



PROMOTION OF STRATEGIES TO REDUCE UNINTENTIONAL PRODUCTION  
OF POPS IN THE RED SEA AND GULF OF ADEN COASTAL ZONE

REGIONAL WORKSHOP: TRAINING OF TRAINERS ON BAT/BEP  
IMPLEMENTATION AND PREPARATION OF ACTION PLANS

PERSGA Headquarters– Jeddah  
KINGDOM OF SAUDI ARABIA

July 5-7, 2010

July 16<sup>th</sup> 2010

## **Introduction**

The third meeting of the Project Management Committee (PMC) held in March 30<sup>th</sup> – 31<sup>st</sup> 2010 agreed that a regional training workshop addressing the development of action plans for BAT/BEP implementation is to be held at PERSGA Headquarters during the first week of July. Focus is to be given to the selected industrial sources as identified in the national inventories and finalized in the Third PMC Meeting, in order to reach meaningful release reduction of dioxins and furans, while -if possible- increasing the competitiveness of the same industries.

Priority locations for BAT/BEP implementation have been identified based on the Annex C POPs inventories developed specifically for the coastal zones of the participating countries. The main objective of BAT/BEP implementation would be to achieve meaningful reductions of the Annex C POPs releases as requested by Article 5 of the SC. Participating countries have selected one common and one country specific demonstration activity where they would start promoting BAT/BEP. Selected sources are as follows:

1. Common source: Open burning of waste,
  1. Egypt: Oil refineries,
  2. Jordan: power generation by industrial boilers
  3. Sudan: Asphalt mixing,
  4. Yemen: Quicklime production,

At the Third PMC meeting Yemen has selected brick production as the country specific sector, but this decision has been modified in the favour of the production of quicklime from limestone. This decision has been noted and the program modified accordingly.

As was agreed at the Third PMC meeting the regional training workshop took place in Jeddah, Kingdom of Saudi-Arabia at PERSGA Headquarters between the 5<sup>th</sup> and 7<sup>th</sup> July 2010. The agenda of the workshop is attached as annex I. The list of participants is included in annex II.

## **July 5<sup>th</sup> 2010**

On behalf of H E PEWRSGA Secretary General, Dr. Badran the Regional Project Coordinator welcomed the participants. He briefly summarized the activity of the project, the inventory development and the preparation of the regional inventory. The objectives of the regional workshop were also elaborated.

His speech was followed by Dr. Fejes' welcoming words in which he emphasised the importance of guiding the industries on BAT/BEP implementation so that they can improve their performance, can produce cleaner, can reduce the generation of wastes and pollutants while at the same time improving their competitiveness.

The workshop has started with the presentation of the UNIDO consultant on the general guidance of the Stockholm Convention on BAT/BEP. The presentation briefly touched the formation of UP-POPs during combustion processes, the effects of the main parameters of combustion on the de novo formation of these chemicals. Further, he presented the general guidelines for BAT and BEP, particularly those that address burning processes.

According to the next item on the agenda, country presentations were called to elaborate on the common sector, the participating countries have selected, which is open burning of waste. Each presentation highlighted that municipal waste management is a general problem. In many countries the collection system is generally lacking. In Sudan the medical waste is dumped at the same place where municipal waste is placed. The location is very close to Port Sudan and the fumes, depending on the wind direction, many times cover the city. There is a complete lack of recycling of any materials except for metals.

In Yemen there were several projects addressing municipal waste management. Earlier practice was to collect the organic kitchen wastes at the backyard and use it as a soil conditioner and fertilizer. With the urbanization people do not have backyards anymore and plastics have also appeared in the waste stream. This created the need for a project that facilitated the collection of the kitchen wastes. The municipal government has provided the vehicle that took the waste from the cities to the farmers. The farmers separated the wastes and used the organics. The rest of the wastes were taken to the dumpsite. Later the system changed that the separation occurred at the dumpsite and the municipality took the organic kitchen wastes to the farmers. The farmers paid for the services. Later this process has stopped due to the change in the leadership at the municipal government. Other efforts from the municipal government have also failed, for example the immediate covering of the waste with soil. It resulted in the formation of methane gas, which caused self ignition many times. There were also projects facilitating the collection of plastic wastes from the homes by the children. Participating schools asked the students to collect and bring 1 plastic bottle each day. Then a car collected the bottles. This system has also failed because some families didn't feel happy about their children carrying plastic waste to school.

