






# **DISASTERS & CONFLICTS**

Field and  
policy updates

**JULY - DECEMBER**  
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## UNEP Disasters and Conflicts Sub-Programme

Minimizing threats to human well-being from the environmental causes and consequences of disasters and conflicts is a priority area for the United Nations Environment Programme (UNEP). Its Disasters and Conflicts sub-programme has deployed environmental expertise to support crisis prevention and crisis recovery in more than 40 countries, including Afghanistan, Argentina, the Balkans, Nigeria, Ukraine, Madagascar, Georgia and Sudan.

This report was compiled by UNEP's Post-Conflict and Disaster Management Branch (PCDMB).

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# 1

## Post-Crisis Environmental Assessment

UNEP offers technical assistance to countries where critical ecosystems or natural resources have been directly or indirectly degraded, damaged or destroyed by conflicts and disasters. Field-based assessments using sound science and state-of-the-art technology identify environmental risks to human health, livelihoods and security with the aim of integrating environmental needs into relief and recovery programmes.

# Côte d'Ivoire Post-Conflict Environmental Assessment launched

September 2015 saw the official launch of UNEP's Post-Conflict Environmental Assessment (PCEA) of Côte d'Ivoire, the product of years of work and successful collaboration between UNEP and the Government of Côte d'Ivoire.



2013 © Matija Potocnik / UNEP

Forests in Côte d'Ivoire are important not only locally and regionally, but also globally. Locally, forests provide both direct benefits to the community, such as timber and non-timber forest products, and indirect benefits, such as climate regulation and water security. As Côte d'Ivoire's forests have high biodiversity value with many endemic species, these forests also have global significance.

The assessment emphasises that Côte d'Ivoire has abundant natural resources, from forests to mineral reserves. However, the conflict and political turmoil that marked the country placed an unprecedented strain on the country's forests and fertile land, with deforestation and environmental degradation taking place at unparalleled rates.

Large scale reforestation and sound environmental management could support the recovery of Côte d'Ivoire's forest cover, which now forms just 3% of the country's territory and continues to decrease rapidly, according to the PCEA.

The assessment's findings make also it clear that measures, such

as reforestation, will have to be unprecedented, visionary and carried out on a large scale.

Achim Steiner, UNEP Executive Director, also emphasized the importance of effective natural resource management on the path towards sustainable development and post conflict recovery.

**“As Côte d’Ivoire moves towards reconciliation and sustainable development, sound management of the country’s natural wealth will be critical for inclusive economic growth, social cohesion and political stability.”**

**Achim Steiner,  
UNEP Executive Director**

** QUICK FACTS:**

- Forest cover in Côte d'Ivoire now forms just three per cent of the country's national territory and continues to decrease rapidly.
- Satellite data suggests a reduction of approximately 660,000 ha of closed canopy forest cover of classified forests between 2000 and 2013.
- Côte d'Ivoire's Ébrié Lagoon is the largest lagoon system in West Africa, however is highly polluted with solid and liquid urban waste from the city of Abidjan.

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UNEP's analysis spanned a wide range of environmental issues known to be affected by conflict, such as national parks, unplanned urban expansion, the mining sector, the environmental degradation of Ébrié Lagoon, and the risk of oil spill along the country's coastline.

The report proposes a number of overarching strategic recommendations, as well as more specific technical ones.

Some of the key recommendations include reversing the current deforestation trend in order to preserve the ecosystem and economy; improving water and solid waste management to help face the growing population of Abidjan, environmental monitoring of the quality of Ebrie Lagoon and ending the disposal of waste in the lagoon among others.

The report offers a positive look to the future. Its recommendations underline that the environmental degradation of Ébrié Lagoon and the deforestation trends are both reversible. Furthermore, sectors such as mining offer new prospects for the country's economy, if managed wisely and sustainably.

In a ceremony held in Abidjan on 16 September 2015, UNEP's Deputy Executive Director, Ibrahim Thiaw, presented the assessment to Côte d'Ivoire's Minister of Environment, Dr. Rémi Allah-Kouadio, who received the report with thanks and acknowledged UNEP's excellent work. In a further ceremony in Abidjan, on 25 September 2015, United Nations Special Representative Aichatou Mindaoudou handed the report to Côte d'Ivoire's President Alassane Ouattara.

To download the Post-Conflict Environmental Assessment, please see: [unep.org/cotedivoire](http://unep.org/cotedivoire), available in both French and English.

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# UNEP engagement with the response efforts to the Syrian Crisis in Jordan

The ongoing Syrian Crisis and the resultant high numbers of refugees fleeing to neighbouring countries are having significant and diverse impacts on the receiving countries, including Jordan. The Jordan Response Plan (JRP), led by the Government of Jordan and engaging UN agencies and civil society, seeks to address these impacts.



Engaging children and youth in environmental protection in a challenging environment (Jordan)

© Mohammad Alatoom / UNDP Jordan

The Jordan Response Plan (JRP) provides a framework to respond to the challenges brought by the influx of an estimated 1.3 million Syrian refugees and related provision of protection and humanitarian emergency assistance.

UNEP works with the Environment Task Team of the JRP to see that the environment is considered in two key ways. Firstly, by addressing the direct environmental challenges of the Syrian crisis on Jordan; and secondly by mainstreaming environment across all JRP sectors.

**Addressing specific environmental priorities:** A rapid assessment of environmental impacts of the influx of refugees

(commissioned by UNDP and UNEP) revealed that the already challenged natural capital of Jordan is facing substantial additional pressures due to the refugee influx. Increasing competition over natural resources sees pressure on protected areas in the northern and eastern parts of the country where the majority of refugees are situated with both refugees and hosting communities exercising more direct and indirect pressures on natural resources for livelihood purposes. Illegal wood cutting, grazing and hunting have all increased over the past five years, as well as forest fires and land encroachment.



© Mohammad Alatoom / UNDP, Jordan

Engaging children and youth in environmental protection in a challenging environment (Jordan)

Syrian refugees come, in most cases, with a need for health services. Consequently hospitals and health care centres are producing larger amounts of medical and pharmaceutical waste than prior to the crisis with a 184% increase in the amount of medical waste generated recorded by the Ministry of Health since the start of the crisis, and pharmaceutical waste increasing 250%.

Specific projects are being developed under the JRP to address these identified environmental priorities.

**Mainstreaming environment:** The JRP includes a large number of projects on infrastructure, Water, Sanitation and Hygiene (WASH), education and food security, in addition to environmental impacts. In an already resource-scarce and environmentally fragile country like Jordan, this can exacerbate environmental stresses unless mitigation measures are put in place within the design of projects to minimize any negative environmental impacts and enhance positives. UNEP has been working with UNDP in 2015 to introduce an environmental screening procedure within the JRP for all JRP projects by which environmental risks would be

recognized at earliest stage prior to implementation to ensure that the "do no harm" principle extends to the environment.

UNEP and OCHA's "Environment Marker," used in other crises/response situations, is a straightforward, focused screening mechanism being adapted for use in the Jordanian context. Through simple coding, the Environment Marker tracks a project's expected impact on the environment, and informs mitigation options. The marker will ensure that any negative impact on the local environment of a JRP project is reduced as much as possible. Sector guidelines will be prepared for each of the JRP sectors, and as well as addressing environmental impacts, UNEP is also working with UNESCO to address the protection of the rich cultural-heritage of Jordan.

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## Environmental contamination in Guatemala

In response to two contamination incidents causing fish deaths in the river La Pasión in Guatemala, a mission was mobilized in July 2015 through the Joint UNEP/OCHA Environment Unit (JEU) to provide sampling and analysis advice to the national authorities.



© Philipp Hohenblum, ECHO

Experts interviewed affected communities, supported the development of a sampling plan, and provided advice to national authorities during their mission in Guatemala.

The incidents impacted the livelihoods of approximately 15,000 people living in the riverine communities dependant on the river water for drinking, washing and fishing. The experts found that the incidents were most likely caused by a combination of pesticide contamination and the depletion of oxygen by organic matter. The river was found to be under threat of contamination as it is affected by untreated wastewater from communities, by waste and agriculture and industry runoff. The mission supported the development of a sampling plan and recommended the review and update of existing emergency response plans in collaboration with the region's agriculture and industrial enterprises. The

mission was conducted with support of the European Commission's Humanitarian Aid and Civil Protection department and the Swedish Civil Contingencies Agency. The mission report is available on the [Environmental Emergencies Centre website](#).

