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Industrial Reform and Development of Policies & Legislation for Application of BAT towards Reduction of Nutrients & Dangerous Substances

Inception Report



WORKING FOR THE DANUBE AND ITS PEOPLE



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## **ABBREVIATIONS**

| BiH        | Bosnia-Herzegovina  |
|------------|---|
| ВАТ        | Best Available Technique  |
| BREF       | Best Available Techniques Reference Documents   |
| СР         | Contracting Parties of the Danube River Protection<br>Convention  |
| DIS        | Dissolved Inorganic Substances  |
| DRB        | Danube River Basin  |
| DRP        | Danube Regional Project   |
| DRPC       | the Danube River Protection Convention  |
| EC         | European Commission   |
| EPER       | European Pollutant Emission Register  |
| EMAS       | Eco-Management and Audit Scheme   |
| EMIS       | Emission Inventory made by ICPDR  |
| EMIS/EG    | Emission Expert Group of ICPDR  |
| EU         | European Union  |
| FRY        | Federal Republic of Yugoslavia  |
| GEF        | Global Environmental Facility   |
| ICPDR      | International Commission for the Protection of the Danube<br>River  |
| IPPC       | Integrated Pollution Prevention and Control   |
| JAP        | Joint Action Programme  |
| MS         | Member States   |
| PRTR       | Protocol on Pollutant Release and Transfer Registers  |
| ToR        | Terms of Reference  |
| UNDP       | United Nations Development Programme  |
| UNIDO      | United Nations Industrial Development Organisation  |
| UNIDO-TEST | United Nations Industrial Development Organisation-Transfer<br>of Environmentally Sound Technology in the Danube River<br>Basin |
| UNOPS      | United Nations Office for Project Services  |
| WFD        | Water Framework Directive   |

## 1. INTRODUCTION

This document is the Inception Report of the UNDP-GEF Danube Regional Project (DRP) "Industrial Reform and the Development of Policies and Legislation Towards the Reduction of Nutrients and Dangerous Substances" Phase 2. This industrial policy project is a component of the larger DRP, which is a 5 year project managed by the GEF Danube Regional Project Team in Vienna.

This report documents the findings and recommendations from the inception period of the Industrial Policy Project Phase 2. The purpose of the inception phase is to test the assumptions that went into developing the project proposal and to provide additional details and revisions to the work programme as necessary. For example, it was assumed that it would be necessary to use a questionnaire to gather information with respect to the application of the EMIS EG sectoral guidelines. However, at the kick off meeting it was pointed out that the information had already been reported to the ICPDR and therefore the project team could use the already reported information. Additional detailed information is provided with respect to, the focus for the training components in, Serbia Montenegro. The inception period also provides the opportunity to consider information, which may not have been available or not considered at the time the Terms of Reference (ToR) were written. At the kick off meeting a request was made to provide a consolidated summary of how the EU will replace the EPER system with the PRTR registry.

The Inception Report is based upon discussions at the kick off meeting with DRP and ICPDR officials a well as document reviews, site visits and internal consulting team analysis. This report contains recommendations for refinement of the work plan into two related groups of activities namely policy legislation and impact activities and capacity building activities. The policy and legislation reviews and impact activities involve all of the countries while the capacity building activities are designed specifically for the non-accession countries. The Inception Report is organized into three main sections. The section following describes the results of the phase 1 project followed by a discussion of the revised work plan. The report concludes with project implementation arrangements.

# 2. PROJECT SUMMARY PHASE 1

The Phase 1 Industrial Policy Project provided background and recommendations for this Phase 2 project therefore a summary of the Phase 1 project is presented in the following section.

## 2.1. Project Activities

The activities of project Phase 1 were organized into the following three groups:

### Updating the EMIS Methodology

An analysis of the existing EMIS inventory, review of existing guidelines and procedures for the inputs into the EMIS inventory, and personal interviews with members of the EMIS EG and other experts were the main activities. As a part of this analysis, a questionnaire was used to collect information with respect to the mechanism of data collection. Analytical assessment of the EMIS inventory was focused on following:

- > identification of gaps (technical, financial, and procedural),
- > quality assurance of EMIS inventory data, and,
- > use of EMIS inventory for the purposes of the ICPDR activities and other users.

### Policy and legislative analysis

Description of the existing and future situations compared with the EU requirements on a country-by-country basis was the main activity. With respect to industrial water pollution reduction, the following EU water related directives were taken into account: Water Framework Directive, Dangerous Substances Directive, and Integrated Prevention and Pollution Control Directive. The following aspects were assessed:

- > institutional arrangement,
- > permitting,
- > monitoring and,
- > inspection mechanisms.

These aspects were provided for each Danube country in order to recommend steps to be taken in addressing the legislative gaps.

The analysis of the institutional structure shows that, all of the countries have permitting, inspection and monitoring in place, however, the specifics differ on a country by country basis. Most countries rely on self-monitoring by individual installation and data are centrally collected and assessed.

#### BAT pollution reduction at industrial establishments

The BAT concept was introduced focusing on the aspects applying to industrial installations discharging into watercourses. Factors influencing the introduction of the BAT concept were discussed. These included legal base, costs, administration mechanisms, inspection and enforcement.

## 2.2. Findings and Recommendations

The three groups of activities were interrelated in that the EMIS inventory data generally come from data sources required by national law, and the analysis of the data provides a basis for improving government policy and enforcement. Effective enforcement in turn is a key factor in causing pollution reduction in industrial establishments.

The majority of the Danube countries (9 out of 13) have an obligation to the EU to have a consistent approach to environmental management including the management of their water resources, most importantly the Danube River.

The results of the I. phase included **operational** recommendations and **strategic** recommendations. The *strategic* recommendations were developed to allow the ICPDR to analyse ongoing changes in the DRB which the ICPDR may want to consider in the future activities and programs. **Operational** recommendations are more specific and can be implemented in a shorter time frame.

The study identified the *institutional* and *legislative* base in each country:

- > The institutional base includes the organizations involved in water management and decision making in each country. The analysis of the institutional structure shows that, all of the countries have permitting, inspection and monitoring in place, however, the specifics differ on a country by country basis. Most countries rely on self-monitoring by individual installation and data are centrally collected and assessed.
- > The legislative base determines the pollutants, regulated the allowable limits, the pollution charges and the data available on a continuing basis. Both legislation and the institutional capacity to collect data, monitor and enforce the provisions of the water related legislation are necessary for effective water management.

Detailed recommendations are contained in the body of the report and are summarized as follows:

For the *EMIS Inventory* there are two strategic recommendations:

- 1. The EMIS EG should consult the users of the EMIS Inventory including the ICPDR Secretariat, the RBM EG, the MLIM EG and public users of the data in the inventory to identify and determine future uses of the inventory data.
- The EMIS EG should analyse other developing sources which provide data for a significant portion of the DRB for example, the data reporting required under the EU Directives (UWWTD, IPPCD, WFD), to see if that data will be useful in assisting the work of the EMIS EG.

The operational recommendations address:

- > the completeness; the number of industrial installations needs to be increased and the gaps in reporting parameters reduces.
- > quality assurance; this varies widely and it is recommended that a uniform system be put in place.
- > comparability of data in the inventory; the WFD requires a river basin approach for EU Member States. It would be useful if the data provided in the EMIS Inventory can be made comparable with data from other European river systems.

## For the *legislation and policy analysis* there are the following recommendations:

- The EU Directives and policy are the most important legal factor in the reduction and control of water pollution in the Danube River Basin. Six ICPDR contracting parties are also EU Member States. This means that within the ICPDR countries there is now very broad base of experience with the implementation and enforcement of EU policies and legislation The ICPDR should establish a mechanism to support those countries which are not EU Member States or in the accession process members of the EU to follow the EU procedures.
- For each of the ICPDR contracting countries, not involved in EU accession, it is recommended that a targeted three year support program for industrial pollution reduction policy and capacity building be developed. The components should include legislation drafting, institutional development, technical assistance and training among others. The program would be developed in cooperation with the individual national government and tailored to the needs of each country. These activities should be complementary similar activities by other international organizations which are either underway or planned for these countries.