In Egypt ... **Dr. Mohammad El Sehiemy please elaborate .....**

Following the presentations of the countries, UNIDO consultant presented the BAT/BEP guidelines for open burning. After a short discussion it was agreed that during the action plan development session of the workshop further discussions could be undertaken.

The last presentation of the day was given by Mr. Mohamed Ismail, the Egyptian project coordinator. He discussed the obligations of the Stockholm Convention and the training tools on POPs which the Convention provides.

The Action Plan development on the open burning was postponed for the following day.

### **6<sup>th</sup> July 2010.**

Participants have spent half an hour in three groups for developing action plans addressing open burning of waste. Based on the short presentations of the action plans a draft action plan was developed for further elaboration by the national teams.

The draft action plan is as follows:

|   |
|---|
| <p style="text-align: center;"><b>BAT/BEP Implementation Action Plan for Open Burning of Waste</b></p> <p><b>SITE SELECTION AND CHARACTERIZATION</b></p> <ul style="list-style-type: none"><li>• Location;</li><li>• General site characteristics</li></ul> |
|---|

- Subjected to PCDD/Fs releases;
- Identified problems and concerns;

#### SOCIO-ECONOMIC ASSESSMENT

- study the impact on neighbourhood;
- No of people working on the site;
- No of people living close to the site;
- No of animal feeding on the waste;
- Preferred tools for information dissemination;
- Information content of the tools.

#### ASSESSMENT OF THE TECHNOLOGY

- Characterization of the municipal waste management system;
- Knowledge of quantity of waste;
- Composition of the waste;
- Collection practices;
- Price of collection;
- Estimated PCDD/F releases;

#### ANALITICAL ASSESSMENT

Sampling points and methodology for PCDD/Fs analysis

- ambient air
- soils
- leachate

#### ACTION PLAN

##### TECHNOLOGY OPTIONS

##### SOURCE MINIMIZATION

##### DIVERTING WASTE STREAMS

###### Medical

Sorting (at source, on the track, at landfill)

Treatment

###### Metals

Sorting

Cleaning, removing alien parts

Compacting

Packaging

Selling

###### Plastics

Sorting

Cleaning

Agglomerating

Pelletizing

Packaging

Selling

###### Paper

Sorting

Compacting  
Packaging  
Selling

Organic kitchen wastes (Composting)  
Sorting  
Composting  
Packaging  
Selling

#### IMPROVING COMBUSTION PROPERTIES

Establishment of an Incinerator

#### IMPROVING LANDFILLING CONDITIONS

#### INVESTMENT PROMOTION

MARKET ANALYSIS

RESOURCE LOCATION

- Human
- Financial

BUSINESS TRAINING

MARKETING TRAINING

#### PUBLIC AWARENESS ACTIVITIES

- Preparing public awareness tools,
- Regular public awareness activities

#### SOCIO-ECONOMIC ACTIVITIES

OCCUPATIONAL SAFETY IMPROVEMENTS

EXPOSURE REDUCTION

#### SITE RE-EVALUATION

(revisiting the site characterisation activities to confirm and to quantify the PCDD/Fs release reduction, removed impacts on local populations, increased public awareness, etc)

The next agenda item was the site demonstration of the industrial boilers by Jordan. The draft action plan is as follows:

#### **Action Plan:**

The main source of Up-Pops in the coastal zone in Jordan (Aqaba) was identified during the first stage (inventory) and was the emissions from industrial boilers (steam generation).

#### **Site selection:**

Two industries have been selected for assessment and implementation of the BAT –BEP action plan:

1. Jordan phosphate mines company (JPMC):

The industrial complex at Aqaba is producing fertilizers (MAP and DAP fertilizers from Phosphate rock by the reaction between Ammonia and Phosphoric Acid

They have two auxiliary boilers using heavy fuel and diesel.

2. Red sea timber industry:

The Red Sea Timber Company is producing timber from the wood; they use wood waste in their two boilers to generate their energy needs.

The using of waste wood as fuel is prohibited according to Stockholm Convention.

Negotiation with the two facilities to adopt the BAT- BEP concept and sign the partnership agreement with PERSGA is underway.

