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Assessment, monitoring and early warning: state of the environment

**Follow-up to the World Summit on Sustainable Development:
contribution of the United Nations Environment Program**

Implementation of Governing Council decision 22/1 IV on post-conflict environmental assessment

Note by the Executive Director

The Executive Director has the honour to provide, in the annex to the present note, additional information on the implementation of Governing Council decision 22/1 IV on post-conflict environmental assessments, supplementing the information contained in document UNEP/GC.23/3/Add.2. The annex is being circulated without formal editing.

* UNEP/GC.23/1.

Annex

Additional information in the implementation of Governing Council decision 22/1 IV

Background

Governing Council decision 22/1 IV acknowledged the important role that UNEP has played in terms of conducting post-conflict environmental assessments, promoting clean-up of environmental hotspots, supporting the environmental activities of governments in post-conflict situations, and in integrating environmental issues within the delivery of humanitarian assistance and overall reconstruction. Based on the success of UNEP's post-conflict activities, the decision requested the Executive Director to further strengthen the ability of UNEP to assess environmental impacts in post-conflict situations and to report to the relevant United Nations bodies for further follow-up.

Since the development of the programme, UNEP has conducted post-conflict activities in Afghanistan, Bosnia and Herzegovina, Iraq, Liberia, the Occupied Palestinian Territories, and Serbia and Montenegro. UNEP has also joined the United Nations Development Group (UNDG) process as the focal point for environmental issues in Iraq, Liberia, Haiti and Sudan. Technical advisory services have also been provided by UNEP to the United Nations Compensation Commission (UNCC) concerning various environmental compensation claims from the 1991 Gulf War. Detailed progress that has been made in each of the operations is provided in the following sections.

I. Introduction

1. The links between conflict and the environment are complex. In many cases, conflicts cause widespread environmental impacts that threaten human health and livelihoods and compound existing development and reconstruction challenges. In others cases, access to environmental resources is a major contributing factor in a conflict, and proper environmental management is essential for long-term peace and stability.
2. In order to assist countries recovering from conflict, UNEP established a post-conflict assessment unit (PCAU). In the aftermath of a war UNEP-PCAU (herein referred to as UNEP) can rapidly deploy teams of international experts to conduct a strategic assessment of the key environmental problems in a post-conflict country in order to identify immediate risks to human health and livelihoods, and to recommend priorities for clean-up, rehabilitation, sustainable resource use and for strengthening environmental governance. The assessments are normally conducted from start to finish in a three to four month period, enabling immediate actions to be taken.

II. Nature and scope of the activities

3. UNEP's post-conflict environmental assessments rely on a combination of UNEP staff, international experts and local advisors to collect site-specific field-based samples and to conduct interviews with key stakeholders from the private and public sectors and from local communities. Each assessment is tailor-made to respond to the needs and requests of the country. The main topics of the assessment can include direct environmental impacts from bombing, weapons and military actions as well as indirect impacts from refugees, sanctions and the collapse of government. UNEP also assesses the institutional capacity of the environmental administration in terms of human resources, laws, policies, and infrastructure. Understanding how poor environmental management and unequal distribution of natural resources may have contributed to the conflict can also be considered. The assessments are designed to provide the government, civil society and the donor community with the basic information that is required to address the most pressing environmental problems and integrate environmental issues within the reconstruction agenda.
4. When security conditions, financial constraints or other reasons prevent UNEP from conducting a full post-conflict environmental assessment, a post-conflict environmental desk study can be developed. The purpose of the desk study is to summarize the existing environmental problems faced by the country based on secondary information collected from a variety of sources. The desk study presents

the information in an objective way, and attempts to identify key needs and issues requiring further field-based assessment. In some cases, UNEP can produce a desk study as a supplement to a UNDG needs assessment to provide an environmental context within which reconstruction and development decisions will be taken.

5. UNEP's post-conflict environmental assessments often identify environmental hotspots (contaminated sites) threatening human health. If there is no existing capacity to address these hotspots within the government authorities or UN agencies, UNEP would provide technical assistance for environmental clean-up if requested.

6. In many post-conflict countries, one of the critical constraints to addressing the environmental problems identified by UNEP assessments is lack of government capacity. As a result, UNEP is developing a comprehensive set of capacity building activities aimed at strengthening post-conflict environmental administrations at the national and local levels. The range of potential UNEP capacity building activities includes stakeholder coordination, legal and policy development, environmental information generation and monitoring, environmental education and public awareness, international and regional cooperation, institutional reform, human resources development, community-based natural resources management, and environmental impact assessment.

III. Progress on UNEP's post-conflict activities

A. Afghanistan

7. Afghanistan's population of roughly 23.5 million is largely dependent upon the country's environment and natural resource base for its economic and social well-being. Over two decades of war and civil strife, compounded with drought, population movements and a lack of governance, left the country with widespread environmental degradation that threatens human livelihoods.

8. To identify the most pressing environmental issues, and to outline a pathway towards sustainable resource management and environmental recovery, UNEP in cooperation with the Ministry of Irrigation, Water Resources and Environment (MIWRE), embarked on a post-conflict environmental assessment in February 2002. A UNEP programme manager was installed in Kabul in April, institutional preparations and the collection of background information occurred until August, and a month-long field mission was conducted in September 2002. A total of 35 urban locations and 38 rural sites were assessed across the country by an inter-disciplinary team of 20 international and Afghan experts. Approximately 60 field samples were also collected to test for air, soil and water contamination.

9. The final UNEP report, entitled "Afghanistan Post-Conflict Environmental Assessment" was released in January 2003. The work identified the existing status of and pressures on various natural resources, including waters, soils, forests, and wildlife and linked poor environmental management in the waste and water sectors directly to human health risks. The report found that most of the country is subject to an alarming degree of environmental degradation propelled by poverty, population growth and the need to survive. The lack of basic natural resources, such as clean water or forests, has led to the collapse of many rural livelihoods, turning many people into environmental refugees, and increasing population pressures in urban centres. As the country's natural resource base has declined, its vulnerability to natural disasters and food shortages has increased, thereby further increasing poverty and decreasing opportunities for sustainable livelihoods. Human health is also directly threatened by pollution hotspots and inadequate waste management and sanitation practices. The rich natural heritage of the country, an important element for future tourism, is also at risk.

10. Many of Afghanistan's environmental problems can be traced back to the collapse of local and national forms of governance and resource management. Prior to the outbreak of war, many communities developed, in coordination with the central government, ways and means to allocate resources and ensure sustainable use. With the collapse of these systems, resource use spun out of control, leading to a typical "tragedy of the commons" scenario, and wide spread environmental degradation. This finding indicated an urgent need to rebuild systems and institutions for environmental governance at all levels and in all areas across the country.

11. The Afghanistan Transitional Government developed a national budget for the 1382 solar year (March 2003-2004) covering US\$ 1.7 billion dollars worth of development projects and activities. Within this sum, the government gave a high priority to natural resources management, and allocated a total of US\$ 147 million towards addressing the most urgent needs.

12. In order to implement and manage the above projects, and ensure long-term sustainability, the Government of Afghanistan, and its Ministry for Irrigation, Water Resources and Environment identified the strengthening of environmental management capacity as the highest priority for public investment in this sector. To this effect a budget of US\$ 7.3 million, for a period of 2 years, was approved under the National Development Budget through the Public Investment Programme for Natural Resources Management.

