

# フィリピン国産業環境マネジメント調査

## 予備調査報告書

2002年3月

国際協力事業団  
鉦工業開発調査部

鉦調工

J R

02-027

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## 第I部 予備調査の結果

# 第1章 調査概要

## 1-1 背景

フィリピン国（以下「比」国）の国家開発計画「Medium-Term Philippine Development Plan 1999-2004」においては、各分野の開発計画の実行にあたり、環境保全に配慮するよう明記されている。しかし、実際には環境マネジメントに対する認識が一般に浸透しておらず、このため大気汚染、水質汚染、固形産業廃棄物等の環境管理が十分に行われていないのが現状である。

また、我が国による対フィリピン協力についても、1999年3月に派遣された経済協力総合調査団とフィリピン政府との政策対話の結果、今後の対フィリピン援助の中期的な援助の重点4分野について合意したが、そのうちの1つが環境保全である。現在、JICAでは環境計画アドバイザー長期専門家の派遣、都市・産業環境管理にかかる国別特設研修、有害産業廃棄物管理マスタープランの策定を目的とする開発調査の実施等、環境分野への協力を行っている。環境局は規制官庁に特化しており、民間セクターに対する環境マネジメントの協力は、BOI（Board of Investments, Department of Trade and Industry：貿易産業省投資委員会）のような投資促進機関が、企業との適切なコミュニケーションを持つことができる。

さらに、ADB、UNDP、USAIDといった主要ドナーが、環境問題に対する支援プログラムをおこなっているが、これらは地域・産業・分野が限定されている。

このような背景の下、これまでの各ドナーによるプロジェクトの成果を踏まえ、小規模のデモンストレーションを行いつつフィリピンにおける環境マネジメントの一層の浸透を図るべく、フィリピン政府より本案件が要請越された。

## 1-2 調査の目的

I/A（Implementing Arrangement）案及びM/M（Minutes of Meeting）案により、フィリピン側関係機関と協議を行い、本格調査の方針、実施方法等を具体化する。合意した場合にはI/A及びM/Mに署名する。

## 1-3 団員構成

（1）団長・総括	渡辺 泰介	JICA 鉱工業開発調査部工業開発調査課課長代理
（2）技術協力行政	横山 博之	経済産業省南東アジア大洋州課アセアン三係長
（3）産業環境管理	小林 恵三	社団法人産業環境管理協会環境管理センター技術部次長
（4）調査企画	田村えり子	JICA 鉱工業開発調査部工業開発調査課

## 1-4 派遣期間

平成13年12月3日（月）～平成13年12月8日（土）

1 - 5 日程

日 時	行 定
12/3 (月)	東京発 (9:55) (JL741) マニラ着 (13:10) JICA 事務所打合せ 日本大使館表敬 BOI*1 長官表敬
12/4 日 (火)	BOI との協議 GEOSPHERE Technologies, Inc.*2 との打ち合わせ
12/5 日 (水)	産業環境問題分析ワークショップ NEDA*3 訪問
12/6 日 (木)	PBE*4 訪問 IISE*5 セミナー参加 BOI との協議 EMB*6 訪問
12/7 日 (金)	BOI との協議 UNDP 訪問 APRCP *7 訪問 I/A、M/M 署名
12/8 日 (土)	マニラ発 (14:30) (JL742) (19:40) 東京着

\*1 BOI: Board of Investments, Department of Trade and Industry

\*2 GEOSPHERE Technologies, Inc. ( 在外プロジェクト形成調査コンサルタント )

\*3 NEDA: National Economic and Development Authority

\*4 PBE: Philippine Business for the Environment, Inc. ( NGO )

\*5 IISE: Industrial Initiatives for Sustainable Development ( USAID によるプロジェクト )

\*6 EMB: Environmental Management Bureau, Department of Environment and Natural Resources  
( 環境天然資源省環境管理局 )

\*7 APRCP: Asia Pacific Round Table for Cleaner Production ( NGO )

( 12 月 3 ~ 5 日の日程には、現地へ出張中の経済産業省技術協力課 折山光俊氏も参加した )

## 第2章 調査結果

### 2-1 実施細則（I/A）について

調査団とBOIとの間でI/A案、M/M案に基づき協議を実施した。その結果、以下の点について追加・変更を行い、I/A、M/Mの合意に至った。

- ・ 調査タイトルについては、政府も民間の環境マネジメント振興に重要な役割を果たすため、「the Study on Environmental Management with Public and Private Sector Ownership（EMPOWER） in the Republic of the Philippines」とする。
- ・ 対象セクターの中に、未だ対策が不十分な agri-business セクターを含める。（同セクターはBOIの中のIndustrial Planning Departmentが所管。内容は agro-processing ということなので、「including agri-business sector」という文言を加えた）。
- ・ ステアリング・コミッティのメンバーに工業団地、Economic Zoneを所管するPEZA(Philippine Economic Zone Authority)を含めた。

また、予備調査団より以下の事項を説明・依頼し、了解をえた。

- ・ ステアリング・コミッティはDTIのUndersecretaryであるDomingo氏が開催し、意思決定者を招待する（不在時は、Secretary Hernandez, Head of Industry Development Groupが代行するとのこと）。
- ・ 本件調査にはBOI内の他の部署も巻き込む。
- ・ 本格調査の開始・優先分野の特定後、ワーキンググループを設置する可能性があり、必要に応じて業界団体等も巻き込んでいく。

I/A協議にあたっては、Undertakings部分についてBOIの権限外として、協議が難航したが、最終的には、前例にならうということでS/W作成マニュアル変更前のUndertakingsを用いて合意した。

BOIとの間で合意した本格調査の概要は以下の通り。

フィリピン国産業環境マネジメント調査の概要	
1. 調査の目的	企業、投資家に産業環境管理を促進するための、1)アクションプランの策定、2)BOI他産業環境管理関係機関の能力強化を行う。
2. 調査の概要	
(1) 調査地域	対象地域：ルソン、ピサヤ地域の agri-business sector を含む製造業の中心地
(2) 調査項目	
< 産業環境管理の現状分析 >	
ア	中央政府、業界団体、工業団地等、官民の当該分野関係機関の権限・役割・能力等を把握する。

- イ 上記関係機関が現在行っている施策・取り組みを把握する。  
 優遇措置、経済的手法（Market Based Instruments）、人材育成、啓蒙普及、コンサルティングサービス・情報サービス
- ウ 民間セクターにおける産業環境管理の実態を把握する。
- エ 関連分野のプロジェクトの実績、成果、教訓を把握する。  
 (ア) PRIME (UNDP)  
 (イ) IISE (USAID) 等
- <優先分野の特定>  
 コストベネフィットを考慮して、優先して取り組むべき分野を明らかにする。
- <関係機関における産業環境管理振興施策の特定>
- ア 関係機関に各種の産業環境管理施策を広める。  
 (ア) BOI  
 (イ) 業界団体等
- イ 環境管理施策の効果、優先順位を評価する。
- ウ パイロットプロジェクトをデザイン・実施する。
- <政策提言・アクションプランの策定>
- ア 各関係機関に適した環境管理施策の今後の推進方法、適切なシステム・技術、意識向上のための施策を選定する。
- イ 検討結果を政策提言・アクションプランとして取りまとめる。
- ウ アクションプランを以下の方法により公表、周知させる。  
 (ア) 業界団体を通じた情報普及  
 (イ) トレーニングの実施  
 (ウ) 政府・業界団体のダイアログ実施 等

## 2-2 I/A 協議における主要論点

### (1) 対象地域

要請書には対象地域の中にミンダナオも含まれていたが、治安上の問題、ルソン、ビサヤに比した企業数の少なさを考慮し、本調査の対象地域には含めないこととした。

### (2) 調査内容の絞り込み

現状分析に基づいて、優先分野を特定し、優先分野について、パイロットプロジェクトを含め効果的な手法を検討することとした。また、公害規制そのものについては、別途協力が計画されていることから、優先分野の対象としない旨合意した。

### (3) キャパシティ・ビルディング

関係機関のキャパシティ・ビルディング、民間セクターへの情報普及のため、本格調査においてはセミナー、ワークショップを数多く開催する旨合意した。

また、本格調査においては、情報ネットワーク、啓蒙普及活動、トレーニング活動の強化を重点的に図るため、業界団体、NGO を活用していく。

### (4) パイロットプロジェクト

提案するアクションプランの内容に関して、より効果的な手段を確認するため、パイロットプロジェクトを実施する。実施内容については、本格調査開始後、調査団から提案を行い、相手側と協議のうえ決定することとする。

## 2-3 関係機関との討議

関係機関に対して本格調査の概要を説明するとともに、情報収集と本格調査への協力依頼を行った。EMB、PBE に対してはステアリング・コミッティへの参加を依頼し、了解を得た。

### (1) JICA フィリピン事務所、山田専門家 (EMB)

日時：12月3日(月) 16:00~16:40

内容：

- ・調査団より本件予備調査及び本格調査案の概要を説明。

先方発言要旨：

- ・ミンダナオについては知事選挙の関係もあり政情不安定であるため、調査対象地域から除外したほうがよい。
- ・現在産業界の声がうまく政策立案に反映されていない状況である。本調査の実施を通じ、BOI、EMB、産業界がひとつの問題について話し合うことができるメカニズムを形成してほしい。カウンターパート機関を BOI のみに限定すると、インパクトが小さくなる恐れがある。
- ・DENR では DAO ( Department Administrative Order : 省令 ) の改正により環境税を導入しようとしており、現在長官レベルでの検討が行われている。特に地方レベルでの EMB のモニタリング能力は低く、導入されても適切に実施できるか疑問である。プロジェクト方式技術協力等によるモニタリング能力強化のための支援が必要だと考えている。
- ・NEDA では「環境」案件は天然資源管理の一部として農業スタッフが所管しているが、彼らのプライオリティは環境よりも「rural development」にある。「産業」案件は環境でも PIS( Public Investment Staff )



