

UNITED NATIONS ENVIRONMENT PROGRAMME
GLOBAL ENVIRONMENT FACILITY (GEF)
PROJECT DOCUMENT

PROJECT IDENTIFICATION

Title of Sub-Programme: Persistent Organic Pollutants, OP14
Title of Project: POPs monitoring, reporting and information dissemination using Pollutant Release and Transfer Registers (PRTRs)

Project Number: PMS: 3348
IMIS:

Geographical Scope: Global: Cambodia, Chile, Ecuador Kazakhstan, Peru, Thailand, Ukraine and a regional component: Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua

Project Executing Agency: United Nations Institute for Training and Research (UNITAR)

Duration of the Project: 2 years
Commencing: October 2008
Completion: October 2010

Total Cost of Full Project Phase:	US\$
GEF: Medium Size Project ¹	950,000
Co-financing: Participating governments, donors:	2,504,320
Subtotal Co-Financing	2,504,320
Total Cost of Project ²	3,454,320

Project Summary: The Stockholm Convention (SC) requires Parties to exchange information (article 9), facilitate public information, awareness and education (Article 10) report to the Secretariat (Article 15) and periodically update implementation plans (Article 7). Article 10 explicitly acknowledges the value of Pollutant Release and Transfers Registers (PRTRs) for these purposes. This project will implement a Pollutant Release and Transfer Register (PRTR) in Chile, and will design a PRTR in Cambodia, Ecuador, Kazakhstan, Peru, Thailand and Ukraine. It will also conduct a study in six Central American countries (Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua) on the feasibility of a PRTR system as a regional reporting system for chemicals management. This project will prove the value of PRTRs as a tool to assist countries to comply with all Convention Obligations mentioned above.

SIGNATURE:

<i>For United Nations Environment Programme:</i>	<i>For (countries):</i>
Signature:	Signature:
Mr. Theodor Kapiga, OIC Corporate Services Section (CSS), Executive Office, UNEP	
Date:	Date:

¹ Cost to the GEF of medium size project: USD 950,000

² Total cost of medium size project full size project (including co-financing, GEF funds and implementation fee) is US\$ 3,549,320

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LIST OF ACRONYMS/ABBREVIATIONS

COP	Conference of the Parties	PMU	Project Management Unit
GEF	Global Environmental Facility	UNEP	United Nations Environment Programme
NGOs	Non-Governmental Organizations	UNEP DGEF	UNEP Division of GEF Coordination
NIP	National Implementation Plan	UNITAR	United Nations Institute for Training & Research
POPs	Persistent Organic Pollutants		
PRTR	Pollutant Release and Transfer Register		

1.0 Project Description; Background and Context

1.1 Introduction

1. This project will implement a Pollutant Release and Transfer Register (PRTR) in Chile, and will design a PRTR in Cambodia, Ecuador, Kazakhstan, Peru, Thailand and Ukraine. It will also conduct a study in six Central American countries (Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua) on the feasibility of a PRTR system as a regional reporting system for chemicals management. PRTRs will allow countries to comply with Stockholm Convention requirements on updating implementation plans (Article 7), exchanging information (article 9), facilitating public information, awareness and education (article 10) and reporting to the Secretariat (Article 15). Article 10 explicitly acknowledges the value of PRTRs for these purposes.

National Implementation Plans

2. In 2002 Chile and Ecuador were selected to participate in the 12 Countries Pilot Project to develop a National Implementation Plan (NIP) that would meet both countries' obligations under the Convention. Chile and Ecuador have already finalized and endorsed their National Implementation Plan. During the NIP process both countries identified the implementation of the Pollutant Release and Transfer Register (PRTR) information exchange system as a country priority.
3. Cambodia, Kazakhstan, Peru, Thailand and Ukraine have finalized and endorsed their NIPs and highlighted the development of an information exchange, monitoring and reporting tool as a National Priority for POPs.
4. The basic criteria to select the participating countries in this project was based on:
 - a) NIPs completed;
 - b) Parties to the Stockholm Convention; and
 - c) POPs monitoring and reporting system clearly indicated as a country priority
5. Additional elements taken into account in the selection process were the regional representation (3 regions, 7 countries), chemicals monitoring and reporting systems at different levels, and level of industrialization. Information exchange among participating countries and identification of good practices will be an integral part of this project and the diverse level of PRTR development in selected countries will encourage south-to south cooperation. It is expected that countries with a more advanced POPs and chemicals monitoring and reporting systems in place will technically assist and advice less advanced countries. Links with non-participant countries having monitoring systems in place will be established and technical expertise and advice will be sought, according to the project needs and particular situations.
6. A PRTR is a catalogue or database of releases and transfers of potentially harmful chemicals, including information on the nature and quantity of such releases and transfers. A PRTR system comprises three essential elements: (a) a structured database; (b) an information exchange mechanism to enter and publish data; and (c) a dissemination mechanism to convert this data into information and make it public. A PRTR comprises data from point sources of pollution, such as industrial facilities. It may also include data from diffuse sources, such as agricultural operations or transportation activities. A PRTR cover releases to air, water and land, as well as wastes transported to treatment and disposal sites.
7. A PRTR system will allow participating countries to:
 - Gather, on a regular basis, of inventory data for major pollutants including POPs
 - Reduce costs to government and industry from a co-ordinated reporting system that will also include facilities licensing and monitoring
 - Hold and manipulate data to allow update/tracking of inventories

- Prepare reports for information exchange, including reporting to the Convention Secretariat
 - Provide a portal for the provision of information to civil society
 - Update action plans and recognize priority areas on chemicals management
8. The **goal** of this project is to reduce POPs and other chemicals releases
 9. The **purpose** of this proposal is to assist participating countries to meet SC obligations relating to reporting, information exchange and public awareness through the implementation of a PRTR.
 10. The main **objectives** of this proposal are:
 - To ensure proper and smooth coordination during the implementation and design of the PRTR system
 - To develop and provide the legal framework under which the PRTR will operate
 - To design the PRTR database and reporting scheme
 - to enable the PRTR scheme to exchange information among national stakeholders
 - To establish a POPs information dissemination mechanism under the PRTR framework to involving participating countries, Parties to the Convention and its Secretariat
 - To replicate identified best practices to other countries in different regions
 11. The expected **outputs/outcomes** of the project are:
 - PRTR legislation developed and implemented (Chile)
 - Capacity enhanced nationally for an effective transfer and process of data and further provision of information.
 - Information available for all sectors regardless of their access to modern and technological tools
 - Exchanging of information to SC Secretariat and Parties facilitated.
 - Capacity enhanced facilitating PRTR development
 - Best practices and lessons learned identified and disseminated

Linkages to related activities

12. This project will make appropriate linkages to current related initiatives and some of the activities are already part of the co-finance of the project. UNITAR initiated in 2007 a project to support Ecuador, Panama and Chile to institutionalize a Mercury Emission Inventory within a national PRTR framework. Currently, Ecuador and Panama are starting a process to develop PRTR institutionalization strategies and Chile is exploring fine-tuning of its PRTR for mercury based on inventory results.
13. Cambodia and Kazakhstan are currently engaged in projects related to SAICM enabling activities supported by the SAICM Quick Start Programme Trust Fund, with UNITAR as the executing agency. The projects on “Updating National Profiles, Development of a National SAICM Capacity Assessment, and Holding a National SAICM Priority-Setting Workshop” aim to assist with enabling activities as recommended by paragraph 22 of the Overarching Policy Strategy. As part of these 2-year projects, the Profiles will be updated in light of the outcomes of ICCM. As a next step, countries undertake a second enabling activity - the development of a comprehensive National SAICM Capacity Assessment. The third activity is the holding of a National SAICM Priority-Setting Workshop. Although not directly involve the establishing of registers, the projects contribute towards assessment of legal, administrative, technical capacities as well as facilitate the access to environmental information on chemicals management, including POPs, which are important elements for designing a register.
14. This proposal is in line with activities planned in Kazakhstan within the TACIS Project on Strengthening Public Participation and Civil Society Support to Implementation of Aarhus Convention in Central Asia, and in particular the component related to PRTRs. It will be executed by CAREC/Centre for Sustainable Production and Consumption in cooperation with the National Statistics Agency and the Department of Industry and Enterprises of Almaty Akimat (city

- authorities). The project will focus on assessing the state of play of the reporting of emissions and discharges within Almaty City, identifying gaps with PRTR requirements and developing recommendations for introducing a national PRTR system. A close cooperation between these activities and the current proposal, in particular in relation to planned activities in Kazakhstan, will be ensured.
15. The Stockholm Convention Secretariat is developing a Clearinghouse Mechanism where countries will report on progress made on POPs reduction. This project will coordinate and will link closely with the Secretariat of the SC to ensure that compatible and consistent information is being gathered by PRTRs and presented to the SC Secretariat.
 16. Information on the progress and lessons learned within this project will be reported at the meetings of the Working Group of the Parties to the Aarhus Convention, Working Group on PRTRs, Task Forces on Electronic Information Tools, and other relevant fora within the UN Economic Commission for Europe (UNECE). In turn, the UNECE will also provide available expertise, guidance documents and resource persons, under agreed terms for the national-level activities, in particular in the UNECE region, as well as for lessons learned and information sharing, e. g. by participating in Steering Committees meetings.
 17. Currently UNEP/GRID-Arendal together with Donetsk Oblast authorities in Ukraine implementing the Environment and Security Initiative project ‘Assessment and capacity-building for managing environment and security risks in the Donbas and Soligorsk regions’. One of the components of the project aims at increasing transparency over environmental issues and decision-making through supporting environmental awareness activities. As part of this component national and local level authorities will be introduced to the PRTR concept and be presented a show case (Hungary, possible Sweden). Additionally, some elements of PRTR will be included into the information management system, which is now under development in Donetsk region.
 18. This project will also make the appropriate linkages with the upcoming Global POPs monitoring projects being developed by UNEP. While the UNEP GEF funded Global POPs Monitoring projects will deal with the presence and reduction of POPs in the environment and humans, this project will look at the reduction of POPs emissions at the sources, stockpiles, POPs in use and contaminated sites.

Country situation

19. The following sections present a description of the PRTR related issues that represent the background or baseline for the present project. The information has been gathered during NIP development and by studies related to PRTR development.

(a) Chile

20. Geography of Chile (Figure 1): Chile is a country situated in the meridian and occidental part of South America. Its total surface is 2.006.626 Km², of which 756,626 Km² are comprised by continental surface and oceanic islands and 1.250.000 Km² corresponds to Antarctic Chile. It has a total population of 15.116.435 inhabitants and the rate of literacy reaches 95.8% of the total population.

Figure 1: Geographic Situation of Chile



21. The macroeconomic figures indicate that the economy is in constant growth having an average growth of the GDP of 3.1 from 1997 to 2002 (source: NIP, 2005). The main economic sectors are: mining, agriculture, aquaculture, chemical industry and manufacturing.
22. **The mining sector** employs 80.000 workers and accounted for an average of 8.2% of the GDP in 2002. The main product extracted is Copper. The Agricultural sector provided 4.3% of the total national GDP. **The industrial sector** employs around 900,000 workers, about 16% of the national employment. About 95% of the industrial sector is composed by medium and small size industries. The chemical industry is composed by 130 companies that produce approximately 300 chemicals products. Main chemicals products exported are methanol, nitrates, Iodo, and lithium derivatives.

(a.1) Chile situation regarding reporting and monitoring systems

23. The design process of the national PRTR in Chile was undertaken between 2002 to 2005, having Environment Canada supporting the early stages of the design process (2002-2003) and US EPA, through the Free-Trade Agreement Chile-USA, supporting the following stages of the design process (2003-2005). The USA/Chile Free Trade Agreement specifically mentions the design of a PRTR system in Chile. The main output of this process was the development of a National PRTR Implementation Plan (*see appendix 4*). UNITAR was as the implementing agency during the design phase.
24. During the design phase, a PRTR National Coordinating Committee (comprised by representatives from government, industry, civil society and academia sectors) co-ordinated the efforts to design the main features and to determine the scope of the system. The PRTR National Coordinating Committee and the NIP team see significant co-benefits in fully implementing fully the PRTR with specific emphasis on POPs.
25. In 2002 Chile was selected to participate in the 12 Countries Pilot Project to develop a National Implementation Plan (NIP) that would meet Chile's obligations under the Convention. Chile finalized and endorsed its National Implementation Plan in 2005. During the NIP process Chile identified the implementation of the Pollutant Release and Transfer Register (PRTR) as a tool for POPs reporting and monitoring as a country priority.
26. The GEF funding will be used to adapt the PRTR system in Chile, currently being implemented, to comply with monitoring and reporting requirements under the SC Convention. In order to do

that, the Chilean PRTR will present features that are not typically an integral part of a PRTR, for example, inclusion of stockpiles of POPs pesticides, DDT, PCBs, information on possible contaminated soils, such as location and management.

27. This project will attempt to develop emission factors for PCB contaminated sites, which will in turn will complement the GEF funded UNDP-CONAMA project on “POPs contaminated sites with emphasis on PCBs”, considering emissions from contaminated sites as a criteria for designing a sound management of those. Coordination and identification of synergies will be developed by CONAMA, as the local executing agency for both projects.
28. The Central Coordinating Node for the POPs reporting and monitoring system will be the National Commission for the Environment of Chile (CONAMA).

(b) Cambodia

29. Geography of Cambodia (Figure 2): Cambodia is a tropical country situated in South East Asia between latitudes 10⁰ to 15⁰ north and longitudes 102⁰ and 108⁰ east, where the length from north to south is 480 km and the length from west to east is 580 km. It shares borders with Laos to the North, Thailand to the North and West and Vietnam to the East and South. The Kingdom of Cambodia has a total area of 181,035 Km² territories with a coastline of about 435 Km. It has a total population of 13.77 million, of which 52% are women.

Figure 2: Geographic Situation of Cambodia



30. Cambodia had a strong **economic** growth by 13.4% in 2005 (at constant 2000 prices), reflecting a strong growth in agriculture (16.6%), followed by industry (12.1%) Services – tourism and construction (12.1%). About 80-85% of the labor force is engaged in **agriculture** and related sub-sectors (fisheries and forestry). Cambodia main agricultural crop is rice, followed by rubber. **Industrial** development has increased rapidly since 1993, especially textiles and wearing apparel. It is also important to mention dressing, dyeing or fur, food and beverages as the main industrial products. Cambodia’s industrial sector is looking forward to large-scale development in the near future.

(b.1) Cambodia situation regarding reporting and monitoring systems

31. The Royal Government of Cambodia assigned the Ministry of Environment to be the National Focal Point for the Stockholm Convention and to execute the activities under the National Implementation Plan. A National Coordinating Committee (NCC), comprising members from

- line governmental ministries, institutions, academia and NGOs, was established to advise and steer the execution of the National Implementation Plan.
32. Cambodia's NIP was submitted to the Secretariat on 03 May 2007. Among the National Priorities identified, the development of a national chemicals database including POPs and PTS for centralization and exchanging of information is mentioned and will also include information on PCBs, POPs pesticides and DDT.
 33. Cambodia does not possess a centralised database for POPs or chemicals monitoring and information exchange. It may represent a serious difficulty in complying with reporting, NIP updating and monitoring requirements under the Stockholm Convention.

(c) Ecuador

34. Geography of Ecuador (Figure 3): Ecuador has four regions clearly differentiated: Coast, Andes, Amazon and Insular. Ecuador has a total surface of 256,370 Km². It has a total population of 12.1 million of inhabitants of which 50.5% are women. and the rate of literacy reaches 90% of the total population.

Figure 3: Geographic Situation of Ecuador



35. Ecuador's *economy* had been instable from 1995 to 1998, years in which the GDP falls about 30%. The economic indicators are improving slowly and the negative commercial balance between export and import is slowly improving. The sector that contributes the most to the national GDP is the *agriculture* (17%) followed by the *industrial* sector and Petroleum and mining, 15.9% and 15% respectively. The agricultural sector employs 646,419 workers and the main products are rice, bananas, cacao, flowers, maize, and potatoes. The Industrial sector produces food, textiles, wood, paper, plastics, and cement.

(c.1) Ecuador situation regarding reporting and monitoring systems

36. Ecuador's Ministry of Environment executed the NIP activities. Ecuador formed a National Coordinating Committee (NCC) to oversee the activities and developments under the NIP. It comprises a number of key governmental ministries, institutions, academia and NGOs.
37. In 2002 Ecuador was selected to participate in the 12 Countries Pilot Project to develop a National Implementation Plan (NIP). Ecuador finalized and endorsed its National Implementation Plan in 2006. During the NIP process Ecuador identified the implementation of a POPs information, monitoring, reporting and dissemination of information mechanism as a national priority.

38. In 2003, with funds provided by Environment Canada, Ecuador initiated the initial steps towards the development of a PRTR. Ecuador organized a National Workshop to define the national objectives and also conducted a feasibility study to assess the national situation with regards to similar reporting systems. Unfortunately this work could not be continued due to the lack of funding.

(d) Kazakhstan

39. Geography of Kazakhstan (Figure 4): Located in Central Asia, Kazakhstan is the ninth largest country of the world and occupies the territory of 2,724.9 thousand square km. The population of Kazakhstan is 15 million (based on 2005 date) with 57 % of population living in rural areas.

Figure 4: Geographic Situation of Kazakhstan



40. The industry share in GDP has reduced from 45 % of GDP in 1991 to 24 % in 2005 but remains relatively high. Chemical industry, production of rubber and plastic articles, other non-metal mineral products, production of machinery and equipment, transport engineering place an important role and contribute to the national industrial output. In 2004 industrial sectors involved 682.5 thousand people that makes almost a quarter of all workers employed in the economical sectors of the country. The most capital-intensive activities are the crude oil and gas extraction, metallurgic industry, production and distribution of electricity, gas, and water.
41. Industrial activities pose negative impacts on the environment. One of environmental concerns is air pollution. At least 5 millions in Kazakhstan live in the air-polluted conditions; 2 millions live in the extremely high level of pollution. Air pollution is caused by the emissions of enterprises of non-ferrous, heat power, ferrous, oil and gas, and transport.
42. POPs pesticides stockpiles is an area of concern in Kazakhstan. The number of stockpiles accumulated seems to be high and their emissions are high. Tracking and monitoring these stockpiles is one priority area to be addressed through this project.

(d.1) Kazakhstan situation regarding reporting and monitoring systems

43. At the 2002 World Summit on Sustainable Development in Johannesburg President of Kazakhstan, Mr. N. Nazarbayev proposed to establish a register of global environmental problems with concrete recommendations on attracting large scale investments to tackle them.
44. In 2004 Ministry of Environmental Protection started preparation of the NIP for POPs, following objectives set in the Government Resolution of the Republic of Kazakhstan of 3 February 2004 No. 131 on the Plan of Activities on Implementation of the Concept on Environmental Safety of

the Republic of Kazakhstan for 2004–2015. One of priorities identified in the draft NIP is establishment of a system on monitoring of dioxins and furans releases. As one step in this direction, Kazakhstan recognizes the importance of its citizens' access to environmental information and as a demonstration of national commitment, the country ratified to the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters on 11 January 2001. In November 2005 Kazakhstan established a National Coordination Team which includes representatives of the key government agencies and ministries, the OSCE Centre in Almaty, public interest groups and industry with the objective to initiate a preparation process for ratification of the PRTR Protocol and carry out initial work in this regard.

(e) Peru

45. Geography of Peru (Figure 5): Peru has a total surface of 1,285,215.6 Km², including the islands in the Pacific Ocean and the Peruvian side of the Titicaca lake. The territory is divided in three main regions: Coast, Andes and Amazon. It has a total population of 27.2 million of inhabitants of which 62% live in the urban areas and 38% in the rural areas. The rate of literacy reaches 86.87% of the total population.

Figure 5: Geographic Situation of Peru



46. Peru's *economy* had been growing steadily since 2002. The growing rate has been around 4-5% per year, due to an increase on exports and a more effective economic policy. In 2005 the GDP increased some 6.7%. The main economic sectors in Peru are Agriculture, Industry and Mining. The *agriculture* contributes to 8.9% of the GDP in 2004. The Industrial sector contributed to 15.3% of the national GDP. The mining sector contributes to 4,7% of the GDP in 2003. The main minerals produced are: Copper, Gold, Zinc, Silver and Lead.

(e.1) Peru situation regarding reporting and monitoring systems

47. Peru's National Council for the Environment (CONAM) executed the NIP activities. The project invited a number of stakeholders from different regions to participate in the process and to form the National Coordinating Committee (NCC) was formed in order to supervise and oversee NIP development.
48. Peru finished its NIP in 2007 and had identified the development of a PRTR as a monitoring and reporting system for POPs.
49. In 2006 the National Coordinating Committee (NCC) organized a workshop on the development of a monitoring and reporting system for the Convention. This workshop identified PRTRs as the tool to be used and also identified the objectives of a national PRTR. Following this workshop, a

PRTR feasibility study was conducted, concluding that a PRTR is needed in the country and that its implementation is possible based on existing infrastructure and national reporting systems.

(f) Thailand

50. Geography of Thailand (Figure 6): Located in the heart of Southeast Asia, Thailand is comprised of 76 provinces with a total area of 513,000 square kilometers and a population of 65 million.

Figure 6: Geographic Situation of Thailand



51. The agricultural sector in Thailand still provides a living for the majority of Thai people in the rural areas. Rice, cassava, sugarcane, rubber, and fruits are among the major crops grown in various regions of the country for local consumption and for export. The high domestic consumption of pesticides, herbicides and fertilizers is illustrated by the amount imported as finished products, formulated products for local packing, and active ingredients for local formulation.
52. High priorities of concern in Thailand are air pollution from vehicles, construction, and industries; occupational health problems from agricultural activities (insecticides and herbicides); chemical residues in food (pesticides, chemicals, and veterinary drugs); and chemical accidents from industry and transport.
53. Medium-rank problems include air pollution from power plants and petroleum stations; hazardous waste treatment and disposal; occupational health problems occurring in industrial and SMEs' activities; drinking water contamination; adverse reactions to health and consumer products; and import of unknown chemicals.

(f.1) Thailand situation regarding reporting and monitoring systems

54. In Thailand, PRTRs have been recognized as one of the essential tools for promoting environmentally sound management of chemicals/pollutants and for preventing health risk from hazardous chemicals. In addition, PRTR programmes are included in both national plans—such as Thailand's Third National Chemical Strategic Plan on Chemicals Management (2007-2011) and National Plan for the implementation of its obligation under the Stockholm Convention on the Persistent Organics Pollutants (POPs) in Thailand (2008-2012)—and international agreements—such as the Strategic Approach to International Chemicals Management (SAICM) and Chapter 19 of Agenda 21.
55. According to the national plans and international agreements, in late 2007, the Pollution Control Committee appointed a PRTR subcommittee, which consists of 16 members from relevant

agencies (for example; Pollution Control Department, Department of Industrial Works, Department of Primary Industries and Mines, Industrial Estate Authority of Thailand, Department of Labour Protection and Welfare, The Federation of Thai Industries, Department of Environmental Quality Promotion, and Department of Disease Control) for developing and implementing PRTR system.

