



*A Centre Collaborating with UNEP*

# Programme Cooperation Agreement 2014

Final report for the period 01 January 2014 to 01 March 2015





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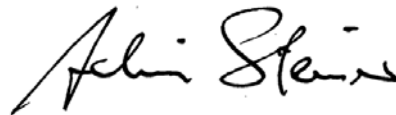
# 1. Foreword

Celebrating its 25th year, GRID-Arendal has come of age as one of UNEP's most valued collaborating centres and a trusted partner in environmental projects spanning the globe. GRID-Arendal is a centre of excellence for scientific analysis in a number of areas, including environmental assessments, capacity-building, outreach and communication. Oceans and polar regions feature prominently in GRID-Arendal's work. The centre specializes in the dissemination of environmental knowledge to inform decision-making and policy formulation. In 2014, GRID-Arendal and UNEP worked together to publish a rapid response assessment of the environmental crime crisis, which was launched at the first session of the United Nations Environment Assembly (UNEA) in June. The publication reached global audience through 30 press releases and articles, published in 112 countries.

A key asset of GRID-Arendal is its ability to bring together the latest scientific findings and strong peer-review processes to enable UNEP to take issues forward to decision-makers, thus reconnecting science to policy. Our joint purpose is to shorten the distance between the emergence of new science findings and relevant policy actions. We seek to influence thinking and action at the

level of the global community on issues that require collective understanding and responsibility. I believe that change in the planet's environmental patterns will increasingly dictate the need for us to act in unison and to recognize that many problems cannot be solved through individual action at the national or local level alone.

In 2014, UNEP and GRID-Arendal signed a new framework agreement that strengthens our ongoing collaboration. The agreement signifies a continuation into the years ahead of the fruitful cooperation and partnership that we have so far enjoyed. I am confident that the next chapter of the journey for GRID-Arendal will be as ground-breaking and influential as it has been in its first 25 years. UNEP staff and I look forward to working with our colleagues in GRID-Arendal to make a difference to the global environment..



**Achim Steiner**

UN Under-Secretary-General, and  
Executive Director, UNEP



*"I am confident that the next chapter of the journey for GRID-Arendal will be as ground-breaking and influential as it has been in its first 25 years."*

Achim Steiner

## 2. Executive Summary

For GRID-Arendal, 2014 has been a year marked by success, new beginnings and transition. Major events included the successful submission by seven West African countries of extended continental shelf claims, six years in the making, to the United Nations Commission on the Law of the Sea (UNCLOS); the publication of the highly influential Rapid Response Assessment of the Environmental Crime Crisis launched at the UNEA meeting in June; the commencement of a new Green Economy programme and a 'Blue Forest' UNEP/GEF programme involving 12 international partners; a change in Managing Director; and the re-structuring of GRID-Arendal.

During 2014, GRID-Arendal completed over 70 projects organised in five main programme areas: 1) Environmental Crime; 2) Transboundary Waters; 3) Support to ODA Countries in Environmental Management; 4) Adaptation to Climate Change; and 5) Marine and Coastal Resources. Some significant outcomes of each programme are as follows:

**Environmental Crime** – INTERPOL and UNEP released a UNEP Rapid Response Assessment (RRA) report *The Environmental Crime Crisis* during the UNEA meeting in June 2014. The report highlights how environmental crime is used to finance criminal, militia and terrorist groups and how it threatens human security and sustainable development. Key messages from the RRA were relayed through more than 30 press releases and over 2000 news articles across 112 countries globally, resulting in a combined potential viewership of over 3 billion people.

**Transboundary Waters** – GRID-Arendal's support for the Interim Secretariat of the Tehran Convention focused on the preparation of key documents to inform the Fifth Conference of the Parties (COP5) and further development of the Caspian Environmental Information Centre. High-level government officials of the five Caspian States met from 28 to 30 May in Ashgabat, Turkmenistan for COP5, where they took major decisions towards ensuring a sustainable future for the Caspian Sea.

**Support to ODA Countries in Environmental Management** – The reduction of environment and security risks through strengthened cooperation among and within countries in Central Asia, Eastern Europe, Southern Caucasus, and South-Eastern Europe is the goal of UNEP's Environment and Security Initiative. GRID-Arendal is responsible for the assessment component in the Initiative, to facilitate ENVSEC-trademark participatory assessments of links between climate change and security, highlighting hotspots, and to present the assessment results in a visual and practical format. Two draft assessment

reports, on Eastern Europe and Southern Caucasus based on background studies, have been prepared and a third, on Central Asia, is in preparation.