With respect to **BAT** the phase one activities and findings are as follows:

- > The project organized a workshop on BAT issues with broad representation from the DRB. The conference focussed on BAT water related issues and included the results of a related UNIDO project. Summaries of the existing situation in DRB countries with respect to BAT were presented and the feasibility of establishing a BAT Network was explored. The conference discussions resulted in the following observation and recommendation:
- > There are an increasing number of available sources providing information on legislation, BAT BREFs, BAT methodology and other BAT related materials to national governments, industrial organizations and individual industrial installations in the DRB. It is recommended that a link on the ICPDR website be developed which will allow all interested parties to access the major sources and the experts which have worked with the EMIS EG on BAT issues.

# 3. REFINED WORK PLAN

## **3.1. Work Plan Development Considerations**

When refining the work plan activities during the inception phase four main factors were considered:

- 1. The need to develop a participatory approach within the recipient countries through interaction with DRP and ICPDR officials and the involvement of the Heads of Delegations, and Members of the EMIS Expert Group. The approach will also include the use of local consultants in Bosnia Herzegovina, Moldova, Serbia Montenegro and the Ukraine and developing positive working relationships with key national officials so that the process of understanding and ultimate implementation of study recommendations is enhanced through the study process itself.
- 2. The need to provide BAT related training which is demand driven and meets the needs of the recipient countries. The training needs for relevant countries will be discussed with members of EMIS EG during the EG meeting in September 2005. The project team will prepare for each country training packages according to identified demands.
- 3. The need to build upon the experience of the Phase 1 Industrial Policy Project to improve the project process and to provide sustainable results.
- 4. Another important objective in the inception period is to identify related or parallel activities, which will influence the course of the study. At the kick off meeting a request was made to provide a consolidated summary of how the EU will replace the EPER system with the PRTR registry

EPER is the European Pollutant Emission Register, which was established by a Commission Decision of 17 July 2000. The EPER Decision is based on Article 15 (3) of the Directive 96/61/EC concerning integrated pollution prevention and control According to the EPER Decision, Member States have to produce a triennial report on the emissions of industrial facilities into the air and water. The report covers 50 pollutants which must be included if the threshold values indicated in Annex A1 of the EPER Decision are exceeded. The first reporting year was 2001 this information had to be reported June 2003 at the latest. The second reporting year was 2004. Not all industrial plants existing are considered for EPER reporting – only those activities which are listed in Annex A3 of the EPER Decision are included. The report covers 50 pollutants which must be included if the threshold values indicated in Annex A1 of the EPER Decision are exceeded. The European Commission reviews the reporting process and the results of the reporting after each reporting cycle.

The European PRTR is developed as a requirement of the Kiev Protocol (UNECE) to which the EU is a party. The European Union will be Internet-based and hold a variety of data on industrial pollution, providing the public with information about the quality of the environment in their neighbourhoods and elsewhere in Europe. The European PRTR will report on more than 91 substances released to air, water and land from 65 activities. It will also have information on what the industrial installations do with their waste and waste water. The reporting cycle will be annual instead of every three years. What is more, the European PRTR will also compile reporting of pollution from diffuse sources such as road traffic, aviation, shipping and agriculture. The European PRTR should go online in 2009 and will then replace EPER. Its first reporting year will be 2007. Just like EPER, the European PRTR will provide information about releases of pollutants from specific industrial facilities and activities, and by country.

Overview of the data reporting requirements for industrial emission discharged into aquatic environment according to the dangerous substances directives and the IPPC Directive is attached to this report (Annex B). These issues will be subject of project team presentation and discussion with EMIS/EG members during their meeting in September 2005.

## 3.2. Organization of Work Plan Activities

One objective of the inception period is to refine the work plan to reflect the understanding of the issues gained by the Consultant during the initial period of the project. This resulted in an organization of the tasks, outlined in the ToR into 3 groups. The three groups include those:

**A)** Relating to policy and legislative review tasks for example estimating the impact of BAT implementation. This group of activities also includes the Estimation of BAT and Updating and expanding the Policy Matrix.

**B) Involving training and capacity development** in the four non-accession countries (Capacity Building Activities) The activities will be based in Bosnia Herzegovina, Moldova and Serbia Montenegro and the Ukraine.

**C). Developing the Road map for BAT implementation** for four non-accession countries - Bosnia Herzegovina, Moldova Serbia Montenegro and Ukraine.

## A. Policy and legislative review tasks

| Review of policy, legislation and enforcement |   |  |  |  |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|--|--|--|
| Time frame                                    | October 2005 – February 2006  |  |  |  |  |  |  |  |  |  |  |
| Implementation steps                          | <ul> <li>Develop interview guidelines administer survey</li> <li>Contact the countries representatives and updates</li> </ul>   |  |  |  |  |  |  |  |  |  |  |
|   | <ul> <li>&gt; Develop updated matrix (policy, legislation, and situation), for the IPPC Directive and others. Add IPPC implementation specific categories for EU Members States and status of transposition for Accession Countries.</li> <li>&gt; Recommendations including additional training as appropriate focussing on the non-accession countries</li> </ul>   |  |  |  |  |  |  |  |  |  |  |
|   | > Report  |  |  |  |  |  |  |  |  |  |  |
| Outputs                                       | <ul> <li>A report on:</li> <li>Implementation of the IPPC Directive in EU Member States,<br/>transposition and Implementation Strategies in Accession Countries</li> <li>Review and document for each country current policy, legislation and<br/>enforcement situation, including implementation of Pollution Reduction<br/>Programmes for Dangerous Substances for Member States as reported<br/>to the Commission</li> <li>Review of significant changes in industrial installations in non –<br/>accession countries since phase 1 project</li> <li>The present situation concerning the Legislative and Policy measures</li> </ul> |  |  |  |  |  |  |  |  |  |  |
|   | <ul> <li>and enforcement mechanisms</li> <li>Gaps between EU and national regulations</li> <li>Recommendations</li> </ul>   |  |  |  |  |  |  |  |  |  |  |

#### A. 1. Review of policy, legislation and enforcement

#### A.2 Impact of ICPDR BAT Recommendation

| Impact of ICPDR BAT Recommendation |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Time frame                         | October 2005 – February 2006   |  |  |  |  |  |  |  |  |  |  |  |
| Implementation<br>steps            | <ul> <li>Analysis of:</li> <li>&gt; the first reports on the use of BAT for the selected four industries:<br/>chemical industry, chemical pulping industry, food industry, and paper<br/>making industry, for the use of the ICPDR BAT recommendation by<br/>national and local water authorities and other beneficiaries,</li> <li>&gt; ICPDR BAT Recommendations + BREF</li> </ul> |  |  |  |  |  |  |  |  |  |  |  |
| Output                             | <ul> <li>A report on:</li> <li>&gt; Use of the recommendation by national and local water authorities and other beneficiaries,</li> <li>&gt; consistency of use the recommendation in specific sector by EU Member States in the DRB,</li> <li>&gt; how the ICPDR BAT Recommendation experience may be used to further the application of BAT in the DRB</li> </ul>                  |  |  |  |  |  |  |  |  |  |  |  |

#### A.3 Impact of BAT/IPPC Implementation in the Danube River Basin

| Impact of BAT/IPPC Implementation in the Danube River Basin |   |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|
| Time frame  | October 2005 – February 2006  |  |  |  |  |  |  |  |  |  |  |  |  |
| Implementation<br>steps                                     | <ul> <li>&gt; overview of discharges from majority of installations in the region<br/>based on the mission Inventory 2002,</li> <li>&gt; detailed data gathering from two case studies – one chemical, and the<br/>second pulp and paper industries in Slovakia that were identified in the<br/>Emission Inventory 2002 and have permits under the IPPC legislation</li> <li>&gt; estimation of reduction in these two sectors through quantitative<br/>projection based upon the pilot data</li> <li>&gt; estimation of impact of BAT implementation on all sectors using a<br/>percentage of pollution reduction calculation</li> </ul> |  |  |  |  |  |  |  |  |  |  |  |  |
| Outputs   | > Report on impact of BAT/IPPC implementation in DRB  |  |  |  |  |  |  |  |  |  |  |  |  |