の担当になる。

(2) BOI

日時：12月4日(火)9:30~11:30

12月6日(木)13:00~14:00

12月7日(金)9:00~10:00

内容：

- ・調査団より本件予備調査及び本格調査案の概要を説明。

先方発言要旨：

<BOIの組織改正>

- ・組織改正により、旧 Environmental Unit は Office for Industrial Policy 下の Environmental Matters Division となった。メンバーは Division Chief である Ms. Raquel B. Echague 含め 3~4 名程度に減少。Office for Industrial Policy は Environmental Matters Division の他、International Trade Agreements, IPP/Tariffs & Incentives Policy の 2Division を所管する。

<本格調査の内容について>

- ・調査タイトルについては、政府も民間の環境マネジメント振興に重要な役割を果たすため、「the Study on Environmental Management with Public and Private Sector Ownership (EMPOWER) in the Republic of the Philippines」としてほしい。
- ・対象セクターの中に、未だ対策がとられていない agri-business セクターを含めてほしい。(同セクターは Industrial Planning Department が所管)。
- ・undertakings について、カウンターパートスタッフ 1~2 名の配置、オフィススペース、コピー機、電話線、ID カードの提供等を了承した。
- ・ステアリング・コミッティのメンバーに工業団地、Economic Zone を所管する PEZA を含めたほうがよい。

予備調査団は上記内容を了承し、以下の事項を説明・依頼し、了解を得た。

- ・ステアリング・コミッティは DTI の Undersecretary である Domingo 氏が開催し、意思決定者を招待してほしい(不在時は、Secretary Hernandez, Head of Industry Development Group が代行するとのこと)。
- ・本件調査には BOI 内の他の部署も巻き込んでほしい。
- ・本格調査の開始・優先分野の特定後、ワーキンググループを設置する可能性があり、業界団体等も巻き込みたい。

<PRIME Project フェーズ2の実施について>

- ・本プロジェクトの延長に際し新しい活動も追加される可能性があるため、NEDA のエンドースメントが必要であり、現在 NEDA の決定を待っているところ。12 月下旬には結論が出るものと予想している。フェーズ2 ではエコラベリング、環境会計、academic との連携を含む industrial ecology 等の活動を予定している。
- ・本プロジェクトの中の4つのモジュールのうち、モジュール3( Environmental Management System( EMS ) の導入支援)は DTI 内の BPS ( Bureau of Product Standard )、モジュール4( 環境新事業の支援 )は EMB、そのほか大半の事業は PBE に引き継がれるだろう。

(3) GEOSPHERE Technologies, Inc.

日時：12月4日(火)14:00~15:20

内容：

- ・産業環境管理にかかる在外プロジェクト形成調査担当コンサルタントより、調査報告書のドラフトファイナルレポートについての説明を受け、本格調査に関連して以下の情報を得た。

先方発言要旨：

- ・PBE が実施している廃棄物交換は継続できないのではないかと。PBE の本件担当者は1名のみであり、廃棄物の中身を誰もチェックしていない。
- ・PRIME の eco-industrial park モジュール中の副産物交換に関しては、企業は副産物関連情報の提供に消極的であり、こちらも副産物の中身がチェックされていない。99年のデータも更新されていない。
- ・PCAPI ( Pollution Control Association of Philippine,NGO )のセブ支部が設立され、セブでプロジェクトを実施する際中央の PCAPI にコンタクトをとらなくてもよくなった。セブは中央とのコンタクトには消極的である。

(4) 産業環境管理にかかるワークショップ開催

日時：12月5日(水)9:00~15:00

内容：

- ・過去実施したプロジェクトの教訓の共有等を目的とし、政府機関とドナープロジェクトからなる ( BOI, EMB, LLDA, PBE, Federation of Philippines Industries, Philexport, PRIME Project 等 ) 小規模ワークショップを実施した。
- ・以下のテーマについて、カード記入の形式で検討を行った。詳細は別添レポートのとおり。

テーマ1) 環境管理にかかる有効な政策の立案(提唱、教育)

- 2) 政府機能及び組織体制の強化
- 3) エンフォースメント及び既存法制度の実行の強化
- 4) インセンティブ及び既存リソース活性化策の検討
- 5) 技術の適用・アクセス、地方のキャパシティ

(5) NEDA

日時：12月5日(水) 16:00~16:40

内容：

- ・調査団より本件予備調査及び本格調査案の概要を説明。

先方発言要旨：

- ・環境管理に関し、皮革、食品等7産業に焦点をあてた調査がある。これとあわせて、IRRS(Integrated Resource Recovery System)等も含むPRIMEの成果とも連携してほしい。
- ・民間セクターのネットワーク化は重要なポイントである。個別企業では環境管理に予算を当てることは困難である。環境分野主管官庁であるDENR-EMBとも十分協調してほしい。
- ・環境管理分野については、ADBがDOST(Department of Science and Technology)に対しCP(Cleaner Production)関連プロジェクトにfundを提供している。このほか、マニラの大気汚染対策プログラム、パシグ川汚染にかかるプログラムがある。融資プロジェクトはLand Bank、DBP(Development Bank of the Philippines)に関するもののみである。

(6) PBE

日時：12月5日(水) 17:30~18:30

内容：

- ・調査団より本件予備調査及び本格調査案の概要を説明。本件調査への協力及びステアリング・コミッティへの参加について了承を得た。

先方発言要旨：

- ・PBEはNon-profit business organizationであり、企業に対し、環境分野の支援を行っている。情報・技術提供、リソース情報センター機能、教育・訓練の実施、ネットワーキング(NEDAの主催するPhilippine Council for Sustainable Development(PCSD)への参加、PRIME Projectのモジュールのひとつ

- つである Business AGENDA ( BA )21 の取りまとめ ( 現在 83 団体が参加 ) 等の活動を行っている。
- ・ 廃棄物交換に関しては 400 企業が参加しており、14000 のデータがある。また地方における廃棄物交換のデータベースの作成を支援している。今後は企業の 99% をしめる SMEs の参加促進、セクターに焦点をおいた実施が検討事項となろう。Philexport の BA21 にも廃棄物交換の推進がとりあげられている。
  - ・ 環境会計については PICPA が USAID の支援を受けカリキュラム作成等の活動をしている。
  - ・ DENR は現在環境管理を導入する企業に対し、ECC ( Environment Compliance Certificate ) の更新、違反事項への猶予期間を設ける等の “ regulatory flexibility on enforcement on EMS ” にかかる DAO 改正を検討している。なお、ここでいう「環境管理」の定義・認定についてはワーキング・グループレベルでの検討が行われている。

( 7 ) IISE ( Industrial Initiatives for Sustainable Development、USAID によるプロジェクト ) セミナー参加

日時 : 12 月 6 日 ( 木 ) 9 : 00 ~ 15 : 00

内容 :

- ・ 配布資料、OHP をもとに、実際にプロジェクトを担当したコンサルタント、USAID、IISE プロジェクトマネジャーから、プロジェクトの概要、成果、教訓等にかかる発表が行われた。

発表要旨 :

- ・ 環境管理システム導入企業数の増加、コンサルタントの増加による環境サービスコンサルタントフィーの低下 ( 8000-12000 ペソ / 日。従来の 1 / 4 程度 ) 等、一定の成果はあったものの、同プロジェクトのサステイナビリティには問題あり。
- ・ プロジェクト実施の問題点
  - チームワークの欠如 ( EMB project director の交替等による政策変更、各機関のデマケーション確認、参加企業の意識醸成 )
  - プロジェクト予算の削減 ( 8 百万ドル 6 百万ドル )
  - 短期的な成果を求められた
  - 環境サービス導入のメリットを普及するための情報提供が十分徹底できなかった
- ・ 環境管理システムの導入に有効な方策
  - 規制策、インセンティブの導入
  - 行政側エンフォースメントの強化
  - 企業トップ及び環境システム導入企業の存在・リーダーシップ
  - 認証コストの低下

- 企業への国際的な圧力
- DENR、DOST、Land Bank、DBP、DTI 等関係機関のパートナーシップ強化

#### (8) DENR-EMB

日時：12月6日(木) 15:00～15:30

内容：

- ・調査団より本件予備調査及び本格調査案の概要を説明。本件調査への協力及びステアリング・コミッティへの参加について了承を得た。

先方発言要旨：

- ・“flexibility regulatory system”は PEPP (Philippines Environmental Partnership Program) により提言があったもの。規制遵守のための猶予期間等を定めようとしており、DAO のドラフトが undersecretary にあがっている。
- ・現在のエンフォースメントの状況について、EMB のリソース不足により苦情が出たときのみ対応している事態は否めない。ECC の取得に時間がかかることについても、徐々にではあるが見直しをすすめている。また、小規模のプロジェクトに対しては EIA (Environmental Impact Assessment) を免除する等の配慮もしている。