**Technology Assessment:**

1. Kind of boilers used.
2. Fuel used.
3. Combustion conditions
4. Emissions from boilers (baseline data).
5. Labours.
6. Neighbours.

**Environmental and health Assessment:**

1. Meteorological data ( wind direction , temp ,etc)
2. Effect of emissions at Environment.
3. Effect of emissions at labour
4. Effect of emissions at neighbours.
5. Specifying the mitigation measures according to BAT-BEP Concept.
6. Identification of alternatives according to BAT-BEP concept.

**Socio – Economic Assessment:**

1. Identification of target groups.
2. Awareness of people.
3. Cost benefit analysis of BAT-BEP adoption.

**Issues to be addressed**

1. Who is responsible in choosing the BAT.
2. Convincing the facilities to adopt BAT-BEP concept.
3. Costs of BAT-BEP adoption.
4. Technical training of the operators and the cost of training program.
5. Public Awareness
6. High Cost of Analysis

The Jordanian delegation think that BEP is more efficient at this stage than BAT, until new regulations are enforced.

The meeting continued with the presentations of the flaring problems of the Petroleum Refinery

Plant in Egypt. The company has ongoing activities for plant maintenance and upgrade. In this regard they have identified flaring an important area, where significant savings could be achieved by liquefying and reprocessing and the flare gases for energy generation, thus the natural gas consumption of the plant can also be reduced. With this approach significant PCDD/Fs and other pollutants and green house gas release reduction could also be achieved.

Further, UNIDO consultant presented the BAT/BEP guidelines for industrial and utility boilers; and brief information on flaring and the available options for utilizing flare gases.

The final presentation of the day was given by Dr. Badran on the environmental sampling and monitoring in light of the Stockholm Convention. He pointed out that we can immediately start using bio-indicators to define a baseline concentration of Annex C POPs in the coastal environment and we may also start sampling stack emissions at the identified activities in Jordan and Egypt, where the necessary equipment exist. There were suggestions from the audience that may also start with collecting samples of human and animal milk at the identified sites in Yemen.

### **7<sup>th</sup> July 2010.**

The last day of the workshop started with the country presentations concerning asphalt mixing and quicklime production.

In Sudan there are many asphalt mixing facilities in Port Sudan as the road construction has significantly improved over the past years. The inventory of dioxin and furan releases has indicated that this sector has a strong significance in the releases of these pollutants.

In Yemen the PCDD/Fs inventory has shown that quicklime production is undertaken in small scale kilns along the coast and in the whole country. Due to the high price of the cement, people mix quicklime with the cement and use this mix in the construction industry. The production is undertaken in small size kilns made of mud and bricks. The kiln has a smaller chamber in the front, where the combustion takes place, and a large chamber for where the limestone rocks are placed. There is sufficient space between the limestone rocks for the heat and flue gases. The top of the kiln has a chimney, covered with a small cap. The whole structure is placed downwind, thus only the natural draft takes the flue gases off the kiln. People used to fire wood in the first chamber, but nowadays they use more than fifty percent waste fuels, such as waste motor oil, or used tyres. When they burn the kilns, which most of them do at the same time, strong black smoke enters the environment. They recognised that with co-burning wastes the quality of the quicklime deteriorates. Once the product is ready, they take apart the kiln and later construct a new one.

After the country presentations UNIDO consultant gave two presentations; one on Asphalt mixing and one on Lime production. The presentations discussed the production technologies and the options BAT/BEP, where meaningful release reduction could be achieved.

The presentation was followed by discussion on the ways how the country specific actions could be developed and in the case on Sudan; it was recommended that an asphalt mixing facility applying Hot Mix Asphalt technology should be selected. In the case of Yemen it was discussed that air injection into the combustion kiln, specifically into the one that holds the limestone rocks could be implemented. This would increase the combustion performance of the system, probably it will reduce the fuel consumption and the pollutant releases, while at the same time might improve the quality of the product. In this regard a kiln engineer will be sought.

After the discussion Dr. Badran presented the socio-economic assessment methodology and action plan development. Socioeconomic assessment guidelines concerning POPs prepared by UNEP have been discussed. The presentation also included some release limit values of the European Union on dioxins and furans were also briefly explained. Also some limits of acute and chronic exposure have been discussed.