**Adaptation to Climate Change** – GRID-Arendal continued its involvement in the Himalayan Climate Change Adaptation Programme (HICAP), which aims to enhance the resilience of mountain people, particularly women, by improving the understanding of vulnerability to change and identifying opportunities and potential for adaptation. GRID-Arendal conducted a dedicated training for 12 Indian and Nepalese journalists in Assam, northeast India in February 2014. The workshop focused on climate and flood issues within the Brahmaputra river basin, and led to the publication of numerous articles in the local, national and international press.

**Marine and Coastal Environment** – The West African States of Cabo Verde, Gambia, Guinea, Guinea Bissau, Mauritania, Senegal and Sierra Leone lodged their submission for continental shelf beyond 200 nautical miles in New York on 25 September 2014. GRID-Arendal was one of the Norwegian institutions that had provided support to the West African States for the preparation of their submission, along with the Norwegian Petroleum Directorate and the Legal Department of the Norwegian Ministry of Foreign Affairs. At its recent 11th Conference of the States Parties, member states of the Abidjan Convention unanimously recognized the contribution of the Government of Norway and GRID-Arendal with respect to assistance provided to West, Central and Southern African nations for the delineation of the outer limits of the continental shelf. Other significant outcomes in 2014 include the commencement of a multi-million dollar, four-year 'Blue Forests' project, funded by the Global Environment Facility (GEF), administered by UNEP and involving 12 partners, to demonstrate the value of carbon stored and sequestered in coastal and marine ecosystems to support conservation and sustainable management

In August GRID-Arendal celebrated its 25th Anniversary, with the theme "Cold region – hot topics: Inputs from Arendal to the Sustainable Development Goals". The celebration featured a programme of events that included a number of workshops, seminars and report launches that were well attended by top national and local actors in politics, business and civil society. During of the 25th Anniversary celebrations, UNEP and GRID-Arendal signed a new Framework Agreement through which the foundation agreed to renew its cooperation with UNEP. The agreement was signed by UN Under-Secretary-General and UNEP Executive Director Achim Steiner and Olav Orheim, Chairman of the Board of Directors of GRID-Arendal. Also present at the signing ceremony were Tine

Sundtoft, Norwegian Minister of Climate and Environment, Øystein Djupedal, Aust-Agder County Governor, and Einar Halvorsen, Mayor of Arendal. The cooperation between UNEP and GRID-Arendal has matured greatly since its establishment 25 years ago and this new agreement underscores the value of this cooperation.

After eight successful years Dr Peter Prokosch stepped down from his post as Managing Director of GRID-Arendal in August 2014. The Board appointed Dr Peter Harris as the new Managing Director in September. Under his leadership, GRID-Arendal implemented a new organizational structure in December 2014 to simplify and improve operations and management, to better match the skills and qualifications of the staff with the programme of work to be delivered in the foreseeable

future, and to focus attention on the delivery of content and the measure of impact and outcomes. A key element of the new structure is the creation of eight programme areas that address global environmental challenges: Polar and Mountain Environments; Environmental Crime; Transboundary Waters; Blue Carbon; Green Economy; Marine Spatial Planning; State of Environment Reporting; and Marine and Coastal Resources.

GRID-Arendal's accomplishments in 2014 reflect well on the organization and set the stage for another successful year in 2015. After signing a new Framework Agreement with UNEP and with its improved internal organization, GRID-Arendal is well placed to make significant contributions to support UNEP and advance environmental knowledge in the years ahead.

### 3. Introduction

This is the Final Report on the Addendum to the Programme Cooperation Agreement (PCA) between the Norwegian Ministry of Foreign Affairs (MFA) and GRID-Arendal for the period 1 January 2014 to 1 March 2015. The Final Report provides an overview of the programme delivery and highlights the results that have been achieved during this period. A detailed financial report is also included.

In line with the principles and terminology laid out in NORAD's guide on Results Based Management,<sup>1</sup> the effects of GRID-Arendal's work under the PCA fall into one of three categories along the results chain: outputs are the direct products and services generated by programme activities; outcomes are the effects that these products and services have on the target group; and impacts are the long-term changes, or improvements that occur in society or in the state of the environment.

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1. NORAD, 2008. Results Management in Norwegian Development Cooperation: A practical guide. NORAD on behalf of Norwegian Ministry of Foreign Affairs



## 4. Attribution of results

While clear causal links – from inputs and activities through outputs to outcomes and impacts – form the basis of project design, the attribution of a particular result tends to become more tenuous along the results chain.

