area.

3. Socio-economic organizations: organizations and individuals in the country and abroad investing in equipment, facilities for the rescue, response to environmental incidents and environmental protection in Vietnam under the provisions of law shall be responsible for implementing the mobilization of the City People's Committee and People's Committees of districts and towns; People's Committee of communes, wards and townships.

## **CHAPTER V IMPLEMENTING PROVISIONS**

**Article 14.** Commendation and Reward

Organizations and individuals having achievements in the response to and handling of environmental incidents shall be commended and rewarded in accordance with the relevant regulations.

**Article 15.** Handling of violations

Organizations and individuals defined in Article 2 of this Regulation if failed to implement the responsibilities prescribed in this Regulation shall, depending on the nature and seriousness of the violation, be handled according to regulations of the law.

**Article 16.** Implementing Provisions

During the implementation of this Regulation, if any difficulties arise, the Departments; People's Committees of districts and towns; People's Committees of communes, wards, townships, and organizations and individuals concerned are requested to reflect to DONRE for their review, summary and report to the city People's Committee for consideration, amendments and supplements in accordance with the actual situation.

ON BEHALF OF THE HANOI CITY PEOPLE'S  
COMMITTEE

FOR CHAIRMAN

VICE CHAIRMAN

## Annex 4 Profile of Oil Spill Response Plan in Quang Ninh Province

### 1. Classification of Oil Spill Incidents and Responses

#### 1) General

Pursuant to Decision No. 129/2001/QD-TTg (dated 29th August 2001) and Decision No. 103/2005/QD-TTg (dated 12th May 2005) of the Prime Minister, oil spill incidents have been classified into 3 levels from Level I to Level III, based on the volume of spilled oil into the environment, as follows:

- Level I: Less than 100 tons
- Level II: From 100 to 2,000 tons
- Level III: Over 2,000 tons

According to statistics of occurred oil spill incidents in waters in Quang Ninh Province so far, oil spill incidents often occurs at the Level I and the Level II. Oil spill incident with the Level III may happen, possibly.

Based on the 3 levels of oil spill incidents, series of responses against oil spill incidents are implemented, as follows:

#### 2) Oil Spill Incident at the Level I

When oil spill occurred at the entity, the entity owner must organize and mobilize the manpower, facilities and equipment of the entity or contracted manpower, facilities and equipment from other unit to response the incident, promptly.

In case the oil spill exceeds the capacity of the entity, or the local human resources do not meet to responding the spill by itself, the entity must promptly report to the managing agency and QN PPC for support. The entity should make a plan for the mobilization of facilities for such incident and the entity owner is responsible for the site commanding of oil spill.

In case of serious oil spill or the oil spill occurred in priority areas for protection, in order to respond promptly, a head of the agencies that are responsible for the site commanding to be allowed to mobilize necessary forces and means to respond immediately, and report to PPC and the NSRC to have a timely direction and coordination.

#### 2) Oil Spill Incident at the Level II

In case oil spill occurred is exceeding capacity of response of entity or it is not belongs to direct responsibility of entity such as natural disasters and collision incidents or due to oil from other places drifted to the locality, the chairman of PPC is responsible to command or assigns another person to command response on the spot according to planned scheme. At the same time, the chairman of PPC requests to urgently mobilize the necessary resources of the enterprises, units and the sectors in the Province as well as Oil Spill Response Center in Northern Area for responding.

Responsible agency to assist the chairman of PPC for oil spill incidents is DONRE.