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# Fire at electrical station in Paraguay causes environmental and health impacts

In November 2015, a team of five experts was deployed through JEU, the Basel, Rotterdam and Stockholm Convention Secretariat and the Pan-American Health Organization, to provide environmental emergency assistance to the Government of Paraguay following a fire at an electrical station.



Electrical equipment damaged by fire outside Asuncion, Paraguay

© Joint UNEP/OCHA/PAHO Mission

Around 20,000 transformers were stored at the station, of which some contained persistent and highly toxic polychlorinated biphenyls (PCBs). It is estimated that around 6,000 units were completely destroyed in the fire which also generated around 3,000 tons of hazardous waste from equipment, as well as an estimated 5,000 tons of contaminated soil.

While the mission could not fully analyse the risks to human health and the environment due to lack of information, the team proposed a set of risk reduction measures which include: removal of transformers, covering soil, further inventory of equipment, identification of contaminated areas, and collection of baseline information health and environmental assessments. The de-

velopment and implementation of a PCB management system covering the entire cycle – inventory, sampling, storage and disposal – should be a key objective in the country. The mission was conducted with support of the European Commission’s Humanitarian Aid and Civil Protection department. The full mission report is available on the [Environmental Emergencies Centre website](#).

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# Trained crisis managers share environmental emergency knowledge in the Caucasus

Environmental emergencies now form part of the standard curricula of the Armenian Crisis Management State Academy who together with the Joint UNEP/OCHA Environment Unit (JEU) and the United Nations Development Programme (UNDP) Armenia conducted a Training of Trainers (ToT) on these topics in October 2015.



Emergency managers discussing chemical accident preparedness

© JEU

Since the ToT, 11 trained facilitators have trained over 120 emergency responders and environmental experts on environmental emergencies and the use of the Flash Environmental Assessment Tool (FEAT). Availability of training materials, like the Industrial Accidents online course, in Russian and Armenian have allowed trainers to share knowledge with colleagues across the country's regions.

Use of the FEAT methodology and environmental emergency preparedness tools is also of interest to the Georgian Emergency Management Agency, who with JEU and the Office for Coordination of Humanitarian Affairs (OCHA) conducted an environmental emergency

preparedness training in Tbilisi in November. A field trip to a nearby fertilizer plant was a highlight of the training, where participants saw chemical accident prevention and preparedness in action. More information and participants' impressions from the training workshops can be found on the [Environmental Emergencies Centre website](#).

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## Post-Crisis Environmental Recovery

Based on the outcomes of environmental assessments, UNEP works to develop recovery programmes that encompass environmental governance, clean-up and rehabilitation, and ecosystem management projects. These programmes, which are largely implemented by UNEP project offices, provide an initial anchor for UNEP in crisis-affected countries and can be used as a basis for wider programming involving other priority areas. UNEP also acts as the focal point for environmental issues within the UN country team and works to integrate environmental needs into UN recovery programmes.

# UNEP supports Afghanistan at Paris climate change conference

An impressive 21-person delegation representing six ministries and the office of the President attended the Paris Climate Conference on behalf of the Islamic Republic of Afghanistan.

On 30 November 2015, H.E. Ashraf Ghani, President of the Islamic Republic of Afghanistan, addressed leaders from 195 countries at the Paris Climate Conference (COP21) to bring attention to the urgency of addressing climate change for least developed countries. In his speech, Mr Ghani emphasized Afghanistan’s vast hydropower, solar, and wind energy potential – estimated at 316,000 MW – as a means to achieving a national low-emission development path, and the valuable role that developing countries, such as Afghanistan, can play as innovators of climate friendly technologies and practices.



UNEP Executive Director, Achim Steiner, and Director-General H.E. Prince Mostapha Zaher, National Environmental Protection Agency of Afghanistan met in Paris at COP21.

Afghanistan’s myriad development needs often overshadow environmental issues like climate change, which is why the UNEP programme in Afghanistan has spent the past year supporting Afghanistan in the development of its Intended Nationally Determined Contribution (INDC) and preparing the country to take an active role in the COP21 nego-

tiations. UNEP worked especially closely with Afghanistan’s National Environmental Protection Agency (NEPA) to build political will and momentum for COP21, culminating in President Ghani’s attendance at the conference, accompanied by more than 20 high-level representatives from NEPA and the ministries of Foreign Affairs; Economy; Agriculture, Irrigation and Livestock;

Energy and Water; and Rural Rehabilitation and Development.

Climate smart technologies and renewable energies feature prominently in Afghanistan’s INDC, and are priority areas of UNEP’s work in Afghanistan. In particular, UNEP recently supported NEPA to access technical assistance from the Climate Technology Centre and

Network (CTCN), marking the first time a post-conflict country accessed the network. UNEP’s programme in Afghanistan is also supporting the execution of two full-size GEF projects to promote ecosystem-based adaptation and build core institutional capacity to address climate change, as well as assisting NEPA with the completion of the country’s Second

National Communication (SNC) and Biennial Update Report (BUR) under the UNFCCC.

During the high-level segment of COP21, NEPA Director-General H.E. Prince Mostapha Zaher also met with UNEP Executive Director Mr. Achim Steiner to discuss Afghanistan’s climate change initiatives. Mr. Steiner stated that he

is conscious of the extraordinary and passionate UNEP team in Afghanistan, and promised efforts to attract more financial and technical support for Afghanistan. In a short discussion with one of the UNEP National Staff, Mr. Steiner conveyed his best wishes to the UNEP team in Afghanistan, and stated: “You are doing a great and wonderful job in Afghanistan, I am with you!”



Afghanistan is extremely vulnerable to the impacts of climate change, due to its arid climate and primarily agrarian society that depends on glacial and snow melt.

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# “Plant Portal” for Afghanistan

UNEP’s programme in Afghanistan balances national-level capacity and institutional support with on-the-ground activities with local communities to raise awareness about environmental protection, build resilience, and conserve biodiversity.

In September 2015, the UNEP programme in Afghanistan launched a new project on plant biodiversity, in collaboration with the Centre for Middle Eastern Plants (CMEP) at the Royal Botanic Garden Edinburgh. Through this project, UNEP and CMEP will work with the National Environmental Protection Agency (NEPA), Ministry of Agriculture, Irrigation and Livestock (MAIL), Kabul and Bamyan universities, and local communities to establish a “Plant Portal” as a digital archive of the country’s vast plant diversity, as well as re-establish the National Botanic Garden at Kabul University.

This new collaboration builds upon UNEP’s wider portfolio of biodiversity work in Afghanistan, which includes working with rural communities in four flagship provinces to ensure that traditional environmental knowledge is integrated into ecosystem-based approaches to building resilience to climate change and natural hazards.

One of UNEP’s flagship sites is the scenic Shah Foladi area in Bamyan province. The Shah Foladi area was declared Afghanistan’s third nationally protected area in June 2015 on World Environment Day. UNEP is currently assisting NEPA and MAIL in the development of the management plan for the Shah Foladi as an exercise in supporting government institutions to work at the landscape level on large environmental systems.

The Shah Foladi area is also the site of UNEP’s annual “Peace Trek,” held each year since 2009 in celebration of the International Day of Peace on 21 September. This year, the trek brought together students, teachers, and young environmental stewards from the Shah Foladi area to raise awareness about the relationship between peace and the environment, and how natural resource protection and biodiversity conservation can contribute to building peace and stability.



Spreading the message of peace and the importance of natural resources in maintaining it, this Jawzari leader took part in the Peace Trek in the Shah Foladi area



Afghanistan is home to an estimated 3,500 – 4,000 species of native plants, which form an integral part of the country’s natural heritage and provide the foundation for rural agricultural livelihoods.

## Afghanistan Resilience Consortium

UNEP is working with the UN Country Team and NGOs to provide strategic institutional support to Afghanistan’s national disaster management authority.

Earlier this year, the UNEP programme in Afghanistan teamed up with four international NGOs – ActionAid, Afghanaid, Concern Worldwide, and Save the Children – to create the Afghanistan Resilience Consortium (ARC), which aims to build the resilience of rural communities across eight of the country’s most hazard-prone provinces. Through the ARC, UNEP is integrating environmental considerations into humanitarian programming, as well as providing strategic institutional support to Afghanistan’s National Disaster Management Authority (ANDMA).