13. Based on this decision, the Minister of Irrigation, Water Resources and Environment requested UNEP's Executive Director to make an effort to jointly mobilize funding, for the next 2 years and to take the lead in implementing and coordinating a portfolio of capacity building activities covering the following components:

- (a) Environmental Coordination;
- (b) Institutional Restructuring and Human Resources Development;
- (c) Environmental Impact Assessment;
- (d) Environmental Legislation, Regulation and Standards;
- (e) Community-based Natural Resource Management;
- (f) Environmental Policy and Planning;
- (g) Environmental Monitoring, Analysis and Reporting;
- (h) Environment Education, Communications and Outreach;
- (i) Multilateral Environmental Agreements and Regional Cooperation.

14. Funding of US\$ 5.3 million was successfully raised by UNEP for the programme from the European Commission as well as from the Government of Finland and from enabling activities of the Global Environmental Facility (GEF). The programme is being implemented from October 2003 to September 2006 by UNEP PCAU, in cooperation with UNEP Regional Resource Center for Asia and the Pacific (RRC.AP) and the World Conservation Union (IUCN). In the first 12 months of the programme, significant progress was made in the following areas.

15. Fourteen MIWRE offices were refurbished and furnished by UNEP in January 2004. These include offices for national programme staff, GEF staff, the programme manager and four international experts. Computer equipment, furniture and office supplies have been procured for the professional and administrative staff of UNEP and for the office and the secretariat of the Deputy Minister for Environment. A computer laboratory with five computers, a printer and internet connectivity has been established for the Department of Environment. The computer laboratory, managed by a DoE staff member, under the overall supervision of the UNEP network administrator, was officially inaugurated by the Deputy Minister for Environment in June 2004.

16. The UNEP Kabul office now contains five international (2 male/3 female) and 10 national staff (1 female and 9 male) working within the Department of Environment in the Ministry of Irrigation, Water Resources and Environment. A project coordinator is also located in Geneva. A process was undertaken by UNEP and the Department of Environment in August-September 2004 to identify suitable counterpart staff from MIWRE. A total of 53 potential counterpart staff were interviewed and 20 were selected (15 male/5 female). The 20 staff will receive detailed training from the UNEP Kabul team in the areas of environmental law, environmental impact assessment, multi-lateral environmental agreements and regional cooperation. A letter of agreement between UNEP and MIWRE on the counterpart staff was signed on 8 November 2004.

17. In order to support the on-going reform of the Department of Environment of MIWRE, UNEP and the Asian Development Bank (ADB) organized two events, as well as provided background reports on institutional structures for environmental management in other countries as examples. The first event, a workshop organized by ADB on 25 and 26 October 2003 focused on institutional development of each of the three departments of MIWRE. The second event, a decision-making ministerial discussion forum organised by UNEP on 18 March 2004, discussed the institutional structure of the Department of Environment. The purpose of these events was to study the institutional structures utilized by other environmental administrations, and to identify options for re-structuring the MIWRE and DoE. The two events, and other technical assistance provided to MIWRE, resulted in a draft departmental structure (Stage 1) that was submitted to the Independent Administrative Reform and Civil

Service Commission in April 2004. After its formal approval in early 2005, UNEP and ADB will assist MIWRE and DoE in the development of a Stage 2 proposal.

18. In an effort to identify the potential environmental impacts of development projects, UNEP and MIWRE successfully obtained the consent of the Ministry of Finance to include environmental information within the donor assistance database and project submission forms for the 1383 national budget. This allowed for all projects with potential environmental impact to be identified and for appropriate actions to be considered by the Transitional Government of Afghanistan in relation to those projects. A first round of screening was conducted by UNEP and MIWRE whereby 108 projects were identified as falling within the environment sector, while 325 were identified as having potentially significant environmental impacts. A UNEP mission visited Kabul from 9–17 March 2004 to determine the next steps for policy development in the area of environmental impact assessment (EIA). The UNEP mission met with key EIA stakeholders to identify policy goals and organized an inter-ministerial meeting on EIA on 13 March 2004 for senior Ministerial staff to further clarify the current state of EIA in Afghanistan and to facilitate the development of EIA policy within MIWRE. Since then, UNEP has been working closely with the Department of Environment to develop an EIA screening procedure for major industrial works. The first draft of the screening procedure, based on the UNEP EIA Manual, was released on 24 August.

19. UNEP and the World Conservation Union (IUCN) provided inputs to the draft constitutional clause on the environment, and also gave additional background information on best practice. Two references to the environment were included within the approved constitution. The first acknowledges that the people of Afghanistan are responsible for “ensuring a prosperous life, and sound environment for all those residing in this land”. The second obliges the state to “adopt necessary measures for safeguarding forests and the environment”. UNEP and IUCN have also been providing technical advice and information on best practice to the MIWRE Department of Environment and the Ministry of Justice during the development of the new environmental framework law (environmental management act). The new law is expected to be passed in early 2005.

20. UNEP was active in three key areas concerning Afghanistan’s participation in multi-lateral environmental agreements. UNEP facilitated Afghanistan’s accession to the Vienna Convention and Montreal Protocol (Ozone Treaties), and the accession instruments were signed by the Government of Afghanistan in June 2004. A National Ozone Unit (NOU) was also established in October in order to analyze the current situation with regards to the production and consumption of ODS (Ozone Depleting Substances) and develop a strategy statement and plan of action to be taken by the Government of Afghanistan. In addition, UNEP provided assistance in the preparation of two proposals to the Global Environment Facility (GEF) for enabling activities. These included a National Capacity Self-Assessment for Global Environmental Management (NCSA), with a budget of US\$ 200,000, and support for the preparation of a National Adaptation Programme for Action (NAPA) under the UNFCCC, with a budget of US\$ 200,000. The NCSA proposal was approved on 15 May 2004 while the NAPA proposal was approved on 11 July. UNEP has also provided assistance to the Department of Environment in developing a legislative plan required by the Convention on the International Trade of Endangered Species of Fauna and Flora (CITES).

21. UNEP and ADB co-organized five meetings of the Advisory Group on the Environment (AGE) in an effort to improve the coordination of environmental activities and to share information between key stakeholders. It was identified at the last meeting that multi-stakeholder technical task forces must be developed in 2005 to address specific issues, such as environmental impact assessment, environmental law and environmental health.

22. To further facilitate project coordination in the environment sector, UNEP and MIWRE developed a Public Investment Programme (PIP) for Environmental Management for 1383. The document analyses all projects with environmental components in the national development budget, and identifies those with key environmental relevance. In total 108 projects that fall directly within the environment sector were listed. This is an important first step at improving environmental coordination. The next step is to improve the sharing of information between the relevant environmental stakeholders and to promote their participation in the Advisory Group on the Environment.

23. UNEP has established a partnership with the World Conservation Union (IUCN) to conduct pilot projects on community-based resource management and restoration in three locations in Afghanistan. An IUCN expert will join the UNEP Kabul office in early 2005 to begin the implementation of related activities.

24. In terms of human resources development, UNEP organized three training workshops for MIWRE staff. The first event was a 3-day workshop on the identification of funding opportunities through the Global Environmental Facility (22–24 March 2004). The information gained in this workshop was also used to develop two GEF enabling project proposals for GEF funding. At the invitation of MIWRE, a three-member delegation of the Wildlife Institute of India (WII), led by the Director of WII, visited Afghanistan from 17-21 July 2004 to prepare a training programme for the staff of the MIWRE Department of Environment in the area of forest and wildlife conservation. The WII visit was facilitated by UNEP. The WII delegation also met a variety of stakeholders ranging from public sector institutions like the Ministry of Agriculture to international organizations including FAO. While WII prepares the training programme, sponsorship for MIWRE staff to attend short, medium and long-term training courses at WII is being sought. The third event was a 3-day environmental conservation and management course delivered by MIWRE and UNEP staff in Jalalabad to 60 MIWRE staff from four eastern provinces (Nangarhar, Laghman, Nuristan and Konar).