#### 3) Oil Spill Incident at the Level III

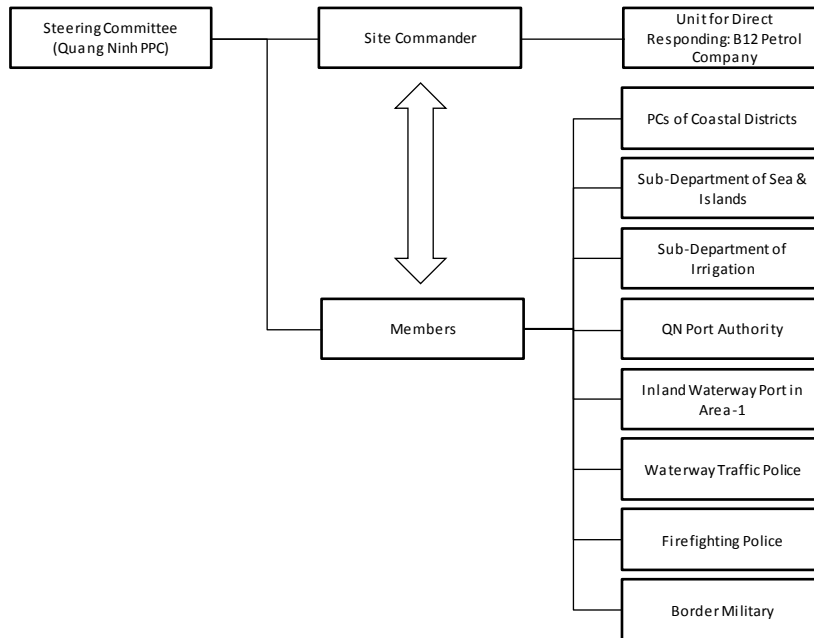
In case of oil spill occurred particularly serious, PPC must report promptly to the National Committee for Search and Rescue. The NSRC directs, and coordinates with concerned agencies to organize response. At the same time, to mobilize the responding forces under several ministries, industries and enterprises in locality together for response.

In case of oil spill is exceeding the responding capacity of the domestic forces, the NSRC requests Prime Minister for consideration and decision to get support from regional or international responding

organizations.

## 2. Provincial Organization for Responding Oil Spill Incident

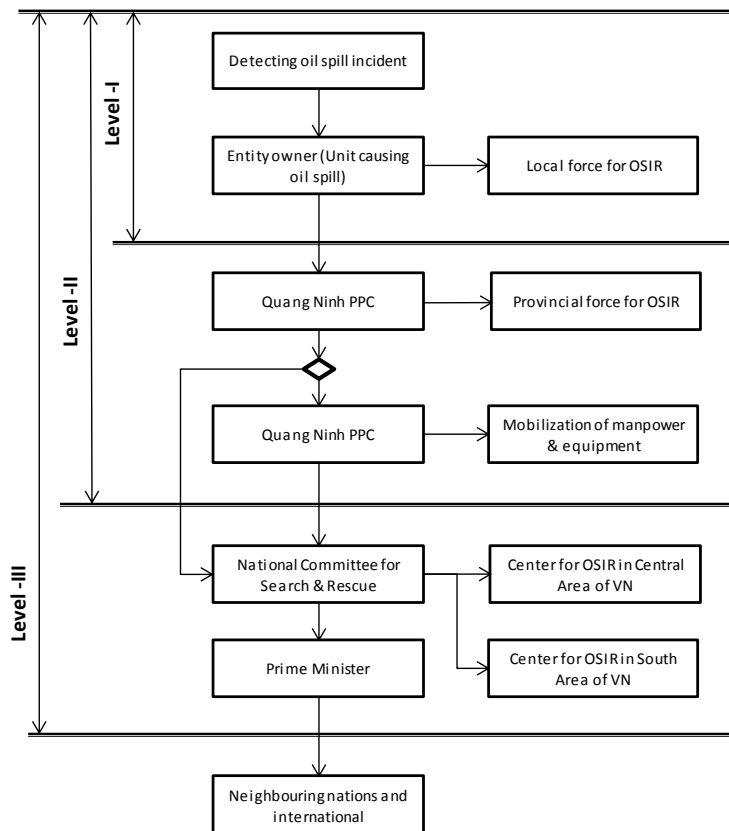
Quang Ninh Province establishes the following organization under the PPC, to respond against oil spill incidents:



## 3. Mobilization Flow of Oil Spill Incident Response

Mobilization against oil spill incident is made according to the classification of regional, provincial and national levels as follows, depending on the level of oil spill:





#### 4. General Site Response Activities against Oil Spill

The site response activities against oil spill are taken, generally according to the following procedures:

- <1> Determine precisely location of the incident.
- <2> Determine location of oil spill source and immediately stop leaking from the oil source.
- <3> Evaluate impacted area caused by oil spill.
- <4> Dispatch response forces (B12 Petroleum Company, etc.) for oil collection.
- <5> Report to Quang Ninh DONRE on oil spill incident response activities.
- <6> For collision incidents, the owner of the facility has to act under instructions of the provincial SC for ROSI during the incident (e.g. pumping oil to other storage facility).
- <7> Control the moving direction of spilled oil out of affected area that largely influences the environment and ecosystem (mangroves, agriculture production, aquaculture area, etc.).
- <8> Response operation is completed when all spilled oil has been fully collected and simultaneously absolute stop is done at oil spill source.
- <9> Assessment of environment damages after the incident, cleaning the environment.
- <10> Consider expenses of incident handling and carry out relevant compensation, handling under the provision of the law.