Afghanistan consistently ranks among the countries most vulnerable to the impacts of climate change and natural hazards, making it all the more important that ANDMA has the capacity to effectively build environmental resilience, reduce the impacts of hazards, and

respond quickly when hazards do occur. In recognition of these needs, Afghanistan also recently requested assistance from the UN Country Team to strengthen the country’s capacity to reduce disaster risk and increase rural resilience.

In October 2015, ANDMA’s leadership was restructured and UNEP took a leading role, both with the ARC and the UN Country Team, on providing institutional support to ANDMA by developing plans for a strategic institutional review and capacity building at the national and sub-national levels. Through this engagement, UNEP has been successfully promoting more holistic approaches to disaster risk reduction that integrate ecological approaches and climate change adaptation into conventional approaches.

# Cross-cutting capacity development for MEAs in Afghanistan

Afghanistan launches national MEA working group to increase coordination and streamline implementation of the UNFCCC, CBD, Stockholm Convention, and Montreal Protocol.

In September 2015, UNEP and the National Environmental Protection Agency (NEPA) launched a national working group to increase Afghanistan's core capacity to implement Multilateral Environmental Agreements (MEAs). This working group, which meets biweekly, brings together five projects on MEAs being jointly executed by UNEP and NEPA covering the areas of climate change, biodiversity, and chemicals.

Monika MacDevette, Chief of the Scientific Assessment Branch of

UNEP's Division of Early Warning and Assessment (DEWA), attended the launch of the MEA working group and presented on UNEP Live and the importance of robust environmental data for the effective implementation of MEAs in Afghanistan.

In the months since the establishment of the MEA working group, valuable linkages have been made between these five projects and relevant stakeholders across the country. In particular, synergies between climate change, biodiversity, and chemicals have been

fostered in order to streamline the implementation and national ownership of these MEAs. Afghanistan has also agreed to implement UNEP Live services and pilot the National Reporting System (NRS) technology to support evidence-based decision making and enhance the country's participation and contribution to regional and global processes on environmental research, policy, and planning.

## MEAS PROJECTS

- Second National Communication (SNC) under the UNFCCC
- Review of the National Biodiversity Strategy and Action Plan (NBSAP) and submission of the Fifth National Report to the UNCBD
- Development of the National Implementation Plan (NIP) on Persistent Organic Pollutants (POPs) under the Stockholm Convention
- Institutional Strengthening and Capacity Building to address ozone under the Montreal Protocol
- Cross-cutting Capacity Development (CCCD) for MEA Implementation and Natural Resource Management in Afghanistan



2015 © UNEP/Alec Kmuerr

Band-e Amir's is composed of six cascading lakes filled with crystal clear water and numerous aquatic plant and fish species.

## Connecting Haiti’s rural south to sustainable energy

UNEP’s work on sustainable energy in Haiti’s south department continues as the Haiti Sustainable Energy Project is extended into a fourth year.



The evenings in Les Coteaux are illuminated thanks to the functioning of the CEAC grid; community members benefit from improved public street lighting in additional residential electric services.

2015 © UNEP/Marc Lee Steed

The innovative solar-diesel hybrid mini-grid system aiming to provide reliable and affordable electricity to more than 1,000 users started operating in October 2015. The mini-grid, constructed by project-partners the National Rural Electric Cooperative (NRECA) and the Solar Electric Light Foundation (SELF), currently provides electricity to 480 households in the

towns of Coteaux, Roche-a-Bateau and Port-a-Piment in Haiti’s rural south-west. 200 additional members have already paid up and are waiting for physical connection to electricity. For safety reasons, the grid is currently operating only in the evenings on weekdays as the CEAC teams are physically attaching household lines during daylight hours.

At the current rate, NRECA is connecting around 100 households per month, and aims to reach 1000-1,200 connections by the end of 2016. Inauguration of the completed and fully operational grid (120kW solar and 120kW+250kW back up diesel generators) is expected in February 2016.

The electricity system in these three towns will be operated and managed by the Cooperative Électrique de l'Arrondissement de Coteaux (CEAC) with support from UNEP and NRECA. The cooperative

counts a growing membership base of 1,000 users and is the first electric cooperative in Haiti.

The construction of this USD 3.8 million mini-grid has been ongoing

since 2012 and has been primarily funded by the Government of Norway together with USAID, the Inter-American Development Bank and NRECA.

## Landscape rehabilitation in Haiti

UNEP's work on landscape rehabilitation, part of the Terre Sud programme, includes the reforestation of ravines and riverbanks vulnerable to erosion in upstream and downstream areas of key watersheds in the South Department.

To date, the programme's efforts have resulted in a total of 27 kilometers of reforested ravines in the watersheds of Port-a-Piment, Les Anglais, Port Salut and Carpentier.

The ravines are planted with fast-growing bamboo and other valu-

able species that are cultivated in specialized nurseries in Port Salut and then planted on ravines, riverbanks and upper watershed areas to protect from downstream flooding and to control erosion. In light of the devastating effects of the regional drought in the region in 2015,

UNEP's implementing partner, the Organization for the Rehabilitation of the Environment, has ensured the successful planting of the seedlings and provided much needed work opportunities for planting for local communities in the target areas as well.



Employees work to divide bamboo seedlings in the nursery to grow them to the necessary height for planting in the ravines.

# Macaya National Natural Park Management Plan adopted

The final version of the Macaya National Natural Park Management Plan was officially adopted in October 2015 through the support of UNEP and partners.

This management plan is the first of its kind in Haiti and will serve to support the sound management and development of the Macaya Park for the future. It includes all essential information on biodiversity, ecosystems, and species and includes a zoning plan for the park, including defined core, outer and buffer zones. The plan also specifies the management requirements for the park, as well as the financial needs for its operation. The Macaya Park houses the highest endemism of amphibians in the world (specifically for frogs) and contains many other valuable species of ferns, orchids and birds. It is one of the last remaining stands of natural primary forest in Haiti and is one of the most biodiverse areas in the country.

In addition, a methodology for the development of protected area management plans was developed through South-South Cooperation between the Government of Haiti and the Cuban Protected Areas Agency, also facilitated by UNEP's support. This document will serve as the basis for all future development of protected area management plans in Haiti and represents a fruitful collaboration between neighboring countries of the Caribbean Biological Corridor. These two landmark achievements are an important and historic step for the development and management of Haiti's protected areas.



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# Technical validation of DR Congo’s first community-based catchment management plan resources policy

The watershed user association of the Lukaya River – one of the main drinking water supply sources for Kinshasa’s estimated 11 million inhabitants – wrapped up 2015 by formalizing their management plan.



Community agroforestry demonstration site in Ntampa, upper Lukaya catchment

A first for the DRC, the new catchment management plan is the fruition of a consultation process lasting more than a year, involving extensive community and stakeholder participation including with farmers, land-owners, local and traditional authorities, technical government agencies, the public water utility REGIDESO and private companies.

Covering the period 2016-2018, the catchment management plan serves as a ‘calling card’ for implementing the watershed association’s joint action programme. Its overall vision is to achieve "integrated and sustainable management of water and ecosystems serving the development and well-being

of users and the population of the Lukaya catchment through a cooperative approach." The management plan is also a strategic tool for sustainable use of the watershed’s natural resources, which includes a monitoring and evaluation system and core indicators to track planned actions.



Urban gully erosion stabilized with vetiver grass in Kimwenda, on the outskirts of Kinshasa

Priority intervention areas identified by watershed users include reforestation and introduction of community-based agroforestry, particularly in the upper and middle parts of the catchment. To that end, a dedicated awareness raising and knowledge sharing workshop for landowners – both private and traditional authorities – was organized to encourage uptake of agroforestry practices. Based on UNEP’s 15 hectare demonstration site in Ntampa at the Lukaya River’s source, the agroforestry system consists of an eight year rotation cycle involving fast growing leguminous acacia trees, cowpeas and cassava. In addition, from the second year beehives are installed as an income-generating activity for farmers, which is a valuable revenue source for farmers and can also help fund expansion of future agroforestry activities. Furthermore, the bees can also have a

deterrent affect against intruders illegally cutting down trees.