(g) Ukraine

56. Geography of Ukraine (Figure 7): Ukraine is a country in Central and Eastern Europe that occupies southern west of the Eastern European plain and some part of Carpathians and Crimea mountains. Length of Ukraine is 893 km from north to south and 1,316 km from east to west, and its territory is 603.5 km² that is 5.7% of the European territory and 0.44% of the world's territory. Population of Ukraine is over 47.14 millions. Majority of inhabitants (68%) live in towns and cities, and 32% of the Ukrainian population live in rural area.

Figure 7: Geographic Situation of Ukraine



57. Ukraine has a major ferrous metals industry, and it ranks among the top steel producers in the world. Economic growth in Ukraine was catalyzed by the export of steel and chemicals.
58. Cast iron, rolled steel, and steel pipe are produced in Ukraine, mainly in the Donets Basin. Mining is also a very important branch of the economy, the main products being coal, natural gas, and iron ore. Prominent manufactured goods include metallurgical equipment, diesel locomotives, tractors, and television sets. The Ukrainian chemical industry produces coke, mineral fertilizers, and sulfuric acid. The food industry produces granulated sugar from sugar beets; flour, pasta, and baked goods from grain; oil and margarine from sunflower seeds; and meat, vegetable, and dairy products. Diversified industry, in more than 150 fields, is the most important sector in the economy in terms of productivity and revenue earned. In 2005 the share of industry in Ukraine accounted for 30 % of GDP compared to 50 % back in 1991.
59. During the Soviet period, rapid industrialization, intensive farming, and a lack of effective pollution controls combined to seriously degrade the environment in Ukraine. The coal-burning industries of eastern Ukraine, which emit high levels of sulfur dioxide, hydrocarbons, and dust, have created severe air pollution throughout the region. Major rivers, including the Dnieper, Dniester, Inhul, and Donets, are seriously polluted with chemical fertilizers and pesticides from agricultural runoff and with poorly treated or untreated sewage. Coastal water pollution in the Sea of Azov and the Black Sea has necessitated the closing of beaches and has led to a dramatic reduction in fish catches. [The 1986 accident at the Chernobyl nuclear power plant has created

severe environmental problems in northwestern Ukraine. Vast areas of land are contaminated by dangerous short- and long-lived radioactive isotopes, which can replace calcium in foods and become concentrated in bones and teeth].

(g.1) Ukraine situation regarding reporting and monitoring systems

60. Ukraine is active on the international arena in the environment field. It is a Party to a number of MEAs, including the Stockholm Convention. In 2003 Ukraine hosted the fifth Ministerial Conference “Environment for Europe” which was concluded a Protocol on Pollutant Release and Transfer Registers to the UNECE Aarhus Convention. Ukraine was one of the signatories to the Protocol.
61. The Ministry for Environmental Protection of Ukraine has taken the main responsibility for NIP development with active participation of concerned parties including representatives of the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, central and local bodies of executive power, entertainments, non-governmental organizations, community, scientific research workers, and others. The NIP identified a number of priorities that could be addressed through this project, including promoting of permanent exchange POPs information among concerned parties according to the requirements of Stockholm Convention and Protocol on POPs; public information, awareness and education concerning POPs; implementation of POPs information to educational process; improvement of state monitoring system as part of POPs Global monitoring system; and implementation of state PRTR according to the requirements of the Protocol under Aarhus Convention including POPs.

(h) Central American Region

62. Central America is undergoing a regional integration process with the goal of achieving a more united region in the political, economic and environmental fields. The Central American Integration System (SICA) has been a key promoter of regional integration, its fundamental objective being the achievement of Central American integration through peace, democracy and development (Tegucigalpa Protocol, 1991). In the economic area, Central American countries embarked on a customs union with the aim of achieving a gradual unification. Free trade agreements have been signed to facilitate trade among Central America and its partners. Of key importance is the DR-CAFTA, signed by Central American countries and the United States of America in which includes specific opportunities for environmental cooperation.
63. In responding to growing chemicals pollution concerns in the region, the Central American Regional Environmental Action Plan (PARCA, 2005-2010) introduces pollution control as a regional strategic objective, specifically stating that pollution must be managed through regionally harmonized systems.
64. PRTR development was widely supported by delegates from Costa Rica, Honduras, Guatemala, El Salvador, Panama and Nicaragua at the UNEP/UNITAR supported Central American PRTR Awareness Raising Workshop (San José, Costa Rica, December 2003). Additionally, Costa Rica’s authorities endorsed PRTRs in a PRTR Workshop in Costa Rica (San José, Costa Rica, December 2003). PRTRs were specifically identified as a key area for immediate action to be included in the Plan of Work of the DR-CAFTA Environmental Cooperation Agreement. Additionally, the Central American Council of Environmental Ministers requested the CCAD Executive Secretariat to coordinate with UNITAR a regional approach for PRTR implementation in Central America (Belize, January 2007). In follow-up CCAD has recently developed a PRTR feasibility study on at the regional level. As for the national-level initiatives, El-Salvador prepared a national PRTR feasibility study; the Dominican Republic pilot-tested the national PRTR in one selected area of the country. Outputs of these processes will serve as a basis for proposed activities in this region.

2.0 Rationale and Objectives

2.1 Rationale for GEF Intervention

65. Article 13 of the Convention sets out the principles on which "...developed country Parties shall provide new and additional financial resources to enable developing country Parties and Parties with economies in transition to meet the agreed full incremental costs of implementing measures that fulfil their obligations under the convention". Article 14 of the Convention states that "The institutional structure of the Global Environment Facility ... shall, on an interim basis, be the principal entity entrusted with the operations of the financial mechanism referred to in Article 13 ...".
66. In response, the Council of the Global Environment Facility agreed at its 19th meeting in May 2002 to amend the Instrument of the Facility to enable it to serve as an entity entrusted with the operation of the financial mechanism of the Convention. The Council having reviewed document GEF/C.19/14 recommends that the GEF Assembly designate "Persistent Organic Pollutants (POPs)" as a focal area in support to the implementation of the Convention.
67. Financial support to the Convention is currently focused on addressing priority areas identified by Parties to the Convention. Participating countries have expressed their difficulties in addressing reporting and monitoring aspects of the Convention and have identified those areas as national priorities within their National Implementation Plans.
68. This project is consistent with POPs Focal Area Strategy SP1: Strengthening capacities for NIP implementation by developing a regulatory framework in each participating country for POPs monitoring and reporting. It will also allow participating countries to enhance government's capacity to manage and monitor POPs by tracking POPs releases and transfers periodically, which will in turn allow easy updating of inventories and producing technical report for the SC Secretariat and other interested Parties.
69. This project is also in line with the Framework Strategy on Sound Management of Chemicals for GEF-4, specifically with SP1 by promoting chemicals management of chemicals ensuring global environmental benefits and with SP2 by articulating chemicals-related interventions within countries frameworks for chemicals management.
70. A PRTR system will allow participating countries to:
 - Gather, on a regular basis, of inventory data for major pollutants including POPs
 - Reduce costs to government and industry from a co-ordinated reporting system that will also include facilities licensing and monitoring
 - Hold and manipulate data to allow update/tracking of inventories
 - Prepare reports for information exchange, including reporting to the Convention Secretariat
 - Provide a portal for the provision of information to civil society
 - Update action plans and recognize priority areas on chemicals management.

2.2 Project Goal, and purpose Expected Outcomes, Objectives, Activities and Financial Inputs

71. The **goal** of this project is to protect human health and the environment from persistent organic pollutants – the principal objective of the Convention.
72. The **purpose** of this proposal is to meet participant countries' obligations relating to reporting, information exchange and public awareness through the implementation of a PRTR. A logical framework for the project is given in *Appendix 3*.

2.3 Specific Project Objectives

73. To achieve these goal and purpose, the activities of the project have been grouped into a series of objectives contributing to the planned outputs. These objectives are:

Objective 1: Project Management and Supervision regime

Objective 2: Implementation and use of PRTRs as a model for POPs reporting and monitoring system

- Objective 3: Design a PRTR system for POPs monitoring and reporting in Cambodia, Chile, Ecuador, Kazakhstan, Peru, Thailand and Ukraine
- Objective 4: Regional assessment of regional reporting systems in Central America for POPs and other chemicals
- Objective 5: Identification of Good practices and Sharing Lessons learned in POPs monitoring and reporting
- Objective 6: Development of a Monitoring and Evaluation Programme
74. Each of these objectives will require the execution of a series of activities. Wherever possible, these activities are developed in accordance with national regulations and particular situations, and international requirements. This project will pay special attention to the involvement of national stakeholders, since most activities involve the actions of many national actors.

2.4 Expected Project Outcomes/Outputs

75. The expected outputs/outcomes of the project are:
- PRTR used as a tool for POPs, and other chemicals, monitoring and reporting.
 - Identification of POPs and other chemicals priority areas nationally and regionally through annual information provided by PRTRs.
 - Capacity for POPs collecting of information and reporting enhanced nationally, allowing a rapid transfer and process of data and further provision of information.
 - Information available for all sectors, regardless of their access to modern and technological tools
 - Identification and availability of lessons learned and good practices in the development and implementation of POPs reporting and monitoring systems.

2.5 Activities and Financial Inputs (Implementation Plan)

76. An implementation plan for the project is provided in *Appendix 2*. The project activities comprise four main components: PRTR implementation by Chile, PRTR design by participating countries, a regional feasibility study and pilot test and an lessons learned and good practice component involving all countries participating in this project.

Objective 1: Project Management and Supervision

Activity 1.1 Operate project management, review, monitoring and evaluation regime

1.1.1 Define and set up project management, monitoring and supervision

(i) establish project work team for Implementation in Chile, regional assessment project and project design in participating countries; (ii) recruit and supervise national and international experts and subcontractors as necessary to deliver project outputs; (iv) plan, organise and execute the project activities set out below; (v) prepare and present project plans, regular progress and financial reports to responsible officers within CONAMA, relevant ministries in participating countries to UNITAR, which will in turn will report to UNEP; (vi) regular report to other interested entities, such as relevant national executing agencies and other entities.

Objective 2: Implementation and use of PRTRs as a model for POPs reporting and monitoring system

Rationale:

77. The Convention specifies the following obligations for Parties with regard to reporting, monitoring and access to information (Article 7, 9, 10, 11 and 15).
- Each Party shall review and update, where appropriate, its implementation plan on a periodic basis and in a manner to be specified by the Conference of the Parties.
 - The Parties shall exchange information on reduction or elimination of the production, use and release of persistent organic pollutants.

- Each Party shall designate a national focal point for the exchange of such information.
- Each Party shall promote and facilitate: i) provision to the public of all available information on persistent organic pollutants; ii) public participation in addressing persistent organic pollutants and their health and environmental effects.
- Each Party shall ensure that the public has access to the public information on persistent organic pollutants and that the information is kept up-to-date.
- The Parties shall, at the national and international levels, encourage and/or undertake appropriate research, development, monitoring and cooperation pertaining to persistent organic pollutants.
- Each Party shall report to the Conference of the Parties on the measures it has taken to implement the provisions of the Convention and on the effectiveness of such measures in meeting the objectives of the Convention.
- Each Party shall provide to the Secretariat statistical data on its total quantities of production, import and export of each of the chemicals listed in Annex A and B or a reasonable estimate of such data.

Activity 2.1 Legal Framework development

2.1.1 Legal implementation for PRTR reporting and institutionalization

(i) develop a strategy for PRTR implementation and institutionalization; (ii) develop a draft law/regulation to be considered for inclusion in the national legal framework; (iii) prepare, in consultation with national stakeholders, a scheme for reporting and compliance; *2.1.2 develop a single window implementation plan regulation*

(i) conduct an assessment and analysis of the national conditions required to implement a single window approach on PRTR legal implementation; (ii) develop a roadmap for the implementation of a single window approach; (iii) implement a single window approach technically and administratively.

2.1.3 develop a single window implementation plan

(i) conduct an assessment and analysis of the national legal, technical and administrative conditions required to implement a single window approach on PRTR implementation; (ii) develop a roadmap for the implementation of a single window approach;

2.1.4 develop and implement a norm for liquid industrial waste

(i) establish a task force to develop a draft norm for liquid industrial waste; (ii) conduct a study to assess the feasibility for a national norm for liquid industrial waste; (iii) develop a workplan for legal implementation of a norm for liquid industrial waste; (iv) implement the norm.

Activity 2.2 National Technical Capacity Enhancement

2.2.1 Develop or improve classification systems

(i) assess the industrial and chemicals classification system in the country; b) develop a proposal to harmonize classification system in all national databases and reporting systems; c) implement the proposal and harmonize classification systems.

2.2.2 Implement PRTRs (integration of reporting systems)

(i) assess existing reporting system; (ii) develop, in conjunction with relevant entities, a technical national proposal to integrate reporting systems; (iii) integrate national reporting systems, including POPs inventories and information; (iv) adapt national PRTR to include information on POPs stockpiles, risk assessment, contaminated soils and DDT stockpiles

2.2.3 Enhance estimation techniques

(i) review current estimations techniques; (ii) identify gaps and opportunities for improvement estimation techniques; (iii) recommend and develop new or enhance existing estimation techniques

2.2.4 Implement single window approach

(i) review recommendations in single window approach document; (ii) implement, in conjunction with relevant stakeholders in government and industry, recommendations and workplan for a single window approach

2.2.5 Compare emissions vs national regulation

(i) develop, in conjunction with national stakeholders, a national proposal for PRTR data display on the internet; (ii) conduct a pilot exercise on PRTR data display to be reviewed by national stakeholders; (iii) develop, in conjunction with national stakeholders, recommendations including national regulation regarding PRTR data display; (iv) implement recommendations and include them in the PRTR data display in the internet.

Activity 2.3 Public Information dissemination to main stakeholders

2.3.1 Develop a Public Outreach Strategy and Training Materials

(i) hire a consultant to develop a public outreach strategy for PRTRs; (ii) implement, in conjunction with relevant stakeholders, the PRTR outreach strategy; (iii) review existing materials on PRTR development and use/ interpretation; (iv) develop and/or update training materials for national stakeholders – government officials, NGOs, industry sector and journalists- on PRTR use and understanding;

2.3.2 Implement a training programme for NGOs

(i) develop a detailed programme to train NGOs to fully participate in the PRTR process; (ii) organize a workshop to assess NGOs knowledge and needs regarding PRTR administration and data processing; (iii) conduct two workshops to train NGOs regarding PRTR involvement, data interpretation and dissemination (iv) develop a training programme report and manual for NGOs.

2.3.3 Implement a training programme for Government

(i) organize a workshop to assess government officials knowledge and needs regarding PRTR administration and data processing; (ii) conduct two workshops to train government officials involved in PRTR data management; (iii) develop a training programme report and manual for government officials.

2.3.4 Implement a training programme for Industry

(i) organize a workshop to assess industry representatives knowledge and needs regarding PRTR reporting and compliance with national regulation; (ii) conduct two-three workshops to industry sector and assist them to report to the PRTR system; (iii) develop a training programme report and manual for industry.

2.3.5 Implement a training programme for Journalists

(i) organize a workshop to assess journalists knowledge regarding PRTR; (ii) conduct two workshops to train journalist on how to interpret and present data to the public; (iii) develop a training programme report and manual for journalists.

2.3.6 Develop a PRTR website

(i) design a PRTR website to be consulted by the public; (ii) develop appropriate interfaces to government offices involved in PRTR management, industry facilities to report (electronic reporting) and public in general to consult the information; (iii) conduct a pilot to present the PRTR data through internet and obtain feedback from national stakeholders; (iv) launch the national PRTR website.

Activity 2.4 Information Exchange Scheme

2.4.1 Development of a PRTR POPs administrative office

(i) assess national mandates and capacities and select the PRTR/POPs administrative office; (ii) strengthen national capacities and design a plan to assign roles and responsibilities regarding PRTR POPs information flow and relation with relevant institutions, eg. purchase of hardware and software dedicated exclusively to PRTR/POPs system for regional and central node, ; (iii) set up the PRTR POPs administrative office; (iv) convene meetings with stakeholders (at least 6 during the duration of the project) to review material to be disseminated; (v) hire a consultant to develop terms of reference for institutionalization of PRTR administrative office; (vi) develop printed material to publicize PRTR/POPs admin office; (vii) hire a

consultant to develop a national strategy for the national PRTR POPs administration and information office..

2.4.2 Development of an annual Publication on PRTRs and POPs

(i) hire consultant to collect PRTR reports from other countries, extract relevant information and propose a unique national Chilean PRTR and POPs summary report; (ii) consult draft PRTR publication with relevant stakeholders; (iii) print report and publish it; (iv) disseminate report to main stakeholders and to Parties of the Stockholm Convention.

Objective 3: Design a PRTR system for POPs monitoring and reporting in Cambodia, Ecuador, Kazakhstan, Peru, Thailand and Ukraine

Rationale:

78. The Convention specifies under Article 10 on Public information, awareness and education that:
- “Each Party shall, within its capabilities, ensure that the public has access to the public information referred to in paragraph 1 and that the information is kept up-to-date.”
 - “Each Party shall give sympathetic consideration to developing mechanisms, such as pollutant release and transfer registers, for the collection and dissemination of information on estimates of the annual quantities of the chemicals listed in Annex A, B or C that are released or disposed of...”
79. All activities under this Objective will be conducted in every participating country and cross-cutting activities (NGO participation, development of a legislative framework) will be performed in every country and will be included in activities 3.2 to 3.6.

Activity 3.1 Identify goals and objectives of a National PRTR system

3.1.1 Organization of a National PRTR workshop to define the objectives and purposes of a PRTR system

(i) plan, in conjunction with relevant national stakeholders, logistics and administrative arrangements for a national workshop on PRTRs; (ii) organize and run a national workshop on PRTRs in every participating country and assess how to address different Multilateral Environmental Agreements (MEAs) through PRTRs; (iii) prepare a workshop report with recommendations for PRTR development

Activity 3.2 Assess the existing infrastructure relevant to National PRTR

3.2.1 Conduct a Feasibility Study on PRTRs

(i) gather information on existing reporting and monitoring systems in each country; (ii) assess the feasibility for integration of existing reporting systems and needs for adaptation to comply with a unified PRTR system and the Stockholm Convention; (iii) develop a feasibility study report, recommending actions for PRTR development in participating countries

Activity 3.3 Design the key features of a National PRTR system

3.3.1 Development of Technical Key features of the PRTR system

(i) hire a consultant to follow the recommendations of the feasibility study and build, in conjunction with national stakeholders, a suitable PRTR system which will include information on POPs stockpiles and contaminated sites; (ii) circulate draft PRTR system report to national stakeholders for comments and recommendations; (iii) develop the final proposal for implementation of the technical development of the PRTR system.

3.3.2 Development of a Normative Framework for a PRTR system

(i) develop, in consultation with national stakeholders, a draft national normative framework for PRTRs; (ii) take into account comments and develop a final national normative for PRTRs and a plan for implementation

3.3.3 Develop administrative characteristics of the system

(i) define roles and competences of government agencies regarding the PRTR reporting system; (ii) develop a report on national administrative characteristics of the system highlighting different roles for government agencies and how data will flow; (iii) develop a roadmap for implementation

3.3.4 Develop an awareness raising and a PRTR dissemination plan

(i) identify potential partners for information dissemination; (ii) develop a national plan for PRTR dissemination and awareness raising in different sectors; (iii) implement dissemination and awareness raising plan.

3.3.5 Develop a Reporting Scheme to comply with MEAs

(i) identify existing reporting scheme for PRTR and opportunities to include POPs information, as well as other Conventions' related information; (ii) make recommendations to adapt existing reporting schemes to comply with POPs requirements and PRTRs; (iii) conduct a pilot to test proposed reported scheme and flow of information (see activity 3.4).

Activity 3.4 Conduct a PRTR Pilot reporting trial

3.4.1 Select target sector or location for pilot test

(i) discuss, with national stakeholders, target place and sector to conduct the pilot; (ii) meet national and regional authorities to sign an MoU to cooperate during the pilot; (iii) conduct the pilot.

3.4.2 Process information

(i) gather results; (ii) process data; (iii) prepare draft report of pilot reporting trial.

3.4.3 Present results and recommendations

(i) prepare a final report on pilot reporting trial; (ii) organize a workshop to present final results and recommendations.

Activity 3.5 Finalize a National PRTR proposal

3.5.1 Develop a National PRTR implementation proposal

(i) develop a draft national PRTR implementation proposal, including results and recommendations from pilot; (ii) circulate draft proposal to main stakeholders and incorporate comments; (iii) develop final proposal for PRTR implementation; (iv) develop a strategy for the PRTR implementation proposal.

Activity 3.6 Conduct a National PRTR Implementation Workshop

3.6.1 Organize a PRTR endorsement workshop

(i) Organize a National PRTR Implementation workshop to present the national PRTR implementation proposal and seek endorsement.

Objective 4: Regional assessment of reporting systems for POPs and other chemicals in Central America

Activity 4.1 Organize National Execution

4.1.1 Organize National teams and project execution

(i) organize a regional workshop to organize administration and execution of the project in each participating country; (ii) develop a workplan for the project

Activity 4.2 Conduct a regional assessment study

4.2.1 Conduct regional assessment study

(i) identify, in conjunction with relevant stakeholders, regional and international experts to conduct the regional study; (ii) develop a draft study –with recommendations, opportunities and weaknesses for PRTR systems in the region; (iii) circulate draft study for comments.

Activity 4.3 Conduct a PRTR pilot demonstration in two countries in the region

These activities will be supported through services available at the Virtual Classroom on PRTRs. Online interactive discussion groups on specific issues related to the project will be organized and facilitated by UNITAR upon countries' requests

4.3.1 Selection of two countries for pilot test

(i) based on the results of the regional assessment, select two countries to design and pilot test a PRTR

POPs reporting and monitoring system in two countries in the region; (ii) engage key stakeholders in the pilot test; (iii) train regions selected on reporting and data processing aspects.

4.3.2 Conduct pilot test

(i) conduct pilot test on PRTR in two countries; (ii) gather results from pilot; (iii) analyse results, prepare conclusions and make recommendations; (iv) prepare report from pilot, including recommendations for the region

Objective 5: Identification of Good practices and Sharing Lessons learned in POPs monitoring and reporting

Rationale:

80. The Convention in its Article 10 establishes that “Each Party shall promote and facilitate the development and exchange of educational and public awareness materials at the national and international levels...”. It also indicates that “the Parties shall, at the national and international levels, encourage and/or undertake appropriate research, development, monitoring and cooperation pertaining to persistent organic pollutants.
81. Article 12 states that “the Parties shall cooperate to provide timely and appropriate technical assistance to developing country Parties and Parties with economies in transition, to assist them taking in to account their particular needs, to develop and strengthen their capacity to implement their obligations under the Convention.”
82. The Convention in Article 7 indicates that “the Parties shall cooperate directly or through global, regional and subregional organizations, and consult their national stakeholders...to facilitate updating of their implementation plans”

Activity 5.1 Development of Global guidelines for POPs monitoring and reporting systems

5.1.1 Develop or Update Global guidelines on PRTR development as a tool for POPs monitoring and reporting

(i) gather existing guidance on PRTR development; (ii) draw global conclusions and recommendations for the development of PRTR for POPs; (iii) develop customized guidance or update existing material on the development of POPs monitoring and reporting systems in three different regions: Asia, Latin America and Central and Eastern Europe; (iii) publish these materials on UNEP and UNITAR website for public access and print them.