#### 5. Investment Plan for Equipment Procurement for Oil Spill Incident Response

The Oil Spill Response Plan in Quang Ninh Province has developed the following investment plan for procuring necessary equipment with a total amount of 3,690 million VND.

No.	Equipment	Quantity	Unit in Charge	Procurement	Cost
-----	-----------	----------	----------------	-------------	------

				Year	(million VND)
1	Oil containing buoy for inshore and offshore	2,000 m	B12 Oil Port	2012	950
2	Water spray equipment of high-pressure type	2 sets		2012 to 2015	800
3	Oil sucking equipment and accessories	4 sets		2012 to 2015	400
4	Oil absorbent materials	4 packages		2014 to 2015	100
5	Canvas	10 sets		2012	150
6	Safety shirt, hat, glove	200 sets	Provincial Border Military, Provincial Military Command	2012 to 2013	
7	Handy Talkies	20 sets		2012	40
8	Special Cloths	50 sets			250
9	Oil Storage Tank	4 sets		2012 to 2013	800
10	Phone, Fax, Laptop C/P, Movie Camera, GPS	1 set	DONRE	2012	200

#### 6. Operation Schedule of Oil Spill Response Plan

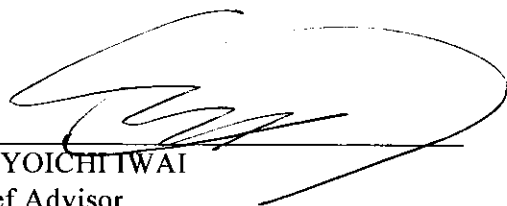
The Oil Spill Response Plan in Quang Ninh Province is going to start along the following operation plan:

No.	Activity	Start	Completion	Unit in Charge	Estimated Expense (million VND/year)
1	Dissemination of Oil Spill Response Plan to related institutions and units	2012	2012	DONRE	300
2	Procurement of equipment and device for response activities	Starting from 2012	To be conducted on a regular basis.	DONRE, Financial Department, Border Guard Military, Local PCs, Port Authority	600
3	Training of key forces for response operation	Starting from 2012	To be conducted Annually.	DONRE, Boarder Guard Military, District DONREs, Entities with possible oil spills.	150

*Note: This profile is formulated by WG-1, by extracting core parts from Plan Of Oil Spill Response in Quang Ninh Province (developed by Quang Ninh DONRE, 2012)*

**DISCUSSION RECORD  
ON  
WG-1 WORKSHOP  
THE PROJECT FOR ENVIRONMENTAL PROTECTION  
IN HALONG BAY**

7<sup>th</sup> December 2012



---

Mr. YOICHI IWAI  
Chief Advisor  
JICA Expert Team  
The Project for Environmental  
Protection in Halong Bay



---

Ms. NGUYEN THI THU THUY  
Secretary of PMB  
Deputy Director of Sub-Dept. of EP,  
DONRE  
Quang Ninh Provincial People's Committee  
The Socialist Republic of Vietnam

In accordance with the Inception Report (Ic/R) for the Project for Environmental Protection in Halong Bay (the Project) in September 2010, WG-1 Workshop (for Output-2) to share the final result on series of activities held on 7<sup>th</sup> December and 2012 in Meeting room B, Conference Center of Quang Ninh PPC. The meeting was chaired by Ms. Nguyen Thi Thu Thuy, Deputy Director of EP, DONRE, Secretary of PMB. This is a discussion record describing comments and opinions of the participants in the workshop. The list of attendants and the agenda of the workshop session were attached in Attachment-1 and Attachment-2, respectively.