25. While project implementation is progressing, the security situation has been on a continuous decline throughout 2004. As part of the UN country team for Afghanistan, UNEP will follow all decisions taken by the Designated Official concerning security during periods of high alert.

B. Bosnia and Herzegovina

26. UNEP's work on depleted uranium (DU) started in the summer of 1999, when UNEP carried out an assessment of the impact of the Kosovo conflict on the environment and human settlements. As part of this overall assessment, UNEP conducted a Desk Assessment of the potential effects of the possible use of DU during the conflict. In 2000, the North Atlantic Treaty Organisation (NATO) provided the United Nations with new information concerning the use of DU during the Kosovo conflict. This information included maps, number of rounds used, and coordinates of the targeted areas. This enabled UNEP to carry out the first-ever international assessment of DU when used in a real conflict situation. The final report, entitled "Depleted Uranium in Kosovo - A Post-Conflict Assessment" was published in March 2001.

27. The work on DU in the Balkans was not closed following the publication of the Kosovo DU report. During the Kosovo conflict, a few sites outside Kosovo, in Serbia and Montenegro, had also been targeted with ordnance containing DU. Following the precautionary approach advocated by UNEP and to reduce uncertainties about the environmental impacts of DU, it was evident that a second phase of scientific work would be needed. This second phase started in September 2001 and was concluded in March 2002 with the publication of the report "Depleted Uranium in Serbia and Montenegro - Post-Conflict Environmental Assessment". The report provided additional information and revealed important new discoveries on the environmental behaviour of DU.

28. Based on these findings, a third study was required in Bosnia and Herzegovina in order to determine the environmental impacts and potential health risks of DU seven years after its use in conflict in 1994-1995. UNEP organized a team of international experts to investigate 15 sites in Bosnia and Herzegovina in October 2002. Five of these 15 sites were areas where NATO had reported using DU munitions. The remaining 10 sites were areas where the local population or authorities were concerned that DU might have been used. One of the 15 sites was inaccessible for UNEP due to the heavy presence of mines. The team used highly sensitive instruments including alpha and beta meters to measure surface radioactivity, and also relied on laboratory analyses.

29. The 17-member UNEP team included experts from UNEP, the Swedish Radiation Protection Authority, Spiez Laboratory (Switzerland), Italy's Environmental Protection Agency and Technical Services (APAT, former ANPA), the International Atomic Energy Agency (IAEA), the World Health Organization (WHO), the Greek Atomic Energy Commission, the US Army Centre for Health Promotion and Preventive Medicine (USACHPPM), the Nuclear Safety Institute of the Russian Academy of Sciences, and the University of Bristol (UK). Spiez and APAT also analysed the collected samples of penetrators, water, vegetation and so forth for toxicity and radioactivity. The mission was funded by the Governments of Italy and Switzerland.

30. The final UNEP report on DU in Bosnia-Herzegovina was launched on 25 March 2003. The report confirms for the first time that DU from weapons used in Bosnia and Herzegovina in 1994 and 1995 contaminated local supplies of drinking water at one site, and can still be found after 7 years in dust particles suspended in the air. The recorded contamination levels, however, are very low and do not present immediate radioactive or toxic risks for the environment or human health.

31. Overall, the findings in Bosnia and Herzegovina are consistent with previous UNEP studies in Kosovo (2001) and in Serbia and Montenegro (2002). However, the report also cites four new and significant findings about how DU behaves in the environment. First, ground contamination occurs at DU penetrator impact points at low levels, and is localized to areas typically limited within 1-2 metres. Second, DU penetrators buried near the ground surface have corroded rapidly losing 25% of their mass over seven years. The DU penetrators will corrode completely within 25 - 35 years after impact. Third, the report records the first instance of DU contamination of groundwater. The previous UNEP assessments of DU in the Balkans were made shortly after the end of conflict, while in Bosnia and Herzegovina the seven years that had passed since the conflict have allowed the corroding of DU to penetrate the soil and contaminate the groundwater. When contamination is found, UNEP recommends that alternative water sources be used and that regular water sampling and measurements continue for several years. Finally, DU contamination of the air was found at two different sites, including inside two buildings. This is due to the re-suspension of DU particles from penetrators or contamination points due to wind or human actions.

32. The report's recommendations include collecting the penetrators from the ground, covering contamination points with asphalt or clean soil, handling and disposing of DU material properly, decontaminating buildings and other places used by people, keeping records of DU sites, investigating all health claims and obtaining the missing coordinates of six confirmed attack sites in Bosnia and Herzegovina.

33. In addition to DU contamination, the UNEP team found that mine clearance personnel, as well as the general public, were not sufficiently aware of the risks and issues surrounding DU ammunition. As a result, UNEP organized a DU awareness training session for de-miners in Bosnia-Herzegovina in October 2004 and produced an informative brochure on potential risks from DU.

C. Haiti

34. An armed insurgency in Haiti forced President Jean-Bertrand Aristide to leave Haiti on 29 February 2004. Extensive looting and destruction followed, resulting in a breakdown of basic services. On 30 April, the Security Council established the United Nations Stabilization Mission in Haiti (MINUSTAH) for an initial six-month period.

35. In March 2004 the UN Office for the Coordination of Humanitarian Affairs (OCHA) responded to the growing humanitarian crisis in Haiti by organizing a Flash Appeal to address immediate humanitarian needs. Also in response to this crisis, a conference was organized with the donor community and Haiti interim government on 22 April, at which the Interim Cooperation Framework (ICF) process was launched, under the United Nations Development Group (UNDG).

36. The Interim Cooperation Framework (ICF) is a process led by the interim Haitian government to define a new partnership for cooperation between the interim Haiti government and the international community, in the transitional period and beyond. In practical terms, this exercise seeks to identify activities for funding by the international community in ten key sectors over a 2-year period starting in September 2004.

37. From 4-20 May 2004 a UNDG/World Bank Assessment Mission to Haiti was conducted to assess the Haitian government's needs and to establish an interim framework for two years to implement identified activities. The assessment process involved both national and international agencies. UNDP was representing the UN System, and the World Bank, European Commission as well as Inter-American Development Bank were also present. A total of 13 thematic working groups were established to conduct the needs assessment. They included security and political governance, economic governance, rapid employment and social safety nets, environment, health and nutrition, education and culture, agriculture and food security, infrastructure (roads and transport, energy, water and sanitation, solid waste management & slum upgrading), private sector development and SMEs and local development and decentralization).

38. The Environment Working Group, chaired by UNDP, included representatives of FAO, UNDP, UNEP, World Bank, the Canadian International Development Agency (CIDA), the Haitian State Secretariat for the Environment, Haitian Ministry of Tourism, Haitian Ministry of Agriculture, Haitian Office of Energy and Mining, and the Haitian Foundation for the Environment (NGO). Relevant environment issues were also covered by other clusters such as infrastructure, energy and agriculture. UNEP PCAU and the UNEP Regional Office for Latin America and the Caribbean (ROLAC) participated in this mission and were involved in the working group on the environment.

39. Within the environment working group, the members decided to draft a state of the environment report which could be fed into the overall assessment. UNEP contributed to the drafting of the report as well as reviewing forestry and energy sectors to suggest potential interventions and project ideas. As per the request of Haitian government, a national consultation involving NGOs was carried out on 17 May.

40. The state of the environment report, drafted by the environment working group was submitted to the needs assessment steering committee on 20 May. Follow-up activities are currently being considered by UNEP ROLAC. The contents of the state of the environment report will be used as a substantive input to the UNEP Geo process for Haiti.