Another key activity is the use of vetiver grass to combat severe soil erosion, particularly in unplanned urban areas lacking drainage infrastructure. This initiative is informed by the anti-erosion work of neighbourhood committees on the outskirts of Kinshasa using vetiver to stabilize gullies. Rehabilitation work is made possible by two field nurseries with over 10,000 vetiver plantlets established through UNEP’s catchment project. Hydro-meteorological data collection, revived after a 30-year hiatus with UNEP assistance, is well underway and feeding into watershed modelling and flood mapping work to better inform land use planning.

Finally, the watershed user association’s visibility received a boost with

the inauguration of its office hosted inside the public water utility treatment plant in Kimwenda, and the creation of its first website ([aubrlcd.org](http://aubrlcd.org)). The ball is now in the watershed association’s court to rally its members in implementing the management plan in a coordinated manner. To help mobilize this process and in collaboration with the Environment Ministry, UNEP will organize a workshop to present the Lukaya catchment plan to development partners in January 2016.

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# Promoting legal artisanal gold mining in eastern DRC

The joint UNEP-MONUSCO report on illegal natural resource exploitation prepared in collaboration with the Office of the Special Envoy of the Secretary General for the Great Lakes (OSESG-GL) in early 2015, underscored the key role of gold in fuelling instability in eastern DRC.

Artisanal gold is the single most important natural resource financing armed and criminal groups in war-torn eastern DRC, accounting for up to 50% of total smuggled profits. This is one of the main findings of the UNEP-MONUSCO report released in April 2015.

In line with the commitments under the Peace, Security and Cooperation Framework for the DRC and the Region (PSCF), the abovementioned joint report identified formalization of the artisanal gold mining sector as one of the priority areas for action. This in turn led MONUSCO, Partnership Africa Canada (PAC) and UNEP to join efforts to promote the establishment of legal supply chains for artisanal gold in eastern DRC.

Collaborative action will build on PAC's groundwork in setting-up a chain of custody system for artisanal gold from mine production site to the point of export, and potentially to refiner and buyer/end user level. Work at the artisanal gold mining site in Mambasa Territory, Ituri Province, started in January 2015 and preparatory activities at a second mining site in Walungu Territory, South Kivu, kick-started in December 2015. MONUSCO is providing critical logistical and strategic support, and UNEP is furnishing technical assistance to reduce mercury use and emissions in artisanal gold mining to help protect the health of miners, their families and environment.

Lessons learned from this pilot work will provide invaluable knowledge to support the operationalization of the International Conference for the Great Lakes Region

(ICGLR) certification process for gold. It also has the potential of serving as a scale-up model for regional programmes including the UN's Great Lakes Regional Strategic Framework for 2016-2017, which identifies artisanal gold as an intervention area under its natural resource management pillar.



Reducing mercury use in artisanal gold mining will be investigated along with efforts to setup legal supply chains

# UNEP contributes to UN Development Plan in DRC

UNEP contributed to the mid-term review of the UN Development Assistance Framework (UNDAF) for DR Congo 2013-2017, which took place from June – August 2015.

Comprising the collective response of the UN system to the DRC’s development priorities, the UNDAF review provided an opportunity for UN agencies, the peace-keeping mission MONUSCO, the DRC Government and civil society organizations to take stock of progress in its implementation. The evaluation led to the revision of the UNDAF’s “results matrix” based on lessons learned, and better alignment with the DRC’s national development priorities as set out in the national economic growth and poverty reduction strategy (DSCRPII), the Addis Ababa peace framework agreement and the International Stabilization and Security Support Strategy (ISSSS) for eastern DRC.

One of the main focus areas of the DRC UNDAF is on the environment, whose aims include strengthening national capacity in natural resource management including revenue sharing regimes and improving disaster management mechanisms. A successful approach identified in the UNDAF evaluation is the promotion of new natural resource governance models strongly anchored on participatory approaches, including UNEP’s innovative experiences in community-based catchment management and ecosystem-based disaster risk reduction. Steady progress in the development of a national institutional framework on disaster management as well as in several key pilot provinces is also underscored.

Among the key challenges highlighted is a need to balance investments in “hard” infrastructure developments with “soft” governance reforms, including drawing-up environmental policies and laws and institutional capacity building. Another important observation is that financial support to the environ-

mental sector continues to heavily favour forestry and protected area projects, while “brown issues” including mining pollution and sanitation are hardly addressed. While recognizing efforts made so far to mobilize resources, the UNDAF review underlines the need to further invest in bridging the funding gap including by mustering domestic sources and exploring other financing opportunities.



Wetlands host a wide variety of species and act as a natural water storage facility, thus playing a key role in the regulation of the Congolese ecosystems.

# UNEP and the UK Government launch major climate programme in Sudan

Following the historic climate deal agreed at the COP 21 Climate Conference in Paris, UNEP and the UK Government, through the Department for International Development, are now collaborating on a new four-year, £10 million programme.



2014 © Albert Gonzalez Farran, UNAMID

Sudan is on the frontline when it comes to the impacts of climate change

Adapt for Environment and Climate Resilience in Sudan or "ADAPT!" aims to respond to the call by world leaders in Paris to collectively address the urgent challenges posed by climate

change particularly in countries expected to be hit hardest.

Sudan, considered a least developed country, is on the frontline

when it comes to the likely impacts of climate change. Temperatures are expected to rise, rainfall will become more unpredictable, droughts and floods will become more severe,

and precious water resources will become ever more stretched. Sudan also faces a series of structural challenges including weak environmental governance following decades of conflict, incomplete data and analysis for future planning, and limited financing to address these issues.

Working in close partnership with Government Ministries, UN, agencies, NGOs, academia and donors, the programme aims to increase climate resilience and environmental management in Sudan. It will focus on three priority areas. Firstly, to integrate best practice on climate and environmental issues into

project delivery through improved project design, technical assistance and joint programming. Secondly, ADAPT will work to deepen and broaden the knowledge and evidence base to promote climate smart planning through analysis such as a 'State of the Environment' report; surveys of groundwater resources; and climate modelling. Finally, the programme will work to improve policy processes and strategic planning, and by leveraging finance to implement and multiply best practices. This includes engaging with international climate negotiations and supporting Sudan to take forward its COP21 Intend-

ed Nationally Determined Contributions commitment, attracting global climate funds to support adaptation, and reviewing policies such as the Agricultural Strategy and Poverty Reduction Strategy in view of climate change projections.

By leveraging strategic partnerships and ensuring responses are underpinned by sound science and best practices, this programme will play an important role in helping the people of Sudan cope with the inevitable environmental, political, economic and social stresses caused by climate change.

## **WEK continues to emphasize and respond to community-defined priorities**

On 24-25 October, over 200 pastoralists, farmers and government representatives met in Derma village, North Darfur, an area affected by insecurity, to agree on key issues needed to restore stability in the region.

The meeting, facilitated by UNEP, Practical Action, and the Centre for Peace and Development Studies at the University of El Fasher highlighted the importance of equitable use of natural resources to reduce conflict, and promote long term development. A key issue raised by participants was the urgent need to organize and manage pastoralist and farmer land use in order for both groups to benefit from the

land's natural resources without provoking conflict. Re-establishing security was also highlighted as a top priority, requiring community, local leaders, and government involvement. The meeting emerged with actions and recommendations that pastoralist and farmer community leaders have pledged to take forward together with government.

Community priorities articulated through Community Action Plans are also helping to guide activities implemented in the Wadi El Ku project area. The Seil Gideim water spreading earth dam, a key priority from communities, has been constructed and is now benefitting more than 10,000 people. UNEP and partners have also encouraged other actors to get involved in sup-

porting community defined priorities. Starting in 2014, WFP joined WEK project partners to promote early recovery in the project area, by providing Food For Assets (FFA) support to enhance the rehabilitation and best use of natural resources. This has included, for example, FFA support for stabilizing eroded wadi banks, establishing new community forests, and water harvesting techniques. Oxfam has also funded a number of hand pumps from the Community Action Plans.