## **1. Concept of Integration between Environmental Monitoring and Water Pollution Control**

(1) Mr. Kengo Naganuma, Environmental Monitoring and Analysis Expert, JET presented the concept of the interaction between Environmental Monitoring and Water Pollution Control toward better environmental management.

(2) There is not comment from participants for presentation by Mr. Naganuma

## **2. Integrated Environmental Monitoring Implementation Plan**

(1) Ms. Do Ni Tan, Head of Environmental Monitoring & Analysis No. 2, Head of Working WG-1, on behalf of WG-1 presented the Integrated Environmental Monitoring Implementation Plan.

(2) Comments and questions and by Mr. Nam Phong Vu, Director of EMAC, Member of WG-3

1) The points in the risk of heavy metal contamination are not enough (page-24). The water discharging from waste dumping sites of Ha Tu, Nui Beo and Ha Lam mines into the coastal area of Doi Cay and Ha Khanh Port-cluster area is polluted seriously. By vision, it was dark yellow. Besides, there are many reclamation activities inside Cua Luc Bay, water quality in this area is also contaminated.

2) Does WG-1 use modeling methods to demonstrate and identify the tidal-up water when develop polluted points?

(3) Questions and comments by Ms. Nguyen Thi Thu Thuy: What are criteria have been used for setup the monitoring sites network by WG-1?

(4) Replied by Ms. Do Thi Ni Tan for questions

1) Regarding the question of Mr. Vu Nam Phong

- WG-1 did not use the modeling method to setup the polluted sites. They are setup based on the results of Quang Ninh PSD, the survey results of subcontractor, the Institute of Marine Environment and Resources. Because the Project is to increase capacity of counterpart team. Therefore, the sites are in the risks of pollution to be identified based on the knowledge and experience of WG-1 members on check-inspection as well as environmental monitoring. These sites were monitored, analyzed and evaluated to propose the additional points in the current monitoring network.

- Regarding the heavy metal pollution points in Ha Khanh, the comment by Mr. Vu Nam Phong is correct. However, due to time constraints, WG-1 did not focus in this area. We will consider to add them in the Plan.

2) Regarding question by Ms. Nguyen Thi Thu Thuy

Similar to the response to Mr. Phong question, the criteria are used to setup monitoring sites including Quang Ninh PSD, survey results of subcontractors and knowledge, experience in environmental check and inspection as well as monitoring by WG-1 members. If we identify any point is in the risk of pollution, which is added in the provincial monitoring site network.

(5) Explanation of Mr. Kengo Naganuma

1) Under the framework of the Project, WG-1 does not cover all the monitoring sites.

2) Regarding criteria for selection, based on the impact of pollution source from the mainland to the Halong Bay as oil-grease, organic matter and heavy metals. Organic matter is from waste. Oil-grease is from vessel operations in the Bay. Heavy metals come from concentrated mines in coastal area of Cam Pha, Dien Vong Estuary and so on.

3) The impact of coastal areas to Halong Bay is very large compared to the area inside Cua Luc. Therefore the CEPC under Output-3 was established by the Project.

6) Comments by Mr. Pham Van Cung, Head of Environment Control Section, Sub-Dept. of EP

Mr. Cung agreed with the opinion by Mr. Vu Nam Phong. He commented to add more some monitoring sites that maybe polluted by heavy metals and organic content in Dien Vong Estuary.

### **3. Implementation Plan of Inspection and Administrative Guidance**

(1) Mr. Tran Thanh Tung, Expert of DONRE, Member of WG-1 on behalf of WG-1 presented the Implementation Plan of Inspection and Administrative Guidance

(2) Suggestion by Ms. Nguyen Thi Thu Thuy (Secretary of PMB) on focused contents should be discussed, as follows:

1) Assessment of strong and weakness in implementation of environmental check and inspection.

2) Criteria for implementation of check and inspection as well as administration sanction

3) Setup of a standing committee for environmental check and inspection.

4) In addition to the pollution sources and polluting objects, observation/information of pollution sources from local people should also be considered as criteria for the implementation of environmental inspection.

5) The frequency of inspection, JET proposed 3 levels high, medium and low. But it is not clear. It should be more clarified by JET.

6) The sharing of information of environment check by Sub-dept of EP with relevant units such as Division of Water Resources and Hydrometeorology, HBMD, has not been good. The suggestion for improvement should be given.