The last item on the technical agenda of the workshop was the development of the draft workplans. In this regard the discussion concluded that each country will develop individual workplans for both selected source sectors of BAT/BEP implementation. To this effect the workshop concluded with the following recommendations:

- **The National Coordinators are responsible for submission of the workplans for BAT/BEP introduction in the identified sectors in their countries.**
- **The workplans shall include the site selection process, the characteristics of the selected site, proposed BAT/BEP implementation measures and a monitoring programme for dioxin and furan releases at the coastal zone and at the selected sites.**
- **The workplans shall be submitted to the Project's Coordination Unit at PERSGA not later than 10<sup>th</sup> August 2010.**

The workshop was closed by H E PERSGA Secretary general Prof. Ziad Abu Ghararah. He briefly summarized PERSGA support the project and reassured the participants on PERSGA commitment in achieving the objectives of the project. He also urged the Project's National Coordinators to speed up the implementation process, specifically in the BAT/BEP implementation phase.

The workshop was successful and achieved its goals as can be seen from the participants' assessment sheet; Annex III.



## ANNEX I: AGENDA OF THE WORKSHOP

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### REGIONAL TRAINING WORKSHOP ON STRATEGY DEVELOPMENT FOR BAT/BEP PROMOTION IN SELECTED INDUSTRIES UNDER THE STOCKHOLM CONVENTION

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#### PROMOTION OF STRATEGIES TO REDUCE UNINTENTIONAL PRODUCTION OF POPs IN THE RED SEA AND GULF OF ADEN (PERSGA) COASTAL ZONE

##### Background:

The Global Environment Facility has approved the project entitled "Promotion of strategies to reduce unintentional production of POPs (UP-POPs) in the Red Sea and Gulf of Aden (PERSGA) coastal zone". The project is implemented by the United Nations Industrial Organization. Regional coordination is undertaken by the Regional Organization for Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA).

Participating countries (Egypt, Jordan, Sudan and Yemen) and self-financing Kingdom of Saudi-Arabia have ratified Stockholm Convention and concluded in the NIP development process that the reduction or elimination of POPs is a respective national priority and that they are committed to take appropriate actions towards the reduction of the releases of unintentionally produced persistent organic pollutants (UP-POPs). Due to the trans-boundary movement of POPs and the special nature of the coastal zone of the Red Sea and Gulf of Aden, it is of importance to take preventive measures to reduce the negative impact of industrial activities and human settlements on the environment of the coastal zone. These preventive measures can be more effective if they are undertaken in a coordinated manner at the regional level. It can be further improved if the regular collection and interpretation of environment related scientific data are also undertaken at the regional level, together with the development of harmonized legislations and interventions. The participating countries have therefore decided to integrate their collective efforts under the regional umbrella of PERSGA and take united actions in reducing UP-POPs releases from selected industrial sources.

Participating countries have agreed that close cooperation is needed to collectively implement the SC's measures concerning introduction of best available techniques (BAT) and best environmental practices (BEP) for the coastal zone industries. The countries have further agreed that it could be possible that a larger impact on the environment and the coastal zone economy be attained if the cooperation is made at regional level rather than each country intervenes alone at the industries of its own coastal zone.

Based on the Annex C POPs inventories developed specifically for the coastal zones of the participating countries priority locations for BAT/BEP implementation have been identified. The main objective of BAT/BEP implementation would be to achieve meaningful release reductions of the Annex C POPs releases as requested by Article 5 of the SC. Participating countries have selected one common and one country specific demonstration site where they would start promoting BAT/BEP. Selected sources are as follows:

- Common source: Open burning of waste,
- Sudan: Asphalt mixing,
- Egypt: Oil refineries,
- Yemen: Brick production,
- Jordan: power generation by industrial boilers,
- Saudi-Arabia: In the process of developing the inventories.

The project will assist the selected industries to implement BAT/BEP measures. Detailed assessments are undertaken at each location in order to identify the most cost-effective options for BAT/BEP and to scientifically prove the effectiveness of the identified measures. The assessments will consider the technologies and releases of Annex C POPs from the source locations, the environment and human health impacts of the releases as well as the socio-economic implications prior to and after the BAT/BEP implementation.

This regional training workshop will provide insight to the BAT/BEP options for the selected industries, the potential release routes and recipients of the UP-POPs and proposed methodology to develop specific public awareness activities for those who might be exposed to these chemicals.