#### (9) UNDP

日時：12月7日(金) 11:00～11:40

内容：

- ・調査団より本件予備調査及び本格調査案の概要を説明。あわせて PRIME Project フェーズ 2 の実施の可否を確認した。

先方発言要旨：

- ・JICA で実施予定の開発調査の関係機関 (DTI、DENR、PBE) は PRIME のステアリング・コミッティのメンバーでもあった。
- ・PRIME の評価については終了しレポートを作成済み。フェーズ 1 は 1 月に終了する。
- ・フェーズ 2 では分野をもう少し絞り込む必要があると考えている。DTI においても何らかの transition activity が必要であり、DENR、PBE も引き続き関心を示している。SMEs に関連する部分は ADB とも協力しつつ支援を続けることになる。UNDP はフェーズ 1 の成果を根付かせることを目

的とするので JICA のプロジェクトとは重複しないと思う。

- ・ PRIME の project managers から提出されたフェーズ 2 の要請内容は以下の 5 点である。
  - ( 1 ) BA21 のアップデート
  - ( 2 ) eco-industrial park、Integrated Resource Recovery Systems ( IRRS )、副産物交換を含む IE の実施
  - ( 3 ) エコラベリングにかかる制度構築の継続及び environmental auditor、laboratory の認証制度構築
  - ( 4 ) environmental performance indicator への支援 ( 環境会計、Cleaner Production ( CP ) 含む )
  - ( 5 ) ビジネススクール向け環境管理カリキュラムの導入
- ・ Industrial Ecology ( IE ) のモジュールでは PEZA を含む関係者が継続に同意している。IE の世界的なネットワークが設立されており、フィリピンが会議をホストしたこともある。UNDP はこれをサポートしたいと考えている。なお、対象地域はルソンのみであり、ビサヤへは進出しない。
- ・ 環境会計については PBE、Philippine Institute of Certified Public Accountants ( PICPA ) を通じ引き続き研修を重点に行っていく予定。
- ・ UNIDO による CP センターについては DOST がカウンターパート機関となるが、fund がついていない。
- ・ UNIDO は Global Environment Facility ( GEF ) により Persistent Organic Pollutant Systems ( POPs ) をスロベキア、フィリピンを対象に実施中。カウンターパート機関は DENR。Transformer からの PCB 除去に関し、分解技術の普及、インベントリーの作成、キャパシティ・ビルディングを行っている。

#### ( 10 ) APRCP

日時 : 12 月 7 日 ( 金 ) 15 : 00 ~ 16 : 00

内容 :

- ・ 調査団より本件予備調査及び本格調査案の概要を説明し、調査対象分野の絞込み時等に本格調査団に対する助言を依頼した。
- ・ 先方発言要旨 :
  - ・ UNEP がソウルでの NCPC ( National Cleaner Production Center ) 代表の会議で環境会計にかかるプレゼンテーションを行った。UNEP は産官学関係各機関を対象に教材の作成、ワークショップの支援を行っている。フィリピンでも PBE、PICPA を通じ、ベトナム人の講師を派遣する等して環境管理の基礎を含む研修を無料で行っている。 트레이ナーズ・トレーニングも実施予定。
  - ・ PICPA は USAEP の支援による研修も行っているがこちらは有料である。
  - ・ DBP は JBIC の EISCP ( Environmental Infrastructure Support Credit Program ) により、複数セクターにかかるマニュアルを作成済み。

## 2 - 4 今後の予定

本部でコンサルタント選定手続きを進め、本格調査期間は、2002年3月～2004年7月を予定している。

## 2 - 5 留意事項

### (1) PRIME Project の延長について

2001年で終了予定の本プロジェクトの延長については、BOIからプロポーザルが提出されているが、まだUNDPで最終決定はなされていない。プロポーザルでは、エコラベリング、環境会計、academicとの連携を含む industrial ecology 等の活動を予定しているとの由であり、パイロットプロジェクトの選定時等、同プロジェクトの動向に引き続き注視する必要がある。

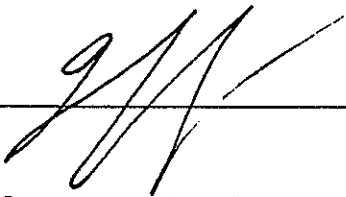
## 第II部 添付資料

- 1 I/A、M/M
- 2 主要面会者一覧
- 3 パイロットプロジェクト例（協議に利用したもの）
- 4 産業環境問題分析ワークショップ資料
- 5 IISEセミナー資料
- 6 PRIME PROJECT報告書
- 7 APRCP概要（ホームページより）
- 8 公害防止関連の政府施策（規制基準の設定以外）
- 9 本開発調査要請書




IMPLEMENTING ARRANGEMENT  
ON  
TECHNICAL COOPERATION  
FOR  
THE STUDY  
ON  
ENVIRONMENTAL MANAGEMENT  
WITH  
PUBLIC AND PRIVATE SECTOR OWNERSHIP  
(EMPOWER)  
IN  
THE REPUBLIC OF THE PHILIPPINES  
AGREED UPON BETWEEN  
THE BOARD OF INVESTMENTS  
OF  
THE DEPARTMENT OF TRADE AND INDUSTRY  
AND  
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Manila, December 7, 2001



Usec. Gregory L. Domingo  
Managing Head  
Board of Investments  
Department of Trade and Industry



Mr. Taisuke Watanabe  
Leader  
Study Team  
Japan International Cooperation Agency  
(JICA)

## I. INTRODUCTION

In response to a request from the Government of Republic of the Philippines (hereinafter referred to as the "GOP"), the Government of Japan (hereinafter referred to as the "GOJ") has decided to conduct the Study on Environmental Management with Public and Private Sector Ownership (EMPOWER) in the Republic of the Philippines (hereinafter referred to as the "the Study"). The GOJ exchanged Notes Verbale with the GOP concerning the implementation of the Study.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the GOJ, will undertake the Study in accordance with the relevant laws and regulations enforced in Japan.

On behalf of the GOP, the Board of Investments of the Department of Trade and Industry (hereinafter referred to as the "BOI") shall act as the counterpart agency to the Japanese study team and also as a coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

This document constitutes the Implementing Arrangement between the BOI and JICA based on the above-mentioned Notes Verbale exchanged between two governments.

## II. OBJECTIVES OF THE STUDY

For promotion of industrial environmental management for enterprises and investors:

- (1) To formulate an action plan
- (2) To promote capacity building of the BOI and other related organizations

## III. STUDY AREA

The Study will cover centers for manufacturing industries in Luzon and Visayas.

## IV. SCOPE OF THE STUDY

1. Reviews and analysis of the current status of industrial environmental management

- (1) Examine authorities/mandates/ roles/capacities of public and private organizations related to industrial environmental management (e.g., the central government, industry associations, industrial estates, etc..)
- (2) Examine policies/measures implemented by the above organizations
  - 1) incentives
  - 2) market-based instruments
  - 3) human resources development
  - 4) information dissemination and awareness-raising
  - 5) consulting and information services

- (3) Assess the current conditions of industrial environmental management in the private sector
- (4) Assess the achievements/outputs/lessons of other projects concerned with industrial environmental management

## 2. Clarification of priority areas

Clarify priority areas, by considering cost benefits and other conditions

## 3. Selection of measures to promote industrial environmental management in related organizations

- (1) Provide information on various measures for industrial environmental management to related organizations (e.g., the BOI and industrial associations)
- (2) Assess the effect and priority of measures implemented by each organization
- (3) Design and implement pilot projects connected with the above measures

## 4. Recommendation for industrial environmental management policies and formulation of an action plan

- (1) Select measures for promotion of industrial environmental management including awareness-raising through economic and institutional analysis
- (2) Formulate policy recommendations and an action plan based on the above assessment
- (3) Disseminate an action plan by:
  - 1) disseminating information through industrial associations
  - 2) implementing training program
  - 3) promoting dialog between the government and industrial association, etc.

## V. STUDY SCHEDULE

The tentative schedule of the Study is attached as the Annex.

## VI. REPORTS

JICA shall prepare and submit the following reports in English to the GOP.

- Twenty (20) copies of the Inception Report in English
- Twenty (20) copies of the Progress Report in English
- Twenty (20) copies of the Interim Report in English
- Thirty (30) copies of the Draft Final Report in English
- Thirty (30) copies of the Final Report in English

## VII. UNDERTAKINGS OF THE GOP

In accordance with the Note Verbale exchanged between the GOJ and GOP, the GOP shall accord privileges, immunities and other assistance to the Japanese study team (hereinafter referred to as "the Team") in connection with the performance of their duties for the Study and, through the authorities concerned, take necessary measures to facilitate the smooth conduct of the Study.