D. Iraq

41. The past and recent conflicts in Iraq, combined with years of environmental neglect and mismanagement have led to serious environmental challenges in Iraq including degradation of water quality and quantity, inadequate management and treatment of municipal, military and industrial wastes, and ecosystem degradation, including deforestation, desertification and loss of the Mesopotamian Marshlands. The existing problems are compounding humanitarian conditions and threatening human livelihoods. If left unaddressed, the environmental problems will endanger human health, undermine sustainable development, and become a barrier to peace, economic growth and national stability. Technical assistance is needed to provide scientific and objective environmental information, prioritise actions, build governmental capacity to address the problems at hand, and clean-up sites posing immediate risks to human health.

42. At the extraordinary “Humanitarian Meeting Iraq” in Geneva on 15-16 February 2003, the Swiss delegation proposed to establish an “Environmental assistance stand-by group”, and explicitly asked for UNEP to be part of such a group. UNEP reacted positively proposing as the first step a Desk Study on the environment in Iraq. The UNEP Desk Study on the Environment in Iraq was presented by the Executive Director on 24 April in Geneva to the diplomatic corps and to the press. The following day it was presented in Paris to the UN Senior Management Group and the same weekend in Paris to the G-8 Ministers of Environment.

43. The UNEP desk study aimed at providing a timely overview of key environmental issues in the context of the recent conflict. Background materials used in the report’s preparation relied on UNEP’s earlier work in the region, including three studies it had carried out about the environmental impacts of the 1991 Gulf War, and the 2001 report on the demise of the Mesopotamian Marshlands. Due to the conflict situation, it was not possible to conduct field assessments and the study was rapidly compiled from published information sources as well as satellite data. Despite these limitations, the report sets out the general environmental context and provides guidance on the next steps for addressing key environmental challenges.

44. On 23 June 2003 in New York the OCHA Humanitarian Appeal for Iraq was launched, with a budget of US\$ 850,000 for UNEP for the year 2003. In parallel to the launch of the OCHA appeal, the UN Development Group convened a meeting in New York for important agencies in post-conflict Iraq. A total of 13 sectors were identified for the needs assessment. These included health, education, agriculture, water resources & food security, mine action, water supply and sanitation, macroeconomics, economic management, investment climate and state-owned enterprises, banking and finance, transport and telecommunications, electricity, livelihoods and employment generation, housing and institutional capacity building and rule of law.

45. Within the undg process, UNEP was requested to be the lead-agency on the crosscutting issue of environment. Within this context, UNEP developed environmental checklists for each of the sectors, reviewed each of the sector reports, identified key environmental needs for 2004 and beyond, and conducted two fact-finding missions to Baghdad and Basra. The UNEP input to the undg Needs Assessment, a report of 33 pages on the environment was submitted on 8 September. This was the first major, substantive input by UNEP to a undg process and involved several UNEP offices in several countries.

46. Within the undg Needs Assessment Report for Iraq, environment is recognized as a key issue to be addressed during the reconstruction process. Priorities for 2004 included within the report are to strengthen the Ministry of Environment and environmental governance at all levels, build capacity for environmental impact assessments, clean up environmental hotspots, and build public awareness of environmental issues. In the medium term, Iraqi environmental decision makers may want to focus their efforts on establishing a modern environmental infrastructure accompanied by laws, procedures, and

information systems, and building capacity for Iraq to access international environmental funding opportunities.

47. In October 2003, UNEP released the “Progress Report on the Environment in Iraq” which provides updated information about the evolving environmental situation in Iraq, with a view to highlighting priority areas for action. In addition to other sources, it draws its information from two fact-finding missions that UNEP was able to field to Iraq in July and August 2003, as well as from UNEP’s participation in the UNDG process. The report focuses on environmental risks posed by depleted uranium, contaminated sites, and hazardous wastes as well as on threats to human livelihoods caused by environmental degradation, including the demise of the Mesopotamian marshlands. The Progress Report was presented by UNEP at the Madrid International Donors’ Conference in October 2003.

48. In 2003, UNEP also organized a series of six roundtables on the environment in Iraq. The purpose of these meetings was to coordinate activities between key environmental stakeholders, to share information on environmental issues in Iraq, and to identify priorities in the environmental sector.

49. In early 2004, the UN Strategy for Assistance to Iraq was developed by the UN country team. The document draws together a range of prioritised programmes addressing humanitarian, reconstruction and development needs, to be undertaken by the UN family, its partners and others working closely with the Iraqi authorities in 2004. In addition, all of UNEP’s proposed projects involving environmental assessment, risk reduction, capacity building and marshlands restoration are reflected within the strategy.

50. The UN Strategy for Assistance to Iraq has identified environment as an important cross-cutting theme, as well as a major issue within cluster 5 “Agriculture, water resources and environment”. Within the UN Country Team for Iraq, UNEP is responsible for addressing the cross-cutting issue of the environment, as well as for developing targeted environmental projects based on its expertise and comparative advantages within the framework of cluster 5.

51. In order to identify project priorities for 2004/2005, UNEP had held a number of consultation sessions with the Ministry of Environment of Iraq. The first meetings were conducted in Baghdad in July and August 2003, followed by a meeting in Geneva with Interim Minister of Environment, Mr Abdul Rahman Sidiq Kareem on 21st November 2003. A further technical dialogue was held with the Deputy Minister for Technical Affairs, Mrs Manal Kamil Elyas in Geneva on 14/15 June 2004. Finally, the DU issue was discussed during the meeting between the current Minister of Environment, Ms Mishkat Moumin and Mr Pekka Haavisto, Chairman of the UNEP Iraq Policy Group, in Amman on 20th July 2004.

52. Based on the consultations with the Iraqi environmental authorities, UNEP has developed a comprehensive programme entitled “Strengthening environmental governance in Iraq through environmental assessment and capacity building”. Within the framework of the programme, US\$ 4.7 million has been contributed by the Government of Japan through the UN Trust Fund for Iraq. In addition, a bi-lateral contribution of US\$ 1.2 million has been made by the Government of the United Kingdom for environmental assessment, technical training and environmental mainstreaming activities, and a contribution of EUR 123,000 was made by the Government of Germany for capacity building in disaster management and prevention. The implementation period for the activities is June 2003 to December 2005. During 2004, significant progress was made in the following areas.

53. Due to the existing security situation in Iraq, UNEP’s approach is to conduct intensive capacity building workshops outside of the country in regional destinations, where possible. In this regard, UNEP successfully held four workshops in 2004, with a total of 65 participants. The first workshop on Environmental Emergencies and Disaster Management was held from 21 -23 March in Amman, Jordan. A total of 20 Iraqi experts from the Ministry of Environment, the regional environmental centres, the Ministry of Oil, the Ministry of Transport, and the Ministry of Industry and Minerals received basic technical training in disaster prevention, preparedness and response to environmental emergencies. A second workshop, on Environmental Inspections and Environmental Laboratory Analyses, was held from 2-15 of May at the Spiez Laboratory in Switzerland. A total of 18 Iraqi experts from the Ministry of Environment and from different regional environmental centres in Iraq received technical training in environmental inspections and laboratory analyses. The workshop also included specific field training on environmental inspections and sampling procedures of different media such as water, air, soil and biota. From 22-26 of September, UNEP facilitated five Iraqi participants to attend a regional Environmental Impact Assessment (EIA) Train the Trainers workshop in Tunis, Tunisia. The objective of the workshop was to develop skills in preparing and presenting courses based on the UNEP EIA

Training Resource Manual, specifically adapted to the needs of the participating countries. An additional EIA training workshop tailor-made for Iraqi government officials is planned in December 2004. In 2004/2005, additional training workshops are planned on multilateral environmental agreements, environmental monitoring, environmental governance and environmental law. In addition, an environmental information centre - consisting of an environmental library - will be developed for the Iraqi Ministry of Environment.