**Tentative Training Program Agenda: The Training Program will take place at PERSGA Headquarters in Jeddah Kingdom of Saudi Arabia during the period July 5<sup>th</sup> – 7<sup>th</sup> 2010**

**July 5<sup>th</sup> 2010**

- 9:00 – 9:30 Registration**
- 9:30 – 10:00 Opening ceremony and introduction of the workshop and participants**
  - Welcome remarks UNIDO,
  - Welcome and opening address PERSGA Secretary General
  - Introduction of workshop and participants Regional Project Coordinator, Group photo
- 10:30 – 11:00 Coffee Break
- 11:00 – 12:00 General Introduction to BAT/BEP
- 12:00 – 12:30 Site demonstrations of open burning of waste (Egypt, Sudan, Yemen)
- 12:30 – 13:00 BAT/BEP guidelines for open burning of waste
- 13:00 – 14:00 Lunch and Prayer Break
- 14:00 – 15:30 Public Awareness and Stockholm Convention Training Tools
- 15:30 – 17:00 Group work on strategies for sites specific technologies (Participants will be divided in four working groups; coffee and tea will be available during the session)
- 17:00 Close of day 1



**July 6<sup>th</sup> 2010**

- 9:00: – 9:30 Site demonstration of the Sudanese asphalt mixing facility
- 9:30 – 10:00 Site demonstration of Jordanian Boilers
- 10:00 – 10:30 General BAT/BEP guidelines for Asphalt Mixing and Boilers
- 10:30 – 11:00 Coffee Break
- 11:00 - 12:00 Environment and Health Related Research, Monitoring and Laboratory Analysis
- 12:00 – 12:30 Site demonstration of the Egyptian Oil Refinery (flaring)
- 12:30 – 13:00 Site demonstration of the Yemeni Brick Production
- 13:00 – 14:00 Lunch and Prayer Break
- 14:00 – 14:30 BAT/BEP guidelines for flaring and brick production
- 14:30 – 16:00 Group work on strategies for sites specific technologies (Participants will be divided in four working groups; coffee and tea available during the session)
- 16:00 Close of day 2

**July 7<sup>th</sup> 2010**

- 9:00 – 10:30 Presentation of strategies developed by the working groups
- 10:30 – 11:00 Coffee Break
- 11:00 – 12:00 Socioeconomic, Human and Occupational Health Safety Measures
- 12:00 – 13:00 Final Discussion and Recommendations
- 13:00 – 14:00 Lunch and Prayer Break
- 14:00 – 15:00 Closing Remarks and Distribution of Certificates
- 15:00 Close of the workshop