1. The GOP shall be responsible for dealing with claims which may be brought by third parties against the members of the Team and shall hold them unaccountable in receipt of claims and liabilities arising in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims or liabilities arise from gross negligence or willful misconduct of the above-mentioned members.
2. The BOI shall provide the Team with the following, in cooperation with other agencies concerned:
  - (1) Available data and information related to the Study,
  - (2) Counterpart personnel and support staff necessary for the Study,
  - (3) Suitable office space with necessary equipment and furniture,
  - (4) Credentials or identification cards to the members of the Team.
3. To facilitate smooth conduct of the Study, the BOI shall make the necessary arrangement with other governmental and non-governmental organizations concerned for the following:
  - (1) to secure the safety of the Team,
  - (2) to permit the members of the Team to enter, leave and sojourn in the Philippines for the duration of their assignment therein,
  - (3) to exempt the members of the Team from taxes, duties fees and other charges on equipment, machinery and other materials brought into the Philippines for the conduct of the Study,
  - (4) to exempt the members of the Team from income taxes and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study,
  - (5) to provide the necessary facilities for the Team for remittance as well as utilization of the funds introduced into the Philippines from Japan in connection with the implementation of the Study,
  - (6) to secure permission for entry into private properties or restricted areas for the conduct of the Study,
  - (7) to secure permission for the Team to take all data and documents (including maps and photographs) related to the Study out of the Philippines to Japan by the Team, and
  - (8) to provide medical services as needed. Their expenses will be charged to the members of the Team,

## VIII. UNDERTAKINGS OF THE GOJ

In accordance with the Note Verbale exchanged between the GOJ and GOP, the GOJ, through JICA, shall take the following measures for the implementation of the Study:

1. to dispatch, at its own expense, the Team to the Philippines,
2. to help build capacity of the Philippine counterpart personnel in the course of

the Study.

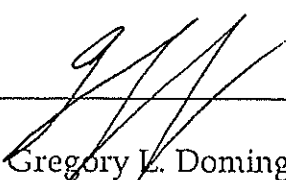
#### IX. OTHERS

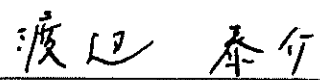
JICA and the BOI shall consult with each other in respect of any matter that may arise from or in connection with the Study.



MINUTES OF MEETING  
FOR  
THE IMPLEMENTING ARRANGEMENT  
ON  
TECHNICAL COOPERATION  
FOR  
THE STUDY  
ON  
ENVIRONMENTAL MANAGEMENT  
WITH  
PUBLIC AND PRIVATE SECTOR OWNERSHIP  
(EMPOWER)  
IN  
THE REPUBLIC OF THE PHILIPPINES  
AGREED UPON BETWEEN  
THE BOARD OF INVESTMENTS  
OF THE  
DEPARTMENT OF TRADE AND INDUSTRY  
AND  
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Manila, December 7, 2001

  
\_\_\_\_\_  
Assec. Gregory L. Domingo  
Managing Head  
Board of Investments  
Department of Trade and Industry

  
\_\_\_\_\_  
Mr. Taisuke Watanabe  
Leader  
Study Team  
Japan International Cooperation Agency  
(JICA)

This Minutes of Meeting has been prepared to confirm the points agreed upon between the authorities concerned of the Government of Republic of the Philippines (hereinafter referred to as "the Philippine side") and the team organized by the Japan International Cooperation Agency (hereinafter referred to as "the Team") concerning the implementing framework of the Study on Environmental Management with Public and Private Sector Ownership (EMPOWER) in the Republic of the Philippines ("the Study"). Hence this minutes of meeting should be read in conjunction with the "Implementing Arrangement (I / A)" signed in Manila on December 7, 2001.

1. Title of the Study

Both sides agreed to change the title of the Study from " Development Study on Industrial Environmental Management and Zero Emission" in the official request to " The Study on Environmental Management with Public and Private Sector Ownership (EMPOWER)".

2. Industries covered by the Study

The Study will focus on manufacturing sectors including agri-business sector.

3. Organizational Setup for Implementation of the Study

Concerning institutional setup for implementation of the Study, both sides agreed as follows:

The BOI will set up a Steering Committee under the chairmanship of the BOI for ensuring the smooth implementation and coordination of the Study. The committee members will be composed of, but not limited to, representatives of related organizations, such as:

- BOI
- Environmental Management Bureau, Department of Environment and Natural Resources (EMB)
- Laguna Lake Development Authority (LLDA)
- Philippine Economic Zone Authority (PEZA)
- Philippine Business for the Environment (PBE)

Responsibilities of Steering Committee members are as follows:

- a. The BOI, as the leading counterpart, will engage in overall coordination for the Study.
- b. Other members, as the collaborating counterparts, will offer necessary advice and support for the smooth and effective implementation of the Study.

4. Pilot Project

Both sides agreed to conduct (a) pilot project(s) to examine the effectiveness of possible action/recommendations. The JICA Study Team will identify candidates for the pilot project(s) and discuss the content of the pilot project(s) with the Philippines side during their work in the Philippines.



### 5. Duration of the Study

Both sides agreed that the duration of the study will be about 18 months, although this period may change in compliance with the content of the pilot project(s).

### 5. Factory Survey

The BOI will make necessary arrangements for a factory survey including arrangements for a factory visit. Details will be discussed by the BOI and JICA Study Team.

### 7. Counterpart Personnel

Both sides confirmed that the Study will be a collaborative project by the Philippine and Japanese sides, and therefore active participation by the Philippine side is essential for the success of the Study.

Both sides agreed that the BOI will appoint members of its staff as counterpart personnel for the Study, and that it will complete this appointment by the start of the Study in the Philippines.

### 8. Office for the JICA Study Team

The BOI will arrange office space with desks, chairs, a phone, and a photocopy machine for the JICA Study Team in the Head Office of the BOI.

### 9. Report

Both sides agreed that the Final Report should be open to the public.

### 10. Workshops/seminars

The JICA Study Team shall organize several workshops/seminars for related authorities during the study period in order to promote technology transfer and raise awareness. Number and topic of the workshops/seminars will be discussed by the JICA Study Team and Philippine side.

## 主要面会者一覧

### DTI-BOI

Usec.Gregory L. Domingo	Managing Head, Board of Investments ( BOI ) , Department of Trade and Industry ( DTI )
Mr.Guillermo S. Laquindanum	Director, Administration Department, BOI
Ms.Erllinda F. Arcellana	Director, Office for Industrial Policy, BOI
Ms.Raquel Echague	Division Chief, Environmental Matters Division, Office for Industrial Policy, BOI
Mr.Marco Carlos	Senior Investment Specialis, Environmental Matters Division, Office for Industrial Policy, BOI
玉置 雅治	JICA Expert ( Japan Desk )

### DENR-EMB

Mr.Fernandino Y. Concepcion	Assistant Director, Environmental Management Bureau ( EMB ) , Department of Environment and Natural Resources ( DENR )
山田 泰造	JICA Expert ( Environmental Planning and Management Advisor )

### NEDA

Ms. Vanessa Agnes F. Dimaano	Senior Economic Development Specialist, Public Investment Staff, National Economic and Development Authority
Ms. Glenda T. Reyez	Supervising Economic Developments, Trade, Industry and Utilities Staff, Public Utilities Division, National Economic and Development Authority
Ms. Violeta C. Conde	Trade, Industry and Utilities Staff, Public Utilities Division, National Economic and Development Authority

## **PBE**

Ms. Lisa C. Antonio

Executive Director, Philippine Business for  
Environment

## **APRCP**

Dr. Olivia la O' Castillo

President, Asia Pacific Round Table for  
Cleaner Production

## **UNDP**

Ms. Amelia Dulce D. Supetran

Senior Programme Manager

Ms. Imee Manal

Programme Manager

## **PRIME Project**

Ms. Sharon Gil

Project Coordinator, Private Sector Participation in  
Managing Environment, A project of the United  
Nations Development Programme

## **在フィリピン日本大使館**

堺井 啓公

一等書記官

## **JICA フィリピン事務所**

小原 基文

次長

番場 紀子

所員

Santos N. Godornes, Jr.

ローカルスタッフ

## Examples of pilot projects (prepared for discussions)

The candidate of pilot project in the priority area will be prepared by the JICA Study Team and be discussed with BOI after the priority area is identified.

### 1. Environmental Accountings (EA)

- (1) To conduct seminars/workshops for BOI, PICPA and other organizations related to EA
- (2) To conduct trainer's training program on EA
- (3) To develop teaching materials on EA
- (4) To assist BOI or PICPA to conduct seminars/workshops on EA for private sectors

### 2. Waste Minimization

- (1) To conduct demonstration at selected factories by waste minimization audit, hands-on technical service, cost evaluation.
- (2) To conduct trainer's training program on waste minimization
- (3) To hold marketing workshop on waste minimization for selected sub-sectors

### 3. Development of environmental consultancy service (Development of environmental service provider)

- (1) To conduct training program for consultants
- (2) To design measures/plans to promote environmental consultancy service in the private sector (e.g. Development of business association for environmental consultancy service/ environmental service provider and Provision of information on environmental consultancy service)
- (3) To market effectiveness of environmental consultancy service to factories through seminars or newsletter

### 4. Eco-industrial Park

- (1) To study the current activities/measures and constraints on environmental management at the target industrial estates
- (2) To conduct demonstration project at the target industrial estates (ex. waste minimization, promotion of reuse/recycle, etc)

## JICA Industrial Environmental Management and Zero Emission Workshop Output Report

By Eimer Mercado,  
05 December 2001

### I. Background

A holistic assessment of industrial environmental management and zero emission (industrial ecology) programs in the Philippines is being prepared under a JICA development study project will be conducted by next year. The study was requested by the Board of Investments as part of its strategic commitment to integrate environmental management in the improvement of corporate competitiveness in the country.