54. Concurrent with the capacity building workshops, UNEP is training and equipping a team of Iraqi environmental officers from the Ministry of Environment and regional environmental centers on techniques for assessing and prioritizing the environmental and health risks at five priority contaminated sites. The training is being conducted in Amman and covers general environmental site assessment (ESA) procedures, risk assessment and prioritisation. In this regard, UNEP organized in Amman, Jordan an ESA training course from 3-7 October and a related workshop on ESA Planning from 21-22 November. In addition, a complimentary course on ESA Sampling/Analysis was held from 12-14 of December in Geneva and Spiez Laboratory, Switzerland. ESA equipment including sampling and analytical tools, digital cameras, global positioning systems (GPS), laptops and health/safety equipment has also been handed-over to the Iraqis during the various ESA workshops. UNEP has also made progress in the development of a contaminated sites-database that will support the environmental assessments as well as land-use planning.

55. In order to promote transboundary management of the Mesopotamian Marshlands, UNEP invited delegations from the Islamic Republic of Iran and Iraq to a technical meeting on the Al-Hawizeh/Al-Azim Marshlands to Geneva, Switzerland, 17-18 May 2004. The purpose of the technical meeting was to initiate contact and dialogue between the two countries on the shared Hawr Al-Hawizeh/Al-Azim marshlands; seek a common understanding on the problems and issues facing the shared wetlands; identify specific areas for cooperation; and introduce as necessary international instruments and mechanisms for long-term cooperation and support. Both delegations agreed that the technical meeting had been a very useful first step and agreed to conduct a second technical meeting on the shared Hawr Al-Hawizeh/Al-Azim marshes in Tehran in autumn 2004. It was further agreed that UNEP would continue to play a key role as meeting facilitator.

56. In addition to UNEP's capacity building activities for environmental governance and assessment, a second area of work in Iraq focuses on the restoration of the Mesopotamian Marshlands. The UNEP International Environmental Technology Centre (IETC) has been provided US\$ 11 million from the Government of Japan through the UN Trust Fund for Iraq to develop pilot projects on marshlands restoration and management through the use of environmentally sound technologies.

E. Liberia

57. The peace accord signed in Accra, Ghana, in August 2003 ended 14 years of civil war in Liberia and provides Liberians and the international community an opportunity to rebuild the country. A National Transitional Government of Liberia (NTGL) was then founded and the United Nations peacekeeping mission in Liberia (UNMIL) began to re-establish the security in the country.

58. The United Nations and World Bank then undertook a Joint Needs Assessment for Liberia under the guidance and auspices of the NTGL and the coordination of the United Nations Development Group. The United Nations Mission in Liberia (UNMIL) played a central role in the planning and fact-finding and technical inputs were provided by Liberian line ministries, the various programmes, funds and agencies of the United Nations, as well as by UNMIL, the World Bank, the International Monetary Fund, non-governmental organizations, and other stakeholders.

59. The Needs Assessment exercise took place from November 2003 to February 2004 and was designed to focus on the highest priority requirements during Liberia's transition from relief to recovery, the latter to include national and local elections that must take place no later than October 2005. The NA covered 13 priority sectors grouped into nine "clusters": Security; Disarmament, Demobilisation, Reintegration and Rehabilitation (DDRR); Reintegration of Internally Displaced Persons (IDPs), Returnees and Refugees; Governance and Rule of Law; Elections; Basic Services (which includes the sectors of Health and Nutrition, Education, and Community Water and Sanitation); Productive Capacity and Livelihoods; Infrastructure (which includes Power, Transport, Communications, and Urban Water and Sanitation); and Economic Policy and Development Strategy. Attention was also given to seven cross-cutting themes: Gender, HIV/AIDS, Environment, Human Rights, Shelter, Forestry and Media.

60. Phase one of UNEP's post conflict environment programme in Liberia, Preparatory Work, commenced in November 2003 as UNEP represented the cross-cutting theme of Environment in the Needs Assessment. This involved producing environmental information for inclusion in its report, reviewing information from other sectors and themes within the Needs Assessment and fielding missions to Monrovia in December 2003 and January 2004. UNEP also attended the International Reconstruction Conference in New York in early February 2004.
61. As supplementary information to the Needs Assessment, UNEP produced the "Desk Study on the Environment in Liberia". The report aimed at providing a rapid overview of the environmental problems faced by the country, and identified the immediate needs to be addressed during the reconstruction and development process. The UNEP Desk Study was presented in New York at the International Reconstruction Conference. The study was prepared with the assistance of the NTGL, United Nations colleagues, as well as local and international environmental non-government organizations.
62. The UNEP Desk Study found that the misuse of natural resources has not only been a source of conflict in Liberia and the wider region, but has also sustained it. The links between the unjust and unregulated exploitation of natural resources in Liberia and the regional arms trade and instability in West Africa have been well documented by the United Nations and international NGOs. A key contribution towards increasing regional stability will be to provide the Liberian government and people with the capacity and proficiency to manage their natural resources in a just and sustainable manner. Creating strong and effective environmental administration would thus not only play an important regional role but it would lay the foundations for the appropriate use of natural resources to aid Liberia's economic and social development and help to achieve the internationally agreed goals of the Millennium Declaration. To achieve this goal, a total of 60 recommendations are provided by the Desk Study for addressing urgent issues in the areas of environmental governance, international cooperation, environmental information and awareness, financing environmental protection, forestry, biodiversity, energy, mining, water and sanitation, solid waste, manufacturing, shipping, land-use planning and displaced people. UNEP fielded another mission to Monrovia in April 2004 during which the Desk Study on the Environment was presented to the NTGL, UNMIL and other UN colleagues in Monrovia.
63. Based on findings of the Desk Study, UNEP received an official request on 19 April 2004 from Chairman Guyde Bryant of the NTGL, to provide additional technical assistance in the areas of environmental policy, law and assessment. The request included an appeal for UNEP to provide a Chief Technical Advisor on environmental matters to the NTGL, undertake capacity building exercises and provide expert advice and technical assistance.
64. In partial response to the request from the NTGL, UNEP organised and co-hosted, along with UNMIL and the UNDP, a two day Seminar on the Environment in Liberia in Monrovia on 12-13 July 2004. The aim of the seminar was to promote and discuss the findings of the UNEP Desk Study as well as to present the draft National Biodiversity Strategy and Action Plan, executed by the EPA, implemented by UNDP and funded by the Global Environment Facility.
65. The seminar enabled 100 participants from government, non-governmental organizations, academia and the international community to familiarise themselves with these documents, debate them and discuss ways in which they can be implemented in Liberia. The second day of the seminar featured three workshops that addressed the issue of capacity building in Liberia with a view to promote environmental protection and foster the implementation of the internationally agreed goals of the Millennium Declaration. The workshop topics were Forests and Biodiversity; Sustainable Energy; Environmental law, policies and institutions.
66. Four key recommendations arose from the seminar. First, environmental issues should be firmly entrenched as a cross-cutting theme in all reconstruction programmes planned and currently under way for Liberia. Second, the administrative structure of the Environmental Protection Agency (EPA) should be finalized through the appointment of its National Environment Policy Council and Board of Directors. Third, the National Biodiversity Strategy and Action Plan should be signed and adopted by the National Transitional Government of Liberia. Finally, environmental issues can be used to build stability in the region through increased cooperation between neighbouring countries and the establishment of trans-boundary protected areas.
67. The seminar has had two immediate positive consequences. Firstly, the National Biodiversity Strategy and Action Plan was signed by Chairman Bryant and has now been adopted by the NTGL. Secondly, as a result of UNEP's intervention, a Task Force on the Environment has been established. This body is modelled on the Advisory Group on the Environment that UNEP created in Afghanistan.