## Annex II. List of participants

|  |                       | <b>Regional Training Workshop: Training the Trainer on the Use of Best Available Technology and Best Environmental Practices in Cutting Unintentional Production of Persistent Organic Pollutants</b> |                                 |   |  |                                |                    |  |  |
|---|-----------------------|---|---------------------------------|---|--|--------------------------------|--------------------|---|--|
|   |                       | ورشة عمل تدريبية إقليمية تدريب المدربين حول استخدام أفضل التقنيات المتاحة وأفضل الممارسات البيئية للحد من الانبعاث غير المقصود للملوثات العضوية الثابتة   |                                 |   |  |                                |                    |   |  |
|   |                       | Jeddah: 5 - 7 July, 2010  |                                 |   |  |                                |                    |   |  |
| No.   | Country / Affiliation | Name  | الإسم                           | Title   | Organization   | Phone                          | Fax                | Mobile  | E-mail   |
| 1   | UNIDO                 | Dr. Szabolcs Fejes (Consultant)   |                                 | consultant  | UNIDO  | 003670 - 3824433               | 00361 - 2467008    |   | sfejes@mail.datanet.hu                         |
| 2   | PERSGA                | Dr. Mohammad I. Badran (Coordinator)  | د. / محمد اسماعيل بدران         | Director, Projects Management, Scientific Research and Monitoring | PERSGA   | 00966 2 652 3224 ext. 204      | 00966 2 652 1901   | 00966565462897  | mohammed.badran@persga.org                     |
| 3   |                       | Mr. Bashar M. Al-Bataineh   | الأستاذ/ بشار محمد البطاينة     | Coordinator- Environmental Monitoring Programme                   | PERSGA   | 00966 2 652 3224 ext. 239      | 00966 2 652 1901   | 00966543246217  | bashar.bataineh@persga.org                     |
| 4   |                       | Mr. Mohammed A. Osman   | الأستاذ/ محمد عبدالله عثمان     | Environmental Specialist  | PERSGA   | 00966 2 652 3224 ext. 204      | 00966 2 652 1901   | 00966557294163  | mohamed.osman@persga.org                       |
| 5   | Egypt                 | Eng. Essam Eldin Roshdy Elkhayyat   | المهندس/ عصام الدين رشدي الخياط | Process design manager  | Suez oil processing Co.                                      | 0020623361616<br>0020623341555 |                    | 0020116445059   | essamkhyyat@hotmail.com                        |
| 6   |                       | Dr. Mohammed Ismail Ibrahim El Sehamy   | د. / محمد اسماعيل السحيمي       | Director of Hazardous Waste                                       | Egyptian Environmental Affairs Agency (EEAA)                 | 0020225256452 / 42 Ext. 8225   | 0020225256475 / 90 | 0020106502402   | elsehamy52@hotmail.com                         |
| 7   | Saudi Arabia          | Mr. Sulaiman M. Alzaben   | السيد/ سليمان محمد الزين        | General director of chemical safety and hazardous wastes          | PME  | 0096626536222                  |                    | 00966557060666  | smz2002@hotmail.com                            |
| 8   |                       | Eng. Ziyad A. Al Yahya  | المهندس/ زياد بن أحمد الجحى     | environmental and safety director                                 | Ministry Of Commerce & Industry                              | 0096614775445                  | 0096614775485      | 00966505464509  | zyahya@mci.gov.sa                              |
| 9   |                       | Eng. Faris Ali Alnajrani  | المهندس/ فارس علي التجرياني     | Mining engineer   | Deputy ministry for mineral resources                        | 00966 2 667 4800 ext. 729      |                    | 00966544466044  | faris@dmmr.gov.sa                              |
| 10  | Sudan                 | Mr. Ali Mohamed Ali Mahmoud   | الأستاذ/ علي محمد محمود         |   | Higher Council for Environment and Natural Resources (HCENR) | 00249183777160                 |                    | 00249912297292  | aliknfa@hotmail.com                            |
| 11  |                       | Mr. Ohag Saied Hamid  | المهندس / أوهاج سعيد حامد       | Director of environment (RSS)                                     | Higher Council for Environment and Natural Resources (HCENR) | 00249912531144                 |                    | 00249912531144  | ohag114@hotmail.com                            |
| 12  | Yemen                 | Eng. Salem Abdulla Baquheizel   | المهندس/ سالم عبد الله باقحيزل  | General Director of Monitoring and Env. Impact Assessment         | Environment Protection Authority (EPA)                       | 009671202019                   |                    | 00967777329607  | sbaqu@y.net.ye                                 |
| 13  |                       | Mr. Thabit Hussien Al-Saadi   | الأستاذ / ثابت حسين السعدي      | General Director of Mukalla branch (EPA)                          | Environment Protection Authority (EPA)                       | 00967777356030<br>009675319987 |                    | 00967711735984  | epamukalla@hotmail.com<br>epamukalla@yahoo.com |
| 14  | Jordan                | Eng. Bassam Hattab Al-saleem  | المهندس / بسام حطاب السليم      | Environmental inspection and auditing division head               | ASEZA  | 00962799996016                 | 0096232091021      | 00962799996016  | balsaleem@aseza.jo                             |
| 15  |                       | Eng. Eman Soliman AL Kooz   | المهندسة / ايمان سليمان الكوز   | Acting head of permetting and EIA section 1                       | ASEZA  | 00962799714391                 | 0096232091021      | 00962799714391  | ekouz@aseza.jo                                 |