Activity 5.2 Identification of lessons learned and good practices

5.2.1 Identification of Lessons learned and good practices

(i) review all the reports and documents produced through the project and identify lessons learned and good practices in different countries and regions; (ii) draft a report on lessons learned and good practices to be used as a main resource material during the global meetings.

5.2.2 Exchange of information through meetings on lessons learned and good practices

(i) organize three meetings on lessons learned and good practices on PRTR for POPs development (3); (ii) develop meeting reports and summarize them in a final report, prior consultations with countries, on lessons learned and good practices on the development of PRTR for POPs; (iii) publish final report and make it available on hard copy and on the web to SC Secretariat, GEFSEC, Parties and Implementing Agencies; (iv) provision of international consultants as required during the project.

Objective 6: Development of a Monitoring and Evaluation Programme

Activity 6.1 Steering Committee Meetings

6.1.1 Organize Steering Committee meetings with participating countries

- (i) organize three meetings (at the beginning, middle and end) of the Steering Committee to assess project progress; (ii) develop meeting reports

Activity 6.2 Monitoring and Evaluation Programme

6.2.1 *Terminal Evaluation*

- (i) Develop a Monitoring and Evaluation programme for the project; (ii) execute M&E programme; (iii) make arrangements to plan a detailed terminal external evaluation; (iv) develop a final report for M&E and submit it to the GEF Sec.

3.0 Risks, Sustainability and Commitments

3.1 Possible Risks and Proposed Risk Mitigation Measures

(a) Low support provided by national stakeholders

- 83. A PRTR systems implies a reporting scheme in all media and a very strong component on access to information. Some stakeholders may be concerned about the type of information displayed and how much cost is involved in reporting to this new system.
- 84. The mitigation measures to be taken are:
 - Conduct awareness raising activities in a transparent and inclusive way
 - Plan roundtables and information sessions to engage all stakeholders and inform about the potential benefits of the system: e.g. reduced reporting costs for industry, reporting to one single system instead to different systems and media; information may be displayed according to the national needs and Stockholm Convention requirements.
 - Provide customized training sessions to stakeholders to participate in the project, invite them to participate in the development of related regulations, facilitate interactions with other groups, empower them to fully participate.
 - Identification of potential incentives for industries participating in a pilot exercise

(b) Information available on PRTRs interpreted differently

- 85. National Stakeholders may be concerned about the use of the data and how it is presented within a national/regional/global context. We need to bear in mind that POPs information regarding human health should be displayed.
- 86. The mitigation measures to be taken are as follows:
 - Training sessions for all stakeholders and to journalists regarding data management and display
 - Include national context, legislation and other important information (e.g. toxicological information) in presenting the information to the public. Associating information with local reality and legislation may help to understand the meaning of POPs and other chemicals' quantities displayed.

(c) PRTR not sustained by countries

- 87. PRTRs may not be sustained due to political changes in national governments and schift of national priorities in the country.
- 88. The mitigation measures to be taken are:
 - Develop and implement an awareness raising and PRTR dissemination strategy in order to draw attention to PRTRs as efficient means of fulfilling Stockholm Convention reporting obligations.
 - early involvement of all stakeholders in the process of developing a PRTR
 - addressing stakeholders concerns properly
 - address legal issues early in the process will allow to “institutionalize” the PRTR nationally
 - ownership of PRTRs, which can be seen as a national system and not only a “government” initiative.

3.2 Sustainability

89. Sustainability implies country commitment to integrate and sustain PRTRs as a regular activity in the National Environmental Programme. Countries participating in this project are Parties to the Stockholm Convention and will have to comply with Convention's obligations on monitoring, reporting and information dissemination.
90. National Implementation Plans in participating countries have been developed through a multi-stakeholder processes, where representatives from key ministries participated and endorsed the final NIP. In all project countries, the NIPs identified the development of an information exchange, monitoring and reporting system as a national priority. As such, the integration of the PRTR as a regular activity in the national programs will be highly secured.
91. The government of Chile has assigned one government official to work on the implementation of PRTR related issues. It has also created a national programme on PRTRs (which is under development) within CONAMA, demonstrating PRTR integration in the national environmental programme and securing sustainability over time.
92. This project will include the development of a legal system with the objective to institutionalize and integrate PRTRs in the national environmental agendas. Drafting regulatory elements for POPs monitoring system will be done in consultation with different sectors. This project will also build elements to continue work, such as development of inter-ministerial agreements, industry cooperation agreements, NGOs programmes, etc.
93. This project will enhance the replication in other countries and will also enhance experience sharing with wider indirect benefits to other chemical related initiatives such as SAICM, see introduction, and to the overall chemical management in countries. This project will also explore possible links to Climate Change initiatives.

3.3 Commitments

(a) Commitment of Participating Countries

94. Participating countries in the project have ratified the Stockholm Convention and as Parties, are committed to comply with Convention's obligations on POPs monitoring, reporting and information dissemination. Participating countries demonstrate their national commitment to this project and to the implementation of the Stockholm Convention by providing a financial contribution to the project. Table 1 indicate the date of ratification of the SC from participating countries:

Table 1: Date of Stockholm Convention ratification and GEF funding requested for this project.

Country Name	Date of SC ratification*	Level of national co-financing (USD) – in kind and/or cash	GEF funding request
Cambodia	25.08.2006	50,000	YES
Chile	20.01.2005	600,000	YES
Ecuador	07.06.2004	52,800	YES
Kazakhstan	09.11.2007	50,000	YES
Peru	14.09.2005	54,520	YES
Thailand	31.01.2005	50,000	YES
Ukraine	25.09.2007	50,000	YES
<i>Regional Component</i>			
Costa Rica	06.02.2007	NA	NO

Dominican Republic	04.05.2007		
El Salvador	-		
Guatemala	-		
Honduras	23.05.2005		
Nicaragua	01.12.2005		

* date of reception of instrument of ratification

95. National Implementation Plans on POPs contain national actions on specific national priorities. These actions will require the provision of human and financial resources to address these priorities at the national level and may also require requesting financial and technical assistance at the international level.

(b) Commitment of UNEP

96. UNEP is committed to assisting its developing country Member States in regard to the Stockholm Convention. UNEP is a GEF Implementing Agency and the GEF has approved Enabling Activities proposals submitted by UNEP for more than 60 countries, including the pilot project of work in 12 countries. In addition, a proposal for Brazil that has opted to undertake NIP development via the GEF full project cycle, have been approved. UNEP is also implementing or developing a range of methodological development and demonstration projects geared to support Convention implementation. UNEP has committed considerable effort to build this assistance programme. This commitment is based on a clear understanding that these activities are compatible with UNEP's mandate and corporate strategy and lead towards the Millennium Development Goals.
97. Many of these Enabling Activities projects are now reaching completion. UNEP is now taking up key issues of common interest at global or regional levels to assist country teams to implement the actions they have defined as priorities in their National Implementation Plans

4.0 Implementation Arrangements, Monitoring and Evaluation

4.1 Implementation arrangements

98. This project will be implemented by UNEP DGEF and executed by The United Nations Institute for Training and Research (UNITAR). UNITAR will execute, in partnership with local agencies, national activities in participating countries and will also supervise the project's component on lessons learned and information exchange in participating countries. Every country participating in the project will form a national counterpart to execute activities at the national level.

(a) Local Environmental Agencies

99. Every participating country will form a National Coordinating Team (NCT) which will be composed by different stakeholders from main sectors and will supervise and participate in the project.
100. The overall execution and coordination of the activities at the national level in participating countries will be in charge of national agencies responsible for environmental management in the country. A **PRTR Project Team (PT)** will be established within the national executing agencies in every participating country and will be in charge of the execution and management of the project. It will report to the National Coordinating Team (NCT), to the Implementing Agency and to the POPs National Coordinating body.
101. The national executing agencies will coordinate and will keep close contact with UNITAR in order to synchronize actions and to exchange information regularly. The experience gained in countries during the PRTR design and implementation will be available to participating countries and beyond.

(b) United Nations Institute for Training and Research (UNITAR) – text provided by UNITAR

102. UNITAR provides institutional, technical, and legal support to governments and stakeholders to develop sustainable capacity for managing dangerous chemicals and wastes. Project activities take place within the framework of implementing international agreements (such as SAICM, Stockholm Convention, and Rotterdam Convention) aimed at protecting human health and the environment, while ensuring sustainable industrial development and facilitating the trade of chemicals. The UNITAR approach to capacity building supports a country-driven programmatic and integrated approach to chemicals management, as endorsed at the International Conference on Chemicals Management (ICCM) in Dubai, February 2006.
103. UNITAR has a long-standing experience in supporting development of Pollutant Release and Transfer Registers (PRTRs). Through its PRTR Programme UNITAR provided to interested countries methodological and technical assistance, guidance materials and supported country-based activities. UNITAR gained its experience from past collaboration with Cuba, Argentina, Egypt, the Czech Republic, Mexico, the Slovak Republic, South Africa, Chile and Ecuador. UNITAR is currently collaborating with Armenia to Design a National PRTR System to Strengthen National Capacities for the Implementation of the Stockholm Convention. Lesson learned and experience gained in Armenia will be valuable for proposed activities.
104. In-house specialists and senior advisers, as well as outside consultants will be made available depending on countries' specific needs and circumstances. UNITAR in-house expertise includes professionals with various skills in the developing PRTR systems in general as well as its specific aspects. UNITAR will endeavor, to the possible extent, accommodate countries' needs using specialists with appropriate language skills to facilitate communication and discussions. Active in PRTR-specific fora (e. g. through participation and chairing of the International PRTR Coordinating Group; meetings of the Working Groups on PRTRs to the Aarhus Convention, etc.), UNITAR is well aware about global and regional trends related to PRTRs. UNITAR possessed sufficient knowledge and project management capacities developed through the provision of technical and methodological assistance on sound chemicals management to numerous countries around the world for over 15 years

(c) UNEP's Relevant Experience

105. UNEP is the overall coordinating environmental organization of the United Nations system. Its mission is to provide leadership and encourage partnerships in caring for the environment by inspiring, informing and enabling nations and people to improve their quality of life without compromising that of future generations. In accordance with this mandate, UNEP works to observe, monitor and assess the state of the global environment, to improve our scientific understanding of how environmental change occurs, and to promote action-oriented national policies and international agreements to manage environmental change.
106. UNEP's capacity building work thus centres on helping its member states to strengthen environmental management in diverse areas in freshwater and land resource management, the conservation and sustainable use of biodiversity, marine and coastal ecosystem management, and cleaner and sustainable industrial development.
107. UNEP administers a number of multilateral environmental agreements. Those pertinent to sound chemicals management include the Vienna Convention's Montreal Protocol on Substances that Deplete the Ozone Layer; the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Convention on Prior Informed Consent procedure for Certain Hazardous Chemicals and Pesticides in International Trade (jointly with FAO), the Stockholm Convention on Persistent Organic Pollutants, and, most recently, the Strategic Approach to International Chemicals Management (Jointly with WHO).
108. UNEP Chemicals, a component branch of the Division of Technology, Industry and Economics, is the centre for all chemicals-related activities of the United Nations Environment Programme. It provides capacity building, scientific and technical support to member states in respect of

chemicals management and has promoted and supported the development of many of the chemicals MEAs listed above. It is a founder member of the IOMC.

109. UNEP is an Implementing Agency of the GEF. A dedicated division, the Division of GEF Coordination (DGEF) supervises the implementation of its project portfolio, extending across all the Focal Areas of GEF operations. DGEF has supervised the largest portfolio of GEF-funded Enabling Activities assisting 58 countries³, almost half of all countries receiving GEF assistance, to develop their NIPs for the Stockholm Convention. UNEP is also assisting Brazil to develop its NIP via the GEF full project cycle.
110. In addition to the Enabling Activities, UNEP and its partners are developed a number of proposals to implement priority actions arising from the national plans and is executing projects:
- to identify best approaches for PCBs management and disposal (W Africa);
 - to identify alternative methods of disease vector control obviating the need for DDT;
 - to identify approaches to minimize or eliminate POPs pesticide use and to prevent pesticide leaching to sensitive environmental compartments;

(d) Correspondence

111. This project will involve one executing agency: UNITAR. All correspondence regarding substantive and technical matters should be addressed to:

All correspondence regarding substantive and technical matters should be addressed to:

<p>UNEP: Maryam Niamir-Fuller The Director Division of GEF Coordination (DGEF) UNEP P.O. Box 30552 Nairobi, Kenya fax: +254-20-762 4041</p>	<p>For UNITAR: Mr. Craig Boljkovac Manager Chemicals and Waste Management Programme UNITAR Palais des Nations CH-1211 Geneva 10, Switzerland Tel: +41 22 917 8471 Fax: +41 22 917 8047 Email: craig.boljkovac@unitar.org</p>
<p><i>With a copy to:</i> Jorge Ocaña Task Manager Division of GEF Coordination UNEP International Environment House 15 Chemin des Anémones, CH-1219, Châtelaine Geneva tel: +41 (0)22 917 8195 fax: +41 (0)22 797 34 60 email: jocana@chemicals.unep.ch</p>	<p><i>With a copy to:</i> Tatiana Terekhova Training Associate Chemicals and Waste Management Programme UNITAR Palais des Nations CH-1211 Geneva 10, Switzerland Phone: +41 22 917 84 70 Fax: +41 22 917 80 47 E-mail: tatiana.terekhova@unitar.org</p>

³ Including 12 countries undertaking enabling activities as part of the ‘pilot project to develop NIPs’

All correspondence related to financial administrative and financial matters should be addressed to: -

<p>UNEP: Mr. Theodor Kapiga, OIC Corporate Services Section (CSS), Executive Office, United Nations Environment Programme P.O. Box 30552 Nairobi, Kenya Tel: 254-20-762 3661 Fax: +254-20-7624041</p>	<p>For UNITAR: Ruth Högländ Chief, Administration and Finance Section UNITAR Palais des Nations CH-1211 Geneva 10, Switzerland Tel: 0041 22 917 8590 Fax: 0041 22 917 8047 E-mail: ruth.hogland@unitar.org</p>
<p>With copies to: Mr Paul Vrontamitis Fund Management Officer Division of GEF Coordination UNEP P.O. Box 30552 Nairobi, Kenya Tel : 254-20-762 4034 Fax: +254-20-762 4041/762 3162</p>	<p>With a copy to: Margarete Hahnen Administration and Finance Section UNITAR Palais des Nations CH-1211 Geneva 10, Switzerland Tel +41 22 917 85 24 Fax +41 22 917 80 47 E-mail: margarete.hahnen@unitar.org</p>
<p>Jorge Ocaña Task Manager Division of GEF Coordination UNEP International Environment House 15 Chemin des Anémones, CH-1219, Châtelaine Geneva Tel: +41 (0)22 917 8195 Fax: +41 (0)22 797 34 60 email: jocana@chemicals.unep.ch</p>	<p>Tatiana Terekhova Training Associate Chemicals and Waste Management Programme UNITAR Palais des Nations CH-1211 Geneva 10, Switzerland Phone: +41 22 917 84 70 Fax: +41 22 917 80 47 E-mail: tatiana.terekhova@unitar.org</p>

4.2 Monitoring and Evaluation

112. Day-to-day management and monitoring of project activities, and any consultants and subcontractors recruited to undertake them, will be the responsibility of project teams at the country level. The teams will be responsible for delivering the technical outputs from individual objectives, and coordinating and compiling these to form the project reports. The executing agencies, UNITAR, will collect information on the country teams and will report to the implementation Agency (UNEP) on progress made and project's evaluation.
113. The **project team** in each national executing agency will comprise a **project coordinator**, a technical assistant and support staff. The **project manager** at the executing agency level will be in charge or contacting the project team and reporting to the implementation agency, management arrangements with the national coordinator/ project teams and recruiting arrangements at different levels, prior consultation with the implementing agency.
114. The **project steering committee** will assess progress made and will take the necessary measures to ensure objectives and goals are achieved. It will comprise representatives from the donor community, implementing and Executing Agencies, other implementing agencies from the GEF family and project coordinators in each participating country. The Steering Committee will meet three times during the lifetime of the project, at the beginning (inception workshop), middle and near the end of the project. These meetings will be held back to back with other technical meetings.

115. During the course of the project the team at the executing agency level will also be responsible for the preparation of regular progress and financial reports, and for the preparation of forward plans and budgetary estimation. The timely preparation and submission of mandatory reports forms an integral part of the monitoring process. Reporting requirements are summarized in the table 10.

Table 2: Progress, Monitoring and Evaluation Reports

Report and Content	Format	Timing	Responsibility
Inception report			
Detailed implementation plan for progress monitoring	Agreed format allowing progress tracking	Following inception workshops	Project team UNITAR
Progress reports			
Documents progress & completion of activities; Describes progress against annual work plan; Reviews implementation plans, summarizes problems and adaptive management; Provides activity plans for following period; Provides project outputs for review	UNEP Progress Reporting Formats;	3-monthly, within 15 days of each reporting period	Project teams UNITAR
Financial Reports			
Documents project expenditure according to established project budget and allocations; Provides budgetary plans for following reporting period; Requests further cash transfers; using cash advance statements Requests budget revision as necessary; Provides inventory of non-expendable equipment procured for project	UNEP Financial reporting formats; Inventory of non-expendable equipment	3-monthly, within 15 days of each reporting period	Project teams UNITAR
Annual Progress Reports			
Provides consolidated review of progress and outputs of project actions; Describes progress against annual work plan; Highlights project achievements, difficulties and measures taken to adapt; Provides progress plans and budgetary requirements for the following reporting period; Provides general source of information for general project reporting	UNEP Progress Report model	Annual, within 30 days of each reporting period	Project teams UNITAR
Inventory of non-expendable equipment (items over \$1500 or more as well as items of attraction such as pocket calculators, cameras, computers, printers).	UNEP inventory report model	Annually by 31 January and within 60 days of the completion of the project/ to be attached to the progress report	Project teams UNITAR
Financial Audit			
Audit of project accounts and records	Approved audit report format	at project completion	Independent auditor
Co-financing report			
Reports co-financing provided to the project; Reviews co-financing inputs against GEF approved financing plan	UNEP reporting format	Annual	Project teams UNITAR
Project Implementation Review (PIR) reports			
Summary implementation review	UNEP format	Annual	UNEP Project Manager
Terminal report			

Review of effectiveness of the project, its technical outputs, lessons learned and progress towards outcomes	UNEP reporting format	At project completion	UNITAR management UNEP-DGEF
Terminal Evaluation			
Provides detailed independent evaluation of project management, actions, outputs and impacts	GEF M&E format	At project completion	Independent Evaluator UNEP DGEF Project teams UNITAR

116. The ***Inception report*** will include a detailed narrative on the institutional roles and responsibilities of the project partners, identify stakeholder engagement commitments developed during the inception workshops, set out progress on project establishment and start-up activities, provide a detailed implementation plan suitable for progress tracking purposes. The report will be submitted to UNITAR and UNEP-GEF and used as a benchmark against which regular progress reports are reviewed.
117. ***Progress reports*** will be prepared by the project coordinator at the country level in English within 15 days of the end of each three-month period. Reports will be prepared using the standard UNEP format to be provided. The reports will be approved by the national executing agency (UNITAR) and submitted to UNEP-DGEF. These reports form the principal tools of regular project monitoring and will contain:
- an account of actual implementation activities undertaken during the reporting period and an assessment of progress against the implementation plan
 - an identification of barriers to project implementation and recommendations for corrective actions during the following period, including any revision to the implementation plan
 - a detailed and costed work plan for the following reporting period, including a forward project of the status of funds held locally and, when necessary, a request for further cash transfers to the project
 - an updated inventory of non-expendable equipment and items of attraction procured for the project
 - copies of project meeting reports and participants lists, technical outputs submitted to the project team
118. ***Financial reports (National Project Expenditure Accounts)***: will be prepared by the project coordinator within 30 days of the end of each three month period. Reports will be prepared in US\$ using the project budget codes and in the standard UNEP format to be provided. They will contain an account of actual expenditure in support of the activities undertaken. The reports will be approved by a duly authorised official of UNITAR and submitted to UNEP-DGEF.
119. A ***terminal financial audit*** is required within 180 days of the completion of the project. UNITAR will supply UNEP with a final statement of account in the same format as for the periodic financial statements, certified by a recognized firm of public accountants. If requested, UNITAR shall facilitate an audit by the United Nations Board of Auditors and/or the Audit Service of the accounts of the project. In particular, the auditors should be asked to report whether, in their opinion:
- Proper books of account and records have been maintained;
 - All project expenditures are supported by vouchers and adequate documentation;
 - Expenditures have been incurred in accordance with the objectives outlined in the project document;
 - The Expenditure reports provide a true and fair view of the financial condition and performance of the project

120. **Unspent funds:** Any portion of cash advances remaining unspent or uncommitted by on completion of the project will be reimbursed to UNEP within one month of the presentation of the final statement of accounts. In the event of any delay in such reimbursement, the executing agency, UNITAR, will be financially responsible for any adverse movement in the exchange rates.
121. **Co-finance report:** The Executing Agencies will report annually on the co-finance received and used to advance the project activities. The report will be prepared using the format to be provided by UNEP and will show:
- The amount of co-financing realized compared with the amount of co-financing committed to at the time of project approval, and
 - Co-financing reporting by source and by type⁴.
122. **Annual Progress reports** will be prepared by the project coordinator in English at the end of each 12 month period of project implementation. These will provide a detailed synopsis of project progress and status, administrative, technical and financial, and form the basis for annual reviews by the project steering committee and tripartite review meetings between the project team, UNITAR and UNEP-DGEF. The timely provision of the annual progress reports and the tripartite review meetings will allow the preparation of the **Project Implementation Review (PIR)**. The PIR is an annual monitoring process mandated by the GEF and for which the independent GEF M&E unit provides the scope and content. Individual PIRs are collected, reviewed and analysed by UNEP-DGEF by focal area, theme and region to extract common issues, lessons learned and good practices. Focal area PIRs are discussed at the GEF Interagency Focal Area Task Forces with consolidated reports by focal area then being transferred to the independent GEF M&E unit.
123. The **Terminal Report** is prepared by the national project team and executing agency (UNITAR) in English within the 60 days following the end of project implementation. It is submitted to UNEP-DGEF, to the Chief, Budget and Financial Management Service, and to the Chief, Programme Coordination and Management Unit, using the format to be provided. It provides a review of the effective operation of the project and of its achievements in reaching its designed outputs. The report will set out lessons learned during the project and assesses the likelihood of the project achieving its design outcomes. It provides a basis for the independent **Terminal Evaluation** of the project. This evaluation reviews the impact and effectiveness of the project, the sustainability of results and whether the project has achieved its immediate, development and global objectives.
124. Indicators for the evaluation of the effective operation of the project are given in the Table 3 below.

Table 3: Indicators for evaluation of effective operation of the project

Indicator	Means of verification
3 monthly and PIR progress and financial reports prepared in a timely and satisfactory manner	Arrival of reports at UNEP
Performance targets, outputs, and outcomes are achieved as specified in the implementation plan and any agreed revisions to it	Progress reports
Deviations from the implementation plans are corrected promptly and appropriately.	Work plans, minutes of steering committee meetings

⁴ Sources include the agency's own co-financing, government co-financing and contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector, and beneficiaries.