## B. Training and capacity development

The ToR specified training and capacity development in the four non-accession countries (Capacity Building Activities). The activities will be based in Bosnia Herzegovina, Moldova and Serbia Montenegro. This part includes also developing Road Map for BAT Implementation

| Training and capacity development |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Time frame                        | October 2005 – June 2006   |  |  |  |  |  |  |  |  |  |  |  |
| Implementation                    | > Identify transferable examples of good practice                    |  |  |  |  |  |  |  |  |  |  |  |
| steps                             | > Conduct a Training Needs Analyses on the 4 non-accession countries |  |  |  |  |  |  |  |  |  |  |  |
|                                   | <ul> <li>Develop training packages and timetable</li> </ul>          |  |  |  |  |  |  |  |  |  |  |  |
|                                   | > Delivery of training (exact schedule to be determined)             |  |  |  |  |  |  |  |  |  |  |  |
| Output                            | > Report on results from the workshops                               |  |  |  |  |  |  |  |  |  |  |  |

#### Training and Capacity development

#### C. Developing Road map for BAT implementation

| Developing Road map for BAT implementation |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Time frame                                 | February – August 2006   |  |  |  |  |  |  |  |  |  |  |  |
| Implementation<br>steps                    | <ul> <li>Current legal policy and institutions from extended and<br/>updated the policy matrix</li> <li>Existing industrial base from the 2002 inventory including<br/>future plans as identified in the training field visits</li> <li>Strengths, Weaknesses, Opportunities and Threats (SWOT)<br/>Analysis</li> <li>Identification of common implementation issues</li> <li>Development of country specific recommendations</li> </ul> |  |  |  |  |  |  |  |  |  |  |  |
| Output                                     | > Country specific roadmap for the 4 non-accession countries   |  |  |  |  |  |  |  |  |  |  |  |

## 3.2.1. Methodology

There were three methodological issues addressed during the inception phase. First, as a result of discussions at the kick off meeting the questionnaire approach to the impact of the ICPDR BAT guidelines has been replaced with an analysis of the country reports on guideline implementation received by the ICPDR. Secondly, a more detailed approach to the training activities needs is presented. Thirdly, the methodology for estimating the impact of IPPC implementation in the DRB is specified. In addition, at the kick off meeting it was also suggested and agreed that a summary of the Phase 1 project would be presented at the EMIS EG working group in September. As a result of that request a specific summary of the Phase 1 project is also included in the Inception Report and in the presentation prepared for the EMIS meeting in September.

## 3.2.1.1. Impact of ICPDR BAT

In 2000 the ICPDR EMIS/EG produced Recommendations on Best Available Techniques for the heavily polluting sectors in the field of water (Food Industry, Chemical Pulping Industry, Paper Making Industry, Chemical Industry and monitoring of wastewater discharges). These recommendations were translated into the national languages of DRB countries with EU support and published on DANUBIS.

The EMIS/EG members were given the responsibility to report on how the national and local water authorities would make the most efficient use of these recommendations, with respect to enforcement, compliance and implementation, including:

(i) preparation of a list of the potential beneficiaries (water authorities, industries, industrial associations, etc.),

(ii) proposal for the development of other guidelines and recommendations and

(iii) ways on how best the information exchange can be maximised among the local authorities and local industrial beneficiaries.

The completion of the first reporting period according to the reporting formats of the ICPDR recommendations on the use of BAT for the selected four industries: chemical industry, chemical pulping industry, food industry, and paper making industry, was required by 30<sup>th</sup> of June 2004.

In 2003 EMIS/EG additionally introduced the Recommendation on BAT at Agricultural Point Sources. The recommendation contains technical in-plant and end-of-pipe measures for the reduction of wastewater volumes and abatement of pollution loads. Additional measures are proposed to improve environmental compliance at the plant and enforcement of the permitting environmental authority.

According to Resolution of the 2nd Standing Working Group of ICPDR the contracting countries have agreed with the proposed recommendation and with implementation of the provisions of this document at the national level starting the 1<sup>st</sup> of January 2006.

The EMIS reports will be the basis for the phase 2 project analysis of the impact of the ICPDR BAT Recommendations. In addition, the ICPDR Recommendations will be compared for consistency to a selected number of country specific sector guidelines which are used by EU Member States in the DRB.

### 3.2.1.2. Impact Methodology

It is anticipated that the introduction of BAT to industries and agriculture will result in a positive impact on surface water pollution. The use of more modern technologies which produce lower pollution and the introduction of more stringent emission limit values reduce discharges. The application of the BAT concept also leads to more efficient prevention for example by stressing the use of less dangerous substances as well changing behavior which is also an important BAT factor.

While the benefits of the application of BAT are logical, the quantitative assessment of the BAT implementation impact is extremely difficult. It requires very detailed knowledge of the data in each instillation because the permitting process is installation specific. The data required for impact calculation includes both the knowledge of technology status as well as current emissions. Such data is not currently available and it can not be expected to be available in near future. This means that only very broad estimates can be made with the limited data. The ICPDR Draft Emission Inventory 2002 provides a good overview of discharges from the majority of installations in the region which can be used for the estimation of BAT implementation impact.

The estimate will be based on more detail knowledge of selected pilot IPPC installations/case studies in two industrial sectors; chemical and pulp and paper industries.

The detail information gathered from the two installation case studies will provide the data on the reduction of pollution and other impacts due to BAT implementation at the installation. When the reduction of the most important pollutants have been calculated in these two case

studies it will be projected to the rest of the installations in the 2002 Inventory resulting in the BAT implementation impact in that sector. The calculation may be based on simple multiplication. Appropriate size factors may be calculated depending upon the findings of the case studies. The size factor will be calculated if it is useful in taking into account the differences in total pollution in individual installations.

The reductions in pollutants in these two sectors will then be applied on a percentage base to the remaining sectors.

### 3.2.1.3. Training Methodology

#### Introduction

During the Inception period the focus for the development for training activities was Serbia Montenegro. Because the inception period included the summer vacation period it was not possible to make the contacts and visit Bosnia Herzegovina, Moldova or the Ukraine. The visits will be arranged during September and October when the key individuals are available. The process for Serbia Montenegro is described in this section and parallel approaches will be used in the other two countries.

#### **Training Needs Analysis**

The first step in the process is a training needs analysis. The training needs analysis included the review of background documents with respect to the implementation of BAT and interviews with knowledgeable individuals. Serbia Montenegro has IPPC legislation in place. This legislation was reviewed and using the EU IPPC Directive as the baseline. Other documents and studies relating to BAT implementation for example those describing the existing monitoring system were also reviewed. The individuals interviewed included senior policy and decision makers, members of research institutes and those directly responsible for the implementation of the existing IPPC legislation. They were asked both to describe the existing situation and to suggest the type of training which would be most useful. The result of the training needs analysis showed that there are issues relating to the implementation of the existing legislation and that key support systems, for example, monitoring need to be further developed. Based upon the findings of the needs analysis it was decided to develop a training programme to address implementation issues related to the existing legislation. One possible outcome of the training may be recommendations for amendments to future IPPC legislation. Information with respect to legislation implementation training is provided in this section.

#### **DRP Training Guidelines**

In Phase I of the DRP a very useful set of guidelines for training for all DRP project components was developed. The training activities for the Phase 2 Industrial Policy Project will be based upon those guidelines. The planning for the training approach is most advanced in Serbia Montenegro. In Serbia Montenegro after discussions with responsible officials and an analysis of the existing situation a two part training approach is being developed. In Serbia Montenegro there is existing IPPC legislation however it has some weaknesses in that it does not provide for sufficient input from the installation and public involvement in the permitting process. Therefore, it has been decided to have one training module devoted to the development of the more effective implementation of the IPPC legislation for Serbia Montenegro. In the following section the IPPC legislation component is described using the format provided in the DRP training guidelines.

#### **Definition of training objectives**

The general training objective is to provide participants with the knowledge to address the highest priority issues<sup>1</sup> for the implementation the existing legislation consistent with the principles and approaches of the EU Directive tailored to the specific circumstances in Serbia Montenegro.