The study shall also serve as a follow-through activity to other projects related to industrial environmental management and zero emission (industrial ecology) that are being implemented in the country. These include the UNDP-funded Private Sector Initiatives in Managing the Environment (PRIME) Project and USAID Industrial Initiatives for a Sustainable Environment (IISE). Current and recent programs on industrial environmental management were either site-specific or sector focus projects. Only the PRIME Project and the Philippine Business for the Environment have active industrial ecology activities, albeit, limited efforts. Likewise, previous and present programs emphasise manufacturing sectors and have minimal exposure in the agribusiness industries. The study aims to put together the results of these projects, examine trends and see how zero emission (industrial ecology) can be encouraged to complement environmental management.

To achieve this, one of the key input activities for the preparatory work of the study is a workshop of key government agency and business/industry sector participants that would help draw a broad picture of the key issues, concerns and possible intervention/mitigating activities needed to address these issues on industrial environmental management and zero emission (industrial ecology).

The objectives of the workshop were:

- a. To identify and prioritize key issues and actions related to implementing an effective and appropriate industrial environmental management and zero emission (industrial ecology) programme in the country; and,
- b. To identify and recommend key strategies and intervention activities to strengthen current industrial environmental practices and experiences in the Philippines.

Expected outputs of the workshop are:

- a. An broad action plan to promote industrial environmental management and zero emission (industrial ecology); and,
- b. A matrix framework of issues, concerns and key indicators of success for implementing the IEM and zero emission in both manufacturing and agribusiness sectors.

## II. Workshop Outputs

A key input in the workshop was the consolidated matrix of previous IEM/Zero Emission related workshops conducted by the Philippine Business for Environment and UNDP Prime Strategy Session. The consolidated matrix ( see Annex 1) identified 5 major thematic areas of concern in pursuing industrial environmental management and zero emission (industrial ecology) adoption in the Philippines. These five areas of concern included the following :

- a. Creating an enabling policy environment for industrial environmental management in the Philippines;
- b. Strengthening environmental governance and institutional arrangements;
- c. Improving enforcement and implementation of existing laws on IEM and rules and regulations;
- d. Developing appropriate incentives framework and resource mobilization to support application and adoption of IEM/Zero emission practices;
- e. Access and applicability of IEM technology, production systems, capacity-building and technical 'know-how'.

Based on these 5 core themes, specific issues and key activities were identified (see Annex B).

### *Creating an enabling policy environment for industrial environmental management in the Philippines.*

In this particular area, the main issue identified are related to further understanding and appreciation of existing laws on IEM and Zero Emission. The passage of several landmark environmental management legislation in the Philippines ohave highlighted the importance of environmental management in the mindset of many decisionmakers in the Philippines. The Clean Air Act (RA 8749) and the Solid Waste Management Act (RA 9003) were recently passed that provided for a legal framework for environmental management on air emission and solid waste. Earlier legislation on toxic and hazardous waste ( RA 6969) laid down the policy framework for the handling of toxic and hazardous waste in the country. However, given these landmark legislations on IEM, the key question raised by the participants centers on the level of commitment and understanding of the provisions of these policies that would facilitate efficient enforcement and implementation.

A critical sector that was identified is the role played by national policy makers and local government officials in pursuing effective adoption of IEM in the country. Indeed, the Clean Air Act and Solid Waste Management Act along with another landmark legislation the Local Government Code of 1990 ( RA 7160) provided stronger responsibilities and roles to local government officials in the management of their local environment. However, these seems to be an area which needs to be further strengthened due to the limited understanding and education given to officials on these laws.

The same concern over education and understanding of these IEM related laws to other stakeholders, including staff of field implementing agencies and other stakeholders is perceived to hinder the full utilization and effective implementation of these IEM laws.

Other areas of concern identified by the participants include adoption of appropriate standards of environmental monitoring; criteria and requisites of the EIA process specially for small and medium enterprises; and, consultation mechanisms for the participation of local stakeholders in the formulation of IEM policies and rules.

As a whole, the creation of enabling policy environment for IEM/Zero emission is essentially in place. What is lacking is the further efforts towards expanding the understanding by policymakers, implementers, enforcers and community participants of the details of these policies as well as the simplification of these policies. The development and implementation of a comprehensive and focuses information, education and communication campaign and plan at both national and local levels; and agency and community levels, will facilitated the process of consensus building and understanding of IEM.

#### *Strengthening environmental governance and institutional arrangements*

A critical issue on environmental governance and institutional arrangements lies on the rationalization of the regulatory and developmental mandates of major IEM implementing agencies, particularly the Department of Environment and Natural Resources (DENR) and the Laguna Lake Development Authority (LLDA). Both agencies perform regulatory/police powers in the enforcement of environmental laws and standards while at the same time tries to promote development initiatives with private sector groups on adoption of cleaner production and environmental management. These duality is perceived as a hindrance to the effective governance of environmental management because of the conflicting policy and implementation arrangements being pursued by the agencies.

Likewise, there is also a similar overlap between the mandates and responsibilities of the DENR and the LLDA over certain portions of MetroManila. As per mandated of LLDA it exercises both regulatory and development authority over all communities and municipalities/cities covering the Laguna Lake. This virtually covers almost all of the cities and municipalities of MetroManila and Manila Bay. The LLDA issues its own standards and guidelines on environmental management and enforcement separately from the DENR has the over-all mandate over environmental management in the country. And as such exercise similar regulatory and development powers in MetroManila. This overlap presents applying two different levels of environmental management rules causes confusion and further delays in efforts by local industries specially those located in MetroManila to adopt IEM systems.

Other issues over clarification of jurisdiction also involves other agencies such as the Housing and Land Use Regulatory Board (HLURB); Special Economic Zone Administrations, i.e. Clark and Subic Development Authorities; and, Philippine Export Zone Administration. In this regard, specific policy reform initiatives and technical studies on the rationalization and clarification of various roles, functions and mandates of government environmental management agencies will be a critical step towards addressing this issue.

Similar issues and concerns raised under this section involves the stability and sustainability of institutional commitments to IEM. This is particularly due to the frequent changes in the leadership or management structures of implementing agencies. Such

frequent changes of leadership affects the continuity of policies and commitment to previously acknowledge and supported projects. Another issue is the effectiveness of field implementing agencies in monitoring and performing their mandates under existing IEM policies. Often, it was pointed out that field implementing agencies, specially at the local levels, are themselves have very limited, if not erroneous, appreciation of their roles and functions as well as provisions of IEM policies.

#### Improving enforcement and implementation of existing laws on IEM and rules and regulations

In this section, the most common issue or obstacle to achieving improved enforcement of existing laws is the limited support and incentives given to field implementing units. The absence of resources and facilities for monitoring, testing, standards setting and review, manpower, mobility and data gathering/dissemination are some of the activities that are not given full support. This situation maybe particularly due to the low prioritization given towards environmental management at both national and local levels of governance.

Similarly, private sector initiatives towards adoption of IEM and cleaner production is stymied by the short-term cost involve in shifting current production processes towards IEM vis-à-vis potential long-term benefits. It was pointed out that for many firms, specially small and medium enterprises, the adoption of IEM is a big outlay that cannot be afforded by many SME's in the country. Likewise, because of the relative laxity and limitations of government enforcement agencies to monitoring and effectively implement environmental standards and requirements, non-compliance to environmental rules is believe to be much cheaper than adoption of IEM or cleaner production systems.

Other issues involve the non-observance of time-bound schedules and processing time for environmental clearances and permits; overlaps in jurisdiction by enforcement agencies ( as earlier mentioned in the preceding section); limited capacities and technical knowhow of implementing agency personnel. Other concerns relates to the discrepancy in the standards identified by existing IEM laws and rules vis-à-vis local conditions for adoption, technical knowhow and available technological systems. This discrepancy is seen in the identification of 'foreign standards' for environmental management and criteria in existing policies without due consideration of firm-level conditions of existing production processes, systems and capabilities, specially for SMEs.

One of the major recommended activities in this section is the creation of venues of consultation and interaction/coordination between government agencies, private sector groups and civil society representatives. Such mechanism could be at the technical, policy or implementation levels. Similarly venues for feedbacking and monitoring should also help improve enforcement of IEM laws and policies.

#### Developing appropriate incentives framework and resource mobilization to support application and adoption of IEM/Zero emission practices

In this area, the most critical issue identified is the question of access to credit facilities and funds for firms, specially SMEs, to support adoption of IEM and cleaner production. While many firms would like to pursue IEM, the prohibitive cost of money, i.e. interest rate, from banks and government financing institutions hinders local firms from borrowing money for IEM and cleaner production systems. This issue is a concern



affecting monetary policies imposed by the Bangko Sentral ng Pilipinas and the Monetary Board.

Likewise, limited incentives are given to firms adopting IEM and cleaner production technologies. This is particularly related to duties and tax-free incentives for importation and procurement of capital equipment. Prior to 1997, the government included exemptions from tax payments importation or procurement of capital equipment in the list of incentive packages for businesses. However, Executive Order 226 which provided such incentive lapsed in 1997 and therefore reimposed duties and taxes for capital equipment. Such issue has to be dealt with the Department of Finance (DOF) in terms of adopting concessional interest rates for environmentally-oriented projects.

Other incentive packages for SMEs are tied to non-fiscal incentives mainly targeted towards government recognition of SME efforts to adopt IEM systems and integration of cleaner production systems into their processes. At the moment, such recognition or 'awards' scheme has not being initiated.