Types of co-finance include Cash (grants, loans, credits, and equity investments) and In-Kind resources (limited to those dedicated uniquely to this project and valued as the lesser of the cost and the market value of the required inputs they provide for the project and monitored with documentation available for any evaluation or project audit).

Quarterly financial reports are timely and accurate	Arrival of reports at UNEP
Disbursements are made on a timely basis	IMIS system of UNEP and Bank statements of national executing agency
Procurement is achieved according to procurement plan and reflected in non-expendable equipment inventory	Progress reports
Requests for deviations from approved budgets are submitted in timely manner	Timely submission of revised budget to UNEP for approval
Audit reports and other reviews showing sound financial practices	Audit reports

125. **Technical outputs and milestones** identified for the project are given in table 4 below. It is likely that the bulk of these will be prepared by national experts or expert groups contracted by the national project team and the executing agency. The project has been designed to allow for the review and approval of draft outputs by key stakeholders to ensure ownership of products. This is particularly important as most project outputs designed and intended to be sustainable beyond the life of the project. The project teams and UNITAR have a first-line supervisory role with regard to project consultants and thus to the review and monitoring of their outputs. The project steering committee will also review and make recommendations regarding the technical outputs of the project at key milestones defined in the implementation plan.
126. The Executing Agencies will submit to UNEP three copies in draft of any substantive project report(s) and, at the same time, inform UNEP of any plans it may have for the publication of that text. UNEP will give the Executing Agency substantive clearance of the manuscript, indicating any suggestions for change and such wording (recognition, disclaimer, etc.) as it would wish to see figure in the preliminary pages or in the introductory texts. It will equally consider the publishing proposal of the Executing Agency and will make comments thereon as advisable.
127. UNEP may request the Executing Agencies to consider the publication on a joint imprint basis. Should the Executing Agency be solely responsible for publishing arrangements, UNEP will nevertheless receive an agreed number of free copies of the published work in each of the agreed languages, for its own purposes.

Table 4: Outputs and milestones from Project Activities

Component/Activity	Output/Milestone	Date
Component 1: project Management and Supervision		
1.1 Project Management and Supervision	see reporting requirements in table 2	periodically
Component 2: Implementation and use of PRTRs as a model for POPs reporting and monitoring system		
2.1 Legal framework development	draft PRTR legislation	10 th month
	draft single window implementation plan	9 th month
	draft norm on liquid industrial waste	14 th month
2.2 National technical capacity enhancement	report on reviewed classification system	5 th month
	reporting form including single window uploaded and working	10 th month
	Draft first PRTR report	13 th month
2.3 Public Information, dissemination to main stakeholders	Public Outreach Strategy Plan	6 th month
	reports on training programme for NGOs, government, industry and journalists reports	11 th month
	PRTR website	19 th month
	First final PRTR report	22 nd month
Component 3: Design a PRTR system in Cambodia, Ecuador, Kazakhstan, Peru, Thailand and Ukraine		
3.1 Goals and objectives of a PRTR system	Report on workshop on PRTR objectives	3 rd month
3.2 Assessing the Existing infrastructure relevant to PRTRs	Feasibility study in every participating country	8 th month
3.3 Designing the key features of a National PRTR	Report on designed PRTR	13 th month
3.4 Conducting a PRTR pilot test	Pilot test report and recommendations	20 th month
3.5 Finalizing a PRTR proposal	National Proposal report and implementation plan	22 nd month
3.6 National Workshop on PRTR proposal implementation	National proposal and implementation plan endorsed	23 rd month
Component 4: regional assessment of reporting systems for POPs and other chemicals in Central America		
4.1 National Execution	See table 2	Table 2
4.2 Regional Assessment Study	Report on regional Assessment on PRTR development	12 th month
4.3 Pilot demonstration in two countries	Report on Pilots	23 rd month
Component 5: Identification of good practices, lessons learned and replicable elements in POPs monitoring and reporting		
5.1 development and/or update of global guidelines for PRTRs for POPs	Guidelines developed or updates on PRTRs for POPs	22 nd month
5.2 identification of lessons learned and good practices	Final report on lessons learned and good practices report	23 rd month
5.3 Meetings on lessons learned and good practices	Three meeting reports on lessons learned and good practices	2 nd , 15 and 23 rd month
Component 6: Monitoring and Evaluation Programme		
6.1 Development of Monitoring and Evaluation Programme – Steering Committee Meetings	Monitoring and Evaluation Programme developed	2 nd , 15 th and 23 rd month
6.2 Monitoring and Evaluation Programme – External evaluation	External evaluation report	24 th month

128. In addition to this regular monitoring, UNITAR will convene three meetings of the *Project Steering Committee* (PSC) to assess the progress of this project towards its milestones, to review its technical outputs and to make recommendations concerning project execution in the coming period. These PSC meetings will include the project coordinator and may also include representatives of UNEP-DGEF, as implementing agency, and of other agencies collaborating in the project or engaged in closely related activities. The timing of these meetings will be flexible to optimise the review process but table 4 below shows the project outputs likely to be available to

progress review meetings held annually after a first meeting in the 2nd month of project implementation.

129. The first progress review meeting (Project Steering Committee Meeting), to be held in about the 2nd month of project implementation, will form the annual review meeting to be attended also by the UNEP-GEF project manager. The second progress review meeting, to be held in about the 15th month of project implementation, will review the designed PRTR systems in every participating country and the draft of the first PRTR report in Chile. The third and final progress review meeting will review the PRTR national implementation Plans and the final version of the first PRTR report and website in Chile containing a special section on the POPs situation.
130. The three progress review meetings will assess the progress made against the expected outputs and the indicators stated in the logical framework of this project (see Appendix 3) and will assess the implementation of the mitigation strategies identified in section 3.0.
131. These progress review meetings will be held back to back with technical lessons learned meetings.

Table 5: Project outputs available to Progress Review Meetings

Activity	Milestone/Output	Date
1st Meeting		2nd month
1.1	<i>Project Management arrangements, draft MoUs,</i>	1 st month
2nd Meeting		15th month
	<i>Project Inception Report</i>	2 nd month
2.1	draft PRTR legislation	10 th month
2.1	draft single window implementation plan	9 th month
2.1	draft norm on liquid industrial waste	14 th month
2.2	report on reviewed classification system	5 th month
2.2	reporting form including single window uploaded and working	10 th month
2.2	Draft first PRTR report	13 th month
2.3	Public Outreach Strategy Plan	6 th month
2.3	reports on training programme for NGOs, government, industry and journalists reports	11 th month
3.1	Report on workshop on PRTR objectives	3 rd month
3.2	Feasibility study in every participating country	8 th month
3.3	Report on designed PRTR	13 th month
4.2	Report on regional Assessment on PRTR development	12 th month
4.3	Report in Pilots	23 rd month
5.3	First meeting reports on lessons learned and good practices	2 nd month
6.1	Monitoring and Evaluation Programme developed	2 nd month
6.2	Evaluation meeting report	2 nd month
3rd Meeting		23th month
2.3	PRTR website	19 th month
2.3	Final version of the first PRTR report	22 nd month

3.4	Pilot test report and recommendations	20 th month
3.5	National Proposal report and implementation plan	22 nd month
5.3	Second meeting reports on lessons learned and good practices	15 nd month
6.2	Evaluation reports – 2 nd meeting report	15 nd month

132. Formal monitoring and evaluation of the project will follow the GEF Monitoring and Evaluation Policies and Procedures. UNITAR, as executing agency, will be responsible together with UNEP-DGEF for the preparation of annual Project Implementation Reviews and will use the detailed progress reports provided to UNEP for this purpose. The project team and its partners will use the results of these reviews to inform project implementation planning in subsequent periods.
133. UNEP will make arrangements for independent terminal evaluation of the project according to Monitoring and Evaluation procedures established by the GEF. These monitoring, reporting and evaluation responsibilities are summarized in the table below.

Table 6: Monitoring, reporting and evaluation responsibilities

UNEP	Executing Agency: UNITAR
Monitor the agreed M&E plan in accordance with the terms of agreement with GEFSEC; Report progress to GEFSEC Task Force meetings	Day-to-day management of the project; Assignment and supervision of tasks; Supervision of contracts and procurement
Receive and review three-monthly progress and financial reports and plans; Provide advice and recommendations to project team	Prepare and forward three monthly progress and financial reports and plans with supporting documentation to UNITAR management, relevant stakeholders and UNEP
Attend annual review meetings of the steering committee; Provide recommendations on summary progress reports and project outputs; Prepare Project Implementation Review (PIR) for GEFSEC and GEF M&E	Prepare annual summary progress reports with substantive project outputs. Prepare draft Project Implementation Review (PIR) in GEF format for consideration by UNEP
Review terminal report	Prepare terminal report
Prepare ToR and engage independent M&E consultant to undertake final evaluation of the project.	Assist in independent consultant review of the Project and its outputs and potential outcomes
Facilitate the review of the project by STAP (as appropriate)	

134. Costs for the monitoring and evaluation of the project are set out in Table 7 below and equate to the costs for Activity 1.0 shown in the project budget.
135. In Table 7, a number of regular mandatory reporting items are shown with no costs. This is because the continuous monitoring of project performance, and the preparation of periodic reporting, by the project management team form part of the normal operational duties of the team. For this reason, the costs of these monitoring activities are included in the costs of establishing and maintaining this team throughout the life of the project and shown against Activity 1.1 of the project budget.
136. Similarly, the costs of monitoring and review by the UNEP-GEF project manager are provided by the implementation fee. It follows that these costs do not form part of the project budget.
137. Ultimately, the success of the project will be measured by the endorsement of its principal product, the National Implementation Plan for PRTRs, by Governments of participating countries and PRTR fully implemented in Chile..

Table 7: Monitoring and Evaluation Budget

M&E activity	Purpose	Responsible Party	Budget (US\$)* ¹	Time-frame
Inception workshop	Awareness raising, building stakeholder engagement, detailed work planning with key groups	Project team, UNITAR	0	Within two months of project start
Inception report	Provides implementation plan for progress monitoring	Project coordinator	0	Immediately following IW
Project Review by Steering Committee	Assesses progress, effectiveness of operations and technical outputs; Recommends adaptation where necessary and confirms forward implementation plan.	Project team, UNITAR	0	Month 2, 15 and 23
Project Implementation Review	Progress and effectiveness review for the GEF, provision of lessons learned	Project team, UNITAR, UNEP-DGEF	0	Month 2, 15 and 23
Terminal report	Reviews effectiveness against implementation plan Highlights technical outputs Identifies lessons learned and likely design approaches for future projects, assesses likelihood of achieving design outcomes	Project team, UNITAR, UNEP-DGEF	0	At the end of project implementation
Independent Terminal evaluation	Reviews effectiveness, efficiency and timeliness of project implementation, coordination mechanisms and outputs Identifies lessons learned and likely remedial actions for future projects Highlights technical achievements and assesses against prevailing benchmarks	Project team, UNITAR, UNEP-DGEF Independent external consultant	25,000	At end of project implementation
Independent Financial Audit	Reviews use of project funds against budget and assesses probity of expenditure and transactions	Audits by every country and coordinated by UNITAR	0	At the end of project implementation
Total indicative M&E cost*¹			25,000	

*1: Excluding project team and UNEP DGEF staff time. All costs of workshop are costed 0 because these will be joined with Lessons Learned and good practices meetings.

5.0 Stakeholders Participation and Results Dissemination

5.1 Stakeholders Participation

138. Activities to be undertaken during the project have been planned to include opportunities for stakeholders to be engaged in specific activities. A PRTR National Coordinating Committee will be formed in each participating country and it will be formed by the main sectors in the country, such as academia, NGOs, industry, government, etc.
139. Project Component 2, on PRTR implementation in Chile, has a strong component on legal implementation, Technical support for key stakeholders (Industry, NGOs and Government).
140. Project Component 3, on project design, also allocated resources for NGO involvement. Awareness raising to different key stakeholders groups is also envisaged. This project requires the active participation of the industry sector. Industry will play a key role during the pilot test component of the design process.

5.2 Dissemination of Results

141. The principal outputs of this medium size project are the implemented (Chile) and designed monitoring, reporting and access to information tool for the Stockholm Convention. A key component is the sharing of information, experiences among participating countries (which are situated in three different continents and present a different development of reporting systems).
142. Through these projects lessons learned and good practices will be identified and shared. Global meetings to identify lessons learned and good practices will be open to any interested country.

- Results will be shared through the development of internet websites at the national and international levels and the provision of printed documents on good practices.
143. The Meetings of the Conference of the Parties to the Stockholm Convention have been identified as potential places where the results of this project can be shared and presented.
 144. At the national level, throughout the project, stakeholders will be engaged in the process of revision and evaluation of milestones and outputs. It is understood that the development a PRTR implies a coordinated efforts of main stakeholders in the country. Stakeholders will have distinctive roles to play, e.g. by providing information, training activities, sharing experiences, providing expertise, etc.
 145. *Public awareness and education:* The project has a strong component on public awareness and training. During the PRTR implementation process in Chile, a series of Training sessions will be planned and carried out to assist stakeholders to know how to manipulate the PRTR information and how to participate in the building up of the system. Specific training sessions for NGOs, Industry, Government officials and journalist will be designed and carried out.
 146. Activities at the country level will include a component for public awareness and NGO work. A seed funding will be provided in each country to develop an awareness raising strategy and to involve NGOs and public participation in the project.
 147. The project supervision and overseeing at the country level will be done through a multi-stakeholder group, a National Coordinating Committee on PRTRs. This Coordinating body will be composed by the main sectors interested and involve on POPs management. The NCC formed during the NIP development can be used as a basis to form this body on PRTRs

6.0 Incremental Costs and Project Financing

148. *Incremental costs:* The project has been designed to incorporate actions required to develop a sustainable capability to meet the obligations of the Convention within the institutional and regulatory frameworks that exist in the Parties participating in the project. The costs of doing so thus represent incremental costs that would not be incurred if the Convention had not prompted them.
149. This incrementality may be considered as permitting a series of efficient precautionary actions that will reduce future costs likely to be incurred in the region and globally to address human health problems and remediate an environment damaged by POPs chemical pollution. The physico-chemical characteristics of the chemicals listed in the Convention, in particular their persistence and capacity for long-range transport, mean that the global benefits sought by the Convention derive largely from local and national efforts. For this reason it is difficult to dissociate the incremental costs of gaining global benefits from the costs of actions only benefiting local communities.
150. In Chile, GEF funding will allow the PRTR system, currently under implementation, to include a component for POPs monitoring and comply with SC requirements in terms of reporting and access to information. The Chilean PRTR will display information on POPs, direct links to POPs reports and stockpiles, as well as information on POPs contaminated files.
151. In Kazakhstan, Cambodia, Ecuador, Peru, Thailand and Ukraine, the GEF funding will assist to ensure that the design of PRTRs are in line with SC requirements and country obligations current practices of industry.
152. The GEF funds will be used to:
 - fund the *incremental cost* of adapting PRTRs currently being designed and implemented to be compatible with SC requirements (will include POPs stockpiles and storage places) and obligations in terms of monitoring and reporting;
 - to exchange lessons learned and good practices in using PRTRs as a POPs monitoring tool; and
 - to produce a report on good practices on monitoring and reporting for the SC using PRTRs

153. *Co-financing*: In assessing the incremental costs of the project, it is recognised that some activities are undertaken by partners in this project even without the GEF intervention.
154. In Chile the development of PRTRs has a broader focus, it is designed and implemented for all chemicals, not only for POPs and it is being undertaken by the Commission for Environment of Chile. The GEF resources will serve Chile to adapt its PRTR to diverse POPs requirements.
155. The Chilean government is providing a co-financing of USD 600,000 for the PRTR development. The Canadian Government, through the World Bank, is providing a co-financing of 250,000 CAD for the development of a Chilean PRTR.
156. In 2006 UNIDO provided a course valued USD 10,000 for a government representative of CONAMA to attend a series of training sessions on single window approach initiatives, implementation of it and use of GIS applications in a PRTR system.
157. UNITAR will contribute to the project the equivalent of 100,000 USD as an in-kind contribution to the project, in the form of additional staff time and website maintenance and hosting to support this project as well as offering services of the Virtual Classroom on PRTRs (in-house server, support costs, website maintenance, administration services, establishment and management of online discussion groups, etc.)
158. Co-financing for this project will be contributed from the following partners: Switzerland (POPs and Mercury-PRTR Project support); US Environmental Agency (Mercury project in Chile, Panama and Ecuador); US Environmental Agency (Central American assessment) (to be confirmed); SAICM Quick Start Programme Trust Fund (Armenia, Cambodia, Chile and Kazakhstan); GRID-Arendal (Ukraine and Kazakhstan); and UN Economic Commission for Europe (Almaty study, Kazakhstan.)
159. The project budget (Table 8) gives a breakdown of the costs of each project activity and the source of funding. The co-financing to be provided by the partners mentioned in paragraph 149 represents a majority of funding to those activities that are essentially national in character and related to:
 - POPs Mercury Project support from Switzerland for POPs-related PRTR development in Thailand; mercury projects related to PRTR in Jamaica and Suriname where similar guidance on PRTR related to mercury will be tested, and guidance development on PRTRs and PCB and preparation of the feasibility study on PRTRs in Togo. The co-financing contribution for these activities is 450,000 USD.
 - As part of the project in Ecuador and Chile on Strengthening Inventory Development and Risk Management-Decision Making for Mercury, countries are in the process of institutionalizing a mercury emission inventory within a national PRTR framework. In Ecuador this will be accomplished by developing a strategy, taking into account and coordinating with PRTR design activities, in particular identification of goals and objectives of a national PRTR system and designing the key features of the systems. Chile is adjusting its PRTR for mercury data, generated during the mercury inventory development. These activities will be carried out in line with objective 2 on Implementation and use of PRTRs as a model for POPs reporting and monitoring (see paragraph 71) in Chile and activities under the objective 3 on design of a PRTR system in Ecuador (see paragraph 72). The co-financing contribution for these activities is 380,000 USD.
 - USEPA in collaboration with the Executive Secretariat of the Central American Commission for Environment and Development (CCAD) will be supporting the development of a Central American regional PRTR. Involved countries include Costa Rica, Honduras, Guatemala, El Salvador, Nicaragua and the Dominican Republic. Stakeholder involvement will be a critical project component. The project will achieve a coordinated register in the Central American

countries, adding to a regional harmonized chemical management. The co-financing contribution for these activities is 172,000 USD (to be confirmed).

- The projects on “Updating National Profiles, Development of a National SAICM Capacity Assessment, and Holding a National SAICM Priority-Setting Workshop” supported by the SAICM Quick Start Programme Trust Fund in Armenia, Cambodia, Chile and Kazakhstan will contribute towards gathering information on chemicals management, including POPs. These activities will facilitate and are in line with Activity 3.2 (see paragraph 72) on assessing the existing infrastructure relevant to National PRTR. The co-financing contribution for these activities is 200,084 USD with 100,800 USD allocated for projects in Cambodia and Kazakhstan.
 - Assessment and capacity-building for managing environment and security risks in the Donbas and Soligorsk regions currently implemented by Donetsk Oblast authorities in Ukraine and supported by GRID-Arendal will contribute to awareness raising activities to be undertaken in Ukraine and Kazakhstan at the national and local levels within the project. As part of GRID-Arendal project national and local level authorities of Ukraine will be introduced to the PRTR concept and be presented a show case (Hungary, possible Sweden). Expertise generated within GRID-Arendal-led project related to access to and dissemination of environmental information, community right-to-know will be a valuable contribution to the project through sharing lessons learned and good practices according to Activity 5.2 and meetings of the Steering Committee. The co-financing contribution for these activities is 200,000 USD; and
 - TACIS Project on Strengthening Public Participation and Civil Society Support to Implementation of Aarhus Convention in Central Asia includes a component related to PRTRs. The project will focus on assessing the state of play of the reporting of emissions and discharges within Almaty City, identifying gaps with PRTR requirements and developing recommendations for introducing a national PRTR system. It will provide a valuable contribution for the activity 3.3 on the design of key features of a national PRTR system in Kazakhstan (see paragraph 71). The co-financing contribution for these activities is 30,000 USD.
160. UN Economic Commission for Europe (UNECE) through its Secretariat of the Aarhus Convention will provide support as in-kind contribution equivalent to 12,000 USD to the project activities within the UNECE region and, to some extent, in other regions, in particular, by sharing expertise and lessons learned about the PRTR development in other countries as well as providing guidance documents, technical studies related to the PRTR subject and participating in Steering Committees meetings. In addition to this contribution, individual countries (except Chile, see paragraph above) will provide a cash and an in kind contribution to the project by providing office space, salary for project team, meeting organization, stationary, etc. The level of national government co-financing ranges from 50,000 to 54,500 USD. Details are provided in the tables below.
161. *GEF Contribution:* Funding provided by the GEF will be directed in particular to those activities that represent new obligations required by the Convention, and by the operation of the project itself. GEF funding thus represents a majority contribution to ‘alternative’ actions, in particular:
- Updating implementation plans;
 - information exchange;
 - public information, awareness and education;
 - reporting requirements by the convention; and
 - monitoring and evaluation
162. *Cost-effectiveness:* The cost of inaction is monitoring country’s progress on POPs management from different ministries, which may require a lot of coordination, resources and efforts every time a report for the CÖP or the Convention Secretariat may request it. It will also imply that a

good picture of the POPs management in the country may be scattered between different ministries, and that updating NIPs may require lots of coordination, resources and efforts every time it is requested. This system can also easily incorporate new chemicals to be added to the list of POPs.

163. The project is thus cost-effective in enhancing the sustainability and replication of actions required under the Convention and will effectively save resources and coordination efforts if such participatory platform implied in a PRTR system is already in place.
164. With regard to the cost-effectiveness of the GEF contribution, PRTR design-related activities and outcomes will address chemicals of concern, including POPs and in order to do that, the structure of proposed PRTRs will be adapted. The project includes a strong technical component, which will be mainly addressed through an extensive training programme involving key stakeholders. By these means, different stakeholders will be empowered to fully participate in the project.
165. This project will include a wide group of countries at different stages of PRTR development and in different regions and conditions. It will enhance the replication in other countries and will also enhance experience sharing with wider indirect benefits to other chemical related initiatives such as SAICM and to the overall chemical management in countries.
166. This project will explore possible links to Climate Change initiatives and projects. Funding from the SAICM Quick Start Programme is being used as a source of co-finance to this project and will mainly relate PRTR design activities (uses and purposes of PRTR to chemical related initiatives, stakeholders' meetings and prioritization of actions at the national level) to activities on other chemicals.

7.0 Project Budget

167. The total budget and the source of funding for each Activity and Objective of the Medium Size project phase are shown in Table 8. The project budget in UNEP format, showing allocations by object of expenditure is given in Appendix 1.

8.0 Terms And Conditions

(a) Responsibility for Cost Over-runs:

168. Expenditure against the GEF Trust Fund cannot exceed the approved GEF budget. Any cost overrun (expenditure in excess of the amount budgeted in each budget sub line) shall be met by the organization responsible for authorizing the expenditure, unless written agreement has been received in advance, from UNEP and a revision to the project document amending the budget issued by UNEP.