The short term objectives are to provide participants with:

- > an understanding of the philosophy and principles of the EU IPPC Directive
- > the key concepts of the EU IPPC Directive
- > the major implementation issues be addressed
- > gaps in the current implementation process
- > the necessary country based system required to implement IPPC legislation

#### The Medium term objective is to:

> provide the participants with the knowledge necessary to develop the system for the implementation of IPPC legislation in Serbia Montenegro

#### Identifying the Target groups for the training workshops

The IPPC legislation involves either national or local officials depending upon the size of the installation therefore both levels need participate in the training

- > senior decision makers
- > national programme managers and professionals in related fields and ministries
- > local officials

#### Training Workshop Methodology

The workshops will be organized and supported by the training specialist on the project team. Each of the trainers will have experience previous IPPC training and or IPPC legislation implementation. The local consultants will be fully involved in key training and preparation and delivery so that there is a local resource base for future training requirements beyond the scope of this specific project.

#### Participation:

- > the workshop will be designed to engage the participants in an interactive process with continuous participant feedback
- > the training materials will be user friendly and useful in actual legislative development e.g. sample clauses, system diagrams
- > the local consultants involvement will ensure that the materials are specifically relevant to the situation in Serbia Montenegro
- > time will be allocated in the training process to address specific issues raised by the participants

<sup>&</sup>lt;sup>1</sup> The training will focus on the highest priority issues in recognition that full IPPC implementation support is well beyond the mandate and resource capability of the Phase 2 Industrial Development Project.

#### Workshop size:

It is anticipated that the number of participants will be between 20-30 people. The target ratio of trainer to participants will be 1-10.

#### Training methods

The training will be <u>Knowledge oriented training</u> therefore focusing on passing information from an expert to the participants as an initial attracting point followed by an interactive process.

Exercises and examples will be used during the training process so that there will be group discussions and projects in addition to the knowledge dissemination.

### Evaluation of Training Workshops, Reporting

Each workshop will be evaluated, applying a standardized methodology as required by the DRP. The participants will be provided with a template at the end of the training workshops. Participants will fill it before leaving the workshop. The evaluation sheets will be attached with the final workshop report.

# 4. PROJECT IMPLEMENTATION ARRANGEMENTS

## 4.1. Time Frame

There are a few changes in the timeframe from that originally planned for the project. These changes occur not because of altered activities but result from the time taken to finalize the contract and also from the need to conduct the inception activities during the summer period. The work began following the kick-off meeting on June 27, 2005. This Inception Report has been developed for a meeting of the Steering Committee in the first week of September. The presentation to the EMIS EG will occur in the last week in September therefore it will be useful and possible to update some of the material presented to the EMIS EG. This additional material will be provided to the Steering Committee members in advance of the EMIS EG presentation.

## 4.2. Field Trips

Initial field trips have been made in Serbia Montenegro. Because of the summer period it was not possible to schedule field trips to the other countries. This issue was discussed with the DRB Project Manager and it was decided that the meetings should be scheduled wherever possible for the first half of September. The information from these meetings would be included in the EMIS EG presentation in Belgrade.

## 4.3. Assumptions

In discussions at the kick off meeting it was decided that the project activities in the Ukraine would not be initiated until further meetings had been held between ICPDR and Ukraine officials. The assumption is that if the Ukraine is not included the resources would be used for the other three countries which have training components. This assumption applies to the capacity building activities; all other project analytical components involving secondary sources would include available information for the Ukraine.

## 4.4. Coordination with IPCDR

To benefit from the experience and work of other DRP and IPCDR projects we have established a Steering Committee which will meet every three months with the first meeting scheduled in September. The meetings will be held at the ICPDR offices in Vienna. A presentation will be made to the EMIS EG in September. The HoD and EMIS EG members will be consulted in the hiring of local staff. Effective cooperation will also be ensured with informal discussions periodically and project reports.

## 4.5. Proposed Team Structure

There have not been any changes in the team structure during the inception period. The local consultants in Serbia Montenegro FIDECO have been selected after consultation with the Serbia Montenegro HoD.

# ANNEXES

| ANNEX A | Minutes kick off meeting  |
|---------|---|
| ANNEX B | Overview of the data reporting requirements for industrial emission<br>discharged into aquatic environment according to the dangerous<br>substances directives and IPPC Directive |
| ANNEX C | Work Plan   |
| ANNEX D | Outline of content for Final Report   |

# ANNEX A: Minutes of kick-off meeting

| Project  | Industrial Reform and Development of Policies and Legislation for Application of BAT towards Reduction of Nutrients and Dangerous Substances |
|----------|--|
| Client   | UNOPS  |
| Memo No. | 1  |
| From     | Tom Owen   |
| То       | Peter Whalley  |
|          | Philip Weller  |
|          | Joachim Heidemeier   |
|          | Michaela Popovici  |
|          | Eleonora Bartkova  |
|          | Danka Thalmeinerova  |
|          | John Adams   |

Kick off meeting for the UNOPS project "Industrial Reform and Development of Policies and Legislation for Application of BAT towards Reduction of Nutrients and Dangerous Substances"

#### Agenda:

- 1. Welcome and Introduction
- 2. Purpose of Meeting
- 3. Expectations of the ICPDR from the Project
- 4. Consultants approach
- 5. Discussion
- 6. Future Actions and Meetings
- 7. AOB

#### DISCUSSION

The meeting was opened by Mr. Peter Whalley and Mr. Philip Weller who presented the expectations of ICPDR concerning the project development and final outputs. He highlighted the importance of a close communication the project leaders with ICPDR and EMIS Group with aim to achieve the final results of the project. He suggested meetings every three months. He also pointed out that the focus should be on making things happen, not theoretical results and should build on the Phase 1 conclusions for example that the EU policy needs to be applied in all of the countries. All types of actions including information development capacity building and others in the areas where they would have the most impact, that is at the facility, sectoral or country level. The sustainable benefits to the countries must be clear including the use of local consultants.

The expectation is that consultants will identify where are areas that the project outcomes will have the biggest impact in four particular countries. Also, he said, that communication will be critical due to the fact that most of people are not directly tied with the water ministries in these countries.

Mr. Tom Owen, project director introduced the project team and organization of the work. Project communication will be ensured by the Steering Committee and progress Reports, which the project team will submit to the Steering Committee every three months as well as the output reports.

The project tasks were divided into two components: Analysis and Implementation. With respect to the training implementation component, this will be based upon the on demand driven principle and the sensitive use of local consultants to ensure sustainability in the individual country.

The expectation of EMIS group is to receive the review of IPPC in individual countries from different points: a) legal, b) concrete facilities c) enforcement practices. Also, the discussion was on how to provide a better understanding of EPER and its relationship to PRTR and to advise EMIS on what to recommend to harmonise reporting systems.

It was agreed that the Inception Report will be finished at the end of August and submitted to the Steering Committee for approval. A Steering Committee meeting will be held approximately one week later. It was agreed that a draft power point presentation to the EMIS EG at their meeting at the end of September 2005 would be included. It was also pointed out that there is a European IPPC Conference in Dresden from the 20-22<sup>nd</sup> of September 2005.

#### **Future Actions**

Following the discussions focused of the work plan, the participants agreed on next steps:

Inception Report will include a summary analysis of outputs from Phase I of project and gaps concerning available data and information. Of particular importance will be the data reporting requirements for EPER, PRTR and data sources including the EMIS Inventory. The Inception Report will be discussed at the EMIS EG meeting, where representatives will be encourage to discuss needs of individual country.

EMIS EG will provide project team with available data with respect to the IPPC BAT Sector Guidelines namely the country reports and the list of beneficiaries.

The ICPDR would decide on how to proceed with the Ukraine and communicate that to the consultants

The consultants suggested a food industry focus for Moldova, training for the new staff hired under the BAT legislation in Serbia, Montenegro, and an approach in Bosnia Herzegovina which compliments other BAT related projects. It was stressed that these are preliminary ideas only subject to country specific verification and modification.

Minutes would be distributed to all participants by the consultants for review and revision.