(3) Comment by Mr. Pham Van Cung, Head of Pollution Control Section Sub-Dept. of EP, DONRE

1) Some terms and numbers in the presentation should be edited to correct the situation: (in Vietnamese).

- The "Project" should be translated as the "facility/cơ sở" for example, "facility/cơ sở causing serious pollution" instead of the word "project" in the presentation.

- Term of "*environmental incidents*" should be used to replace the "*environmental pollution incidents*" to comply with the Vietnam Environment Law.

2) According to the current regulations of Vietnam, MONRE, Provincial DONRE and DONRE at District level are the authorities for environmental incidents management. However, responsibilities of each agency and involving staff must be identified and supplemented.

(4) Interpretation of Tran Thanh Tung, WG-1 member.

1) In addition to units under DONRE, some other agencies collected or have a lot of data on environmental check and inspection. Therefore, these data should be shared and updated.

2) Currently, MONRE has found that there are many shortcomings in the inspection management including institutions, structure and function of each level and agency. Some circulars and legal documents are under formulation to improve the situation.

3) Do not set up the Standing committee for environmental inspection, because it is related to the institution.

4) The sharing of database is very important. If the inspectors understand about the inspected facilities

before making the inspection, the resolution will be very fast and efficient.

5) Technical facilities and equipment to cater for the sampling and analysis is very important. If the equipments are available, the conclusion can be given immediately.

6) Mr. Tung has the file of Inspection Manual. If any members are interested, Mr. Tung will provide.

(5) Comments by Mr. Tadashi Shoji, JET

1) Mr. Shoji would like participants to pay attention more to the weakness of the inspection work.

2) Results of the inspection in 2012 are well. However, if compared with more than 300 pollution sources, the number of inspected units is little.

3) Characteristics of pollution source should be considered as the important criteria for check and inspection planning.

(6) Comments by Mr. Nguyen Manh Hoach, Head of Natural Resources and Environment, Management Board for Economic Zones.

1) Annually, Management Board for Economic Zones plans the Environmental Inspection and check based on identifying projects in "hotspots". For example, in 2003 the hotspot is the Mong Cai Border Gate Economic Zone. In 2012, hotspots are Van Don Economic Zone and Cai Lan Industrial Zone. In fact, the check and inspection is implemented in the place occurring of polluted environment.

2) There are many organizations have check and inspection function. There should be closed coordination and information sharing between agencies to avoid overlap and inconvenience to the business. The relating information of the inspected facilities as well as inspected results should be informed to relevant units. QN province has two written letters requesting function units to collaborate each other in inspection work. The function agencies should implement well the letters.

3) Some circulars or guidelines should be formulated for more consistent implementation.

(7) Opinion of Ms. Tran Thi Lan, Expert, the DONRE of Hai Ha District

1) Division of Natural Resources and Environment Hai Ha District makes plan for environmental inspection focusing on the facilities with environmental sensitivity. Mostly, these facilities are mineral exploitation such as sand, clay and stone. In 2012, there are 2 sanctioned facilities.

2) The basis of the mining of Hai Ha sand mining, there has been labor intensive. Besides checking other parameters also have to check the concentration of dust and labor safety conditions for workers under the law.

(8) Comments by Mr. Kengo Naganuma

1) The determination of the number of inspectors, inspection trends is important. Table 11 should be considered to suit the current situation.

2) As the experience of Ms. Tran Thi Lan, mineral exploitation applies also a criteria.

(9) Explanation of Tran Thanh Tung, WG-I Member

1) The units uses PSD can know the number of inspections, information and results of the inspection process.

2) According to Decree No. 61, a content of one unit only is inspected not more than 2 times in one year. If overdone, the inspection unit violated the regulation. But in fact, may be one unit was inspected several times a year due to combination among agencies is not good. This should be improved.

3) The assessment of environmental inspection result is not just based on the number and quality inspection. In 2012, the quality of the inspection and check was improved compared to 2011. The sampling is implemented for analyzing to find out the causes of the problem to solve. In addition to check and inspection, the explanation was also implemented in order inspected facilities understand the mistakes to overcome or improve in the next time.