(b) Cash Advance Requirement:

169. Initial cash advance of (amount to be determined), being 25% (TBD) of the allocation for 2008 and (TBD) 10% of the total GEF grant, will be made upon signature of the project document by both parties and will cover expenditures expected to be incurred by The Executing Agencies during the first three months of the project implementation. Subsequent advances are to be made quarterly, subject to:
 - a. Confirmation by the Executing Agency at least two weeks before the payment is due, that the expected rate of expenditure and actual cash position necessitate the payment, including a reasonable amount to cover "lead time" for the next remittance; and
 - b. The presentation of
 - i. A satisfactory financial report showing expenditures incurred for the past quarter, under each project activity.
 - ii. Timely and satisfactory reports on project implementation.

- iii. Requests for subsequent cash advances should be made using the standard format provided in a form provided by UNEP.
170. The final disbursement, normally amounting to 5% of the total project budget, will be made upon submission of the Terminal Report and copies of all physical products such as publications and manuals.

(c) Inventory of Non-expendable equipment purchased against UNEP projects:

171. UNITAR and participating countries will maintain records of non-expendable equipment (items costing US\$1,500 or more as well as items of attraction such as pocket calculators, cameras, computers, printers) purchased with UNEP funds (or GEF funds, Trust funds or Counterpart funds administered by UNEP), and submit an inventory of such equipment to UNEP following the format to be provided, attached to the periodic progress report.
172. Non-expendable equipment purchased with funds administered by UNEP remains the property of UNEP under the custody of UNITAR during the life of the project. UNITAR shall be responsible for any loss or damage to equipment purchased with UNEP administered funds.
173. The equipment can only be disposed of with the authorization of UNEP. Proceeds from the disposal of equipment shall be credited to the accounts of UNEP, or to the appropriate trust fund or counterpart funds.
174. Within 60 days of completion of the project, participating countries through UNITAR will submit to UNEP a final inventory of all non-expendable equipment purchased under this project indicating description, serial number, original cost, present condition, location and a proposal for the disposal of the said equipment. A duly authorised official of UNITAR should physically verify the inventory.
175. At project completion, countries participating in the project through UNITAR may request the transfer of ownership of the equipment purchased during the project and listed in the inventory. The Request for the Transfer of the equipment and the Transfer Agreement between the countries through UNITAR and UNEP need to be completed and signed by the signatory to the project document using the formats to be provided soon.

(d) Claims by Third Parties against UNEP

176. The Executing Agency, shall be responsible for dealing with any claims which may be brought by third parties against UNEP and its staff, and shall hold UNEP and its staff non-labile in case of any claims or liabilities resulting from operations carried out by The Executing Agency, under this National Project document, except where such claims or liabilities arise from gross negligence or wilful misconduct of the staff of UNEP.

(e) Amendments

177. The Parties to this project document shall approve any modification or change to this project document in writing.

(f) Arbitration

178. The parties shall first seek to resolve through conversations with each other any disputes between them over the interpretation and implementation of this Agreement and the Project. If these negotiations prove unsuccessful, then either Party may initiate arbitration which shall be binding and conducted in accordance with the United Nations Commission on International Trade Law Arbitration Rules (UNCITRAL) arbitration rules or such other procedures as they may agree. The Parties shall be bound by the arbitration award rendered in accordance with such arbitration, as the final decision on any such dispute, controversy or claim.

(g) Privileges and immunities

179. Nothing in or relating to the present Agreement shall be deemed a waiver, express or implied of any privileges or immunities of the United Nations and UNEP.

Table 8: Project Budget by Activity

	BY ACTIVITY	GEF	Cofinancing	Total
1	Project Management and Supervision	95,000	435,800	530,800
1.1	Project Management and Supervision	95,000	435,800	530,800
2	Implement an use a PRTR as amodel for POPs reporting and Monitoring system	150,000	767,200	917,200
2.1	Legal Framework Development	30,000	92,000	107,000
2.3	National Technical Capacity Enhancement	47,000	466,000	473,000
2.4	Public Information dissemination to main stakeholders	30,000	114,000	144,000
2.5	Information Exchange Scheme	43,000	95,200	138,200
3	Design a PRTR system for POPs monitoring and reporting in Cambodia, Ecuador, Kazakhstan, Peru, Thailand and Ukraine (country management and supervision included)	439,000	922,320	1,361,320
3.1	Cambodia	80,000	15,800	95,800
3.2	Ecuador	80,000	12,000	92,000
3.3	Kazakhstan	83,000	60,000	143,000
3.4	Peru	80,000	15,520	95,520
3.5	Thailand	46,000	59,000	105,000
3.6	Ukraine	70,000	140,000	210,000
	Complementary activities (not yet assigned to specific act)		620,000	620,000
4	Regional Assessment of reporting systems for POPs and other chemicals in Central America	0	146,200	146,200
4.1	Conduct regional assessment	0	60,200	60,200
4.2	Pilot exercise in two countries	0	86,000	86,000
5	Identification of Good practices and sharing lessons learned in POPs monitoring and reporting	241,000	232,800	473,800
5.1	Development of global guidelines for POPs monitoring and reporting	101,000	20,000	112,000
5.2	Identification of Good practices and sharing lessons learned in POPs monitoring and reporting	140,000	20,000	160,000
5.3	Complementary activities	0	192,800	192,800
6	Monitoring and Evaluation Programme	25,000	0	25,000
6.1	Steering Committee Meetings*	0	0	0
6.2	Terminal Evaluation	25,000	0	25,000
	TOTAL COST	950,000	2,504,320	3,454,320

* Steering Committee Meetings will be held back to back with technical meetings, hence, its cost will be considered as zero.

Appendix 1: Project Budget by Activity

Objective / activity	GEF	Co-financing Source 1	Co-financing Source 2	Co-financing Source 3	Co-financing Source 4	Co-financing Source 5	Co-financing Source 6	Co-financing Source 7	Co-financing Source 8	Co-financing Source 9	Co-financing Source 10	Co-financing source 11	Co-financing Source 12	total
	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US \$
1 Project Management and supervision														0
1.1 Project Management and Supervision	95,000	10,000		28,000		10,000		50,000		92,800			245,000	530,800
2 Implementation and use of PRTRs as a model for POPs reporting and monitoring system	150,000								10,000	507,200	250,000			917,200
3 Design a PRTR system for POPs monitoring and reporting in Cambodia, Ecuador, Kazakhstan, Peru, Thailand and Ukraine (country allocations)		320,000	300,000											620,000
Cambodia	80,000												15,800	95,800
Ecuador	80,000												12,000	92,000
Kazakhstan	83,000					50,000							10,000	143,000
Peru	80,000												15,520	95,520
Thailand	46,000	50,000											9,000	105,000
Ukraine	70,000					140,000							0	210,000
4 Regional assessment of reporting systems for POPs and other chemicals in Central America														0
4.1 Conduct Regional Assessment	0			60,200										60,200
4.2 Pilot exercise in two countries	0			86,000										86,000
5 Identification of Good practices and Sharing Lessons learned in POPs monitoring and reporting			50,000		100,800		12,000	30,000						192,800
5.1 Development of Global guidelines for POPs monitoring and reporting	101,000											20,000		121,000
5.2 Identification of Good practices and Sharing Lessons learned in POPs monitoring and reporting - organization of lessons learned meetings	140,000							20,000						160,000
6 Monitoring & Evaluation Programme														
6.1 Monitoring and Evaluation report	25,000													25,000
6.2 Steering Committee Meetings	0													0
Total costs	950,000	380,000	350,000	174,200	100,800	200,000	12,000	100,000	10,000	600,000	250,000	20,000	307,320	3,454,320

*Note that Project Management and Supervision is for component 2 (project implementation in Chile) and 3 (project design in other countries) of the project

PRTR for POPs implementation purposes

Co-finance sources:

Co finance source	Identification /Description	co-finance letter date	Name of officer
Co-finance source 1	Switzerland (POPs and Mercury Project support)	20.03.2008	Thomas Kolly Federal Office for the Environment
Co-finance source 2	USEPA (Mercury project in Chile, Panama and Ecuador)	27.05.2008	Maria Doa Director, National Programme Chemicals Division USEPA
Co-finance source 3	USEPA (Central American assessment)	27.05.2008	Maria Doa Director, National Programme Chemicals Division USEPA
Co-finance source 4	Quick Start Programme Trust Fund (Kazakhstan and Cambodia)	25.03.2005	Matthew Gubb Coordinator SAICM Secretariat
Co-finance source 5	GRID-Arendal (Kazakhstan and Ukraine)	27.03.2008	Nickolai Denisov Deputy Director, GRID-Arendal Office in Geneva
Co-finance source 6	Economic Commission for Europe (UNECE)	28.03.2008	Christina von Schweinigen Acting Director, UNECE Environment, Housing and Land Management Division
Co-finance source 7	UNITAR	28.04.2008	Craig Boljkovac Manager, Chemicals and Waste Programme
Co-finance source 8	UNIDO	27.03.2008	Through Chile
Co-finance source 9	Chile government	27.03.2008	Alvaro Sapag Rajevic Executive Director National Commission for the Environment
Co-finance source 10	Canada POPs fund	27.03.2008	Through Chile
Co-finance source 11	UNEP DTIE	18.04.2008	Per Bakken Head, Chemicals Branch UNEP DTIE
Co-finance source 12	Cambodia	20.03.2008	Mok Mareth Senior Minister and Minister for the Environment
	Ecuador	17.03.2008	Marcela Aguinaga Vallejo Minister of Environment of Ecuador
	Kazakhstan	27.03.2008	A. Braliev Deputy Minister of Environment
	Peru	25.03.2008	José Antonio Gonzáles Norris National POPs Focal Point
	Thailand	31.03.2008	Supat Wangwongwatana Director General Pollution Control Department
	Ukraine	26.03.2008	Giorgiy Philipchuk Minister of Environment

2.1 Chile (Activity 2 under the overall project budget, includes national project management and supervision)

Objective / activity		Chile	CPF & Environment Canada	UNIDO	GEF	Total activity cost	Ol
		US\$		US\$	US\$	US\$	
1	Project Management and supervision						
1.1	Overall supervision and project management Establish project management & implementation arrangements (CONAMA)	72,800			0	72,800	
1.2	Operate project review, monitoring and evaluation regime	20,000			0	20,000	
2	Legal framework development					0	
2.1	Legal implementation for PRTR reporting and institutionalization	29,000	10,000		18,000	57,000	
2.2	development of a single window implementation plan	15,000			12,000	27,000	
2.3	Develop and implement a norm for liquid industrial waste	23,000	15,000		0	38,000	
3	National Technical Capacity Enhancement						
3.1	Generate or improve classification systems	80,000	22,000		15,000	117,000	
3.2	Implement single window approach	80,000	0			80,000	
3.3	Enhance estimation techniques	35,000	26,000		10,000	71,000	
3.4	Implement PRTR (Integration of reporting systems)	110,000	13,000	10,000	17,000	150,000	
3.5	Compare emissions vs national regulation	50,000	40,000		5,000	95,000	
4	Public Information dissemination to main stakeholders						
4.1	Develop a PRTR website	10,000	20,000		10,000	40,000	
4.2	Organize a Training Programme for NGOs*	0	30,000		5,000	35,000	
4.3	Organize a Training Programme for Government	10,000	4,000			14,000	
4.4	Organize a Training Programme for Industry	10,000	10,000		10,000	30,000	
4.5	Organize a Training Programme for Journalists	0	10,000			10,000	
4.6	Organize a Public Outreach Strategy	10,000	0		5,000	15,000	
5	Information Exchange Scheme						
5.1	Development of an Annual Publication on PRTRs and POPs	30,000	30,000		20,000	80,000	
5.2	Implementation of a PRTR POPs administrative office	15,200	20,000		23,000	58,200	
Total costs, Full Project phase		600,000	250,000	10,000	150,000	1,010,000	1,

* Chile: Under programme management, the estimated time for project management for PRTR implementation is higher than designing the system.

**Activity 3 under the overall budget (includes national project management and supervision):
country budgets for PRTR design**

2.2 Cambodia

Objective / activity	Co-financing Cambodia US\$	GEF US\$	Total activity cost US\$	Total Objective cost US\$
1 Project Management and supervision				39,200
NEA Overall supervision and project management				
1.1 Establish project management & implementation arrangements	34,200	5,000	39,200	
2 Design of PRTR system for POPs*	15,800		15,800	95,800
2.1 Stage 1: Identifying goals and objectives of a National PRTR		9,000	9,000	
2.2 Stage 2: Assessing the existing Infrastructure relevant to PRTRs		14,000	14,000	
2.3 Stage 3: Designing the key features of a PRTR system		15,000	15,000	
2.4 Stage 4: Conducting a PRTR pilot reporting trial		30,000	30,000	
2.5 Stage 5: Developing a National PRTR Proposal		7,000	7,000	
2.6 Stage 6: Organizing a National PRTR Implementation workshop		5,000	5,000	
Total costs, Full Project phase	50,000	85,000	135,000	135,000

* Cambodia's in-kind contribution to the project is USD 50,000. It includes project management, use of official vehicle, meeting rooms, equipment use, etc

2.3 Ecuador

Objective / activity	Co-financing	GEF	Total Objective cost
	Ecuador US\$	US\$	US\$
1 Project Management and supervision			45,800
1.1 NEA Overall supervision and project management Establish project management & implementation arrangements	40,800	5,000	
2 Design of PRTR system for POPs*	12,000		92,000
2.1 Stage 1: Identifying goals and objectives of a National PRTR		5,000	
2.2 Stage 2: Assessing the existing Infrastructure relevant to PRTRs		9,000	
2.3 Stage 3: Designing the key features of a PRTR system		15,000	
2.4 Stage 4: Conducting a PRTR pilot reporting trial		30,000	
2.5 Stage 5: Developing a National PRTR Proposal		14,000	
2.6 Stage 6: Organizing a National PRTR Implementation workshop		7,000	
Total costs, Full Project phase	52,800	85,000	137,800

*Ecuador's in kind USD 27,600 and cash USD 25,200 contributions is translated in staff time and meeting facilities, and use of equipment.

2.4 Kazakhstan

Objective / activity	Co-financing		GEF US\$	Total activity cost US\$	Total Objective cost US\$
	Kazakhstan	GRID Arendal			
	US\$	US\$			
1 Project Management and supervision					55,000
1.1 NEA Overall supervision and project management Establish project management & implementation arrangements	40,000		5,000	55,000	
2 Design of PRTR system for POPs*	10,000	10,000		10,000	133,000
2.1 Stage 1: Identifying goals and objectives of a National PRTR			6,000	6,000	
2.2 Stage 2: Assessing the existing Infrastructure relevant to PRTRs			9,000	9,000	
2.3 Stage 3: Designing the key features of a PRTR system		10,000	18,000	28,000	
2.4 Stage 4: Conducting a PRTR pilot reporting trial		20,000	30,000	50,000	
2.5 Stage 5: Developing a National PRTR Proposal		10,000	10,000	20,000	
2.6 Stage 6: Organizing a National PRTR Implementation workshop			10,000	10,000	
Total costs	50,000	50,000	88,000	188,000	188,000

* Kazakhstan contribution of USD 1,000 to awareness raising activities and USD 5,000 to drafting legislation

** GRID ARENDAL contribution of USD 5,000 for awareness raising and 5,000 to draft legislation

2.5 Peru

Objective / activity	Co-financing	GEF	Total activity cost	Total Objective cost
	Peru US\$	US\$	US\$	US\$
1 Project Management and supervision				44,000
NEA Overall supervision and project management				
1.1 Establish project management & implementation arrangements	39,000	5,000	44,000	
2 Design of PRTR system for POPs*	15,520		15,520	95,520
2.1 Stage 1: Identifying goals and objectives of a National PRTR		0	0	
2.2 Stage 2: Assessing the existing Infrastructure relevant to PRTRs		8,000	8,000	
2.3 Stage 3: Designing the key features of a PRTR system		20,000	20,000	
2.4 Stage 4: Conducting a PRTR pilot reporting trial		30,000	30,000	
2.5 Stage 5: Developing a National PRTR Proposal		12,000	12,000	
2.6 Stage 6: Organizing a National PRTR Implementation workshop		10,000	10,000	
Total costs	54,520	85,000	139,520	139,520

*Peru's in kind contribution comprises office space, stationary, internet service, technical support, etc.

2.6 Thailand

Objective / activity	Co-financing		GEF	Total activity cost	Total Objective cost
	Thailand US\$	BAFU US\$	US\$	US\$	US\$
1 Project Management and supervision					56,000
1.1 NEA Overall supervision and project management Establish project management & implementation arrangements	41,000	10,000	5,000	56,000	
2 Design of PRTR system for POPs*	9,000	30,000		39,000	105,000
2.1 Stage 1: Identifying goals and objectives of a National PRTR		5,000	0	5,000	
2.2 Stage 2: Assessing the existing Infrastructure relevant to PRTRs		8,000	0	8,000	
2.3 Stage 3: Designing the key features of a PRTR system			10,000	10,000	
2.4 Stage 4: Conducting a PRTR pilot reporting trial			36,000	36,000	
2.5 Stage 5: Developing a National PRTR Proposal		5,000		5,000	
2.6 Stage 6: Organizing a National PRTR Implementation workshop		2,000		2,000	
Total costs	50,000	60,000	51,000	161,000	161,000

* BAFU's cash contribution of USD 30,000 will be allocated for awareness raising and legal assessment studies for PRTRs

2.7 Ukraine

Objective / activity	Co-financing		GEF	Total activity cost	Total Objective cost
	Ukraine	GRID-Arendal			
	US\$	US\$	US\$	US\$	US\$
1 Project Management and supervision					65,000
NEA Overall supervision and project management					
1.1 Establish project management & implementation arrangements	50,000	10,000	5,000	65,000	
2 Design of PRTR system for POPs*		50,000		50,000	210,000
2.1 Stage 1: Identifying goals and objectives of a National PRTR		10,000	6,000	16,000	
2.2 Stage 2: Assessing the existing Infrastructure relevant to PRTRs			6,000	6,000	
2.3 Stage 3: Designing the key features of a PRTR system		30,000	13,000	43,000	
2.4 Stage 4: Conducting a PRTR pilot reporting trial		30,000	30,000	60,000	
2.5 Stage 5: Developing a National PRTR Proposal		10,000	7,000	17,000	
2.6 Stage 6: Organizing a National PRTR Implementation workshop		10,000	8,000	18,000	
Total costs	50,000	150,000	75,000	275,000	275,000

* Contribution from GRID-Arendal (150,000 USD out of 200,000 USD)

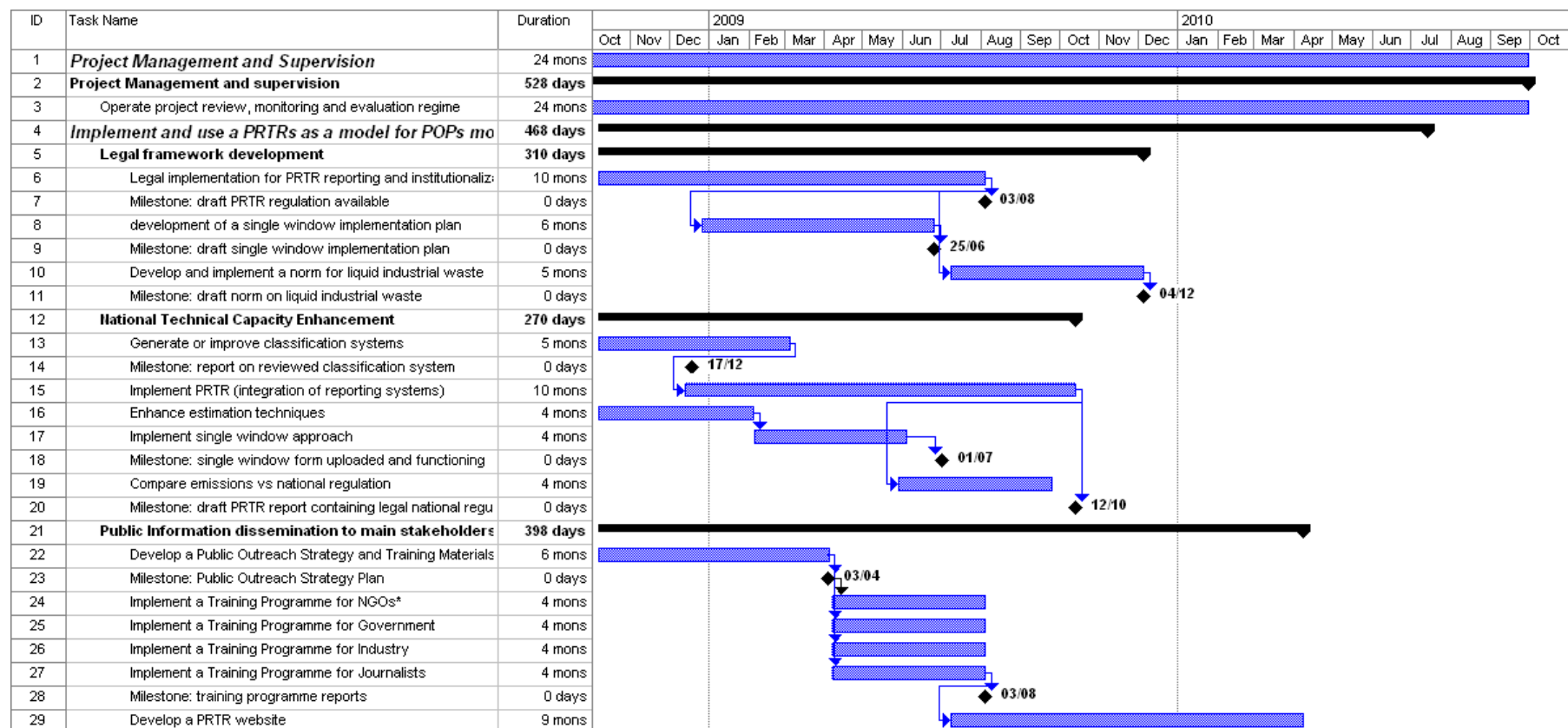
**GRID/ARENDAL: USD 30,000 will be used for awareness raising activities, USD 20,000 for drafting legislation