# ANNEX B: Overview of the data reporting requirements for industrial emission discharged into aquatic environment according to the dangerous substances directives and IPPC DireCtive

#### Dangerous substances directives

The present situation with regard to reporting requirements of EC is quite complicated in field of waste water discharges from industrial installations into aquatic environment. The Member States (MS) are obliged report to the EC according to "Dangerous Substances" Directives and the Decision of EC 92/446/EEC concerning questionnaires relating to the Directives in the water sector. This Decision establishes the outlines of the questionnaires necessary for monitoring, implementation and compliance with all the Directives on water, including Directives on "dangerous substances" and "daughter directives". Beside of these reporting obligation MS had to adopt and implement "Reduction Programmes of pollution" and inform EC about these issues. The Dangerous Substances Directives are tools to reduce and prevent water pollution in the DRB at the tame and are in point of view implementation of the IPPC Directive relevant.

#### **IPPC and EPER**

On the other hand there are other important requirements concerning reporting obligation according to the Directive on IPPC. In 2000 the details of the emission inventory were laid down in a Commission Decision 2000/479/EC on the establishment of a European Pollutant Emission Register. EPER covers large and medium-sized industrial plants which are listed in Annex I of the IPPC Directive (identical with Annex A3 of the EPER Decision) and which exceed specified emission thresholds. To limit the administrative burden on industry, the threshold values have been fixed at a level that aims to cover about 90% of the emissions from facilities covered by IPPC. EPER is managed jointly by the EC on and the European Environment Agency.

EPER aims to provide scientists, local authorities and policy makers with a consistent, Europewide emissions database. The first set of emissions data, covering the year 2001, was published in February 2004. EPER contains data on the main pollutant emissions (50 substances emitted to air and water from 56 industrial activities to air and water) reported by around 10,000 large and medium-sized industrial facilities in the 15 EU Member States, Hungary and Norway.

Collection of the first set of data for EPER has required a considerable effort by the industries and countries involved, however, the data are not fully comprehensive for all pollutants and all facilities in each country. In addition, different techniques were used to determine emissions from some industrial sectors in different countries. These aspects obviously reduce the comparability of this first dataset. The EPER data does not enable direct comparison of the environmental performances of individual facilities. A facility with good environmental performance can emit more than a facility with poor performance. Reasons can be simply the different size of the facilities or differences in the products they manufacture. The quality of the EPER emissions data has been checked at local, regional and national level before the data were included in EPER. It is the responsibility of Member States and other contributing countries to check the accuracy of their emissions data before submitting them to EPER. In addition, Member

States, the Commission and the EEA have checked that the data submitted comply with the agreed reporting format outlined in the EPER decisions and EPER guidance document. This has been done using a validation tool developed by the Commission. The validation covers the type of pollutants, codes for industrial sectors, the type of geographical coordinates etc. Such validation is a prerequisite for data to be included in EPER.

The share of emissions from all sources covered by EPER inevitably varies for each Member State, industrial activity and pollutant. For some air pollutants the EPER share can be assessed, whereas for direct and indirect emissions to water it is more difficult due to a lack of pan-European data sets. It should be recognized that EPER covers mainly industrial sources. It excludes for example emissions from the transport sector and from most agricultural sources, whereas the underlying totals include these emissions.

The second set of data for EPER, covering 2004, will be reported in 2006 and all new EU Member States will take part

#### New development in field of IPPC reporting

The European Community and its Member States negotiated and finally signed, with the exception of Malta and Slovakia, an UN-ECE Protocol on Pollutant Release and Transfer Registers (PRTRs) on the fifth Ministerial Conference "Environment for Europe" in Kiev, May 2003.

In order to ratify the UN-ECE Protocol, the already existing more limited European Pollutant Emission Register (EPER), has to be replaced by a comprehensive European PRTR. The European PRTR will fully succeed the existing EPER In the perspective of simplifying and streamlining reporting requirements, Council Directive 91/689/EEC on hazardous waste and Council Directive 96/61/EC concerning integrated pollution prevention and control are proposed to be amended.

A Proposal for a Council Decision on the conclusion of the UN-ECE Protocol on PRTRs is submitted in parallel. This will allow the Community to become a Party to the Protocol

These legal acts are also designed to ensure the Community's full compliance with the provisions of Article 5(9) of the Århus Convention. The Commission has adopted on 7 October 2004.

The European Parliament gave the proposal on the establishment of a European Release and Transfer Register, as required by a UN protocol a positive vote in July 2005. The Council will formally adopt the proposal without further discussion in any upcoming Council meeting. The Regulation will then become binding when it is published in the Official Journal.

PRTR should go online in 2009 and will then replace EPER. Its first reporting year will be 2007. Just like EPER, the European PRTR will provide information about releases of pollutants from specific industrial facilities and activities, and by country.

PRTR will report on more than 91 substances released to air, water and land from 65 activities. It will also have information on what the industrial installations do with their waste and waste water. The reporting cycle will be annual instead of every three years. What is more, the European PRTR will also compile reporting of pollution from diffuse sources such as road traffic, aviation, shipping and agriculture. After its initial establishment, citizens will have a say in how it should be developed further.