Annex III. Participants' assessment of the workshop

|   |                           |                    |                      |                     |  |
|---|---------------------------|--------------------|----------------------|---------------------|--|
|  <p><b>Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA)</b><br/> <b>الهيئة الإقليمية للمحافظة على بيئة البحر الأحمر وخليج عدن</b></p> <p><b>Regional Training Workshop:</b><br/> <b>Training the Trainer on the Use of Best Available Technology and Best Environmental Practices in Cutting Unintentional Production of Persistent Organic Pollutants</b></p> <p><b>ورشة عمل تدريبية إقليمية:</b><br/> <b>تدريب المدربين حول استخدام أفضل التقنيات المتاحة وأفضل الممارسات البيئية للحد من الانبعاث غير المقصود للملوثات العضوية الثابتة</b></p> <p><b>July 5<sup>th</sup> – 7<sup>th</sup> 2010</b></p> <p><b>Workshop Evaluation Sheet</b> <span style="float: right;"><b>استمارة تقييم ورشة العمل</b></span></p> |                           |                    |                      |                     |  |
| <p>درجة التقييم<br/>Evaluation Score</p>  |                           |                    |                      |                     | <p>العناصر<br/>Aspects to be evaluated</p>   |
| ممتاز<br>Excellent<br>(5)   | جيد جداً<br>V.good<br>(4) | جيد<br>Good<br>(3) | مقبول<br>Fair<br>(2) | ضعيف<br>Weak<br>(1) |  |
|   |                           |                    |                      |                     | <p>القسم الأول: التوقيت والجدول الزمني<br/>Timing and Scheduling</p>   |
| 1   | 4                         | 2                  | 2                    |                     | <p>(1) درجة كفاية أيام الورشة لتغطية المواضيع المطروحة<br/>Sufficiency of the workshop days to cover the presented subjects</p>  |
| 1   | 6                         | 1                  | 1                    |                     | <p>(2) درجة مناسبة طول زمن جلسات الورشة<br/>Sufficiency of the sessions period</p>   |
|   |                           |                    |                      |                     | <p>القسم الثاني: الموضوعات والمحتوى<br/>Subjects and Contents</p>  |
| 3   | 5                         | 1                  |                      |                     | <p>(1) مدى مناسبة موضوعات الورشة في تحقيق هدفك من المشاركة<br/>Competence of the workshop issues to your participation needs</p> |
| 4   | 5                         |                    |                      |                     | <p>(2) درجة التنسيق والترابط بين موضوعات الورشة<br/>Competence and integration of the workshop issues</p>                        |
|   |                           |                    |                      |                     | <p>القسم الثالث: الطرق المستخدمة في تنفيذ الورشة<br/>Training methods used during the workshop</p>                               |

|   |   |   |  |  |   |
|---|---|---|--|--|---|
| 2 | 5 | 2 |  |  | (1) درجة اندماج المشاركين والتفاعل مع الموضوعات المطروحة<br>Participants communication and their interactions with the subjects               |
| 4 | 4 | 1 |  |  | (2) درجة التحدى والإثارة الفكرية فى طرح الموضوعات<br>Discussion stimulation and issues delivery challenges                                    |
| 5 | 4 |   |  |  | (3) درجة ملائمة وسائل الإيضاح السمعية والبصرية<br>Proficiency of the audio-visual tools   |
|   |   |   |  |  | <b>القسم الرابع: جوانب الاستفادة من موضوعات الورشة والتقييم العام</b><br>Usefulness of the workshop issues to the participant                 |
| 3 | 5 | 1 |  |  | (1) حداثة المفاهيم والأفكار المكتسبة من موضوعات الورشة<br>Updates of the gained issues and thoughts during the workshop                       |
| 5 | 4 |   |  |  | (2) إمكانية إسهام موضوعات الورشة في تطور الأنظمة والأنشطة المرتبطة بعملك<br>Usefulness potentiality of the workshop issues in your field work |
| 4 | 5 |   |  |  | (3) درجة إسهام موضوعات ومناقشات الورشة في تنمية قدراتك<br>Contribution of the workshop issues and discussions to your knowledge               |
| 4 | 5 |   |  |  | (4) التقييم العام للورشة<br>Overall evaluation of the workshop  |
|   |   |   |  |  | <b>القسم الخامس: الترتيبات والخدمات</b><br>Arrangement and Services   |
| 6 | 3 |   |  |  | (1) درجة ملائمة القاعة لأعمال الورشة<br>Suitability of the workshop hall  |
| 5 | 4 |   |  |  | (2) مدى كفاءة خدمات الاستقبال والإقامة<br>Suitability of the reception and accommodation services   |