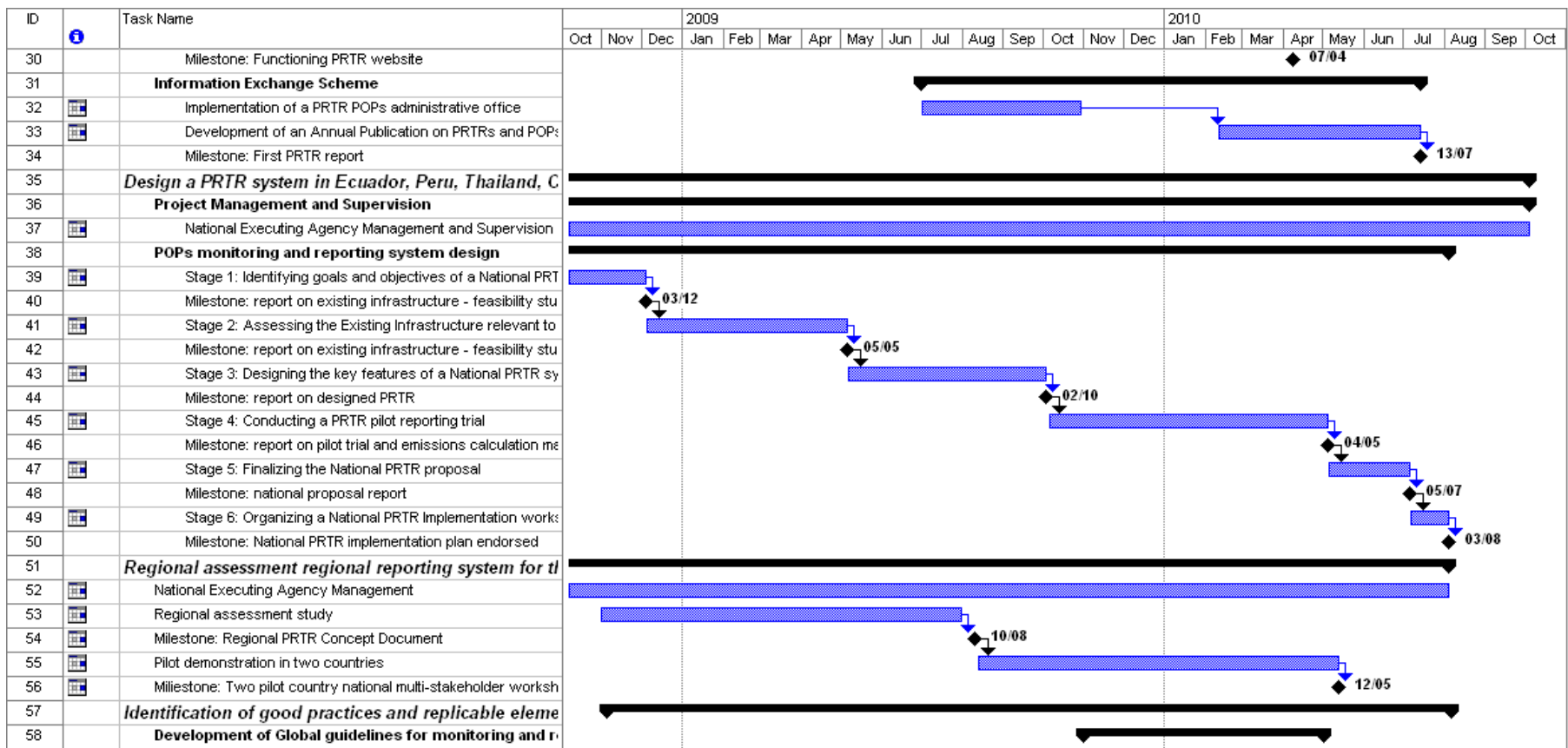
Activity 4 under the overall budget (including Project Management & Supervision)

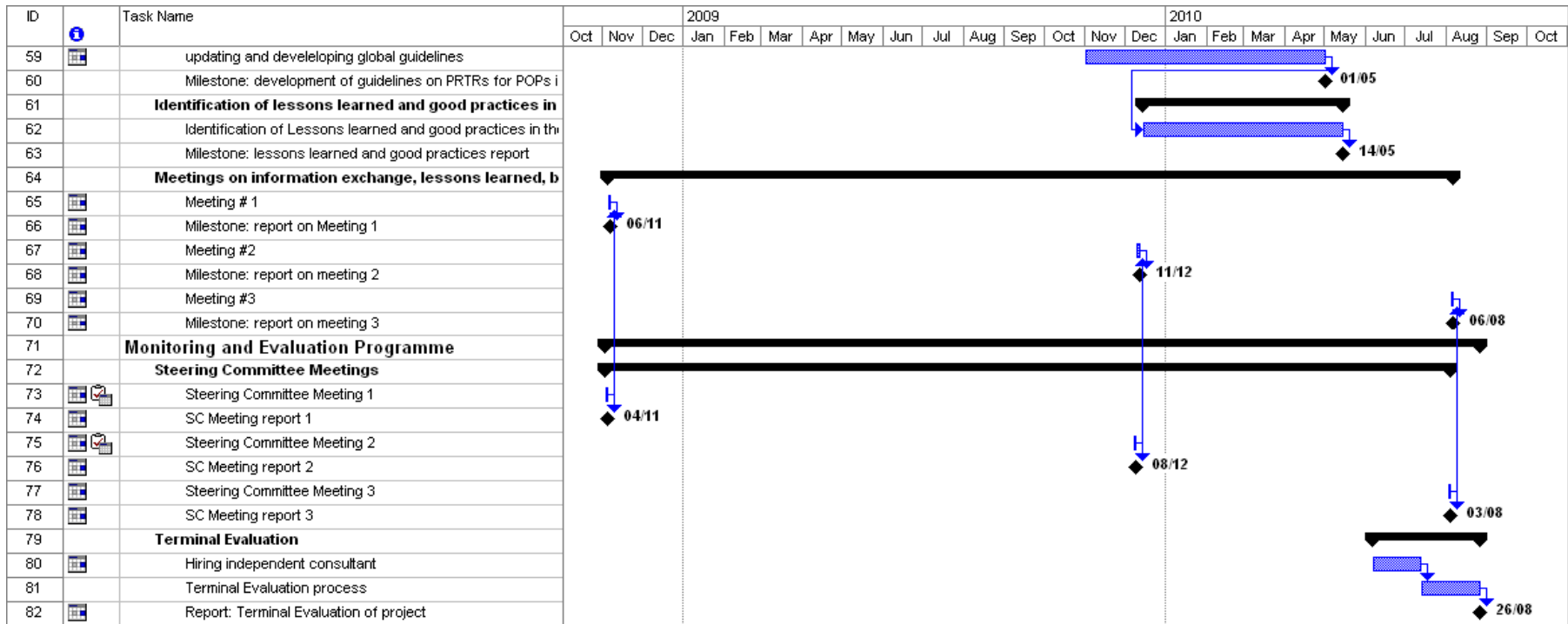
Central American Regional Assessment

Objective / activity		Financing USEPA	Total activity cost	Total Objective cost
		US\$	US\$	US\$
1	Project Management and supervision			28,000
1.1	NEA Overall supervision and project management Establish project management & implementation arrangements	28,000	28,000	
2	Regional Assessment regional reporting system for the SC in Central America		0	146,200
2.1	Regional Assessment study	60,200	60,200	
2.2	Pilot demonstrations in two countries	86,000	86,000	
Total costs		174,200	174,200	174,200

Appendix 2: Project Implementation Plan – Gantt chart







APPENDIX 3: PROJECT RESULTS FRAMEWORK

HIERARCHY OF OBJECTIVES	BASELINE	TARGET	OUTPUT	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
OBJECTIVE: to develop the appropriate tools monitor progress made on protecting human health and the environment from POPs threats	0	Tools to monitor implementation of the Stockholm Convention developed	Tools to implement the Stockholm Convention developed	Number of countries with designed and implemented tools for POPs monitoring nationally	Evidence of use of these tools in developing POPs reports to the Secretariat	<ul style="list-style-type: none"> Tools supports and assist countries to implement the Stockholm Convention regarding monitoring of progress
PROJECT DEV OBJECTIVE: To meet participating countries' Stockholm Convention obligations regarding to reporting, information exchange and progress monitoring using environmental management tools as PRTRs	0	PRTRs used as a monitoring and reporting tool for POPs POPs Monitoring and reporting tool designed.	PRTRs implemented in Chile and designed in other participating countries	Number of countries using PRTRs as a monitoring and reporting tools for the Stockholm Convention Number of countries with PRTR system designed as a tool for POPs monitoring and reporting.	PRTR implemented in Chile and designed in other participating countries by mid 2010	<ul style="list-style-type: none"> National priorities related to chemicals' management do not change during the project execution. National stakeholders continue to cooperate, or are willing to cooperate during the project duration
OUTCOMES						
COMPONENT 1: PRTR implemented and used for POPs monitoring and reporting system in Chile	PRTR system designed	PRTR system fully implemented	PRTR operational and functioning	POPs monitoring system in place and operational in Chile	First PRTR report by mid 2010, used as a basis for preparing POPs reports to the SC Secretariat	<ul style="list-style-type: none"> POPs team working closely with PRTR for POPs and Chemicals team in Chile
COMPONENT 2: POPs monitoring and reporting system designed in Ecuador, Peru, Thailand, Cambodia, Kazakhstan and Ukraine	Initial assessment on POPs monitoring system in Ecuador, Peru and Thailand.	PRTR system designed in the 6 participating countries	PRTR designed in each country to comply with SC obligations on POPs reporting and monitoring	Number of countries with designed PRTR systems	PRTR designed in 6 countries by September 2010	<ul style="list-style-type: none"> Industry, NGOs, Academic and Government sectors fully engaged in the process
COMPONENT 3: Regional reporting system for the SC in Central American countries developed. Countries involved: Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua	0	Preliminary regional assessment report on PRTRs as a tool for POPs monitoring and reporting includes 5 Central American countries	Regional assessment for PRTRs as monitoring and reporting system for the SC available	Number of Countries participating in the regional assessment with a sound feasibility study	Endorsed Central American regional assessment report on PRTR design and implementation plan available by June 2010	<ul style="list-style-type: none"> Participating countries recognizing PRTRs as a national priority and different sectors engaged
COMPONENT 4: Good practices and replicable elements on POPs monitoring and reporting identified.	0	Lessons learned and good practices identified and shared in all 7 participating countries and the CA region	Lessons learned and good practices report produced	Number of countries participating in the identification of lessons learned and good practices	Lessons learned and good practices report, with input from participating countries, by September 2010	<ul style="list-style-type: none"> Countries willing to share experiences and expertise with other participating countries and beyond.

COMPONENT 1: PRTR IMPLEMENTED AND USED FOR POPs MONITORING AND REPORTING SYSTEM IN CHILE

Activities	Objectively Verifiable Indicators of Achievement	Means (Sources) of Verification	Assumptions
1. Development of a Legal Framework			
1.1 Formalize procedures for legal implementation of PRTR	PRTR institutionalized and functioning	General Environmental Law and regulations include PRTR by month 9	Government support for establishment of PRTR
1.2 Develop an implementation plan for a single window approach	Unique reporting scheme analyzed for possible consideration	Single window implementation plan ready for involved ministries by month 9	Country willingness to explore this option
1.3 Identify and address national and sectoral legal gaps – norm for liquid industrial waste	Number of reporting systems enhanced and running	At least 4 existing reporting systems enhanced and including data on liquid industrial waste by month 15	Industries and government cooperate
2. National Technical Capacity Enhancement			
2.1 Generate or improve standard classification systems	Number of chemicals and industrial sectors classified using the standard classification system	More than 100 chemicals and 10 industrial sectors able to be sorted by industry or chemical id number in PRTR system by month 6	Industry sectors and activities easily identifiable
2.2 Implement a single window approach	Number of Industries using the single window forms	Unique multimedia forms available by month 9; at least 100 facilities used the forms by month 20	Industry agree with format and use of the form
2.3 Enhance estimation techniques and methodologies	Number of emission factors and guidelines developed	5 emission factors enhanced; estimation guidelines (3) available by month 5;	Industry sector and government cooperate
2.4 Integrate national reporting systems into PRTR	Number of reporting systems integrated into PRTR	At least 4 reporting systems integrated through a PRTR report by month 20	Government agencies cooperate
2.5 Compare emissions vs national regulation	12 POPs data presented within a national context.	1 PRTR report generated are displayed within a national context by month 20	PRTR legislation allows reporting under PRTR
3. Public Information dissemination to main stakeholders			
3.1 Design a Web based portal relating PRTR data with human/environmental data	PRTR Website developed containing POPs information	Website available to all users by month 19	Citizens have access to the internet
3.2 Organize a training programme and workshops for civil society	Number of training activities carried out; Number of NGOs having PRTRs in their work programmes	Training programme modules available and finished by month 11; 3 training workshops reports available by month 16	NGO groups available and interested
3.3 Organize a training programme and workshops for government	Number of training activities carried out; development of a PRTR unit in CONAMA	Training programme workplan and strategy available by month 11; 3 training programmes per sector (gov/industry) by month 16; PRTR unit in place by month 10.	Key government stakeholders available
3.4 Organize a training programme and workshops for industry	Number of training activities carried out		Key industry sectors willing to participate
3.5 Organize a training programme and workshops for journalists	Number of training activities carried out; number of newspapers articles published about PRTRs and POPs	Training programme workplan and strategy available by month 11 At least 3 articles on POPs and PRTR on main newspapers by month 20;	Environmental journalists willing to participate and available
3.6 Develop a Public Outreach Strategy using the media	Number of TV and radio programmes; Number of PRTR website visits increased	5 TV and radio programmes from start of project to month 7; website statistical data reports an increase of 20% in the PRTR website visits after the Public Outreach Strategy is implemented, by month 24.	Programmes on air have high audience rate, website visits numerous
4. POPs Information Dissemination and Outreach Mechanism			
4.1 Develop an annual publication on PRTRs and POPs	Number of PRTR POPs publications available	1 Annual publication on POPs releases and PRTR available by month 21	Users interested and able to access information
4.2 Implement a POPs National Focal Point Office	Number of POPs PRTR documents shared with Parties through the SC	4 National POPs reports sent to SC Secretariat and as requested;	Information to be sent to SC Secretariat coming from PRTR

	Secretariat	POPs office set-up by month 23	
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COMPONENT 2: POPS MONITORING AND REPORTING SYSTEM DESIGNED IN ECUADOR, PERU, THAILA CAMBODIA, KAZAKHSTAN AND UKRAINE			
Activities	Objectively Verifiable Indicators of Achievement	Means (Sources) of Verification	Assumptions
1. Design of POPS Monitoring and Reporting System in countries			
1.1 Identify goals and objectives of a National PRTR system	Number of National stakeholders attendance to the national workshop on objectives for the PRTR for POPs	1 endorsed report on National workshop on objectives for the PRTR POPs system by Dec 2008	Government, industry stakeholders support establishment of PRTR
1.2 Assess the existing infrastructure relevant to National PRTR	PRTR infrastructure assessed in 6 countries	National PRTR Infrastructure Assessment report ready and endorsed by mid 09	Key government and ind sectors willing to participate
1.3 Design the key features of a National PRTR system	Key features such as scope, legal implementation, data collection, etc of the PRTR are designed	Training materials and workshop report on technical aspects for the design of PRTR system Key features of a National PRTR system report ready by month 12	Participating parties adequ trained
1.4 Conduct a PRTR pilot reporting trial	Number of industry reports per country; number of facilities adequately reporting; Industry representatives' technical capacity improved	At least 10 facilities per country participate in the pilot exercise; 60% of industry reports considered "satisfactory" to be incorporated in the pilot report. 1 final report on trial exercise per country, duly endorsed by month 19.	Industry agree with reporting components and approach
1.5 Finalize the national PRTR proposal	Number of stakeholders involved in the preparation of the National PRTR Proposal through meetings and consultations processes	1 final National PRTR Proposal by month 20 includes list of involved institutions	Key stakeholders willing participate
1.6 Organize a national PRTR implementation workshop	Number of national stakeholders representatives involved; Number of signatures, from different sectors, endorsing the document	1 Workshop report containing list of participants Final National PRTR Implementation Plan endorsed by month 23	Key stakeholders willing participate
COMPONENT 3: REGIONAL REPORTING SYSTEM FOR THE SC IN CENTRAL AMERICAN COUNTRIES DEVELOP COUNTRIES INVOLVED: COSTA RICA, EL SALVADOR, GUATEMALA, HONDURAS AND NICARAGUA			
Activities	Objectively verifiable Indicators of Achievement	Means (Sources) of Verification	Assumptions
1. Regional Assessment on Regional Reporting System for the Stockholm Convention in Central America			
1.1 Undertake National Executing Agency Management	Project management reporting properly and in a timely manner	NEA terms of reference developed, 4 progress reports submitted to executing agency and approved	Government support establishment of PRTR
1.2 Prepare regional assessment study	Number of countries participating and endorsing the Regional PRTR infrastructure assessment and implementation plan	1 Regional PRTR Assessment Document ready by month 23	Key government and ind sectors willing to participate
1.3 Implement pilot demonstration in two countries	Number of countries participating in the more in-depth assessment of the national infrastructure relevant to PRTRs; countries endorsing the document	Reports of two pilot country national multi-stakeholder activities by month 21	Availability of the Regional P Concept Document Participation of knowledg stakeholders
COMPONENT 4: GOOD PRACTICES AND REPLICABLE ELEMENTS ON POPS MONITORING AND REPORT IDENTIFIED.			

Activities	Objectively verifiable Indicators of Achievement	Means (Sources) of Verification	Assumptions
1. Identification of Good Practices and Replicable Elements			
1.1 Development of global guidelines for monitoring and reporting tools to address the Stockholm Convention requirements	Number of Parties to the SC participate in the development of and use guidelines for monitoring and reporting to the SC	7 countries participating in the development of guidelines for SC monitoring and reporting by month 19 Availability for use of 1 global guidelines by month 20	Guidelines are adequately disseminated
1.2 Identification of lessons learned and good practices in developing a monitoring and reporting tool for the Stockholm Convention	Number of countries providing input to the lessons learned and good practices activities; Number of countries incorporating good practices identified throughout the project in their PRTRs design	3 countries take into account good practices identified in the lessons learned and good practices report and incorporate them into the national PRTR designed system 1 Lessons learned and good practices report by month 19	Countries are willing to information on their experiences
1.3 Meetings on information exchange, lessons learned, best practices among participating countries	Number of countries participating in an online forum on information exchange and lessons learned for POPs monitoring systems	4 countries participating in the information exchange forum; Availability of Meeting reports (3): MR 1 by month 2 MR 2 by month 15 MR 3 by month 23	Countries are interested monitoring and reporting practices

Appendix 4: Status of the PRTR in Chile

Chile has finished the design phase of the PRTR information exchange system under the coordination and supervision of the national Commission for Environment (CONAMA). The designed PRTR system was driven by a multi-stakeholder coordination, with participation of interested and affected parties from main sectors from Chile. This PRTR design system has been endorsed by the Chilean government and main national stakeholders.

1.1 CHARACTERISTICS OF THE CHILEAN PRTR SYSTEM

1.1.1. Legislation

Current Sectorial Legislation related to PRTR Implementation

The section below contains an overview of current sectorial legislation, which forms the current legal framework for PRTR implementation in Chile:

Air Component – Stationary Sources

The Metropolitan Region has an emissions inventory with a regular updating method based on the systems administrated by SESMA (the current Regional Health Authority) and the SAIE⁵-CONAMA. The application of the inventory is supported by the following laws currently in effect:

- D.S. N° 4/1992 of MINSAL, establishes the particulate matter emission standard for stationary sources in the Metropolitan Region.
- Resolution N° 15.027/1994 of SESMA, establishes the Metropolitan Region Stationary Source Emissions Declaration System.
- D.S. N° 1.583/92 of MINSAL, establishes the particulate matter emission standard for stationary point sources, applicable to all stationary point sources that release more than one ton of PM daily.
- D.S. N° 1.905/93 of MINSAL, establishes the particulate matter emission standard for heating boilers.
- D.S. N° 16/1998 MINSEGPRES, establishes the PPDA for the Metropolitan Region.
- D.S. N° 20/2001 MINSEGPRES, which introduces modifications to the PPDA.

National laws related to air pollution control include the following: Resolution N° 1215/1978 MINSAL, D.S. N°144/1961 MINSAL, D.S N° 185/1991 Agriculture, Mining and Health (Regulates mega-source emissions), SEIA Environmental Approval Resolutions (RCAs) and specific air pollution control plans.

Thus, it may be concluded that:

- Existing regulation does not provide for collection of nationwide data on emissions or raw emissions data for estimating emissions from industrial sources.
- Under current legislation, especially considering the lack of emissions standards in regions outside the RM and the very general nature of Resolution N° 1215, the possibility of exporting the RM's current emissions declaration systems to the regional health authorities in Chile's other regions is not very feasible.

⁵ Emissions Inventory Administration System

- Organic Law N° 17.374/1970 of the National Statistics Bureau (INE), empowers this institution to require information from the public and private sectors. Using this faculty the INE conducts the Annual National Manufacturing Industry Survey (ENIA), in which sources of information are safeguarded by statistical confidentiality; however, through a special agreement this statistical confidentiality may be extended to other public institutions such as CONAMA. This makes stationary source emissions estimations feasible at the level of individual facilities, compared to the broader category of industry type, which is the level of information disclosed to the public. It should be noted that this survey is applied only to companies with more than ten employees in the manufacturing industry.

Air Component – Mobile Sources

Inventories for these types of emissions are generated through emissions estimations, and there are therefore no legal impediments to national level implementation. Information generated will only be limited by the availability of basic data.

Air Component –Diffuse and Natural Sources

As above, since the methodology used for building inventories for these sources is based on estimations, no legal impediments exist for national level implementation. Again, information generated will only be limited by the availability of basic data.

Liquid Waste Component

The Superintendency of Sanitary Services (SISS), the General Marine Authority (DIRECTEMAR) and the Ministry of Health (through its health authorities) each within their own sphere of authority have adequate legal provisions for obtaining information on releases to marine and inland surface waters (D.S. N° 90/2000 MINSEGPRES), groundwater (D.S. N° 46/2002 MINSEGPRES) and sewer systems (D.S. N° 609/98 MOP) throughout the country, which makes the generation of emissions inventories for liquid waste at the national level legally feasible.

For marine and inland surface waters, point 5.2 of D.S. N° 90/2000 also indirectly empowers DIRECTEMAR and SISS in this area, as indicated in the Application Manual for DS N° 90, prepared by CONAMA.

The Water Authority (DGA), for its part, does not carry out direct enforcement activities for sources; however, it does provide relevant information on water resources to other public services with attributes in this area, which enables them to carry out their enforcement activities more efficiently.

Solid Waste Component

MINSAL's D.S. N° 148/2004 approving the Sanitary Rules for Hazardous Waste Management establishes minimum health and safety conditions that must be followed in the generation, possession, storage, transport, treatment, reuse, recycling, final disposal and other forms of eliminating hazardous waste.

The decree also holds the Health Authority responsible for enforcing and monitoring compliance with the provisions of the Sanitary Code Rules for this type of waste, in accordance with Ministry of Health standards and general instructions. Public bodies responsible for different aspects of hazardous waste must carry out their tasks in a co-ordinated manner and with mutual assistance.

In its Title VII on the Hazardous Waste Declaration and Follow-Up System, the Rules indicate that those in possession of hazardous waste across the country must report to the Hazardous Waste Declaration and Follow-Up System, which

is aimed at providing the health authority with comprehensive, up-to-date and timely information on the possession of such waste, from its exit of the production facility to its reception at a disposal facility.

1.1.2 Source Categories

Only chemicals covered under emission standards presently in force or in preparation, and those covered under Chile's international Convention commitments will be included in the PRTR. The source categories for inclusion in the PRTR system are:

Air component

Point sources: All source categories (facilities) nationwide are subject to report to the Health Authority their background information required for estimating emissions from each source through the Stationary Source Emissions Declaration System.