# ANNEX C: Work Plan

| F - Danube Regional Project<br>mponenet S.1. Industrial Reform and the Development of Policies and Legislatior |          |       |        | Dee      |             |      | - 6 61 |          |     |                       |           |      |              |      | Saula |              |       |          |                        |       |     |               |            | _         |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              | -     |
|--|----------|-------|--------|----------|-------------|------|--------|----------|-----|-----------------------|-----------|------|--------------|------|-------|--------------|-------|----------|------------------------|-------|-----|---------------|------------|-----------|----|-----|----------|-------------|-------|--------------|-------|------|-------|------------------|----------------|---------------------|----------------|--------------------|-------------|--------------|-------|
| tailed Work Plan   | TIOW     | rarus | s trie | Ret      |             | JUN  |        | uun      | ent | s ar                  |           | any  | eru          | us s | sub   | star         | lices | Pr       | lase                   | 2     |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              | +     |
| Activities   | June     |       | July   |          |             |      |        |          |     |                       |           |      |              | 1.   |       |              | ÷     |          | Le i                   |       |     | after<br>Marc |            | men<br>Ap |    | ent |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              |       |
| Inception period   | June     |       | July   | +        | Aug         | usi  | Sept   | Units.   | e   |                       | Jer       | NUVE |              | r De | cen   | ver          | Jan   | uary     | rei                    | oruar | У   | marc          | 1          | - AP      |    |     | ay       |             |       |              | TT    |      | augus | 56               | prenio         |                     |                | ar IN              | Jvenik      | Jer          | T     |
| Kick off meeting   | +-+-+    |       |        |          | 1-1         |      |        | 1-1      |     | †-†-                  | +         | -+   | <u>+-</u> +- |      |       | +-1          | +     | ††-      | 1-+                    |       |     | +-+-          | +-+        | -+-+      | +  | +   | +-+-     | 1-+-        | +-+-  | 1-+-         | +-+   |      |       |                  | rt+            | ()                  |                |                    | ††          | +            | +     |
| Project organization   |          |       |        |          | 1           |      |        |          |     | 11                    |           |      |              |      |       |              |       |          |                        |       |     | TT.           |            |           |    |     |          |             |       | 11           |       |      |       |                  |                |                     |                |                    |             |              | 1     |
| Project communication  |          |       |        |          |             |      |        |          |     |                       |           |      |              | _    |       |              |       |          |                        |       |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              | _     |
| Project assumptions  | +        |       |        | <b>ļ</b> | +           |      |        |          |     |                       |           |      | .∔.          |      |       | +-+          | +     |          | - <b> </b> ‡           |       |     | ++-           | -+         | -+        | +  |     | ++-      | <b> </b> +- |       | ·            |       |      |       | <sup> </sup>     | ┝╍┿╍┥          | ∔ <b> </b>          | + <sup>1</sup> | <u></u> <b> </b>   | <u>↓</u>    |              |       |
| Project schedule   | ++       |       |        |          |             |      |        | •••••    |     | ++-                   |           |      |              |      |       | ·+-+         |       |          | +-+                    |       |     | ++-           |            |           |    |     | +        | <b>↓</b> ∤  |       | ++-          |       |      |       | <b>-</b>         |                | ÷-+                 |                |                    |             |              |       |
| Inception  | +++      |       |        | -+-      | ++          |      |        | ++       |     | +-+-                  |           |      | ++-          | -++  |       | +-+          |       | ++-      | +-+                    | -+    |     | +-+-          |            |           |    |     | ++       | <b>₽†</b>   | ++    | +-+          | +-+   |      | ++    |                  | r-+-+          |                     | ++             |                    | ++          |              |       |
| ICPDR contacts   |          |       |        |          | -           |      |        |          |     | t t                   | -         |      | t-t-         | -    |       | +-+          | -     |          |                        | -     | -   | t en ter      |            |           |    |     | deeder.  | l           |       |              |       |      |       |                  | a tat          | in in               | le le l        |                    |             |              | de la |
| Data source identification   | +-+-+    |       |        |          | TT          |      |        | T        |     | tet                   | 1.1       |      | 1-1-         |      |       |              |       | 1        | 1-1                    |       |     | 1-1-          |            |           |    |     |          | 1.1.        |       | 1.1.         | 111   |      |       |                  | (*****         |                     |                |                    |             | TT           |       |
| Initial impact methodology review  |          |       | _      |          |             |      |        |          |     |                       |           |      |              | 1    |       |              |       |          |                        |       |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              |       |
| Initial site visits  |          |       |        |          |             |      |        |          | _   |                       |           |      |              |      |       |              |       |          |                        |       |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                | 1                   |                |                    |             |              |       |
| o Serbia Montenegro  | <b>+</b> |       |        |          | <b>_</b>    |      |        |          |     | <b>↓</b> ↓.           |           |      | l            |      |       | 4.4          |       | ļ        | - <b>I</b> ∔           |       |     | <b>+</b>      | -+         |           |    |     | <b>.</b> | <b>.</b>    |       | ·            |       |      |       | L                | <u>₊.</u>      | <b>.</b>            | +/             |                    | ļ           | <b>.</b>     |       |
| contact ICPDR representatives  | ++       |       |        |          |             |      |        |          |     | ++-                   |           |      | <u>↓</u>     |      |       |              |       |          | <b>+</b> -+            |       |     | +             |            |           |    |     | ·        | <b>.</b>    |       | <b>∔</b> ∔-  |       |      |       |                  |                | <u>↓</u>            |                |                    |             |              |       |
| identify key contacts<br>hold exploratory discussions  | +-+-+    |       |        | -+-      | ++          |      |        | ┼╌┼      |     | +-+-                  |           |      | ++-          | -++  | +-    | - <b> </b>   |       | ┝╍┝      | +-+                    | -+    |     | ++-           |            |           |    |     | ++       | <b>₽ </b>   | +     | +-+          | -++   | -+-+ | ++    | <b> </b>         | r-+            | -+-+                | <u></u> ↓↓¦    | <b>├╂-</b> -       | ∔           | +-+-         |       |
| develop draft approach   | +++      |       |        |          | -           |      |        | ┼╌┼      |     | ++-                   |           |      | <b>⊹</b> }-  |      |       | +-+          |       |          |                        |       |     | ++-           |            |           |    |     | +        | <b>∤</b> }- |       | +            | -++   |      |       |                  | r-+-+          | <u>⊦-</u>           | ++             | <b>├</b> ┠         | <u></u>     | +            |       |
| o Bosnia Herzegovina   | +-+-+    |       |        |          | ++          | +    | +      | ++       |     | +-+                   | -+        |      | ++-          |      |       | +-+          | +     | ++-      | -l+                    |       |     | ++-           | -+         |           | +  |     | ++-      | +-          | ++-   | · · · + ·    | -++   |      | ++    |                  | (*****         | +                   | +++            |                    | ++          | +            | -+    |
| contact ICPDR representatives  | ++++     |       |        | -+-      | 1           | -+-+ |        | +-+      |     | ++                    | +++       |      | t-t-         | +    |       | ++           |       | +-+-     | t++                    |       |     | +++           | ++         |           | -+ |     | +-+-     | t-+-        | ++-   | t-†-         | +-+   | +++  |       | rt-I             | -+-+           | (- <b>†</b>         | ttt            |                    | tt          | t-t-         | -+    |
| identify key contacts  | 1-1-1    |       |        | -+-      | 1-1         |      |        | †-†      | -†- | t t                   | ++        |      | t-t-         | ++   | -+-   | †-†          |       | trt      | ††                     | ++    | -+- | +-+-          | ++         | -+-+      |    |     | t-t-     | t-+-        | t-t-  | t†           | ++    | ++   | -+-+  | rt-I             | -++            | rt-                 | 1-4-4          | - <b>†</b>         | 1-1         | tt           |       |
| discuss general approach   | []]      |       |        | T        | ĽŤ          |      | 1      | Ľ        | 1   | ΠŤ                    |           |      | ĽŤ           |      |       | П            | 1     | ГÌ       | Ľ                      |       |     | 11            |            |           |    | 1   | ГŤ       |             | 11    | T            | IJ    |      |       |                  |                | LL.                 | []]]           |                    | []]         | 11           | Т     |
| o Moldova  | LTT      |       |        |          | LT.         |      |        |          | T   | LT.                   | 11        |      | LT.          |      |       | []           |       | LT.      | T.T                    |       | 1   | LT.           | 11         |           |    | 1   | LT.      | 1.          | 1.    | T.           |       |      |       | 1                |                | 1.T."               |                | 1                  |             | П            |       |
| contract ICPDR representatives   |          |       |        |          | 1           |      |        | ļ.,      |     |                       |           |      |              |      |       |              |       |          |                        |       |     |               |            |           |    |     | <b>.</b> | L           |       |              |       |      |       |                  |                |                     |                |                    |             |              |       |
| discuss general approach   |          |       |        |          |             |      |        |          |     |                       |           |      |              |      |       | +            |       | -        |                        |       |     |               |            |           |    |     |          | ļ           |       |              |       |      |       | ļ                |                | ļ.,                 |                |                    | ļ           |              |       |