Another tool to support consensus over natural resource management among villages, was the con-

struction of a three-dimensional map of their area. To this end, the project brought together community elders from across project villages to construct a three-dimensional model of the landscape. The process sought to promote joint planning and decision-making over natural resources by encouraging communities to define common natural resource problems and solutions. Participatory mapping also highlighted the richness and importance of local knowledge, and demonstrated how combining this knowledge from across villages provides a strong foundation for an integrated discussion over water

and other natural resources at the local level. The three-dimensional model, which measures roughly 4.5 meters by 2.5 meters, is a physical tool that will help communities discuss and reach consensus around key natural resources, and will be used to advocate for positive change among communities, planners, and decision-makers.

Together these activities are helping to promote community driven solutions that promote more equitable and sustainable natural resource management in the Wadi El Ku region of North Darfur.



Pastoralists and farmers transcribe their agreed action points and recommendations

# Communities welcome new project to reduce poverty and support sustainable livelihoods in East Darfur

Following extensive community and state consultations, the European Union funded “Natural Resource Management for Sustainable Livelihoods” project in East Darfur has finalized the inception phase and is now starting implementation.

The project, which will span across four localities in the East Darfur State, aims to improve livelihoods of conflict-affected populations by helping to ensure natural resources are more sustainably and productively used. Over the course of the inception phase, project partners worked closely with local communities and government to select sites, define project activities, and conduct the baseline analysis. Results from the assessments were then presented to communities and state authorities, and their feedback was incorporated into the report and project strategy. The project technical community, which is comprised of key government counterparts, was also formalized during the inception phase by a decree from the state governor. This committee will serve as the major management body in the project offering technical guidance and ensuring natural resource management interventions are delivered in a coordinated manner.

Other highlights from the inception phase include development of the project work plan through joint planning sessions, drafting the constitution for the community based natural resource management committees, and a formal project launch at the State level. The project launch drew over 100 of participants from the six communities and all of the State’s technical government departments, underscoring the anticipation of the project in an area that receives little development support. Work over the coming months will focus on establishing water infrastructure, forming community water management organizations, supporting community based forestry and range management, improving livelihoods through the production of gum arabic and improving Natural Resource Management (NRM) policies and regulations. Two studies to assess range resources and the gum arabic value chain are currently being commissioned to inform the work.



Al Jalabi community consultation to define project activities

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# UNEP launched GEF Enabling Activities (EAs) in South Sudan

GEF Enabling Activities (EAs) are a means of fulfilling essential communication requirements and enabling policy and strategic decisions to be made, assisting planning that identifies priority activities within a country. In South Sudan the EAs are highly strategic and will support the development of policy and action plans as well as provide the foundation for more comprehensive and full-sized projects. Furthermore, they will allow the mobilization of stakeholders and donors, and the development of national capacity, under-

standing and commitment. The EAs will enable South Sudan to access substantial funding such as Least Developed Country Funds (LDCF) (up to USD \$ 25-30 million) to implement UN Framework Convention on Climate Change (UNFCCC) convention obligations including grass root immediate climate change adaptation activities.

In collaboration with the Ministry of Environment, UNEP’s South Sudan office has launched three of the EAs including NAPA, NBSAP and NCSA.

With technical support from UNEP South Sudan office, the Government of South Sudan finalised preparation NAPA document and is now awaiting final review and submission to the UNFCCC Secretariat. In addition, the Ministry of Environment was also supported in drafting the Fifth national biodiversity report and was submitted to the secretariat of Convention of Biodiversity (CBD) in December 2015. Work is in progress to launch the INC and to fast-track completion of these EAs projects.



Group work at NAPA preparation workshop

## **i** EAS IN SOUTH SUDAN:

- National Adaptation Programme of Action (NAPA) to Climate Change;
- National Biodiversity Strategy and Action Plan (NBSAP) for integration of Convention on Biological Diversity obligations into national planning process;
- National Capacity Self-Assessment (NCSA) for Environmental Management in South Sudan;
- Initial National Communication (INC) to enable South Sudan to fulfil its commitments and obligations as required by the Convention to the United Nations Framework Conventions for Climate Change.

# UNEP supports South Sudan's preparation of INDC

UNEP South Sudan Office provided technical support to the Government of South Sudan for preparation of Intended Nationally Determined Contributions (INDC) document. The document, which was prepared through a consultative process, was submitted to the UNFCCC Secretariat in November before the COP 21 Conference in Paris. South Sudan's INDC document highlights the benefits of adaptation and mitigation related actions, as well as other co-benefits including poverty alleviation,

health, energy access and security. As a post-conflict country, it is imperative for South Sudan to ensure sustainable and climate-resilient development across all sectors. It placed emphasis on attracting financial, capacity-building, technology transfer and other types of international support to the republic of South Sudan. It is estimated that investment of over USD 50 billion would be required for South Sudan's mitigation and adaptation actions across different sectors up to 2030.

## Charcoal production, trade and usage in South Sudan

Charcoal production is one of the main causes of deforestation in South Sudan. To understand more about this issue, the Ministry of Agriculture, Forestry, Cooperative and Rural Development (MAFCRD) and Ministry of Environment (MoE), with support from UNEP in South Sudan and FAO, held a national workshop in July 2015 on charcoal production, trade and usage in South Sudan. The workshop aimed to raise awareness on the impact of charcoal production, trade and consumption on the environment, and make recommendations on how to address deforestation caused by charcoal production activities. More than 100 participants from different line ministries, states and local governments departments, independent government commissions, academia, private sector and local communities attended the workshop. The national Minister for Forestry and Agriculture and Minister for Environment, as well as FAO and UNEP country representatives addressed the participants.

A key outcome was the definition of the roles and responsibilities of key Stakeholders by clarifying the rights, responsibilities, returns (revenues) and rela-

tionships between and among the various stakeholders. Further important outcomes included streamlining the issuance of licenses, permits and delegate roles, agreements to promote subsidies on other alternative domestic cooking energy, such as LPG and fuel-efficient stoves by the Government.

It was recommended that government at all levels, UN agencies, international and national NGOs, fund sustainable charcoal production, and use and promote the plantations for fuelwood supply for charcoal production. Support for community forestry initiatives and programmes related to alternative renewable energy sources were also discussed.

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# 3

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## Environmental Cooperation for Peacebuilding

UNEP aims to use environmental cooperation to transform the risks of conflict over resources into opportunities for peace in war-torn societies. This includes assessing and integrating environment and natural resource issues within the peacebuilding policies and strategies of the United Nations, as well as using the shared management of natural resources as a platform for dialogue, cooperation and confidence-building within and between conflict-affected countries. UNEP believes that effectively addressing the environmental dimensions of conflict and peacebuilding can only be done in partnership with a wide range of international and national actors. As a result, UNEP has developed partnerships with a number of peace and security actors including the UNDP Bureau for Crisis Prevention and Recovery, UN Women, the UN Peacebuilding Support Office, the UN Department of Political Affairs, the UN Departments of Peacekeeping Operations and Field Support in New York and the European External Action Service in Brussels.

# Mapping and Assessing the Performance of Extractive Industries (MAP-X Initiative)

At the request of the g7+ group, UNEP has formed a partnership that aims to increase transparency in the extractives sector through the MAP-X initiative.

The g7+ group, an international organization aiming to represent conflict-affected countries affected, aiming to achieve resilience and provide support between member countries, requested UNEP to develop a partnership that supports stakeholders in the extractives sector to consolidate, analyze and visualize transparency data and other contextual information as a contribution to good governance and conflict prevention.