Non-point sources: inter-city road networks, livestock raising, sanitary landfills, pesticide application and other relevant gas emissions. The Emission Model for Mobile Sources in route (MODEM) System collects information from source emissions on urban roadways. This information is collected from cities that have a transportation model. This information is managed by the Transportation and Planning Secretariat – Sectra)

Water Component

Facilities report their emissions to water directly to the Superintendence of Sanitary Services (SISS) and the Direction of Marine Territory (DIRECTEMAR)

Waste Component

All companies facilities possessing or producing waste is subject to provide the Health Authority with a Hazardous Material Declaration. Large scale mining waste are not considered in this category but will be incorporated in the PRTR system in a near future.

Soil Contamination

This information will be incorporated in the PRTR system during the implementation phase.

POPs stocks

This information will also be incorporated in the PRTR system during its implementation phase.

1.1.3 Institutional Structure of the PRTR

According to the analysis of the Constitutional basis for the Pollutant Release and Transfer Register in Chile, and the legal nature of the PRTR as a policy instrument for environmental protection, it can be inferred from the 1980 Constitution that the PRTR, as an environmental management instrument, must be operated by previously established public entities that have the required legal faculties for such purposes, and through previously defined legal procedures and rules.

Furthermore, it has been determined that Law 19.300 grants faculties to CONAMA for the establishment and coordination of environmental information mechanisms.

To complement the above, and to provide more legal certainty for the register, it is recommended that such faculties be specified and developed through the explicit incorporation of the Pollutant Release and Transfer Register into the General Environmental Framework Law, or through the promulgation of a new law (see Section 1.3).

The proposed modification of the Framework Law articles would incorporate Paragraph 7 on the Pollutant Release and Transfer Register into Title II on "Environmental Management Instruments ". Article #B of this proposed paragraph refers to the creation of a PRTR to register regulated emission, and administrated by CONAMA. It also empowers CONAMA to require the corresponding public services and agencies to provide general information on productive activities for the purposes of estimating unregulated pollutant emissions.

Furthermore, both the proposed modification to the Environmental Framework Law and the articles establishing Rules for the PRTR refer to different forms of participation of sectorial services and agencies.

Thus, a proposal was formulated to include a new Letter(s) in Article 2 of Law 19.300, on the Pollutant Release and Transfer Register. This letter defines the PRTR as a system that includes public services and agencies with environmental powers, and that is to be administered by CONAMA. The proposed article stipulates that the PRTR will register, systematize and report on emissions of regulated substances and estimates of unregulated substances and the generation, handling and disposal of solid waste in the cases and manner set out in the Rules.

In addition, the proposal for the PRTR Rules advises the inclusion of Title II, on the Administration of the Register. Article 6 of this Title addresses the Central Administration by CONAMA, Article 7, CONAMA's faculties, Article 8 the participation of public services, and Article 9 the coordinating role of CONAMA.

As is evident, the proposal for the Rules addresses the participation of sectorial agencies only insofar as CONAMA requires information that can be provided by each of these. Nevertheless, the proposal to modify Law 19.300 refers to the PRTR as a system that includes public services and agencies with environmental powers, with CONAMA as administrator.

Therefore, for the purposes of this national implementation proposal is it advisable to broaden these definitions to specify the composition of the National Coordination Group and the role of each public service in the system.

1.1.4 Administrative Procedures to Transfer Information

Inter-institutional coordination committees will be created to ensure transfer of information in a timely manner. CONAMA will be the entity gathering information from all sources and will act as the administrative PRTR Central System Node

As a Central System Node, CONAMA will:

- Maintain the register of information on pollutant releases and transfers.
- Require the respective public services and agencies to provide the necessary information on pollutant releases and transfers.
- Publish the Register, or provide the pertinent information for its publication by the entity chosen.
- Annually publish a report on the type and quantity of pollutants released and transferred to the environment.
- Determine the systems and procedures for housing, registering, estimating and systematizing emissions data, for reporting and for public access.
- Define the content and form of the Annual Report on Pollutant Releases and Transfers.
- Propose the manner in which regular estimations and reports of unregulated pollutants will be carried out, in line with the commitments acquired under international conventions and the environmental policies, strategies, priorities and objectives defined by CONAMA.

- Propose the type of pollutant emissions and waste generation and their respective thresholds for reporting, recording and information.
- Propose the way in which the integration of sectorial databases will be standardized, harmonized and updated.
- Propose and update the glossary of terms.

1.1.5 Reporting modes

There will be two reporting modes: a mandatory report for regulated substances (measurements) and estimation-based reports for unregulated parameters.

1.1.6 List of Substances

Chemicals identified in current standards and those being developed and those in international agreements of which Chile is a Party. Emission estimation system will enable the inclusion of other chemicals and chemicals groups not included in the above.

Given that a single chemical species may have many different names, and that classifications may take different forms depending on the technical or legal criteria used, it is impossible in some cases to compare information, much less to process it. Hence, during the PRTR pilot phase a process of standardization of the lists of substances was begun, beginning with the specific denomination (chemical name), translation (often necessary) and comparable classification or grouping by chemical family. In each case the technical criteria or legal aim of such classifications and denominations had to be analyzed. This process will need to be updated continually in future, as the Pollutant Release and Transfer Register must always adjust to current legislation and available technical criteria, as well as respond to the varying concerns of the community of those who use the system, who, it is hoped, will consult the PRTR in a dynamic manner.

A total of 111 chemicals products and chemical categories are considered in the initial PRTR list of substances, which includes all POPs substances. To see more details, please refer to Section 1.4.

1.1.7 Procedure for incorporating new sources and substances into the system

Following the National Coordination Group's decision, the criteria for adding new sources and substances to the PRTR are based on reporting thresholds established under current legal provisions for nominatory or mandatory reports for releases such as stationary source emissions of particulate matter in the Metropolitan Region; the release of liquid industrial waste from *Industrial Sources*; and the generation of solid waste that must be declared under the Sanitary Rules for Hazardous Waste Management.

An opinion expressed by some members of the National Coordination Group advises against the use of the term "threshold" in favor of the phrase "criteria for adding sources to the system". This is in keeping with the decision that regulated sources will be obligated to report to the PRTR. In other words, emissions only need to be reported as required by the legal standard, and the criteria for incorporation into the PRTR are the same as that found in the legal provisions of the standard.

In the case of unregulated sources and substances, however, the lack of a legal reporting obligation disallows the use of the term "threshold". In these cases the criterion for their incorporation into the Register is the availability of data that will allow for their measurement, such as the information on activity levels.

In the case of non-point sources, the criterion for adding new sources and parameters is based on the availability of technical procedures or estimation methodologies. During the design stage of the PRTR it was agreed that a criterion for incorporating new sources and parameters that classify for this type of report could be the substances covered under international conventions.

In this regard, the National Coordination Group must establish a general criterion for adding new substances to the list that will be used to manage the system. To this end a group should be created and made responsible for carrying out regular review of the technical and legal criteria for adding new sources and substances to the PRTR. This entity should be capable of addressing dynamic requirements over time. In this context, it is advisable that the reviewing body be formed in accordance with the work of the Priority Standards Program.⁶

The following list contains examples of new sources and substances to be added to the PRTR, some of which were included in the design stage of the system, by agreement of the NCG, but were not included in the pilot program:

- Greenhouse Gas Emissions – Kyoto Protocol – CONAMA's Greenhouse Gas Inventory System (SIGEI)
- Mobile Source Emissions on Inter-Urban Roadways – MOPTT –SIMOVYC System
- Generation and Transfer of Solid Waste - MINSAL – CONAMA – Diagnosis of Waste Generation and Management – SINRESIDUOS
- Tailing Reservoirs – SERNAGEOMIN
- Other Sources of Air Pollution - CONAMA –SAIE
- Inventories of POPs (Persistent Organic Pollutants). PCDDs and PCDFs (Polychlorinated di-benzo-p-dioxins and Polychlorinated Dibenzofurans), perfluorocarbons, expired pesticides
- Emissions and Transfers from SEIA
- Emissions from Pollution Control Plans
- Emissions and Transfers from Clean Production Agreements

1.1.8 Emissions estimation methodologies

Currently, there are no official methodologies for estimating air pollution emissions, liquid waste releases or solid waste generation. There are, however, various technical criteria for selecting them.

In view of this each sectorial service or agency should establish the most appropriate emission estimation methodologies where feasible under their technical criteria and existing legal provisions. The emissions estimations carried out by each sectorial agency will be considered official and those carried out under the PRTR should be acceptable to the respective authority in each case. In this way, if a source owner proposes estimation methodologies other than those applied by the competent agencies, these methodologies will have to be submitted to that authority for its approval.

1.1.9 Procedures for addressing information gaps

The sources and substances to be declared and the reporting thresholds refer to current regulations. New provisions are also expected, such as the regulatory bill for mandatory reporting of stationary source air emissions at the national level. However, when estimates of unregulated releases from sources are required, it is possible that a gap in the information will be detected, as the data needed for carrying out these estimations will not be available.

It is quite possible that this situation will develop in several areas, and it is therefore necessary that the appropriate coordination groups be established each time a lack of information is detected. These entities will be responsible for determining how to replace the information that is lacking, the administrative mechanisms for the transfer of the

⁶ Each year the public agencies with competence in this area are asked which regulations in each sector are thought to be important and necessary for the country. CONAMA also invites other actors to present proposals. All of the applications are received and submitted for discussion, during which participants analyze whether or not there is a justification for generating the regulation and if they have the necessary background information in order to do so. A Priority Standards Program is then submitted for approval to the CONAMA Board of Directors. Once approved, an extract of the program is published in the *Diario Oficial* (Official Gazette). However, in case of emergency the Ministries with authority in this area may request the inclusion of a standard in the program once approval has been received from the Board of Directors.

information, or studies and searches for the information that is lacking, in harmony with the agencies and entities involved in the administration of the system and its users.

1.1.10 Handling Confidential Information

The information that will be handled through the Pollutant Release and Transfer Register is administered by sectorial agencies in accordance with the authority of each institution, and this order should be maintained throughout the operation of the PRTR. This is assumed because the proposed system will depend on the available administrative, legal and technical infrastructure as agreed upon by the NCG. According to this system, all of the information that should be considered confidential should be exclusively administered by the respective authority in the area. Notwithstanding this situation, public agencies should enjoy access to the information that is needed in order to comply with the objectives of the PRTR when these objectives are transversal to the tasks inherent to each institution.

For the purposes of managing confidential information, the central system node of the PRTR will allow for access to the data on a case by case basis and in keeping with the decisions of each sectorial agency in accordance with current legal provisions.

1.1.11 Validation of PRTR data

The National Coordination Group established that the proposed system will be based on available administrative, legal and technical infrastructure and each sectorial agency will therefore, within its area of authority, be responsible for determining the validity of the information to be reported to the PRTR. In this sense the PRTR and its central administration will respect the technical criteria of each service. As a result, the information submitted to the system by each agency should be considered official. The technical criteria and data validation or confirmation methods are the exclusive responsibility of each agency in accordance with its area of authority as set out in current provisions.

1.2: DESCRIPTION OF THE SECTORAL SYSTEMS TO BE INTEGRATED IN THE PRTR

Sectorial information systems considered in the pilot program

1.2.1 On-road urban mobile emission sources - SECTRA

For the development of emissions inventories associated with the on-road mobile sources, CONAMA R.M., SECTRA, and the Environmental and Territorial Secretariat have created the software program MODEM II⁷ whose main objectives are to:

- ✚ Gather a diversity of data produced by public and private institutions, both national and international, related to the inventory of mobile emission sources.
- ✚ Automatically generate the emissions inventory for this sector for those cities that have transport models.
- ✚ Organize the data in a coherent manner into databases.
- ✚ Act as pre-processor to generate the input files for the air quality models.
- ✚ Model different scenarios.
- ✚ Evaluate and generate environmental protection measures.
- ✚ Through surveys and reports, provide information relevant for air quality management in the different administrative regions.

⁷ It is important to note that there presently exists a simplified version of MODEM, which is managed by SECTRA, and a more complete version called MODEM II, which allows the generation of files for air quality models and for the PRTR.

The MODEM II system has three types of modules: Emissions, Utility, and Modeling modules (a product of the previous two). MODEM II is a flexible system with respect to its installation and operation. Its different components also operate independently, as each emission module works separately and both its data and methodologies can be modified without altering the other modules.

The emissions module is divided into on-road and off-road sources, and the utility modules provide the platform for the system's operation.

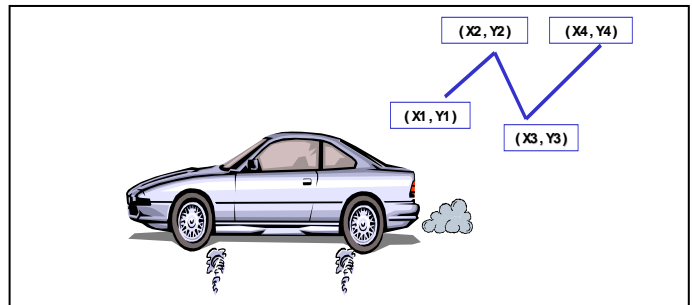
Thus, the on-road mobile source module is divided in two types of networks, urban and highway, since they share the same geometric figure and the same types of emissions, namely, Arc type emissions and Zonal type emissions, which will be presented later as arc-based and grid-based emission models:

- ✚ Urban network: Urban information which is characterized because there is a SECTRA transport model that provides most information to MODEM through already established data files, with information for flow, speed, parameters for the BPR speed function, correction factors, UTM coordinates (type $(x1,y1)$, $(x2,y2)$), the time of the run (AM or FP), among other data. It is worth noting that there are other institutions that provide data to MODEM, such as INE (automotive fleet), and local weather stations.
- ✚ Highway network: Information that is obtained mainly from MOPTT through point counts and toll booths, which provide information about flow, speed and participation of the automotive fleet.

It is worth noting that only the urban network emissions from MODEM will be incorporated into the PRTR, and the emissions corresponding to highways will be managed by the SIMOVYC system, described later in this chapter.

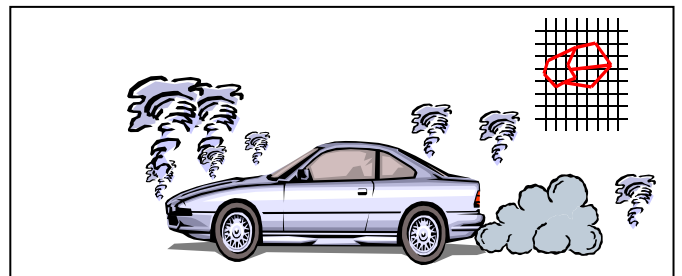
Types of discharge for arc-type emissions:

- Exhaust from mobile sources.
- Dust from paved roads.
- Brake wear.
- Tire wear.



Types of discharge for the zone-type emissions:

- Cold starts
- Running emissions.
- Daytime
- On-road



Current potential for the PRTR:

- It has implemented automatic generation of files for the PRTR.
- It can be implemented in any region or municipality that has a transport model.
- It has incorporated the georeferenced information for roadways.
- The geographic information for the regions RM, VIII, and IX is loaded.

Future developments:

- Implement MODEM in cities that have transport models.
- Obtain the runs of the transport model for all regions for which there are updated and validated data.
- Obtain necessary information to calculate evaporative emissions from the new urban road networks, such as: origin – destination surveys, weather information, and others.
- Perform a revision of the corresponding emission factors by vehicle type for each region or municipality.
- Validate the results for each of the input urban networks.
- Generate the files for the PRTR for each region.

1.2.2 Air pollution from stationary sources – Health Authority – CONAMA

For the administration of the air emissions inventories, CONAMA R.M., created the SAIE system, with the following objectives:

- ✚ Gather a diversity of data produced by public and private institutions, both national and international, related to the inventory of emissions.
- ✚ Organize the data into coherent databases.
- ✚ Act as pre-processor to generate the input files for the air quality models.
- ✚ Automate the calculation of emissions and incorporate emissions already obtained from external emissions models such as SECTRA's MODEM system or the EPA's TANKS system.
- ✚ Administer the air emissions inventory in one Region for all source categories and different chemical substances of interest.
- ✚ Generate different scenarios.
- ✚ Through surveys and reports, provide information relevant for air quality management in the different administrative regions.
- ✚ Evaluate and generate environmental protection measures.

The SAIE system is a modular system with two types of modules: emissions and utilities. The emissions modules were created so that the sources that pertain to each of them share the same geographic figure (polygon, municipality, point or arc) and also the same type of information base for the calculation of emissions.

The SAIE stationary source module currently allows for the direct management of source measurements and automatic calculation of stationary source emissions, principally deriving from:

- ✚ Combustion boilers
- ✚ Internal combustion equipment
- ✚ Industrial processes

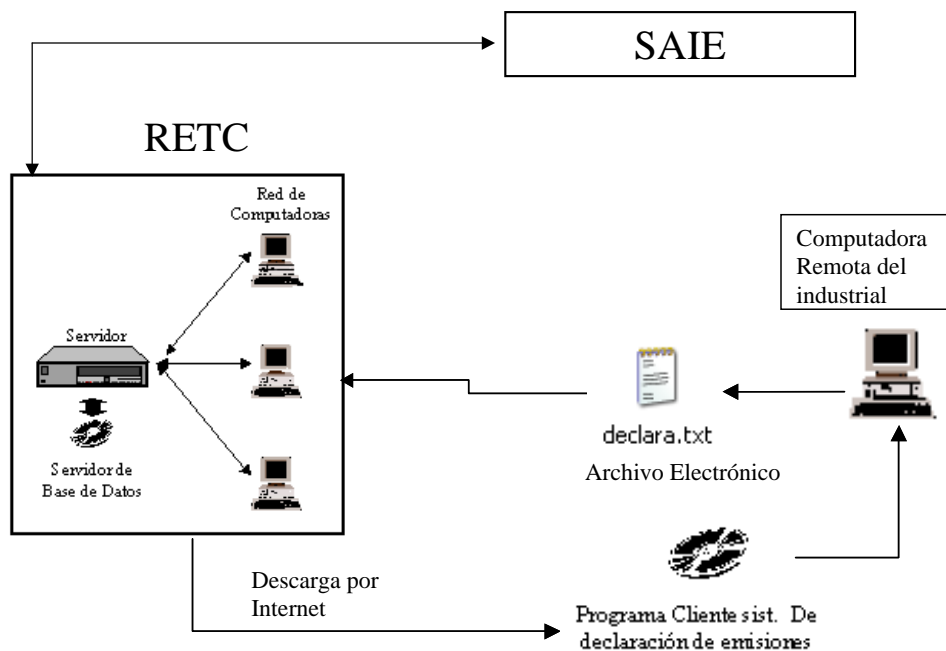


Figure 1: Client program for stationary sources

1.2.3 Water pollution releases from industrial facilities – SISS

There are basically two SISS systems related to the PRTR:

- Wastewater Quality Control System.
- Liquid Industrial Waste (LIW) Quality Control System.

The LIW Quality Control System regulates industrial facilities that discharge into the sewer systems and into bodies of water. The information that is provided from self-regulation is also solicited by SISS in accordance with the monitoring program. The Wastewater Quality Control System regulates emissions from Water Treatment Plants.

Every facility that is subject to the Environmental Impact Assessment System will have to obtain their Environmental Approval Resolution 90 days prior to starting operations, and SISS should be notified through an online form (www.siss.cl) of the treatment mode for the LIW: On-site treatment of LIW, treatment of LIW by third parties, and modifications to the existing treatment system. Subsequently, SISS performs on-site enforcement in which a monitoring resolution is generated and the location to discharge the water from the treatment plant is decided.

- Surface watercourses: D.S. N° 90, the company should conduct self-monitoring, the frequency of which depends on the rate of discharge, and resampling will be done when the value is above the norm but within acceptable limits.
- Infiltration: D.S. N° 46, the company should conduct self-monitoring, with frequency depending on the rate of discharge, and resampling will be done when the value is above the norm but within acceptable limits.

In both cases, SISS will conduct parallel controls.

- Sewer systems: D.S. N° 609, the company should conduct self-monitoring, with frequency depending on the rate of discharge, and this information will be submitted to the sanitary service companies on a monthly basis. Resampling will be carried out when the value is above the norm but within acceptable limits. The sanitary service companies will also carry out direct controls and submit reports to SISS every six months.

System considerations:

- The measurements should be taken at the time and day of highest production.
- The laboratories are authorized by SISS and the INN.
- The CIU most in accordance with the LIW is selected.
- The deadline for Industrial Companies (EI) to normalize their situation is September 2006 for the DS 90, and February 2006 for D.S. 46.
- SISS selects the facility where it will do the parallel control.
- SISS does not require that all the parameters be measured; only those that correspond to each industry category
- PRIDE: Ranking process for industries holding an SISS health permit, this program aims to stimulate the companies' compliance by recognizing the top 15 companies at the end of each year.

Current Potentials:

- Provides data at a national level.
- The system is in the initial population phase.

Future Development:

- Incorporate those information fields that are needed by the PRTR and that have not been taken into account in the system design, for example, the operating days per year and hours per day, and the facility's georeference.
- Automatically transfer the output files to the PRTR.

1.2.4 Water pollution emissions from industrial facilities – DIRECTMAR

DIRECTEMAR contains a Geographic Information System for Aquatic Environments, in which the measurements of the underwater emission sources are stored. The annual frequency of measurements depends on the rate of discharge.

The system has functioned since 1998, and information is available from as early as 1985. All information pertaining to pipes releasing into marine waters are in the system at the national level. Data for companies located between Arica and San Antonio are contained in an ACCESS database, while those from San Antonio to the south are in Excel spreadsheets.

This system was developed in MapInfo 5.5, and includes the database of discharge pipes and their geographical location, with a Datum WGS84 and in-house cartography.

System Considerations:

- ✚ In the system, geographic coordinates exist for both the point of discharge into the sea and the facility, making it necessary to convert from geographic coordinates to UTM.
- ✚ The identification information is updated in the database if there are changes in the data for the business, facilities, etc. They are input by DIRECTMAR.
- ✚ The parameters that are measured are those specified by Decree N° 90, according to the CIU of the facility (between 38 and 41 parameters).
- ✚ All discharge pipes for each facility should be declared and evaluated in order to establish which are considered emission sources.
- ✚ The number of measurements required from a source will be determined by the rate of discharge of the pipe at maximum source operation, as indicated in decree N° 90

- ✚ The system does not take into account information from treatment plants, it only stores measurement results.
- ✚ Before decree N° 90, rate of discharge information did not exist in SIGAA.
- ✚ The receiving body into which the release is made is identified (name only).
- ✚ The facilities are identified by industrial classification, but according to a classification unique to SIGAA; the CIIU is not used.
- ✚ The system does not have a master list of municipalities incorporated; instead, the name of the municipality is typed in.
- ✚ The system does not function with a master list of parameters; rather, the characterization table has a column for each parameter. This makes communication with other systems difficult.

Current Potential:

- Provides data at a national level.
- The information is geo-referenced.

Future Developments:

- Incorporate those information fields that are needed by the PRTR and that have not yet been taken into account in the system design, for example, the operating days per year and hours per day, and the facility's CIIU classification.
- Implement automatic transfer of the output files to the PRTR.
- Generate master files of certain fields, such as municipalities, parameters and CIIU.

1.2.5 Transfer of hazardous solid waste – MINSAL

The principal objective of SIDREP is to build a computer platform that establishes the Sanitary Rules for Hazardous Waste Management.