| o Ukraine<br>wait for summer discussions between ICPDR and Ukraine representatives                             | +++      |       |        |          | ++          | +    | +      | ++       |     | +-+                   | -+        | +    | +-           |      |       | +-+          | +     |          | -l+                    |       |     | ++-           | -+         | -+        | +  |     | ++-      | <b> </b> +- | ++-   | ·+·          | -++   |      |       | h                | p              | +                   | +              |                    | ++          | +            | -+    |
| wait for summer discussions between ICPDR and Ukraine representatives<br>Report draft preparation              | +-+      |       |        |          |             | -    |        | ++       |     | ++-                   |           |      |              |      |       | ·+-+         |       |          | <b>∔</b> -+-           |       |     | ++-           |            |           |    |     | ++       | <b>+</b>    | ++    | <b>∔</b>  -  |       |      |       | <sup>1</sup>     |                | <u>+-</u> +         |                |                    |             | <u>+</u> −+- |       |
| Include summary of phase 1 findings  | +++      |       |        | -+-      | ++          |      |        | ┼╌┼      |     | +-+-                  |           |      | ++-          | -++  | +-    | -+- <b>+</b> |       | ┝╍┝╸     | +-+                    | -+    |     | +-+-          |            |           |    |     | +        | <b>₽†</b>   | +     | +-+          | -++   | -+   | ++    | -+               | r-+-+          | <u>+-</u> +         | ++?            | <b>├╂-</b>         | <u> </u> +∔ | +-+-         |       |
| Include presentation for September EMIS meeting  | +++      |       |        |          | ++          |      |        |          |     | ++-                   |           |      | ++-          |      |       | +-+          |       |          | ++                     |       |     | ++-           |            |           |    |     | +        |             |       | ++-          |       |      |       |                  | (              |                     |                |                    |             |              |       |
| Report outline to Report review Steering Commitee one week before meeting                                      | +-+-+    |       |        |          | +           |      | +      | 1+       |     | t-+                   | -+        |      | tt-          |      |       | +-+          | +     | ++-      | 1-+                    |       |     | +-+-          | -+         | -+-+      | +  |     | +-+-     | 1-+-        | ++-   | +-+·         | -+-+  |      |       |                  | r=+=+          | tt                  | +++            |                    | ++          | +            | -+    |
| Meet, discuss and amend as necessary   |          |       |        |          | 1           |      |        | 1        | -   | 1-1-                  | +         |      | h-h-         |      |       | 11           |       |          | t-+                    |       |     | +-+-          |            |           |    |     |          | t-+-        | ++    | t-+-         |       |      |       | (*****           |                |                     |                |                    |             | 1-1-         |       |
| Report presentation to EMIS EG   | 1        |       |        |          | 1-1         |      |        | 1-1      |     | 1.1.                  |           |      | ††-          | 1-1  |       | 11           |       | 11-      | 11                     | -+    |     | 1-1-          | 1          |           |    |     | ††       | t-+-        | +     | 11           | +-+   | -    | -+-+  | - T- 1           |                | 1                   |                |                    | [ <b>†</b>  |              |       |
|  |          |       |        |          |             |      |        |          |     | 11                    |           |      | III.         |      |       | II           |       |          | 11                     |       |     | 11            | 1          |           |    |     |          |             | 1     |              | T     | _    |       | _                |                | <u> </u>            |                |                    | []].        |              | 1     |
| Policy and legislation review tasks  |          |       |        |          |             |      |        | <b>.</b> |     |                       |           |      | L.L.         |      |       |              |       |          | 1                      |       |     | <u></u>       |            |           |    |     |          | <b>.</b>    |       | <b>_</b>     |       |      |       | h'               | ⊢              | <b></b>             | <u>       </u> | <b></b>            |             |              |       |
| Review of policy, legislation and enforcement  | +++      |       |        |          |             |      |        | ++       |     | ·                     |           |      |              | -++  |       | +-+          |       | <b>.</b> | +-+                    | -+    |     | ++-           |            |           |    |     | ÷        | <b>↓</b> ∔  | +     | +-+          | -++   |      | +     | <b> </b>         | <b>⊦</b> ∔↓    | <u>∔-</u>           | !              | <b> </b>           | <u>↓</u>    |              |       |
| Develop interview guidelines administer survey<br>Contact the countries representatives and updates            | +++      |       |        |          | · · · · ·   |      |        |          |     |                       |           |      | +-           |      |       | +            |       |          |                        |       |     | ++-           |            |           |    |     | +        | <b> </b>    |       | +            |       |      |       | h                | p              | <u> </u>            |                |                    |             |              |       |
| Develop updated matrix   | +        |       |        |          | ++          | +    | +      | ++       |     | +                     | -         | -    | lt-          |      |       | +            | +     | ++-      | ·I+                    |       |     | ++-           | -+         | -+        | +  |     | +-+-     | ·           | ++-   | · • • • •    | ·+··+ | +    |       |                  | r              | <u>∔</u> }          | +              | <u></u> + <b> </b> | <u></u> +}  | +            | +     |
| Contact the countries representatives and updates  | +-+-+    |       |        | -+-      | +-+         |      |        | ┝╌┼      |     | ++-                   |           |      |              |      |       | ÷            |       |          | ╋╌┼                    |       |     | ++-           |            |           |    |     | ++       | <b>₽</b> }  | ++    | <b>₽</b> -+- | ·+-+  |      |       |                  |                | - <b>-</b>          |                |                    |             | ┉╋           |       |
| Recommendation   | +-+-+    |       |        | -+-      | ++          |      |        | ++       |     | +-+-                  |           |      | +-+-         | -++  |       | +-+          |       |          | ++                     | -++   |     | +-+-          | +-+        |           |    |     | ++       | ŧ+-         | ++    | ++           | +-+   |      | -+-+  |                  | (*****         |                     | ++             |                    | +-+         |              |       |
| Report   | +-+-+    |       |        |          | ++          |      |        |          |     | +++                   |           |      | t-+-         |      |       | 11           |       |          |                        |       |     | ++-           |            |           |    |     |          | 1           |       | +-+-         | +++   |      |       |                  |                |                     |                |                    |             |              |       |
|  | t-t-t    |       |        |          | trt         | -+-1 |        | 1+       |     | trt                   | +-+       | -+-1 | t-t-         |      |       | 11           | +     | trt      |                        |       |     | ††-           | +-+        | -+-+      | +  |     |          | 1-1-        | ++-   | 1-1-         | +++   |      |       | _                |                | ff                  |                |                    | ++          | †-†-         | -+    |
| Impact of ICPDR BAT Recommendation   |          |       |        |          | 1           |      |        |          |     |                       |           |      |              | 1    |       |              |       |          | T 1                    |       |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             | T            | 1     |
| Analysis of use the ICPDR recommendation   |          |       |        |          |             |      |        |          |     |                       |           |      |              |      |       |              |       |          |                        |       |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              |       |
| Analysis of the information exchange   | 1.I.I    |       |        |          | +           |      |        | 1        |     | <b>↓</b> ↓.           |           |      | <b>↓</b> ↓.  |      |       | 1            |       |          | <b>.</b> ‡             |       |     | <b>+ </b>     | - <b>-</b> |           |    |     | <b> </b> |             |       | .l           |       |      |       | <u>ا المارما</u> | <u>↓ .    </u> | <b></b>             | +/             |                    | L           | <b>.</b>     |       |
| Analysis oft he first country reports on the use of BAT<br>ICPDR BAT Recommendations + BREF                    | ++       |       |        |          |             |      |        |          |     | +                     |           |      | <u> </u>     |      |       |              |       |          | <b>+</b> +             |       |     | +             |            |           |    |     | +        | <b>.</b>    |       | +            |       |      |       | h-de-            |                | <b>↓↓</b>           |                |                    |             |              |       |
| Report   | +++      |       |        |          | ++          |      |        | ++       |     |                       |           |      | ++-          | -++  |       | +-+          |       | ++-      |                        | -     |     | ++-           |            |           |    |     | ++       | <b>₽}</b>   | +     | +-+          | -++   |      | ++    | <sup>1</sup>     | +              | ÷-+                 | +/             |                    | +           |              |       |
| Keport   | +++      |       |        |          | ++          |      |        | ┼╌┼      |     | ++-                   |           |      | + <u>+</u> - |      |       | +-+          |       |          | ·                      |       |     | ++-           |            |           |    |     | +        | ╂╌┼╍        | +     | +            | -++   |      |       |                  | r-+            | <u>+-</u> +         | ++             | ┝╍┠╍               | <u></u>     | +            |       |
| Impact of BAT/IPPC Implementation in the Danube River Basin  | +-+-+    |       |        |          | ++          | +    | +      | ++       |     | +-+-                  | ·+··      | +    | +-+-         |      |       | +-+          | +     | ++-      | ·+                     |       |     | ++-           | -+         | -+        | +  | +   | +-+-     | <b> </b> +- | ++-   | ·+·          | ·+·+  | +    |       |                  | (              | +                   | +++            | +                  | ++          | +            | -+    |