It should be noted that UNEP also played a constructive role to encourage other UN agencies, UNMIL and UNDP, to cooperate over environmental issues.

68. The Task Force will primarily consist of representatives of the NTGL, and representatives from UNDP, UNMIL and UNEP. It should also include other UN bodies that have in accordance with their mandates an interest in the environment, donors/development partners as well as national and international non-governmental organizations. The Task Force will include assisting the NTGL with environmental information and expertise throughout the implementation of the reconstruction programme that followed the Joint Needs Assessment. It will also assist the Environment Protection Agency (EPA) in compiling a reform package that covers short, medium and longer-term priorities for enabling the EPA to fully implement its legal mandate. UNEP will continue to support the Task Force with environmental expertise and to build on the newly established UNMIL/UNDP partnership.

69. UNEP participated in an extensive field mission to Liberia during the period 20 October to 22 November in order to participate in the collection of field data for the National Capacity Self Assessment (GEF enabling activity). The main findings of the mission will be released in early 2005.

70. Based on the above, UNEP has developed a programme proposal to strengthen the environmental administration in Liberia at national and local levels through a combination of capacity building activities, technical advice and the provision of basic equipment. Efforts are now underway to mobilize funds for programme implementation during 2005/2006.

F. Occupied Palestinian Territories

71. A separate comprehensive status report has been developed for the Occupied Palestinian Territories as required by decision 22/1/V.

G. Serbia and Montenegro

72. The 1999 armed conflict in the Balkans was triggered by the collapse of efforts to find a diplomatic solution to the Kosovo crisis. The Rambouillet peace negotiations failed and NATO initiated air strikes on targets within the then Federal Republic of Yugoslavia (FRY) a few days later, on 24 March 1999. Although the conflict was relatively short-lived, with NATO suspending its campaign on 10 June 1999, severe damage was inflicted on strategic infrastructure in the Republics of Serbia and Montenegro.

73. The intensity of the air strikes, the targeting of industrial and military facilities, and dramatic television pictures combined to fuel claims that an environmental disaster had resulted from massive pollution of air, land and water. At the same time, NATO was underlining its policy of selective, precision targeting and rejecting reports of environmental crisis. As is generally the case in times of war, it became hard to separate fact from rumour and propaganda. It was for this reason that UNEP and the UN Centre for Human Settlements (UNCHS/Habitat) initiated a neutral, independent, scientific assessment of the environmental situation in the FRY known as the Balkans Task Force.

74. The field assessment was conducted between July and October 1999 and consisted of both field missions and desk study components by UNEP and HABITAT experts. The findings from this work were published in October 1999 in "The Kosovo Conflict – Consequences for the Environment and Human Settlements". This report concluded that there had been no generalized environmental catastrophe as a result of the conflict, but that more localized impacts – combined in some cases with a long-term legacy of poor environmental management – gave cause for concern. In particular, the environmental situation at four 'hot spot' locations in Serbia (Bor, Kragujevac, Novi Sad and Pancevo) was so severe that urgent clean-up action was recommended on humanitarian grounds.

75. Following publication of the 1999 report on the Kosovo conflict, UNEP vigorously promoted the provision of immediate environmental clean-up and capacity-building measures, notably through international humanitarian assistance to the Federal Republic of Yugoslavia (now Serbia and Montenegro). A major step was the publication in April 2000 of UNEP's Feasibility Study report setting out in detail 27 technical project proposals for the four environmental hot spots.

76. During consultations with the wider international community, UNEP was urged and encouraged to coordinate implementation of environmental remediation work. Sufficient funding was eventually secured for a UNEP Clean-up Programme to be launched at the end of 2000, running until December 2003.

77. A combination of fund-raising efforts, rigorous project prioritisation and thorough technical preparation resulted in implementation by UNEP of 16 physical works projects at the four hot spot sites. In addition, other international partners provided bilateral support for a further six projects from the Feasibility Study portfolio, meaning that 22 projects in all were able to go ahead. All of these projects have improved the environmental situation and significantly reduced risks to human health and well-being. While the main focus has been the physical works needed to mitigate environmental problems and associated health risks, institutional strengthening and capacity building has been a major theme running throughout the Clean-up Programme.

78. A final report, titled “From conflict to sustainable development: Assessment and clean-up in Serbia and Montenegro” provides the main technical achievements of the clean-up operations. Implementation of the UNEP Clean-up Programme was made possible by the generous contributions of the governments of Denmark, Finland, France, Germany, Ireland, Luxembourg, The Netherlands, Norway, Sweden, and Switzerland. The following sections list the major achievements at each of the hotspot sites.

79. Among the four environmental hot spots, three facilities within Pancevo’s extensive industrial complex were assessed by UNEP in 1999. The main environmental concerns identified at Pancevo petrochemical plant were serious spills of ethylene dichloride (EDC) and mercury. These had contaminated soil, groundwater and the complex’s wastewater canal, which leads to the Danube River. The wastewater treatment plant, though not directly hit during the air strikes, was also damaged, causing untreated wastewater from various units of the petrochemical plant and oil refinery to flow into the canal. At the heavily targeted Pancevo oil refinery approximately 80,000 tonnes of oil products and crude oil burned, releasing sulphur dioxide and other noxious gases. In addition, an estimated 5,000 tonnes of oil and oil products leaked into the soil and the sewer system, aggravating pre-existing soil and groundwater contamination at the refinery. The UNEP Clean-up Programme enabled seven of the fourteen Feasibility Study projects for Pancevo industrial complex to go ahead. The major achievements were as follows:

(a) At the Pancevo petrochemical plant, the project achieved three major results. First, UNEP and other partners installed the necessary equipment at the vinyl chloride monomer (VCM) plant to recover and treat approximately 400 tonnes of ethylene dichloride (EDC) that had spilled from storage tanks damaged during the conflict. Second, at the damaged wastewater treatment plant, the UNEP project replaced mechanical and instrumental equipment, repaired the trickling filter and pH regulation facilities, and rehabilitated the activated sludge unit. This allowed the plant to resume treatment of wastewater from the petrochemical plant and Pancevo oil refinery. Finally, UNEP also remediated mercury contamination at the petrochemical plant that had been caused by bomb damage during the conflict;

(b) At the Pancevo oil refinery, the wastewater pre-treatment facilities – including the oil separators – were repaired and upgraded by the UNEP project, and new mechanical and instrumental equipment was supplied. The repair of the wastewater pipeline between the refinery and the petrochemical plant enables pre-treated wastewater to be transported from the refinery to the treatment plant before discharge to the wastewater canal. As an integral precondition to this project, UNEP funded the construction of an additional 1,700 m³ of oil sludge capacity for the removal and safe disposal of spilled oil and oil products that would otherwise hamper the rehabilitation of pre-treatment facilities. As part of its capacity-building efforts UNEP also delivered a study of integrated wastewater management, which recommended technical solutions for improved management and emergency control systems;

(c) At the Pancevo wastewater canal, UNEP investigations confirmed high concentrations of contaminants in the sludge at the base of the canal, in part due to the Kosovo conflict. In order to prevent the discharge of dissolved and sediment-associated pollutants and to protect downstream drinking-water resources and the Danube River system itself, UNEP undertook remediation design activities. The sediments present at the site were comprehensively characterised. In order to identify suitable remediation options and raise additional funds, UNEP initiated a comprehensive stakeholder review process. Under the leadership of the Serbian Ministry, local and national stakeholders asked UNEP to develop preliminary environmental impact assessments (EIAs) and general designs for two remedial options: (i) dredging the sediment and depositing it in a new landfill; and (ii) dredging and dewatering the sediment and treating it by thermal desorption. Through a step-by-step consensus-building effort, stakeholders in Pancevo and the national environmental authorities expressed their commitment to meeting technical preconditions for sustainable remediation measures (i.e. no further contamination to enter the canal). In addition, fund-raising efforts by UNEP and the Serbian authorities led to the European Commission’s European Agency for Reconstruction earmarking resources to

support implementation. The parties concerned have therefore shown their readiness, in principle, to begin implementing the recommendations put forward by UNEP.