System considerations:

- ✚ *SIDREP generates information in real time and can store information for different years. The system is in the pilot phase, but should be operational across the country by the time the Rules come into force.*
- ✚ This Module stores information on companies, including: facilities, identification of responsible persons, password of the facility, location coordinates for the facility, etc. All of this information should be input to the application and password forms to complete the database so that each time a declaration is made this information does not have to be input again but will be filled out automatically.
- ✚ Applications are submitted through the webpage (Applications), enabling generators, transporters, and recipients of waste to fill out the necessary forms. It is important to note that the identification number is provided together with the health approval resolution from the health authorization (in the case of transporters and recipients), and together with the approval of the management plan (in the case of generators).
- ✚ For those industrial facilities that have more than one CIIU, the criteria for assigning a unique CIIU is based on the most relevant CIIU in regard to the hazardous waste.
- ✚ Identification of the facility will be through assignment of a unique identification number.
- ✚ The quantities of wastes will be reported indiscriminately in units of mass or volume, which will complicate the generation of statistics, given that it is not always possible to obtain the density of certain wastes.

Current Potential:

- The system will contain information at the national level.
- Georeferencing for the facilities has been taken into account.
- The PRTR files will be generated automatically.

Future Developments:

- Identify problems of the fully operational system, for example, problems with the input of UN codes, obtaining the UTM coordinates, classifying the wastes, etc.
- Relate the future system for management plans with the SIDREP.
- Standardize the measurement units with the PRTR
- Resolve duplicate counting in the cases where the same quantity is associated with n-parameters in the declaration form of the SIDREP.

1.2.6 Other emissions and transfers to be incorporated into the PRTR.

➤ Greenhouse gas emissions

Currently, CONAMA has the SIGEI system, which enables the automatic calculation of greenhouse gases for the energy, transportation, industrial, commercial, and residential sectors. Moreover, an expansion of the SIGEI is underway and will include the remaining sectors.

Current Potential:

Periodically update the inventory of greenhouse gases, using the IPCC international method for the energy, transportation, industrial, commercial and residential sectors.

Future Development:

Automate the regular updating of the base information required by the IPCC. Currently the transfer of the CNE Report on Energy is automated.

➤ Intercity on-road mobile source emissions – MOPTT

The MOPTT has developed the SIMOVYC system, which has the principal objective of implementing a modeling tool for noise levels and air pollution generated by the operation of roadway and highway works, in order to reduce their impact on the public.

Current Potential:

Generate data for highway emissions complementary to the MODEM.

Future Development:

Apply this tool in all regions of Chile.

➤ Other Sources Administered by the SAIE System

In addition to the stationary source module incorporated in the PRTR pilot, the SAIE system manages the following list of sources that could be incorporated into the PRTR:.

Module of municipal sources

- ✚ Evaporative: Residential application of adhesives, architectural painting, domestic solvent use, application of asphalt, fuel distribution, drycleaning
- ✚ Combustion: Residential combustion, woodburing, open combustion, small-scale brickmaking
- ✚ Fugitive dust: Construction and demolition, extraction of gravel, preparation of agricultural fields
- ✚ Agricultural activities (Use of Pesticides)
- ✚ Animal husbandry
- ✚ Fugitive emissions
- ✚ Residential NH3

Module of other sources

- ✚ Other sources: Industrial resurfacing, fuel storage tanks, water treatment
- ✚ Burns and fires: Forest fires, legal agricultural burns, Illegal Agricultural burns
- ✚ Mobile sources: Off-road areas, Unpaved roads
- ✚ Biogenic emissions

Current Potential:

The tool for calculating municipal emissions is currently implemented

Future Developments:

- Formalize the transfer of emissions data from these sources to the PRTR; it is only available for the Metropolitan Region.
- The calculation of these emissions should be made across the country.
- The integration of the TANKS system with SAIE should be improved, and the TANKS should be populated for each administrative region throughout the country.
- The integration between the PC-BEIS and SAIE should be improved, and the PC-BEIS should be populated at the national level for biogenic emissions.
- Systems should be developed or identified to calculate the emissions of ports and airports.
- Define the format of data input to the SAIE, both for the municipal emissions module and for the other sources of emissions.

1.2.7 Identification of new local systems that should be enhanced and implemented

Improve the Client Program developed in the VIII Region for the SAIE

One of the conclusions of the PRTR pilot program was the need to improve the operation of the client program developed for the SAIE system in the VIII Region, extending it to the national level. The program should also be updated and brought into online format to make it complementary to the legal text being formulated by MINSAL for air pollution analyses of industrial activities.

Structuring and securing of emissions and transfers from the SAIE

Currently, the SAIE generates a large quantity of information relevant to the PRTR, coming from both the environmental impact assessment process and from project follow-up under the RCAs. For that reason, an information system should be created to enable the administration of the above mentioned data, as well as the structuring of the reporting formats for its population.

Moreover, progress should be made regarding the criteria for unifying the environmental requirements of each project type and the emissions estimation methodologies. 1.3. Proposed modifications to National Legislation

1.3 Proposed modifications to National Legislation

1.3.1 Modifications to National Law 19.300 (General Bases on Environment)

Based on the information gathered in stages previous to this national PRTR implementation proposal, it is understood that Law 19.300 empowers CONAMA to establish and coordinate environmental information mechanisms.

Notwithstanding the above, it is advisable to specify and develop these faculties through the explicit incorporation of the Pollutant Release and Transfer Register into the General Environmental Framework Law, which will provide the PRTR with greater legal certainty. To do this, CONAMA and the National Coordination Group have proposed inserting additional articles, which are presented below:

Between paragraphs 6 and 7 of Title II, "Environmental Management Instruments " of Law 19.300 on the "General Environmental Framework", insert the following new "Paragraph 7, on the Pollutant Release and Transfer Register", modifying correspondingly the numbering of the paragraphs that follow:

"Paragraph 7

On the Pollutant Release and Transfer Register

Article #A

The nature, flow and concentration of pollutant emissions, as well as the characteristics, volume and destination of solid waste , from any type of source, are of general interest, and as such the generator may be subject to requirements for reporting, registering and providing information to the public in the cases and forms indicated in the rules.

For the purposes of this paragraph, raw materials, productive processes, technologies and products from the corresponding emissions source shall enjoy the corresponding commercial and industrial confidentiality in accordance with the general rules.

Article # B

A Pollutant Release and Transfer Register (PRTR) shall be created, and shall be administered by the National Environmental Commission. The nature, flow and concentration of pollutant emissions subject to an emission standard, and the nature, volume and destination of solid waste generated shall be registered and systematized by source or group of sources of the same facility as provided for in the Rules.

In the same way, the register shall systematize and estimate the type, flow, and concentration, both total and by source type, of the emissions that are not currently subject to an emission standard, in the cases and manner established in the Rules. For this purpose the National Environmental Commission shall call upon the corresponding public services and agencies to provide general information on the production, raw material, productive processes, technology, production volume and any other information available and useful for the purposes of estimation. The estimated emissions referred to in this article shall be anonymous and shall indicate the modeling methodology utilized.

The Register shall be public and shall be housed in the offices of the National Environmental Commission, where it may be consulted by any person. In addition, CONAMA shall prepare a report annually on the type and quantity of pollutants released and transferred to the environment, in the manner set out in the Rules.

Article #C

The Rules referred to in this paragraph shall be promulgated through the Ministry of the Presidency (SEGPRES) and shall include the following:

- a) *The systems and procedures for housing, registering, estimating and systematizing emissions information and information available to the public.*
- b) *The content and formalities of the Annual Report of Pollutant Releases and Transfers.*
- c) *Procedure for determining periodically which non-regulated pollutants shall be subject to emissions estimations and registry, as referred to in the second clause of the previous article. These pollutants shall reflect the commitments acquired under international conventions and the environmental policies, strategies, priorities and objectives defined by CONAMA.*
- d) *The types of substances and thresholds for reporting, registering and disclosing pollutant releases and waste generation.*
- e) *The way in which the integration of databases will be standardized, harmonized and updated.*
- f) *A Glossary of Terms*

Insert, between the current letters r) and s) of Article 2 of Law 19.300, the following new "*letter s) Pollutant Release and Transfer Register*", changing the current setter s) to t), and modifying the following letters correspondingly:

"Letter s): Pollutant Release and Transfer Register: A system consisting of public services and agencies with environmental attributes, and administrated by CONAMA, in which regulated and estimated emissions of pollutants and the generation, handling and disposal of solid waste shall be registered, systematized and reported in those cases and in the manner set out in the Rules."

Insert, following letter d) of Article 70 of Law 19.300, the following new Letter d), modifying the following letters correspondingly:

"*Letter d) Maintain and administrate the Pollutant Release and Transfer Register referred to in paragraph 7 of Title II of this Law.*"

Insert, following letter i) of Article 76 of Law 19.300, the following new Letter i), modifying the following letters correspondingly:

"*Letter i) Prepare the Annual Report on the type and quantity of pollutants released and transferred to the environment*"

1.3.2 Modifications to current sectoral legislation

Air Emissions

In general terms there is approved regulation that enables the generation of data necessary for the PRTR at the national level for solid and liquid waste, at least in the most important areas. However, current air emissions regulations only require reporting in the Metropolitan Region, and only for some parameters, while in the remaining regions of the country there is no existing legislation to enable reporting of industrial air emissions at the national level.

In response to this situation, work has begun on a Supreme Decree (Decreto Supremo or DS) to be promulgated by the Ministry of Health. This DS will require stationary sources across the country to provide the local health authority with the necessary information for estimating their emissions. Under this new legal bill, the form, frequency and nature of the information to be required by the health authority from sources shall be stipulated in a resolution to be drafted by the Ministry of Health.

Furthermore, the proposed decree shall indicate that for those sources with more accurate emissions estimations—whether because they have representative measurements or because they have used an emissions estimation method considered the most appropriate by the health authority for the source in question—the source may provide said information instead of that requested under the above-mentioned resolution.

Liquid Industrial Waste

As indicated above, current legal provisions for liquid industrial waste empowers agencies responsible to obtain information on releases to marine and inland surface waters (D.S. N° 90/2000 MINSEGPRES), groundwater (D.S. N° 46/2002 MINSEGPRES) and sewer systems (D.S. N° 609/98 MOP). This makes it legally feasible to generate liquid waste inventories at the national level. Nevertheless, the Superintendency of Sanitary Services still lacks the legal instruments to allow for the regular update of its liquid industrial waste inventory.

In this regard, although Law 19.821/2002 grants authority to SISS to carry out enforcement on productive systems, effluent treatment system and control systems, there is no law that directly requires companies to declare information on their operating conditions and processes. For DIRECTEMAR, D.S. (M) N°1/1992 grants faculties over land-based pollution sources and enables the authority to indirectly obtain operating conditions of sources' productive processes. For releases to marine and inland surface waters, point 5.2 of D.S. N° 90/2000 grants specific faculties in this area indirectly to DIRECTEMAR and to SISS, as indicated in the Application Manual for D.S. N° 90, prepared by CONAMA.

As a result of the above, it is advisable to analyze the feasibility of designing a legal instrument that grants the faculty to implement and regularly maintain an industrial inventory of liquid waste releases at the national level. In addition, where an inventory of this nature is built on the basis of estimations from information on productive processes and activity levels, it will also be necessary to conduct studies for developing liquid release estimation methodologies for each industry or sector that are in line with local realities.

Solid Waste

Current reporting requirements for solid waste are covered under the Sanitary Rules for Hazardous Waste Management, which requires only those wastes classified as such (for their hazardous quality or the threshold set out in the rules) to be reported. This means that certain wastes are not subject to reporting requirements and therefore there is no comprehensive information at the national level on the quantities generated or the types of materials transported or transferred. Given this situation, it is advisable to analyze the possibility of developing legal provisions to require declaration of all types of wastes, thus including those that are not covered under the definitions set out in MINSAL D.S. N° 148. As in the cases of air emissions and liquid waste releases, the option of requiring declarations of information for estimating waste could also be considered. This would need to be accompanied by the development of estimation methodologies in line with the Chilean situation, beyond the limited scope of the manufacturing sector.

Soil contamination

No comprehensive information on soil contamination exists at the national level, there are only isolated studies on specific events or contaminated sites, which have normally been addressed individually. However work has begun on designing a National Strategy for Contaminated Sites. Notwithstanding this initiative, it is advisable to conduct technical studies to facilitate the development of legal requirements for declaring or reporting events and activities that cause soil contamination.

Legal implementation of the system should be undertaken gradually, and should be based at first on existing legal provisions. This process should also respect the sectorial jurisdiction of each agency, and should enable the systematic fulfilment of the objectives and requirements of Chile's Pollutant Release and Transfer Register.

Controlled Substance	Air Emission Standards	Incineration Standard	DS_46	DS_90	DS_609	List_I	List_II	List_III	Stockholm	Kyoto	cas_number
Aluminum	0	0	DS46-2	DS90-2	DS609-2	0	0	0	0	0	7429-90-5
Antimony	0	1	0	0	0	0	0	0	0	0	7440-36-0
Arsenic	1	1	DS46-3	DS90-3	DS609-3	0	0	0	0	0	7440-38-2
Benzene	0	1	DS46-4	0	0	0	0	0	0	0	71-43-2
Benzo-pyrene	0	1	0	0	0	0	0	0	0	0	50-32-8
Boron	0	0	DS46-5	DS90-4	DS609-4	0	0	0	0	0	7440-42-8
Cadmium	0	1	DS46-6	DS90-5	DS609-5	0	0	0	0	0	7440-43-9
Chrome	0	1	0	DS90-11	DS609-9	0	0	0	0	0	7440-47-3
Cobalt	0	1	0	0	0	0	0	0	0	0	7440-48-4
Copper	0	0	DS46-9	DS90-8	DS609-7	0	0	0	0	0	7440-50-8
Cyanide	0	1	DS46-7	DS90-6	DS609-6	0	0	0	0	0	57-12-5
Fluoride	0	1	DS46-11	DS90-14	0	0	0	0	0	0	16984-48-
Hydrochloric acid/Hydrogen chloride	0	1	0	0	0	0	0	0	0	0	7647-01-0
Hydrofluoric acid / Hydrogen fluoride	0	1	0	0	0	0	0	0	0	0	7664-39-3
Hydrosulfuric acid / Hydrogen sulfide	1	0	0	0	0	0	0	0	0	0	7783-06-4
Lead	0	1	DS46-21	DS90-29	DS609-18	0	0	0	0	0	7439-92-1
Manganese	0	1	DS46-13	DS90-21	DS609-13	0	0	0	0	0	7439-96-5
Mercury	0	1	DS46-14	DS90-22	DS609-14	0	0	0	0	0	7439-97-6
Molybdenum	0	0	DS46-15	DS90-23	0	0	0	0	0	0	7439-98-7
Pentachlorophenol / PCP	0	0	DS46-19	DS90-27	0	0	0	0	0	0	87-86-5
Phosphorus	0	0	0	0	DS609-11	0	0	0	0	0	7723-14-0
Selenium	0	1	DS46-22	DS90-32	0	0	0	0	0	0	7782-49-2
Thallium	0	1	0	0	0	0	0	0	0	0	7440-28-0
Toluene / methylbenzene	0	0	DS46-26	DS90-39	0	0	0	0	0	0	108-88-3
Vanadium	0	1	0	0	0	0	0	0	0	0	7440-62-2

Zinc	0	1	DS46-29	DS90-42	DS609-25	0	0	0	0	0	7440-66-6
Chrome VI	0	0	DS46-10	DS90-10	DS609-8	0	0	0	0	0	18540-29-
Tin	0	1	0	DS90-13	0	0	0	0	0	0	7440-31-5
Lead compounds	0	0	0	0	0	0	II.13	0	0	0	
Antimony compounds	0	0	0	0	0	0	II.9	0	0	0	
Selenium Compounds	0	0	0	0	0	0	II.7	0	0	0	
Cadmium Compounds	0	0	0	0	0	0	II.8	0	0	0	
Mercury Compounds	0	0	0	0	0	0	II.11	0	0	0	
Nickel	0	1	DS46-16	DS90-24	DS609-15	0	0	0	0	0	7440-02-0
Silicon	0	1	0	0	0	0	0	0	0	0	7440-21-3
Iron	0	0	DS46-12	DS90-19	0	0	0	0	0	0	15438-31-
Platinum	0	1	0	0	0	0	0	0	0	0	7440-06-4
Carbon Monoxide	1	1	0	0	0	0	0	0	0	0	630-08-0
Carbon Dioxide	1	0	0	0	0	0	0	0	0	0	124-38-9
Volatile Organic Compounds	0	0	0	DS90-18	0	0	0	0	0	0	
Filterable PM10	1	0	0	0	0	0	0	0	0	0	
Total Suspended Particles	1	1	0	0	0	0	0	0	0	0	
Sulfur Oxides (SOx)	1	0	0	0	0	0	0	0	0	0	
Chloride	0	0	DS46-8	DS90-7	0	0	0	0	0	0	
Sulfate	0	0	DS46-23	DS90-35	DS609-22	0	0	0	0	0	
Xylene, total	0	0	DS46-28	DS90-41	0	0	0	0	0	0	
Palladium	0	1	0	0	0	0	0	0	0	0	7440053
Tellurium	0	1	0	0	0	0	0	0	0	0	13494809
Waste substances and articles that contain, or are contaminated by polychlorinated biphenyls (PCB), polychlorinated terphenyls (PCT) or polybrominated biphenyls (PBB)	0	0	0	0	0	1.10	0	0	0	0	
Tar residue resulting from refining,	0	0	0	0	0	1.11	0	0	0	0	

distillation or any pyrolytic treatment											
Waste resulting from the production, preparation and use of dyes, colors, pigments, paints, laquers or varnishes	0	0	0	0	0	1.12	0	0	0	0	
Waste resulting from the production, preparation and use of resins, latex, plastifiers or glues and adhesives	0	0	0	0	0	1.13	0	0	0	0	
Chemical waste, unidentified or new, resulting from research and development of teaching activities that have unknown effects on humans and/or the environment	0	0	0	0	0	1.14	0	0	0	0	
Explosive waste	0	0	0	0	0	1.15	0	0	0	0	
Waste resulting from production, preparation and use of chemical products and materials for photography	0	0	0	0	0	1.16	0	0	0	0	
Waste resulting from surface treatments of metals and plastics	0	0	0	0	0	1.17	0	0	0	0	
Waste resulting from the production, preparation and use of biocides, phytofarmaceuticals and pesticides	0	0	0	0	0	1.4	0	0	0	0	
Waste resulting from the manufacture, preparation and use of chemical products for wood preserving	0	0	0	0	0	1.5	0	0	0	0	
Waste resulting from the production, preparation and use of organic solvents	0	0	0	0	0	1.6	0	0	0	0	
Waste containing cyanides resulting from thermal treatment and hardening operations	0	0	0	0	0	1.7	0	0	0	0	
Waste mineral oils not suitable for their planned use	0	0	0	0	0	1.8	0	0	0	0	
Metal carbonyls	0	0	0	0	0	0	II.1	0			
Tellurium, tellurium compounds	0	0	0	0	0	0	II.10	0	0	0	
Thallium, thallium compounds	0	0	0	0	0	0	II.12	0	0	0	

Inorganic fluorine compounds, excluding calcium fluoride	0	0	0	0	0	0	II.14	0	0	0	
Inorganic cyanides	0	0	0	0	0	0	II.15	0	0	0	
Asbestos dust and/or fibers, excluding waste from construction materials manufactured with asbestos cement	0	0	0	0	0	0	II.18	0	0	0	
Organic phosphorus compounds	0	0	0	0	0	0	II.19	0	0	0	
Beryllium, beryllium compounds	0	0	0	0	0	0	II.2	0	0	0	
Organic cyanides	0	0	0	0	0	0	II.20	0	0	0	
Phenols, phenolic compounds, including chlorophenols	0	0	0	0	0	0	II.21	0	0	0	
Ethers	0	0	0	0	0	0	II.22	0	0	0	
Halogenated organic solvents	0	0	0	0	0	0	II.23	0	0	0	
Organic solvents, excluding halogenated solvents	0	0	0	0	0	0	II.24	0	0	0	
Any polychlorinated dibenzofuran substance	0	0	0	0	0	0	II.25	0	0	0	
Any polychlorinated dibenzoparadioxin substance	0	0	0	0	0	0	II.26	0	0	0	
Hexavalent chrome compounds	0	0	0	0	0	0	II.3	0	0	0	
Copper compounds	0	0	0	0	0	0	II.4	0	0	0	
Zinc compounds	0	0	0	0	0	0	II.5	0	0	0	
Arsenic, arsenic compounds	1	1	0	0	0	0	II.6	0	0	0	
Hydrogen sulfide H2S	1	0	0	0	0	0	0	0	0	0	2148878
Total hydrocarbons	0	0	0	DS90-17	DS609-12	0	0	0	0	0	
Ammoniacal nitrogen	0	0	0	0	DS609-16	0	0	0	0	0	
Ph	0	0	DS46-20	DS90-28	DS609-17	0	0	0			
Active substances of Blue methylene	0	0	0	DS90-31	DS609-20	0	0	0	0	0	
Sulphur	0	0	DS46-24	DS90-36	DS609-23	0	0	0	0	0	
Total phosphorus	0	0	0	DS90-15	0	0	0	0	0	0	

Hidrocarburos fijos	0	0	0	DS90-16	0	0	0	0	0	0	
Phenol index	0	0	0	DS90-20	0	0	0	0	0	0	
Nitrite and nitrate	0	0	DS46-17	DS90-25	0	0	0	0	0	0	
Total Kjeldahl Nitrogen	0	0	DS46-18	DS90-26	0	0	0	0	0	0	
Tetrachloroethylene	0	0	DS46-25	DS90-38	0	0	0	0	0	0	
Chloroform	0	0	DS46-27	DS90-40	0	0	0	0	0	0	
Rhodium	0	1	0	0	0	0	0	0	0	0	
Aldrin	0	0	0	0	0	0	0	0	1	0	309-00-2
Chlordane	0	0	0	0	0	0	0	0	1	0	57-74-9
DDT	0	0	0	0	0	0	0	0	1	0	50-29-3
Dieldrin	0	0	0	0	0	0	0	0	1	0	60-57-1
Endrin	0	0	0	0	0	0	0	0	1	0	72-20-8
Hexachlorobenzene	0	0	0	0	0	0	0	0	1	0	118-74-1
Heptachlor	0	0	0	0	0	0	0	0	1	0	76-44-8
Mirex	0	0	0	0	0	0	0	0	1	0	2385-85-5
Toxaphene	0	0	0	0	0	0	0	0	1	0	8001-35-2
Polychlorinated biphenyls (PCBs)	0	0	0	0	0	0	0	0	1	0	1336-36-3 como grup
Polychlorinated dibenze-p-dioxins	0	0	0	0	0	0	0	0	1	0	
Methane	0	0	0	0	0	0	0	0	0	1	
Nitrogen Dioxide	0	0	0	0	0	0	0	0	0	1	
Ozone	0	0	0	0	0	0	0	0	0	1	
Chlorofluorocarbons	0	0	0	0	0	0	0	0	1	1	
Halons	0	0	0	0	0	0	0	0	0	1	
Nitrogen oxides	0	0	0	0	0	0	0	0	0	1	