| Overview of discharges from the majority of installations  | ++++     |       |        | -+-      | 11          |      |        | 1        | -   | tt                    | +++       |      | t-t-         |      |       | ++           |       | 1        | ††                     |       |     | tt            | ++         |           |    |     | +-+-     | t           | ++-   | t t          | +++   |      |       | (*****           |                | 1-1                 |                |                    | tt          | tt           |       |
| Selection of pilot installations/case studies  | []]]     | 1     |        | t        | ĽŤ          |      |        | ĽŤ       |     | ĽŤ                    |           |      | t t          |      |       | U            |       |          | $\Gamma^{\dagger}$     |       |     |               |            |           |    |     |          | 11          |       | T.           | 11    |      |       | CT-1             |                |                     |                |                    | [           | LŤ           |       |
| Estimation of BAT implementation impact  |          |       |        |          |             |      |        |          | -   |                       |           |      |              |      | _     | П            |       |          |                        |       |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              |       |
| Report   |          |       |        |          | <b>.</b>    |      |        | <b>_</b> |     | ļļ.                   |           |      | L            |      |       |              |       |          |                        |       |     | .ll.          |            |           |    |     | ļ        | <b>.</b>    | +     | +++          |       |      |       |                  | <b>↓</b>       | ļ                   |                | <b>.</b>           | ll          |              |       |
|  |          |       |        |          |             |      |        |          |     | +                     |           |      |              |      |       |              |       |          |                        |       |     |               |            |           |    |     | +        | <b>.</b>    |       | ·            |       |      |       | <sup> </sup>     | <u>⊦</u>       | ļ.,                 |                |                    |             |              |       |
| Training and Capacity Development  | +        |       |        |          | +           |      |        |          |     | + <del> </del> -      | +         |      | .∔.          |      |       | +-+          | +     | ∔-       | - <b> </b> ‡           |       |     | ++-           | -+         | -+-+      |    |     | ++-      | <b> </b> +- | ++-   | ·            | +     |      |       | <u>⊢-</u>  '     | ┝╍┿╍┥          | <b>∔ </b>           | + <sup>1</sup> | <b>├ </b>          |             | ╪╍┣╸         |       |
| Identify transferable examples of good practice<br>Conduct a TNA on the 4 non-accession countries              | ++       |       |        |          |             |      |        | ·        |     | ++-                   |           |      | <u> </u>     |      |       | ·            |       |          | <b>∔</b> ∔             |       |     | ++-           |            |           |    |     | +        | <b>.</b>    |       | <b>∔</b> ∔-  |       |      |       | h-h-d            |                | <b>↓</b> - <b>↓</b> | !              |                    |             |              |       |
| Develop training packages and timetable  | +++      |       |        |          |             |      |        | +        |     | ++-                   |           |      | ++-          | -++  |       | +-+          |       | ++-      | +-+                    | -+    |     | ++-           | -++        |           |    |     | ++       | <b>₽†</b>   | +     | +-+          | -++   |      | ++    | <b> </b>         | +              | +-+                 | +/             |                    | +           | ++-          |       |
| Develop draining packages and directable<br>Delivery of training (exact schedule to be determined)             | +++      |       |        |          | ++          |      |        |          |     | t t                   | -         |      | l            | -    |       | ÷            | -     |          |                        | -     |     | +-+-          |            |           |    |     | le le    |             |       |              | -++   |      |       |                  | r-+            | <u>+-</u> +         | ++             | <b>├</b> ┣         | } <u></u>   | +            |       |
| Additional activities  | +-+-+    |       |        |          | ++          | -+   | +      | ++       |     | ++-                   | · + · · · |      | +-           |      |       | +            | +     | ++-      | 1+                     |       |     | +             |            | -+        |    |     | ++-      | 1           | ••••• | ·+·          | ·+··+ | +    |       |                  | a hat          |                     | +-++           | <u>+-</u> -}       | ++          | +            | et e  |
|  | +-+-+    |       |        |          |             |      |        | •••••    |     | ++-                   |           |      |              |      |       | +-+          |       | +        | t-+                    |       |     | +-+-          |            |           |    |     | ++       | t           | ++    | t-+-         |       |      |       |                  |                | (** <b>†</b> ***    |                |                    |             |              |       |
| Developing Road map for BAT implementation   | t-t-t    |       |        | -+-      | 11          |      |        | t-t      |     | tt                    | +++       |      | t-t-         |      |       | ††           |       | t-t-     | ††                     | ++    |     | +-+-          | ++         |           |    |     | t-t-     | t-+-        | t-t-  | t†           | ++    | 11   | -+-+  |                  | <u></u>        | 1-1                 | 1-1-1          | t-t-               | tt          | tt           | -     |
| Current legal policy   | L-1-4    |       |        | -        | 1-1         |      |        | 171      |     | TŤ                    |           |      | 111          |      |       |              |       | 1        | $\mathbf{T}^{\dagger}$ |       |     | 11            |            |           |    |     |          |             | 1     | T            | 11    |      |       |                  |                | - <b>-</b>          | [              |                    | [           |              | -     |
| Existing industrial base including future plans  |          |       |        | T        | TT          |      |        | П        |     | TT                    |           |      | П            | T    |       | T            |       |          | TŤ                     |       |     | TT            |            |           |    |     |          |             |       | II           |       |      |       |                  |                | П                   |                |                    |             | II           | T     |
| Identification of common implementation issues   | 111      | L.    |        |          | 11          | 11   |        | f.T      | T   | ſΤ                    | T         |      | LT.          | 11   | _     | 11           | 1     |          | []]                    | 1     | 1   | LT.           | T          | 11        |    |     | f.T.     |             |       |              | T     | T    |       | T                |                | 1 I                 |                | L.                 | 1           | Π            |       |
| SWOT analysis  |          | LT.   |        | 1        | ĻП          |      |        | ГI       | 1   | ГĨ                    |           |      | ЦŢ           |      | 1     | ДI           |       | L        | L.L                    | 11    | 1   | LT.           | 11         |           |    | 1   |          |             |       |              |       |      |       |                  | ьŢЛ            | LT.                 |                | LT.                | LT.         | П            |       |
| Country specific Road map for the 4 non-accession countries  | ∔-∔∤     |       |        | ļ        | <b>+</b> -+ | -+-1 |        | 1.1      |     | <b>+</b> - <b> </b> - |           |      | ↓↓.          |      |       | 4.4          |       | ↓↓.      | ₽.†                    |       |     | <b>+ </b>     | 4.4        |           |    |     | +-+-     | <b> </b>  - | ++-   | <b>.</b>     | +-+   |      |       |                  | ⊢┼╌┦           | t-l-                | <u>↓</u>       | <b>↓ </b>          | ļļ          | ∔            |       |
| EMIS EG Meetings (subject to EMIS EG schedule)   | +-+      |       |        |          | ++          |      |        | +        | -   | ++                    |           |      |              | +    |       | ++           |       |          | ++                     |       |     | +-+-          | +-+        |           |    |     | +        | ł           | ++-   | +-∔-         |       | -    |       | <b> </b>         | p              | <b>∔∔</b>           | <u>↓</u>       | <b> </b>           | <u> </u>    |              |       |
|  | 111      |       |        |          | 1           |      |        | 1        |     | 1.1                   |           |      |              |      |       |              |       | 1 1      | 1 L                    |       |     | 1.1           |            |           |    |     | 1 1      | 1           |       |              |       |      |       |                  |                |                     | 1 1 2          |                    | I I         | 1 1          |       |
| Ento comedings (subject to cinto co sciedade)  | +++      |       |        | T        | 1           |      |        | ++       |     | ++-                   | +         |      | ++-          | -++  |       | - <b> </b>   |       | ++-      | +-+                    | -+-+  |     | ++-           | +-+        | +         |    |     | ++       | +           |       | +++          | -++   |      | ++    | ۱ <u></u>        | ++             | <u>+</u> - <b>+</b> | ++             | ++                 | t+          |              | - T   |
|  |          |       |        |          |             |      |        |          |     |                       |           | _    |              |      |       |              |       |          | 11                     |       |     |               |            | _         |    |     |          |             |       | 11           |       |      |       |                  | ┝╍┿╍┧          |                     |                |                    |             |              | -     |
| Progress Reports Draft Report  |          |       |        | -        |             |      |        |          |     |                       |           |      |              |      |       |              |       |          |                        |       |     |               |            |           |    |     |          |             |       |              |       |      |       |                  |                |                     |                |                    |             |              | +     |

# ANNEX D: Outline Table of Content for Final Report

| Chapter | Title   |
|---------|---|
|         | Preface   |
|         | Table of Content  |
|         | Executive Summary   |
|         | Abbreviations   |
| 1.      | Introduction  |
| 2.      | Description of Methodology                                  |
| 3.      | Review and Impact of Policy and Legislation                 |
| 3.1.    | Review of policy, legislation and enforcement               |
| 3.2.    | Impact of ICPDR BAT Sector Guidelines                       |
| 3.3     | Impact of BAT/IPPC Implementation in the Danube River Basin |
| 4.      | Training and capacity development                           |
| 5.      | The Road map for BAT implementation                         |
| 6.      | Recommendation and conclusions                              |
| 7.      | Annexes   |

WORKING FOR THE DANUBE AND ITS PEOPLE