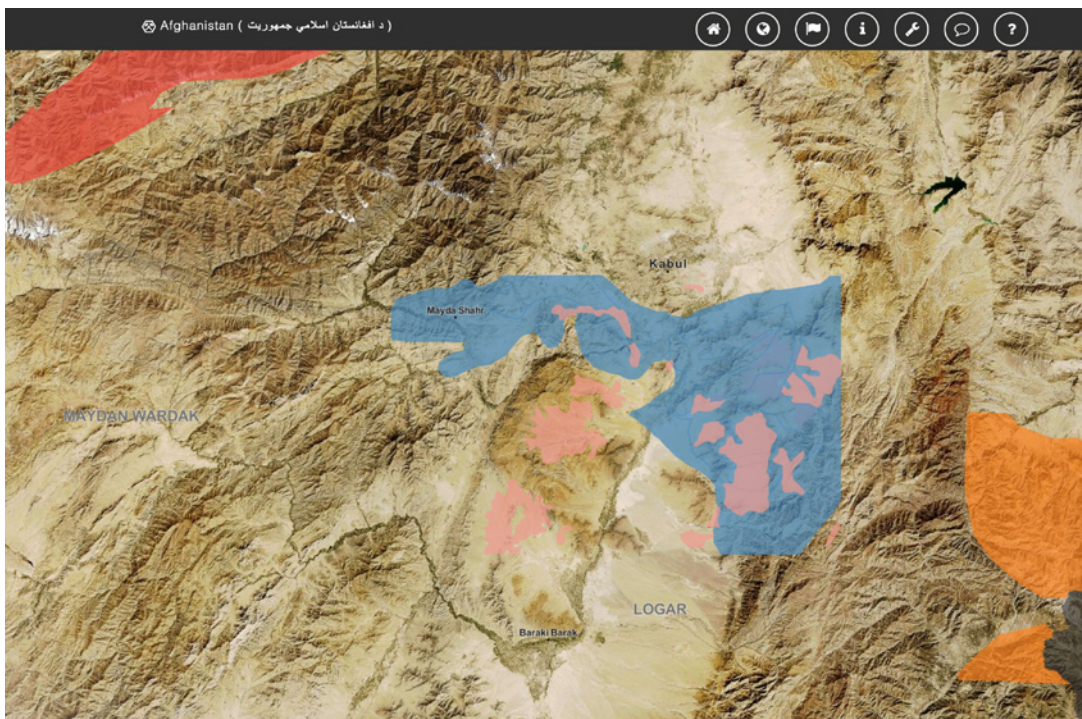
MAP-X has three basic components:

1. Open data platform: a national platform for extractives sector tailored to local needs, owned by stakeholders and reinforcing existing processes;
2. Normative data standard and workflow: a process

for consolidating, validating, reconciling and licensing the data by key stakeholders;

3. Stakeholder capacity building: training stakeholders to comply with the standard, manage the workflow and use MAP-X for decision making.

The MAP-X initiative will improve stakeholder participation, access to information, and impact monitoring across the entire extractive industry value chain. This includes benefit sharing, monitoring compliance and performance of operators on specific financial, social and environmental parameters, and identifying operational risks. MAP-X can also serve as an early warning system helping to identify where conflict prevention, mediation and resolution interventions are needed.



The MAP-X prototype is being developed by ECP and UNEP-GRID Geneva with initial testing in Afghanistan and DRC.

In October 2015, a joint mission was conducted to the Democratic Republic of the Congo by UNEP, the World Bank and the EITI secretariat to present MAP-X to the multi-stakeholder group (MSG) of the EITI-DRC, and other government agencies. Around 60 MSG members attended the meeting and shared their perspectives

on how the MAP-X initiative could meet their specific needs. The MSG welcomed full testing of the MAP-X initiative in DRC in order to consolidate, analyze and visualize the range of extractives data generated through the EITI process and other transparency and good governance initiatives.

## High-level panel events on mediating resource conflicts

Following the launch of the joint UNEP-UN Department of Political Affairs (DPA) publication “Natural Resources and Conflict: A Guide for Mediation Practitioners” in February 2015, a number of high-level events were organized to further raise awareness and disseminate the collection of strategies assembled in the guide.

During Geneva Peace Week in November 2015, UNEP, UN DPA and the United Nations Office at Geneva (UNOG) organized a high-level panel. The event was opened by UNOG Director General Michael Møller, who praised the guide as an important example of fruitful collaboration between the political and technical sides of the UN. At the event, Alan Doss, former Special Representative to the Secretary-General (SRSG) in DR Congo and Liberia, expressed how useful it would have been to have had such a guide during his time as SRSG and hoped that “the new generation of SRSGs and their staff” would “read, digest and above all use” the guide. A recording of the event is available [here](#).

UNEP organized a further high-level launch of the guide in Montreal, together with the Institute for the Study of International Development (ISID) at McGill University. The event featured remarks and praise for the guide from a panel of international experts, including François Crépeau, Special Rapporteur on Human Rights of Migrants, Jeffrey Davidson, Canada’s Extractive Sector CSR Counsellor and Louise Otis, Retired Justice of the Quebec Court of

Appeal and founder of mediation institutes such as the Canadian Conference for Judicial Mediation and the International Conference on Mediation for Justice.

Overall the report has been well-received globally and translated versions have already been requested by a number of member states, testament to its great value as a tool.



Michael Brown, Senior Mediator and co-author, provided an overview of the UN Resource Mediation Guide at the event during Geneva Peace Week.

# Climate change and security

As a direct follow-up to the G7 report, “A New Climate for Peace” published in June 2015, UNEP is joining efforts with the European Union through the Instrument Contributing to Stability and Peace (IcSP) to address the security implications of climate change.

The project will be piloted in two conflict-affected countries during 2016-2019. At the national level, UNEP will identify and analyze climate security hot spot regions by engaging with key national stakeholders to develop policy responses, plans and undertake institutional investments to reduce climate security threats.

At the local level, UNEP will work directly with communities to pilot test concrete actions to reduce the underlying causes of vulnerability and build resilience to climate security risks. Practical actions range from ecosystem restoration, improved resource management and early warning mechanisms, to training and local institution building. To ensure a global reach and influence, the findings and best practices will be documented and communicated to relevant global and trans-regional institutions for further dissemination.

During the COP 21 climate conference in Paris in December, Adelphi Research and the government of Germany

organized a side event to discuss foreign policy action responding to the G7 report’s recommendations and upcoming initiatives tackling climate security risks. UNEP presented its EU-partnership, garnering considerable interest as the first example of a major field-based project to address the climate-security nexus through concrete interventions. Overall, the event showed that there is increasing awareness and interest in dealing with climate security risks including by foreign and development cooperation ministries.

UNEP Deputy Executive Director Ibrahim Thiaw provided high-level remarks at another COP 21 side event on Planetary Security hosted by the Netherlands. He highlighted the exacerbated risks of climate change in connection to livelihoods, migration and extreme weather events, as well as possibilities for natural resources to be sources of opportunity rather than contributors of conflict and organized crime. The speech is available [here](#).



Alsawagi, Kasala State, Eastern Sudan

# Protecting the environment in relation to armed conflicts

In 2015, the issue of protecting the environment during armed conflicts has been receiving increasing recognition. UNEP continues to provide technical assistance to support the work of the ILC and the Special Rapporteur.

In 2013, the International Law Commission (ILC) included “Protection of the Environment in Relation to Armed Conflicts” in its current programme of work, following the recommendation of a [2009 report](#) by UNEP and the Environmental Law Institute (ELI).

Meanwhile, after a pledge made by Nordic countries at the Red Cross Conference in 2011, a study on environmental and derived humanitarian impacts of armed conflict was produced in 2014. An expert meeting was then held in Helsinki, Finland in September 2015. The Helsinki outcome report recommended that the UN Environmental Assembly (UNEA) address this issue and that UNEP’s capacity to conduct post-conflict environmental assessments be strengthened.

In October 2015, UNEP co-hosted a seminar on protection of the environment in relation to armed conflicts together with Rutgers University, ELI, the Nordic Missions to the UN in New York, World Conservation Union (IUCN) and ILC Special Rapporteur, Ambassador Marie Jacobsson. The objective of the meeting was to share ideas and analyse ILC’s work, in connection to the presentation of the 2015 ILC report to the General Assembly in mid-November.