#### **4. Study on Environmental Pollution Incidents**

(1) Mr. Tadashi Shoji, pollution control experts of JET presented the study on environmental pollution incidents

(2) Comments and suggestion by Ms. Nguyen Thi Thu Thuy, Secretary of PMB

- 1) Agreed to use environment incidents
- 2) Source of List of oil incidents in Hai Phong area should be confirmed.
- 3) The sites visit before planning should be added as one study measures to make future planning.
- 4) Some following aspects should be discussed including
  - a) Number of facilities is in risk of oil spill? There is any oil spill from 2003 to the present?
  - b) Response measures have been applied in the past time. The results and the limitation
  - c) From page 7-10 mentioned that 101 companies/facilities in the Halong area are in risk of landslides and 33 facilities in the risk of oil and chemical spill. However the criteria for they were not showed. Therefore the number should be considered carefully. The target is a company or a facility (Vietnamese). Besides, the list of facilities and their location map must be attached.

(3) Answer by Mr. Shoji, JET

- 1) List of oil spill in Haiphong Area was collected by Mr. Hoang Vinh, subcontractors. Mr. Shoji will add more sources of information in the report.
- 2) The pollution source database was developed by the Project. There are 534 pollution sources in Quang Ninh. There are about 200 pollution sources in Halong area. Landslides risk is mainly from coal mining activities. Therefore, based on these criteria, we can realize 101 projects with the potential for landslides.
- 3) Mr. Shoji will modify the Study Report, reflecting comments from the Vietnamese side.

#### **5. Conclusion by Ms. Nguyen Thi Thu Thuy**

(1) Because limited time, the further comments and proposals should be sent to PMB by the participants. PMB and WG-1 will receive for revision of the documents.

(2) The project did not have much time to reset the document and meet the opposite opinions. However, the contents of the documents should be reviewed and revised for completion. Please consider the data on number of facilities to be in the risk of environmental incidents in handling area and confirm the sources on List of oil spill in Hai Phong port area.

(3) This afternoon, local experts will guide the installation and use of improved PSD. In order to use the PSD in a long-term and effectiveness, the information sharing regime should be developed. The trainees were requested to discuss further this afternoon. All the comments should be sent to PMB as soon as possible.

The meeting ended at 12:00 pm

*End.*

## Attachment-1

### List of Attendants

#### *[Counterpart and Stakeholders]*

1. Mr. Hoang Viet Dung Head of Sub-Dept. of EP, Deputy Head of PMB
2. Ms. Nguyen Thi Thu Thuy Deputy Head of Sub-Dept. of EP, Secretary of PMB
3. Ms. Nguyen Thu Huyen Head of Administration Section, Sub-Dept. of EP, PMB Member.
4. Ms. Phan Thi Hoang Hao Staff of Administration Section, Sub-Dept. of EP, PMB Member.
5. Ms. Do Thi Ni Tan Head of Section 2 for Environmental Monitoring and Analysis, EMAC, Head of WG-1 of the Project
6. Mr. Tran Thanh Tung Expert of DONRE, WG-1 member of the Project
7. Mr. Do Dinh Thach Environment Police, Provincial Police
8. Mr. Pham Van Cung Head of Environmental Control, Sub-dept. of EP, DONRE
9. Mr. Nguyen The Thuc Deputy Head of Planning and Financial Division, DONRE, Head of WG-2 of the Project
10. Mr. Nguyen Nhu Hanh Deputy Head of Appraisal- License Section, Sub-Dept. of EP, WG-2 member
11. Mr. Tran Van Thuan Deputy Head of Sub-Dept. of Sea and Island, DONRE
12. Mr. Vu Nam Phong Director of EMAC
13. Ms. Nguyen Thi Bich Lien Expert, Pollution Control, Sub-dept. of EP, DONRE
14. Ms. Dao Thi Hau Expert, Water Resource and Hydrometeorology Division, DONRE
15. Mr. Tran Thanh Binh Expert, Inspection Division, DONRE
16. Ms. Hoang Thi Hong Hanh Expert, Sub-Dept. of Sea and Island, DONRE
17. Mr. Nguyen Quoc Anh Deputy Director, EMAC
18. Mr. Nguyen Ngoc Bien Head of Database and Environment Technology Section of EMAC
19. Ms. Vu Thuy Linh Expert of KAM Division, Department of Trade and Industry
20. Mr. Le Manh Thuong Expert of Health Care & Preventive Center
21. Mr. Pham Thanh Trung Expert of Construction Department
22. Mr. Luu The Phuong Deputy Head of Environment and Service Division, DARD
23. Mr. Nguyen Tien Tam Deputy Head of Environment Division, HBMD
24. Mr. Do Tien Thanh Expert of Environment Division, HBMD
25. Mr. Nguyen Manh Hoach Head of Environment & Resource Division, Management Board for Economic Zones.
26. Ms. Nguyen Thi Duong Expert of Halong DONRE
27. Ms. Nguyen Thi Thao Expert of Uong Bi DONRE
28. Mr. Nguyen Huy Binh Expert of Hoanh Bo DONRE
29. Mr. Nguyen Van Dat Expert of Dong Trieu DONRE
30. Mr. Nguyen Xuan Son Expert of Ba Che DONRE
31. Mr. Pham Linh Chi Expert of Van Don DONRE
32. Ms. Tran Thi Lan Expert of Hai Ha DONRE
33. Ms. Vi Thi Thanh Expert of Binh Lieu DONRE
34. Mr. Nguyen Duy Tam Staff of Co To DONRE
35. Ms. Cao Thi Bon Expert of Quang Yen DONRE