#### Access and applicability of IEM technology, production systems, capacity-building and technical 'know-how'

A basic element to the adoption of IEM and cleaner production/zero emission in the country is the access to basic information on IEM technology and systems that are adaptable to local conditions and levels of production systems, i.e. small and medium enterprises. While there maybe available information of IEM systems this are not readily accessible by potential adoptors such as SMEs. Likewise, basic information such as existing environmental standards and regulations, services, and information are not systematized and organized. There is a need to integrate and link available information on IEM technologies and productions systems with potential IEM firm adoptors as well as local policy makers and stakeholders.

Another concern in this section is the relative limitation in terms of technical capability and skills on IEM and cleaner production. There is also a continuing discrepancy in the adaptability and compliant nature of IEM products and services that are available in the market. This also involves pursuing further research on cleaner production and IEM within the context of local production systems and environment, i.e. labor-intensive SMEs vis-à-vis technology applications of IEM systems.

A key area of intervention in this category rests on the development of an integrated, open and update access to IEM technology and information. This shall dovetail to previous recommendations towards developing an web-based information network on IEM and cleaner production/zero emission from both private and government agencies.

#### Cross-cutting Issues affecting IEM/Zero Emission

A sixth section in the matrix for IEM adoption in the Philippines pertains to external and indirect conditions that have specific impacts to IEM practice and adoption in the country. Among the major cross-cutting issue that would hinder/hamper IEM implementation is the effects of the global/regional economic crisis to the country's economy and local productivity. The impact of the economic crisis are aggravating circumstances that inhibits many firms from engaging in IEM practices if not considering

expansion of production activities. Many firms decision-making processes are tied to survival and market penetration rather than production efficiency and rationalization.

Other cross-cutting issues are the possible changes in national leadership due to the upcoming national elections in 2004 and government bureaucratic inefficiencies and lack of transparency.

**Industrial Environmental Management and Zero Emission  
Matrix Framework of Key Issues and Interventions**

PRIORITISATION (Immediate, Medium, Long-term)	KEY MITIGATING ACTIVITIES/ INTERVENTIONS	INDICATORS OF SUCCESS	AGENCY INVOLVED/ RESPONSIBLE
1.0 Creating an Enabling Policy Environment for IEM/Zero Emission (Advocacy and Education)	National agencies have a common understanding in implementation of promulgated / legislated laws, so that stakeholders will be encouraged to support SD		
	Convergence of economic and ecological concerns in business		
	Environmental Protection and Waste Management Programs. Education should be part or a policy of the business community relations programs		
	Encourage top government officials to be more committed to sustainable development		
	Greening the supply chain		
	Greening the financial sector		
	Give more teeth to local government units		
	Advocacy towards legislators on policies balancing environmental protection with profitability		
	Encourage recycle and reuse concept; institutionalize in all businesses with commitment from top management		
	<i>Inconsistent enforcement of the law</i>		
	<i>No long term plan on environmental issues from the local government</i>		
	<i>Solid waste crisis; ban on incineration</i>		
	<i>Civil society perceive the industries as the major culprit of pollution</i>		

PRIORITISATION (Immediate, Medium, Long-term)	KEY MITIGATING ACTIVITIES/ INTERVENTIONS	INDICATORS OF SUCCESS	AGENCY INVOLVED/ RESPONSIBLE	REMARKS
2.0 Strengthening governance and institutional arrangements for IEM/Zero Emission	Institutionalization of a Waste Exchange Network System			
	Common service facilities / zoning of industries			
	Establishment of recycling centers – lobby with government to set-up			
	Partnership between industry and communities in the implementation and monitoring of environmental projects (e.g. implementation of solid waste management projects, etc.)			
	Mobilize federation of associations on a regional level to promote BA 21			
	Comprehensive planning of concerns in local and regional levels			
	Developing business networks to facilitate exchange of learning, experiences, technologies			
	Development/creation of communities and infrastructure for environment			
	Information centers			
	Profiling of Investment Portfolio for the environmental projects of LGUs / communities			
	Propose a new role for DENR: beyond a regulator should include promotional role			
	<i>Continuity of government efforts are affected with the very frequent change of government leaders</i>			

PRIORITISATION (Immediate, Medium, Long-term)	KEY MITIGATING ACTIVITIES/ INTERVENTIONS	INDICATORS OF SUCCESS	AGENCY INVOLVED/ RESPONSIBLE	REMARKS
3.0 Strengthening Enforcement and Implementation of Existing Rules and Laws	Firms/business/industries self-monitoring effluents/emissions or processes to minimize waste generation			
	Avoid/minimize use of toxic and hazardous materials in production			
	Business firms should look at integrating production processes rather than diverse/ separated production units			
	Business to contribute resources to LGUs for environmental promotion			
	Industry-community partnership			
	LGU and community acceptance, cooperation and involvement is a must			
	Convert harmful chemical to more friendly chemicals, metals and other materials			
	Revise pricing of virgin (raw) materials			
	Promote to industries, especially among SMEs that commitment to the environment does not stop with compliance to environmental regulations. Adopting CP practices and pollution strategies are actually beneficial to them			
	Conflicting implementation strategies of different government agencies on environmental laws, rules and regulations			
	Lack of funds and education			
	Lack of infrastructure such as hazardous waste treatment, domestic sewerage treatment facilities			
	No municipal facilities / dumpsite for collected domestic and industrial solid waste			
	Overlapping functions of government agencies			

PRIORITISATION (Immediate, Medium, Long-term)	KEY MITIGATING ACTIVITIES/ INTERVENTIONS	INDICATORS OF SUCCESS	AGENCY INVOLVED/ RESPONSIBLE	REMARKS
<p>4.0 Developing incentives framework and resource mobilization strategy for IEM/Zero Emission to work</p>	Encourage by-product (waste) exchange among industrial companies			
	Promote product stewardship i.e. cradle to grave responsibility			
	Promote businesses to get from suppliers that re-use, recycle and reduce			
	Active participation in organizations that can support environmental initiatives of members			
	More insurance benefits companies / industries who maintain environmental awareness			
	Information system on BEMP – features on success stories; educate LGUs on environmental issues, profitability of environmental investments			
	Encourage local communities to have active participation in environmental management activities and give recognition on their efforts			
	Conservation of marine resources, tourism and recreation areas			
	Contribute funds to public awareness campaigns for environmental improvement			
	Encourage the government to push for projects to develop environmental infrastructure (e.g. hazardous waste treatment facility, sanitary landfills, etc)			
	Consideration for microfinancing			
	Encourage member firms to adopt EMS through education then monitoring and recognition			

PRIORITISATION (Immediate, Medium, Long-term)	KEY MITIGATING ACTIVITIES/ INTERVENTIONS	INDICATORS OF SUCCESS	AGENCY INVOLVED/ RESPONSIBLE	REMARKS
5.0 Access and applicability of technology and local capacity building/know-how	Documentation of Best Environmental Practices as well as successful company SD initiatives (e.g. savings incurred)			
	Training/awareness on environmental protection for all sugar mills employees through the EMS			
	Developing business networks to facilitate exchange of learning, experiences, technologies			
	Promotion of eco-labelling products			
	Paper recycling			
	Promotion of self-regulation through EMS			
	Implement Environmental Cost Accounting			
	Training of Metro Aides/Garbage collectors			
	Training for ecological awareness			
	Quality and training of labor force			
	Packaging minimization			
	Evaluate use of renewable energies			
	Promote the concept "take back used products for recycling"			
	Promotion of CP including IEC and training			
	Advocating media slots for promotion of environmental concerns			
Lack of technical know-how				

PRIORITISATION (Immediate, Medium, Long-term)	KEY MITIGATING ACTIVITIES/ INTERVENTIONS	INDICATORS OF SUCCESS	AGENCY INVOLVED/ RESPONSIBLE	REMARKS
6.0 Cross-cutting concerns	Investment on CP technologies but with tax and duty free exemptions for capital equipment and other incentives like VAT			
	Compliance to regulations. Less CDO means economic growth			
	Require all suppliers to have an EMS and comply with environmental regulations			
	Improve local community's standard of living by providing employment, training, etc			
	Reduce non-product output			
	Reduce pollution by all means			
	Control and reduce input of resources			
	Eliminate/reduce unauthorized collection of fees by LGUs and equal enforcement of the law			
	Do not patronize suppliers who engage in destructive activities like dynamite fishing, use of mercury in small-scale mining, etc			
	Inconsistent enforcement of law			
	Negative effects of climate change			
	Persistent organic pollutants			
	Tires are lifetime waste. Smuggled tires are usually non-retreadable rather disposable. Contribute a lot to solid waste while retreaded tires are heavily taxed. Thus, price of retreaded tires is close to smuggled tires.			