80. During the conflict, several storage tanks and pipelines at Novi Sad oil refinery were damaged and in excess of 70,000 tonnes of crude oil and oil products reportedly burned or leaked into the wastewater collection system and the ground, causing contamination of soil and groundwater. The UNEP Clean-up Programme enabled three of the seven priority projects identified in the Feasibility Study to be fully addressed. The major achievements were as follows:

(a) At the oil refinery in Novi Sad, UNEP worked in close cooperation with Novi Sad Waterworks to immediately initiate the construction of a hydraulic barrier to prevent the migration of contaminated groundwater from the refinery area towards the drinking-water wells. Work on this project started in mid-2001 and the completed barrier was handed over to the authorities of Novi Sad in April 2002. Since then, Novi Sad Waterworks has tested the equipment on a regular basis;

(b) An approximately two-kilometre long, buried concrete collector conveys wastewater from the refinery, across the Ratno Ostrvo drinking-water wells, to the Danube. The 1999 air strikes may have further damaged the collector, which was reportedly in poor condition prior to the conflict. Severe leakage from the damaged collector has been polluting groundwater and threatening the nearby wells. Repairs to the collector began once a temporary bypass had been installed to carry the wastewater from the refinery. This connected the out let of the oil refinery's pre-treatment facility with the Danube through a network of canals. The main collector was then cleaned and, following mapping of required repairs, the actual remedial works were completed in April 2003. The extension of the collector outlet, taking it downstream of the Ratno Ostrvo well field, will further reduce immediate risks to drinking-water resources;

(c) Working in close cooperation with Novi Sad refinery, and building on complementary studies by Czech partners, UNEP delineated areas within the refinery compound where free phase oil is present on the groundwater table. Remediation options were reviewed and potential techniques pilot tested. It was decided to commence implementation using a mobile abstraction and separation unit. By January 2004, approximately 4.5 tonnes of free-phase oil had been recovered. However, this work has provided only a limited solution to the refinery's historic and more recent pollution problems.

81. During the 1999 conflict, two transformers containing PCB oil were damaged in the paint hall of the Zastava car factory in Kragujevac. Some 2.2 tonnes of PCB oil leaked from the transformers and flowed onto the concrete floor and in the direction of nearby wastewater pits. Analyses of samples taken by UNEP in 1999 and 2000 showed high levels of PCBs covering the floor surface. The UNEP Feasibility Study identified five priority projects at the Zastava industrial complex, all designed to reduce the risks to the environment and human health from PCB contamination. By the end of the project, four of the five priority projects for the Zastava complex, as identified in the Feasibility Study, were completed in the framework of the Clean-up Programme. The following results were achieved:

(a) The UNEP Clean-up Programme, working in close cooperation with the Zastava car factory and Kragujevac University's Institute of Chemistry, removed contaminated layers of concrete and soil, packaging the hazardous waste for later final treatment. New soil and concrete base layers were laid and an anti-static epoxy resin was placed over the concrete. A total of 135 tonnes of hazardous waste resulting from the clean-up work was characterized, properly packed, labelled, temporarily stored and later transported and incinerated abroad. This part of the cleanup was completed in August 2002 and enabled industrial use of the paint hall to recommence;

(b) PCBs leaking from the two bomb-damaged transformers reached open wastewater pits in the Zastava paint hall and became mixed with water, paint sludge, and debris. The total quantity of PCB-contaminated wastewater in the pits was 6,000 m³. To reduce health risks to factory workers, to avoid further cross-contamination, and to protect water resources from additional pollution (in particular through uncontrolled sewerage discharges to the Zdraljica River and the Lepenica River), the PCB-contaminated wastewater was removed from the pits and treated using a remediation method developed by national experts and reviewed by international specialists. In total, 120 tonnes of contaminated debris and bottom sediment were removed. An additional 10 tonnes of equipment from the pits was dismantled, decontaminated and disposed of. The resulting hazardous waste was characterized, properly packed, labelled and later transported and incinerated abroad. This project was completed in April 2002;

(c) PCB's leaking from a transformer at the sub-station close to the headquarters of 'Zastava-Energetika' were also detected by UNEP. The transformer was removed and temporarily stored in an on-site restricted area designated for used equipment containing PCBs. After the removal and replacement of contaminated concrete and soil layers from the transformer pit and the adjacent

concrete surface, a replacement transformer free from PCB oil was installed. Approximately 50 tonnes of hazardous waste was characterized, properly packed, labelled and later transported and incinerated abroad (see below). In addition to protecting workers and improving the environment, the project has enabled the transformer station to begin operating again;

(d) A total of 315 tonnes of hazardous waste resulting from all of the remediation projects at Kragujevac was packed and temporarily stored on the factory premises as there is no approved facility in Serbia and Montenegro for the environmentally sound disposal of such waste. Therefore, in order to treat and finally dispose of the hazardous waste in accordance with environmentally sound management requirements, the material was transported abroad. UNEP successfully completed this phase of the project in October 2003, working in close cooperation with the Zastava factory and the competent national authorities, and in accordance with the Basel Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal.

82. At the Bor mining and smelting complex, which had also been targeted by air strikes, the UNEP post-conflict assessment identified localized PCB contamination at the site of a destroyed transformer station but also raised concerns about severe and chronic air pollution in the Bor region as a result of the plant's long-term operations. However, by the time the Clean-up Programme commenced, local stakeholders had already taken the initiative to move PCB-contaminated debris and material, including approximately 120 capacitors, from the transformer station to the RTB Bor dump site. Consequently, and taking note of the significant wider environmental problems in the Bor region, activities under the Clean-up Programme focused on assessment and reduction of remaining PCB-related risks at the transformer station and dump site and strengthening the overall environmental management capacities of local stakeholders. The following results were achieved:

(a) In 2002/2003 a new transformer station was erected with funding from the Norwegian government. UNEP's risk assessment of the RTB Bor dumpsite, where the PCB-contaminated debris had been placed, was finalized in February 2003. No immediate risks to groundwater were identified, but measures to minimize future risks and to protect workers' health were recommended. In addition, UNEP removed, packed and transported abroad for final treatment some 40 PCB-containing capacitors, which had been removed from the transformer station and stored in the vicinity of the dumpsite.

(b) Given the serious environmental challenges in Bor, and at the request of the local authorities, the UNEP Clean-up Programme provided further support to enhancing local capacities in the fields of environmental planning and monitoring. Environmental monitoring capacities were assessed in May 2002 by a joint mission consisting of national environmental inspectors, national experts and UNEP. This team covered air pollution, industrial and municipal wastewater, and soil contamination, concluding that capacities were generally insufficient. It was recommended that immediate priority – given the serious and direct risks to human health – should be given to strengthening capacities for monitoring of air pollution. An air monitoring system, comprising both fixed and mobile stations was procured, installed in May 2003 and inaugurated in October 2003. Official reporting began in January 2004. Quarterly reports will be used in an effort to clarify the relationship between health and pollution data.