*[JICA Side]*

- |                             |                                       |
|-----------------------------|---------------------------------------|
| 36. Mr. Tadashi Shoji       | Pollution Control Expert              |
| 37. Mr. Kengo Naganuma      | Environmental Monitoring and Analysis |
| 38. Ms. Duong Thi Nhuan     | Translator                            |
| 39. Ms. Bui Thi Cuong       | Translator                            |
| 40. Mr. Nguyen Thanh Phuong | Technical Assistant                   |

**Agenda of WG-1 Environmental Management Workshop (Output-2)**

- 1. Date:** December 7th (Fri), 2012  
**2. Time:** 8:30 – 11:30  
**3. Venue:** Meeting Hall B, Provincial Conference Center of Quang Ninh

**4. Expected Participants:**

1. Sub-department of Environment Protection of DONRE
2. Water Resource Management & Hydro-geological Section
3. Inspection Division of DONRE
4. Sub-department of Sea and Islands
5. Environment Monitoring and Analysis Center
6. Inspection Dept. of QN Province
7. Department of Industry and Trade (DOIT )
8. Dept. of Health of QN Province
9. Department of Construction
10. Dept. of Agriculture and Rural Development (DARD)
11. Inspectors of DCST
12. Halong Bay Management Department
13. Economic Zones Management Board
14. Provincial Environmental Police
15. 14 City/Town/District DONREs
16. PMB
17. Other WGs representatives
18. WG-1 members
19. JICA Expert Team

**5. Objectives of the Meeting:**

The objectives of the workshop are to share and discuss the following final outcomes of WG-1:

- 1) Integrated Environmental Monitoring Implementation Plan (IEMIP)
- 2) Implementation Plan of Inspection and Check (including Study on Environment Pollution Incidents)

**6. Program of the Meeting:**

The meeting will proceed according to:

Items	Time	Person in Charge
1. Opening Remark	8:30 – 8:40	Dr. Hoang Danh Son, Head of PMB, (Deputy Director of QN DONRE)
2. Concept of Interaction between Environmental Monitoring and Water Pollution Control toward better water environment management	8:40-8:50	Mr. Kengo Naganuma (JICA Expert Team)
3. Integrated Environmental Monitoring Implementation Plan	8:50 – 9:20	Ms. Do Thi Ni Tan, WG-1 leader (Environmental Monitoring and Analysis Center of QN DONRE)
4. Implementation Plan of Inspection and Administrative Guidance	9:20 – 9:50	Mr. Tran Thanh Tung, WG-1 member (Administration Division of QN DONRE)
5. Study on Environmental Pollution Incidents	9:50 – 10:10	Mr. Shoji Tadashi (JICA Expert Team)
6. Discussion	10:10 – 11:20	All the participants
7. Closing Remark	11:20 – 11:30	Dr. Hoang Danh Son
<i>Luncheon</i>		
<i>(After lunch, the afternoon session, "Final Technical Training of PSD" is conducted.)</i>		

End