**2. Strengthening governance and institutional arrangements for IEM / Zero Emission**

ISSUES	RECOMMENDED ACTIVITIES
<p>Policy rationalization of enforcement agencies</p> <ul style="list-style-type: none"> <li>• Enhance the coordination of specific/concerned agencies to maximize limited funds/resources to; to effectively implement mandated tasks</li> <li>• Reduce LLDA regulatory functions and focus on developmental / promotional role</li> <li>• Synchronize functions of DENR-EMB and LLDA</li> <li>• Jurisdiction between DENR, LLDA overlap – need to comply with 2 policies</li> </ul>	<ul style="list-style-type: none"> <li>• Financial grants from ODAs should be used to install self-monitoring for highly polluted industries</li> <li>• Federation of associations should adopt a self monitoring role</li> <li>• Review the mandate (charter) of some government agencies either through legislative enactment (LLDA charter; DAO on EIA)</li> <li>• Revive Phil Environmental Partnership Program; review on implementing mechanisms</li> <li>• Develop clear direction/ action plan on IEM (own medium term plans and not just on a yearly basis)</li> <li>• Issue documents on institutional commitments – sustainability, priority and continuity of plans</li> <li>• Mandatory allocation budget / resources for environmental management</li> </ul>
<p>Separate the DENR environmental regulatory functions from developmental functions</p> <p>Continuity and sustainability of policies and commitment</p> <ul style="list-style-type: none"> <li>• There should be a commitment from agencies to continue all activities even with change in leaders</li> <li>• Frequent change of leadership in government results in changes in activity “ownership” / pet projects of leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Pass law / Department Orders defining agencies responsible for regulation and promotion</li> <li>• Synchronize all existing environmental associations / networks to act as the “feedback” nodes</li> <li>• Pressure agencies / organizations to sustain worthwhile projects, initiatives, policies etc. (PCSD is working on this)</li> <li>• Real incentives for industry to do IEM (non fiscal incentives: recognitions)</li> </ul>
<ul style="list-style-type: none"> <li>• Wide gap between written regulations and enforcement</li> <li>• Effective at field implementation level (Regional enforcers have to be trained and equipped)</li> <li>• Feedback system on local implementation</li> </ul> <p>Foresight versus reaction</p>	<ul style="list-style-type: none"> <li>• Activities should be tied up to a work program and actual accomplishments</li> <li>• Operationalize Environmental Assistance Network Advisory / information network for SMEs for:               <ul style="list-style-type: none"> <li>- IEM Technology/ production</li> <li>- Compliance/ rules</li> <li>- Technical services</li> <li>- Export requirements</li> </ul> </li> </ul>

### 3. Strengthening enforcement and implementation of existing rules and laws

RECOMMENDED ACTIVITIES	
ISSUES	
<p>Financing from financing institutions</p> <ul style="list-style-type: none"> <li>• Lack of government resource to monitor environmental laws</li> <li>• More defined timetables / commitment for compliance</li> <li>• Lack of funds for enforcement (infrastructure / support services)</li> </ul>	<ul style="list-style-type: none"> <li>• Dialogue with industry</li> <li>• DENR should strengthen compliance monitoring in regional and local level industries to prepare Environmental Management plans and monitor compliance threats</li> <li>• Channel resources to monitoring / enforcement activities</li> <li>• Shifting of policy strict documentary requirement to strict monitoring</li> <li>• Use media to also educate the general public about the rules and laws</li> <li>• Implement EGF (Environmental Guarantee Fund) scheme to other environmental regulations</li> <li>• DENR to be on top of everything with respect to environmental matters</li> <li>• Capacity building for RDCs of LGUs to integrate environmental issues/concerns in regional plans</li> <li>• Strict adherence to time-bound approval of applications</li> </ul>
<p>Clarify/ rationalize jurisdiction of government agencies with regard to implementation of laws / rules ( also part of governance and institutional arrangements)</p> <ul style="list-style-type: none"> <li>• HLURB (locational clearance / zoning and land-use plans)</li> <li>• MGB</li> <li>• Special zones / authorities</li> <li>• PEZA</li> </ul>	
<ul style="list-style-type: none"> <li>• Institutions versus personality</li> <li>• Ownership of government action plan (institutionalization of IEM policies / programmes</li> </ul>	
<p>Clarification and common interpretation of specific EIA provisions/requirements</p> <ul style="list-style-type: none"> <li>• “social acceptability” of EIA requirements</li> <li>• barangay clearances</li> </ul>	

4. Developing incentives framework and resource mobilization strategy	
ISSUES	RECOMMENDED ACTIVITIES
<ul style="list-style-type: none"> <li>• Financing available for SMEs with</li> <li>• Cost of financing (non-compliance is cheaper)</li> <li>• Access to financing is stringent / burdensome requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen market-based instruments like waste exchange / environment user's fee</li> <li>• Government set examples Greening supply chain</li> <li>• Strengthen PBE as an agent/ promoter of IEM</li> <li>• Congress should pass laws granting incentives to pollution control activities</li> <li>• Use ODA funds for SME upgrading and lower ODA cost from market rates to concessional rates</li> <li>• Reinforce non-fiscal incentives: promotion of "environment-friendly" investment portfolios; recognize business with good environmental performance</li> <li>• Delegate authority to give incentives to Executive branch</li> <li>• Dialogue with industry to find out what incentives will really work – not necessarily "tax exemptions".</li> </ul>
Incentives vis-à-vis revenues foregone <ul style="list-style-type: none"> <li>• problems on interest rates</li> <li>• more financial institutions</li> </ul>	
Quantity vs. quality <ul style="list-style-type: none"> <li>• Adoption by business of the environmental management accounting as a tool to rationalize environmental costs and benefits</li> <li>• Recognition of environmental accounting by agencies / financial institutions</li> </ul>	
Incentives to improvement in efficient production system for SMEs <ul style="list-style-type: none"> <li>- exclusion of capital equipment in incentives</li> <li>- EO 266 lapsed in 1997</li> </ul>	

5. Access and applicability of technology and local capacity building / know how	
ISSUES	--RECOMMENDED ACTIVITIES
<ul style="list-style-type: none"> <li>Promotion of CP tech and other cost-effective methods / processes for SMEs</li> <li>More seminars for SMEs to understand their environmental impact so they will be motivated to adopt clean technologies</li> <li>More environmental trade fairs showcasing local and affordable technologies to be held near locations of SMEs</li> <li>Absence of information (available technologies)</li> <li>Absence of established technical accreditation / assessment</li> </ul> <p>When should capacity building end?</p> <p>Lack of resources for technology assessment</p> <p>Lack of technology transfer / understudy</p>	<ul style="list-style-type: none"> <li>Strengthen PBE – optimized PBEs access to industry</li> <li>Link systems to highlight environmental technologies</li> <li>In-plant consultancy to SMEs for technical upgrading</li> <li>Establish technical accreditation / assessment</li> <li>Product standards / testing</li> <li>Create the interest of the private sector to these options: environmental performance reports and not only “best practices”</li> <li>Develop our own standards appropriate to our resources</li> <li>Use comparative advantage : labor, etc.</li> </ul>

6. Cross cutting concern	
ISSUES	
Economic / financial crisis impacts or focus on environment	
Bureaucratic red tape / corruption	
Frequent change in leadership	
Some environmental compliance issues will affect Philippine-made products in the global market	

#### INDICATORS OF SUCCESS

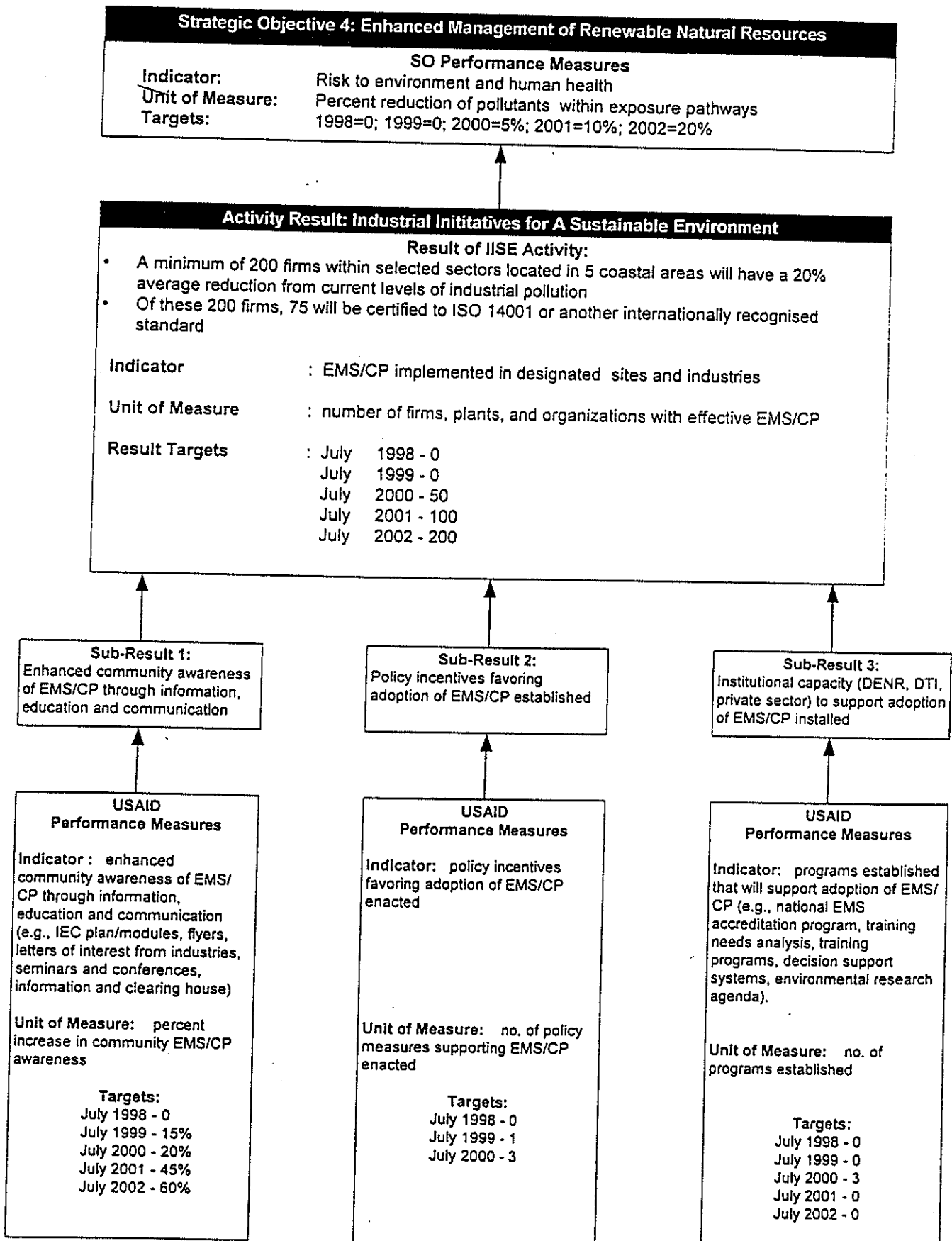
- Significant decrease on the number of companies that are closed down or penalized for non-compliance
- Bigger availment of funds for environment-related upgrading of production systems/processes
- Environmental procedures- simple, transparent, time-bound
- A working SME Assistance Center/ Network (which will be sustained)
- Increase in number of SMEs availing of loans/ ODAs
- MTPDP dedicated section for environmental management