(c) The other UNEP-assisted capacity-building component consisted of enhancing local environmental planning capabilities by supporting formulation of the first Local Environmental Action Plan (LEAP) for Bor. These efforts built on existing initiatives and previous commitments of local NGOs, local government, university and major polluters. A draft LEAP summary was presented at the Kiev 'Environment for Europe' conference in May 2003, with the final document approved in mid-2003 and published early in 2004. The elaboration of detailed project proposals – to enable implementation of the Action Plan – remains a priority next step for the LEAP stakeholders.

83. While the primary aim of the UNEP Clean-up Programme was to reduce the environmental risks at the 'hot spots', the clean-up efforts were complemented by a range of capacity-building activities. The training courses, seminars and workshops organized through the Programme were chosen in consultation with the national authorities and local partners with a view to supporting efficient implementation of, and follow-up to, clean-up activities. An additional objective was to strengthen national and local capacities for identifying, prioritising and addressing environmental concerns. Activities were also designed with the aim of supporting resumption of international environmental cooperation, while stressing the importance of keeping environment (and related health issues) on the national reconstruction and reform agenda. Training and workshop activities covered areas such as hazardous waste management, Local Environmental Action Plans, cleaner production and sustainable consumption, foreign direct investments, and Multilateral Environmental Agreements.

84. Although UNEP's post-conflict activities came to an end in December 2003, UNEP, through its Regional Office for Europe, will continue its environmental cooperation with Serbia and Montenegro.

H. Sudan

85. Sudan is the largest country in Africa with an area of 2.5 million km² and a population of approximately 36 million people. It is a country of diverse culture, religion and ethnicity. Since gaining independence in 1956, Sudan has been plagued by decades of civil war and conflicts. The competition for scarce natural resources and the unequal distribution of these resources combined with marginalisation of the South are among the factors that contributed to the conflicts that have repeatedly engulfed Sudan. Over 2 million Sudanese have died, 4 million have been uprooted and some 600,000 live as refugees beyond Sudan's borders.

86. Various mediation efforts have been launched in the past and the latest initiative spearheaded by the Intergovernmental Authority for Development (IGAD) has resulted in the Machakos Protocol, signed in Kenya in July 2002 and followed by protocols on security arrangements, wealth-sharing and power-sharing. It now remains for the Government of Sudan (GoS) and the Sudan People's Liberation Movement/Army (SPLM/A) to conclude negotiations and sign a comprehensive peace agreement through the Naivasha Peace Talks process. Several concerns remain however, particularly regarding the lack of inclusiveness of all parties in the peace negotiations. Also fighting continues in various parts of the country, particularly in the Darfur region where a massive humanitarian crisis is fast developing with an estimated 1.2 million Internally Displaced People (IDPs). The Darfur crisis has had a negative impact on the Naivasha process and the prompt resumption of the peace negotiations seems to be fading away. Regarding the Darfur region, peace talks between the two rebel groups, the Justice and Equality Movement (JEM) and the Sudan Liberation Movement/Army (SLM/A), and the GoS, have started in Abuja, Nigeria in August 2004.

87. The United Nations have been closely monitoring negotiations both with regard to the Darfur Crisis and the North/South peace negotiations. A Joint Assessment Mission (JAM) co-led by the United Nations and the World Bank to provide an assessment of rehabilitation and transitional recovery needs over the next two years, as well as development needs for a further 4 years, has been established. The JAM process is coordinated by a Core Coordination Group (CCG) comprising representatives from the GoS, the SPLM, the UN system, the World Bank and IGAD. For the JAM process to enter into its full implementation phase a comprehensive peace agreement between the GoS and the SPLM will need to be signed and an adequate resolution to the Darfur will have to be found.

88. UNEP has been actively involved in the preparation for the full implementation of the JAM. UNEP gave a presentation on the interaction between environment, natural resources and conflict at the Conflict Analyses Frames for the JAM held at the World Bank in May 2004. UNEP also participated in the JAM Retreat organised in Nairobi on 6-9 September 2004 as the Focal Point for the Environment. On 10 November, UNEP submitted its first consolidated report on environmental needs to the JAM. In late 2004, UNEP reviewed the report produced by each of the main sectors and provided additional inputs on environmental issues to be taken into account. The final JAM report is expected to be finalized in early 2005.

89. On 18 November 2004, the UN Security Council met in Nairobi and in its Resolution reaffirmed its commitment to the sovereignty, unity, independence and territorial integrity of Sudan and expressed its determination to help the people of Sudan to promote national reconciliation, lasting peace and stability. The Security Council strongly endorsed the Sudanese commitment to reach a Comprehensive Peace Agreement (CPA) by 31 December 2004, and expects it to be fully and transparently implemented, with the appropriate international monitoring. The Security Council also reiterated its readiness to provide assistance and support upon the signing of the CPA and welcomed the initiative of the Government of Norway to convene an international donors' conference for reconstruction and development following the signature of the CPA. Progress towards a peaceful resolution of the conflict in Darfur was emphasised as a condition that would facilitate the delivery of such assistance. In this regard, the Security Council underlined the importance of the Abuja peace talks on Darfur in resolving this conflict.

I. Support to the United Nations Compensation Commission

90. The United Nations Compensation Commission (UNCC) was established by Security Council resolution 687 (1991) to administer a fund to pay compensation for “any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq’s unlawful invasion and occupation of Kuwait”.

91. On 21 June 2001, the “Monitoring and Assessment” instalment was awarded by the UNCC Governing Council (Decision 132) based on the recommendations of the “F4” Panel. Out of the 107 claims that were assessed in the “Monitoring and Assessment” instalment, a total of 69 were recommended for payment, 36 were not recommended for payment and 2 were transferred to future instalments. The countries involved in the successful claims include Saudi Arabia, Kuwait, Iran, Jordan and Syria.

92. The “F4” Panel UNCC of Commissioners has sought the assistance of UNEP in overseeing the monitoring and assessment studies undertaken, or to be undertaken, by the claimant Governments, especially those for which detailed technical modifications were suggested in the first report of the “F4” Panel (Report and Recommendations Made by the Panel of Commissioners Concerning the First Instalment of “F4” Claims, S/AC.26/2001/16, 22 June 2001).

93. The overall aim of the UNEP-UNCC cooperation is to provide the UNCC “F4” Panel of Commissioners with environmental information management services for a period of 2 years to facilitate the tracking of the 69 “monitoring and assessment” projects. Assistance will be provided to the “F4” Panel of the UNCC by providing independent, credible and accurate information on the 69 monitoring and assessment studies and to help the F4 Panel in using the information and results from the “Monitoring and Assessment” studies in processing the other environmental claims. Since inception of the project, UNEP has successfully completed the implementation of various elements of the project. An environmental databank became fully operational in January 2003 and is currently being accessed by the UNCC Panel of Commissioners and their designated consultants from around the world on a regular basis, thus facilitating exchange of information.

94. UNEP has provided eight review reports of the studies being conducted and completed by the claimant countries. Five oral presentations were made to the Panel of Commissioners and UNEP’s reports resulted in the Panel seeking additional information from the claimant countries on the studies being executed.

95. UNEP also arranged interface meetings with all claimant countries to assist them in preparing and transmitting their data in a manner which facilitates easy access by the Panel of Commissioners and their associated experts.

96. The UNCC process is coming to an end in December 2004. UNEP is currently engaged in advising the Panel on how the results from the studies could be made available to a wider audience in the region, with concurrence from the claimant countries.