Jamil Ahmad, Deputy-Director of UNEP New York, highlighted the direct and indirect impacts on the environment by armed conflicts as evidenced by UNEP’s post-conflict environmental assessments, as well as the potential for peacebuilding, economic integration



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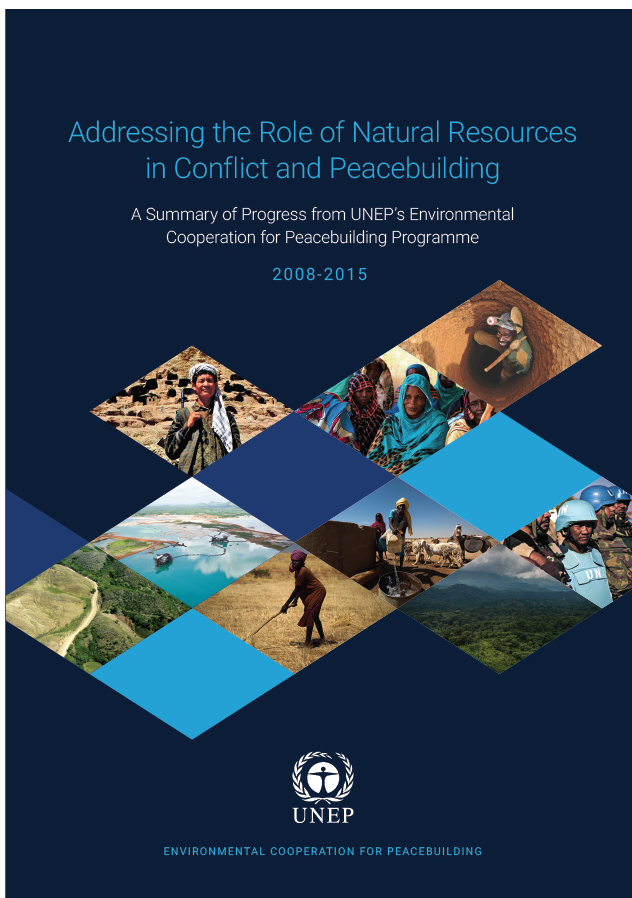
Marie Jacobsson, ILC Special Rapporteur, and Ambassador Principal Legal Adviser on International Law, Ministry for Foreign Affairs, Sweden

and gender equality through remediation and restoration efforts. The neutral and technical information that UNEP can provide was considered particularly vital in the aftermath of conflict, given the frequent lack of reliable and accessible data.

In December 2015, at the 32<sup>nd</sup> Conference of the Red Cross and Red Crescent, Norway hosted a side event outlining the results of the 2011 Nordic pledge on protection of the environment.

# Environmental Cooperation for Peacebuilding progress report

UNEP published a comprehensive [progress report](#) in October 2015 to highlight the progress and results achieved by the Environmental Cooperation for Peacebuilding (ECP) programme during 2008-2015.



The report divides ECP’s work on environmental peacebuilding into three main pillars. Firstly, ECP has been working closely with academics and practitioners to develop an extensive evidence base of lessons learned from conflict and peacebuilding case studies around the world, leading to establishment of a vibrant community of practice and multidisciplinary field of Environmental Peacebuilding.

Second, ECP conducts policy analysis and creates partnerships in order to help formulate more effective response policies and programmes across the spectrum of peace and security operations. This has contributed to ensuring that the complex role of natural resources across the peace and security continuum is increasingly recognized at the highest international political levels.

Finally, ECP provides technical support to UN country teams, conflict-affected countries and other stakeholders in the field to conduct assessments and apply good practices. In the future, UNEP increasingly aims to refocus its own efforts on providing further targeted technical assistance to member states at the field level.

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# 4

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## Disaster Risk Reduction

The disaster risk reduction (DRR) pillar of UNEP's Disasters and Conflicts programme focuses on countries that have been identified as vulnerable to natural hazards, and on human-made disaster events with an environmental component. As well as producing environmental risk assessments, UNEP seeks to strengthen the hand of Member States for environmental management through developing responsive strategies, building capacity and implementing pilot projects to reduce identified risks, thereby contributing to long-term disaster risk reduction. UNEP also contributes to global policy development by producing policy toolkits and training modules that demonstrate good practices and lessons learned in reducing risks, and provides environmental data and expertise on sustainable management of shared natural resources.

# Enhancing national capacities for landslides risk assessments and mitigation in Nepal

Following a major earthquake that struck Nepal in April 2015, UNEP has been working with the Government to train local government officials on landslide inventory, risk assessment and landslide treatment and mitigation through a series of events.

A major earthquake measuring 7.8 on the Richter scale struck central Nepal on 25 April, 2015, which was followed by aftershocks and another earthquake measuring 7.3 on 12 May. With over 9,000 deaths and 30,000 people injured, the earthquakes caused widespread destruction and have triggered multiple landslides, disrupting essential services and placing local communities at higher risk. Affecting millions of people across at least 30 districts, this large-scale disaster will require a major recovery effort in years to come.

Among many priorities, the Government of Nepal identified the need to develop a coordinated process for landslide inventory mapping and for collecting and sharing

landslide information. Given the multiple actors (both local and international) working throughout Nepal with landslide expertise, establishing a national platform for coordinating landslide risk assessments was critical for more effective planning and response on the ground.

On 28-29 September 2015, the Department of Soil Conservation and Watershed Management (DSCWD), together with UNEP, International Centre for Integrated Mountain Development (ICIMOD), International Union for Conservation of Nature (IUCN), World Wide Fund for Nature (WWF) and the Food and Agriculture Organisation (FAO), brought together over 30 organizations from other government agencies, civil society and academic



2015 © Bhushan Thimla, UNEP

In order to ensure that environmental issues are addressed during the reconstruction process, UNEP worked closely with the World Wildlife Fund for Nature on a rapid environmental assessment to inform the recovery process.



UNEP has provided remote and real-time advice to the Government of Nepal, international agencies, and the UN system on dealing with the environmental issues linked to the earthquake. UNEP also actively participated in a Post Disaster Needs Assessment (PDNA) completed in June 2015.

institutions, working on landslide mitigation, landslide inventories and location of safe resettlements in the post-earthquake recovery process. The participants agreed that the various actors should work together in building a national landslide inventory, using a harmonized method for data collection and data storing, which would be hosted in a web-based platform. Moreover, prioritizing landslides for immediate mitigation and treatment, which would take into account community livelihoods and food security concerns as well as safe areas for relocation, will help to facilitate a more rapid, sustainable recovery process.

In parallel, a stakeholder consultation meeting on sustainable reconstruction was also organized. A major gap was identified with regards to the lack of “green” or “eco-safe” post-earthquake construction guidelines

that are specifically tailored to the Nepal context, which takes into account the entire supply chain of sustainable reconstruction.

As follow-up to the September stakeholder consultations, UNEP is working with the Government of Nepal and other international partners to convene national workshops in 2016. DCSWD, with support from UNEP, ICIMOD and LEAD-Nepal, organized a three-day workshop on 19-22 January, to provide tailored training on landslide inventory, risk assessments and landslide treatment and mitigation to 20 local government officials from earthquake and landslide affected areas. Ecosystem-based and bioengineering measures for landslide treatment based on experiences in Nepal was also featured. The workshop took place in Kathmandu with a field visit to an affected area.

# New Integrated Strategic Environmental Assessment (ISEA) project

In the aftermath of disasters and conflicts, affected countries are generally under intense social and political pressure to undertake rapid reconstruction and deliver development priorities. At the same time, post-crisis countries often lack sufficient expertise and planning tools that enable them to rapidly develop and “build back” more safely and sustainably.

In 2016, UNEP will be implementing a new project that aims to strengthen national government capacities to facilitate development planning and investments in a timely manner, while taking into account environmental sustainability and resilience to disasters.

Funded through the UN Development Account, this two-year project builds on a tool often used in development planning, known as Strategic Environmental Assessment (SEA) which assesses and mitigates potential environmental impacts of proposed policies, plans and programmes. Modifying the SEA tool, the project integrates disaster and climate risk information as part of the environmental assessment. A “Development Opportunity Map” is produced which enables national and local planners to determine where development investments

can safely and sustainably take place. This modified Integrated SEA tool was first implemented in the Northern Province, Sri Lanka, shortly after the end of the 30-year conflict in the country in 2009, and received strong government endorsement

at the national and provincial levels. The new project will apply the ISEA methodology in two other selected countries from Africa and Asia and aim to foster south-south collaborations between countries on ISEA best practices.



ISEA methodology can be used after a conflict or disaster to find opportunity areas for development with minimum environmental constraints. Sri Lanka, Northern Province.

# Natural Infrastructure Training Course for Business launched in Paris

UNEP and the World Business Council for Sustainable Development (WBCSD) launched the first Natural Infrastructure (NI) Training Course geared for the business community at the UNFCCC COP21 in Paris.



Forests can act as natural buffers against landslides and avalanches.

2015 © Karen Sudmeier-Rieux/UNEP

The course makes a business case for companies to invest in natural infrastructure solutions and provides tools for decision-making within companies. Through a set of case studies and decision support tools, companies learn about natural infrastructure options based on user needs, for instance using wetlands for treating waste water or forests as natural buffers against coastal storms or landslides.