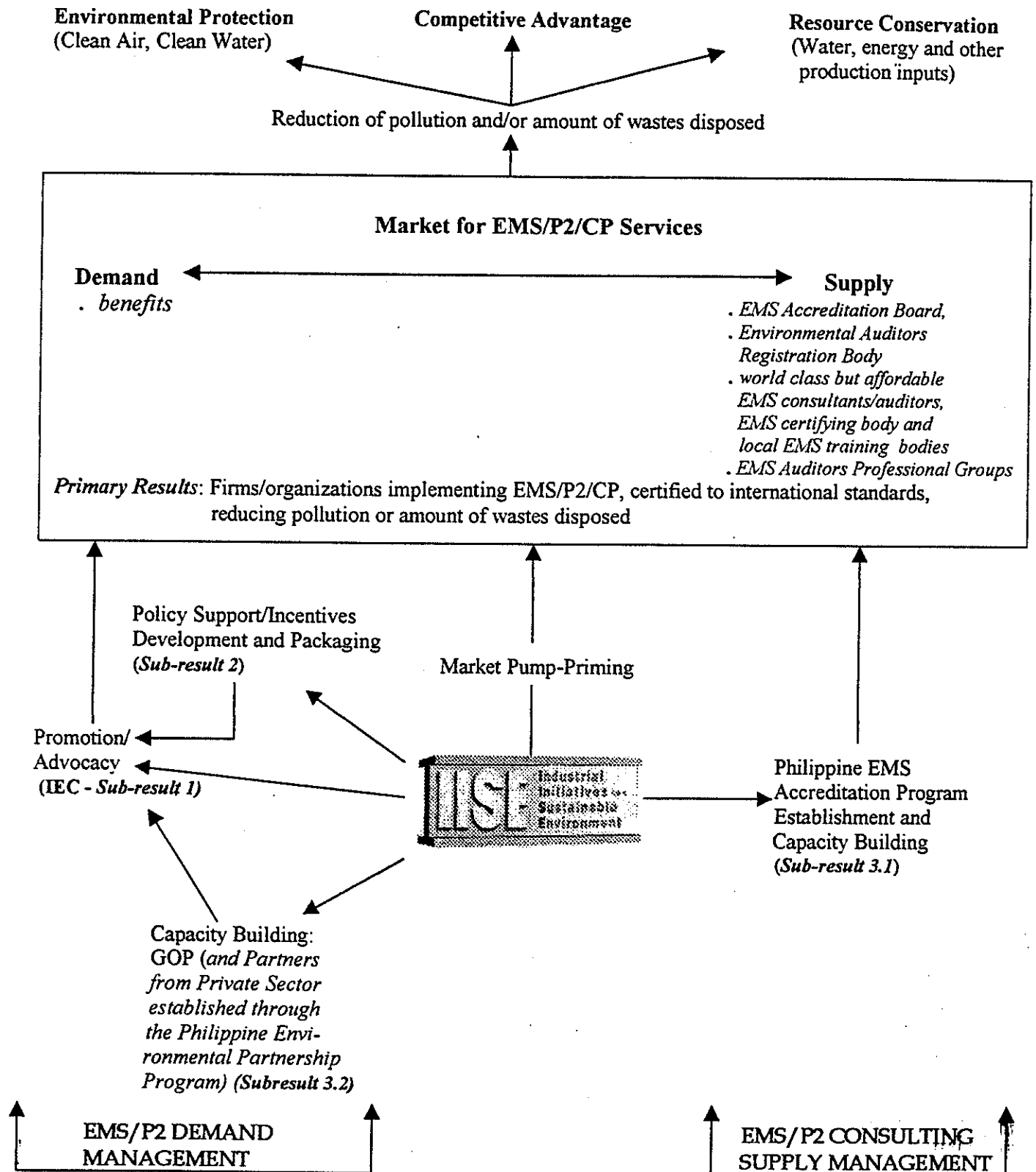
1. Creating an enabling policy environment for IEM / Zero Emission (Advocacy and Education)

<b>RECOMMENDED ACTIVITIES</b>	
<p><b>ISSUES</b></p> <ul style="list-style-type: none"> <li>• Institutional commitment</li> <li>• Many policy makers lack knowledge (Clean Air)</li> <li>• Local government officials lack support (local implementation of environmental management, LGU prioritization to environmental management, influenced by politics / constituency building</li> <li>• Zoning plans of LGUs</li> </ul>	<ul style="list-style-type: none"> <li>• Guidance &amp; popularization of process</li> <li>• Effective IEC program</li> <li>• Conduct seminars and training for all stakeholders</li> <li>• Pilot test developed systems to check its SME-friendliness</li> <li>• Active participation of stakeholders in law / policy making to provide the necessary inputs</li> <li>• Issue DAO order rationalizing EIA system</li> <li>• Accountability / reward system for LGUs / policy makers</li> <li>• IEC on compliance and on accepting pro-active</li> <li>• National IEM Plan developed to complement Medium Term Development Plan priorities for common goals. Use “consultative” method in doing this.</li> <li>• Set-up regular feedback mechanism between industry and the Ecology Committees of Senate and House</li> </ul>
<ul style="list-style-type: none"> <li>• Rationalization of EIA system (some unclear provisions i.e. ECA classification)</li> <li>• Documentation requirements are onerous, tedious for SMEs</li> <li>• Reporting and monitoring requirements and guidance for popularization of process</li> <li>• Accreditation of preparers</li> <li>• Tendency to react to pressure</li> <li>• Popularization</li> <li>• IEC to stakeholders / clientele</li> <li>• Scientific / technically-based information for decision making</li> </ul>	
<ul style="list-style-type: none"> <li>• Policy rationalization of enforcement agencies</li> <li>• Cost factor / SME resources to implement</li> </ul>	
<p>Is there a real “zero emission” system</p>	

# Results Framework for IISE

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IIE Operational Framework



## Joint EMS Implementation Program

Module	Duration	Milestone/Output
<b>Phase 1:</b> Orientation and Planning <b>Module 1:</b> <i>Introduction to ISO14001</i>  <i>Initial Environmental Review</i>  <b>Module 2:</b> <i>Training/ Workshops on Aspects/Impacts Legal/Other Reqts Policy Objectives, Targets, Programs</i>  <i>P2/CP Concepts</i>	(Month 1) 1 calendar day common seminar  1/2 to 1 calendar day  (Month 2) 2 calendar days common training  1 calendar day	Awareness: Benefits of EMS, EMS elements and ISO14001 structure  Facility walk thru: - Preliminary Identification of Activities, Aspects and Impacts  Aspect-Impact Matrix Policy Objectives and Targets Programs  <b>P2/CP Program</b>
<b>Phase 2</b> <b>Module 3:</b> <i>Training/ Workshops Documentation and Control EMS Operation and Implementation Checking and Corrective Action</i>	(Month 3-4-5) 3 calendar days common training	Procedures

<p><b>Module 4: EMS Audit/ Review Workshop</b>  <i>EMS Internal Audit</i>  <i>Corrective Action</i>  <i>EMS Mgt Review</i>  <i>Actual Benchmark Audit</i></p>	<p><b>(Month 6-7)</b>  3 calendar days common training</p>	<p>Procedures</p>
<p><b>Phase 3: Certification/ Registration</b>  <b>Module 5: Third Party Certifier Selection</b>  <i>Prioritization and Scheduling</i></p>	<p><b>(Month 8)</b>  1 calendar common training</p>	<p>Selection Criteria and Procedures, Schedule</p>
<p><i>Pre-Certification Assessment</i></p>	<p><b>(Month 8)</b>  1-2 Manday(s) per Company</p>	<p>Assessment Report</p>
<p><i>ISO14001 Certification (Third Party Audit)</i>  <i>Initial Assessment</i>  <i>Main Assessment</i></p>	<p><b>(Month 9-12)</b>  6-8 mandays per company</p>	<p>ISO14001 Certification</p>
<p><b>End of Engagement</b></p>		