The Training Course is part of the Natural Infrastructure for Business Platform (NI4Biz), which is an online platform that provides key materials that will be used for the training, including case studies generated by the WBCSD member companies and tools to guide business decision-making. Both the Training Course and the Business Platform will contribute to WBCSD's Natural Infrastructure Agenda, whose ultimate objective is: "by 2020, companies systematically assess natural infrastructure options when investing in new sites or

projects, thereby contributing to the protection, restoration and creation of new ecosystems."

The NI4Biz Platform and the Training Course were launched in 10 December at the Global Landscapes Forum in Paris, by Mr. Peter Bakker, President and CEO of WBCSD. He was joined by UNEP Executive Director Mr Achim Steiner. It will be delivered for the first time to WBCSD member companies in April 2016.

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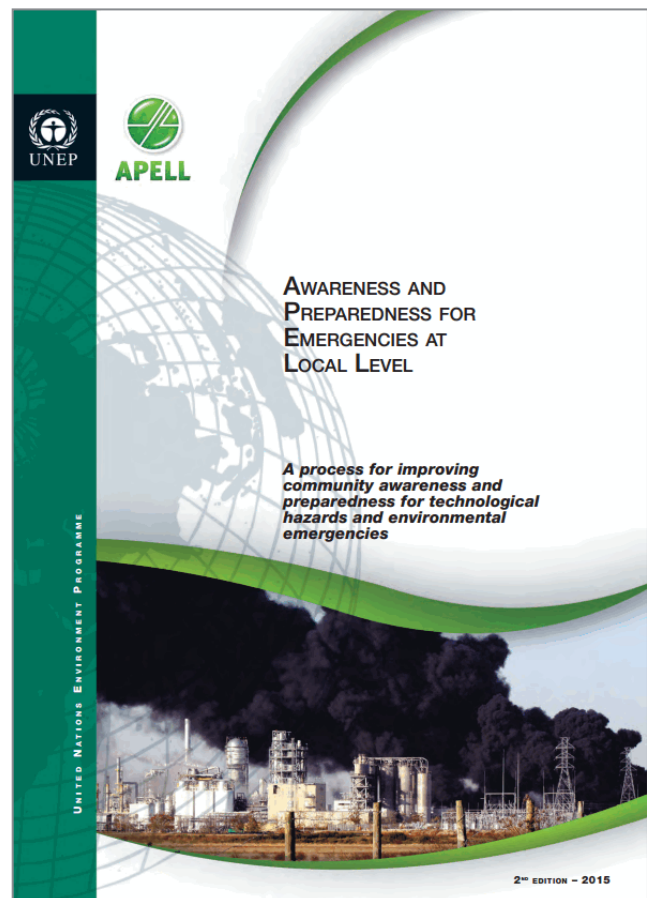
APELL is a programme developed by UNEP in conjunction with governments and industry with the purpose of minimising the occurrence and harmful effects of technological accidents and environmental emergencies.

## Second edition of the APELL Handbook

The second edition of the Awareness and Preparedness for emergencies at local level (APELL) Handbook: A process for improving community awareness and preparedness for technological hazards and environmental emergencies, was launched on 19 August 2015.

The updated edition of the APELL handbook provides guidance to help communities prevent loss of life, as well as health, property and environmental damage, regardless of the nature of the environmental emergency.

The Sendai Framework for Disaster Risk Reduction (2015 – 2030) adopted in March this year is the international community's response to this challenge. The new edition of the APELL Handbook developed by UNEP makes an important contribution to the Sendai Framework for Disaster Risk Reduction (2015 – 2030) adopted in March this year, through providing strengthened guidance to three key stakeholder groups - industry, public authorities and community leaders - to engage in a participatory disaster risk reduction process.



# Regional APELL Training-of-Trainers in Asia Pacific and Latin America and the Caribbean

Based on the new edition of the Handbook, APELL carried out trainings of trainers/facilitators workshops in Bangkok, Thailand and Lima, Peru. This series of trainings aims to strengthen capacity and preparedness to respond to environmental emergencies across regions.



An APELL table top exercise in Colombia

The training for the Asian-Pacific region was organized in partnership with the Asian Disaster Preparedness Center (ADPC) in Bangkok on 19-21 August 2015. This regional APELL workshop built the capacity of 17 stakeholders representatives from government, the private sector and civil society organizations from 11 countries in Asia.

In addition, the regional training for Latin America and the Caribbean was held in Lima, Peru, on 27-29 October 2015. The training was organized in partnership with the Prepare for Disaster Association (PREPARED). It was attended by 26 representatives from government, the private sector and civil society organizations of the region, as well as representatives from regional agencies for disaster preparedness and emergency management.

These events are part of a series of regional train-the-trainers workshops on APELL organized by UNEP for 2015-2016. A session for Africa will take place in early 2016. The series of training are reinforcing the network of APELL practitioners and facilitators to implement APELL and prepare for technological accidents and environmental emergencies.

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# Improving planning around flood and drought management

The number of extreme weather and climate-related events is rising. Floods and heatwaves have more than tripled. The impacts of climate change on ecosystems and communities are becoming more and more visible, prompting a strong need to improve capacity and planning around extreme events such as floods and droughts.

The Global Environment Facility (GEF) funded the Flood and Drought Management Tools (FDMT) project aims at enabling better informed responses to extreme events such as floods and droughts.

The FDMT project is implemented by UNEP, with the International Water Association (IWA) and DHI as the executing agencies. The project is developing a computer software-based Decision Support System (DSS) with tools to support planning from the transboundary basin to water utility level by including better information on floods and droughts. The project is being implemented from 2014 – 2018 in three pilot basins (Volta, Lake Victoria and Chao Phraya).

Since the first steering committee meeting in March 2015, the focus has been on developing the tools within the DSS focusing on drought planning at the catchment level and water safety planning (WSP) for utilities. WSP is a risk management approach developed by WHO (and IWA) to ensure the safety and acceptability of a drinking water supply from catchment to end user.

The first set of tools available within the DSS incorporate drought information and allow users to evaluate the drought impact (according to indicators), provide early warning of drought onset, determine drought severity and spatial extent, and convey consolidated information for decision making.

Data availability is often an issue, so the DSS is being designed to access and use global data sets. The aim is to

provide basic global datasets enabling users to perform basic planning tasks, even if local data is limited.

A Flood and Drought Symposium with high level representatives from national and international institutions was held in Bangkok, Thailand on November 23<sup>rd</sup>. The discussions focused on the essential use of data and information for informed decision making. Similar awareness events will be held in the other project pilot basins in 2016.

A three-day technical training was also held in Bangkok, in November 2015, giving key stakeholders a first impression of the DSS. This was the first in a series of trainings which builds stakeholder capacity in use of the DSS while also providing an opportunity for feedback to make sure that the end product reflects the needs of the users.

Although systems such as DSS enhance our ability to minimise risks and mitigate the impacts associated with climate change, mobilising support and building capacity for their effective use is as relevant as the technologies' potential.

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## The Environment and Security Initiative (ENVSEC)

Based on the outcomes of environmental assessments, UNEP works to develop recovery programmes that encompass environmental governance, clean-up and rehabilitation, and ecosystem management projects. These programmes, which are largely implemented by UNEP project offices, provide an initial anchor for UNEP in crisis-affected countries and can be used as a basis for wider programming involving other priority areas. UNEP also acts as the focal point for environmental issues within the UN country team and works to integrate environmental needs into UN recovery programmes.

# Launch of the Geneva Science-Policy Platform on Environment and Security

On 17 November 2015, Ambassadors and Permanent Representatives accredited at the UN in Geneva, as well as members of the international academia, attended the launch event of the Geneva Science-Policy Platform on Environment and Security, hosted jointly by the Environment and Security Initiative (ENVSEC), represented by UNEP, and the University of Geneva.

The launch event provided an opportunity for the policy-making and academic community to discuss the implications of climate change on European and global security. The newly established platform will serve as a network supplying knowledge and technical expertise for new approaches to confront existing and emerging challenges in the field of environment and security. It will establish continuous dialogue between scientists and policymakers to generate new ideas and methodologies to implement new solutions that facilitate environmental cooperation. The

Platform will meet on an annual basis to address existing and emerging environmental risks and tensions in the overall context of global issues. Find out more at [www.envsec.org](http://www.envsec.org).

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