GRID-Arendal's outputs, such as reports and websites, are relatively easy to identify and attribute. Direct linkages to outcomes and impacts are generally harder to establish. One reason for this is the time lag that often exists between the delivery of products and services and the emergence of related outcomes and impacts - especially when the latter depends on decision-making processes. Several of GRID-Arendal's projects are subject

to these delays along the results chain: the end result of the 2014 West African Continental Shelf submission (see page 25) may well not be known for another 10 years, for example. For the same reason, some of the results that have emerged this year relate to work done before 2014. The *Zambia: Atlas of Our Changing Environment* is a case in point: its collaborative approach and influence on the public were officially recognised in an award received almost a year after its launch in 2013 (see page 19). In addition, decision-makers rarely make decisions based on a single source of information. Many of GRID-Arendal's reports are likely to have influenced decisions, but it is rarely possible to prove this connection.

## 5. Scope and context

During 2014, GRID-Arendal followed its strategy developed in 2013 by continuing to:

- Build a portfolio of larger, long-term projects;
- Strengthen its support to environmental conventions and cross-border cooperation;
- Support the world's transition to a 'green economy'; and
- Increase cooperation with other UN organizations in fulfilling the goals of the Rio+20 process.

In order to remain focused on larger, long-term projects, GRID-Arendal went through a process with UNEP to get involved in some larger projects financed significantly through the Global Environment Facility (GEF). This entails both the opportunity to use the funds under the agreement with MFA as 'seed' funds for the delivery of a larger programme, and also to retain some vital contingency funding to meet unexpected changes in project plans (see also Chapter 11 on lessons learned).

Increasingly, GRID-Arendal's work relates to environmental conventions and thereby contributes to international co-operation. Good examples are the support provided to Tehran Convention for the Protection of the Marine Environment of the Caspian Sea and the Abidjan Convention, UNEP's Regional Seas agreement of West-African states.

GRID-Arendal continues to support projects related to 'green economy', one of the key agendas of UNEP, and uses its communication and facilitation competences in related fields such as 'The Economics of Ecosystems and Biodiversity' (TEEB). The box on page 38 outlines some of GRID-Arendal's new green economy directions in more detail.

While the Final Report focuses on the work programme specified under the MFA PCA, the overview of programme delivery also summarizes the work undertaken by GRID-Arendal beyond the Agreement (such as Polar-related activities). This is done to show the close integration within and across the programme areas and the co-benefits that derive from sharing knowledge, skills and partners between projects.

## 6. Methodology and structure

To make it easy to identify and track progress on specific components, programme delivery is reported in Chapter 7 following the same order and programme areas as listed in the work plan of MFA PCA:

1. Environmental Crime
2. Transboundary Waters
3. Support to ODA Countries in Environmental Management
4. Adaptation to Climate Change
5. Marine and Coastal Resources

Within each of these, there are numbered subsections on the various programme areas, as listed in the Work Programme. Work that was undertaken in addition to the MFA PCA is clearly distinguished within each thematic section by separate headings and numbered as '+' (plus). To illuminate the connection between activities and their associated achievements, the narrative on major projects or programmes covers both implementation and results. Presentation of results is easily identified in the narrative by blue text boxes. 2014 publications related to particular thematic areas are listed in purple boxes.

The Communications team worked with all divisions at GRID-Arendal in the preparation, production, and dissemination of reports and other outreach products for GRID-Arendal partners, including UNEP. In particular, the team provided support in cartography, layout, translation and publications dissemination, web design and development, content management, rich media and graphics design, and digital integration. These are intrinsic to GRID-Arendal operations, and provided core contributions across the range of activities and outputs reflected in this report.

Chapter 8 presents comprehensive financial information for the 2014 Work Programme. A letter from the auditors regarding GRID-Arendal finances is included as Annex 1.

The report concludes by summarizing some of the key considerations for programme management including deviations from and adjustments to the programme (Chapter 9), assessment of work programme effectiveness (Chapter 10) and, last but not least, insight into lessons learned (Chapter 11). The gender dimension is addressed in the report under individual interventions where relevant, rather than as a 'stand-alone' segment.

During 2014, GRID-Arendal underwent a restructuring process to simplify and improve operations and management, to better match the skills and qualifications of the staff with the programme of work to be delivered in the foreseeable future and to focus attention on the delivery of content and the measure of impact and outcomes. The restructuring process was finalised by the start of November 2014. Annex 2 presents GRID-Arendal's new organizational structure as of January 2015, including a short description of the 8 programmes:

- Polar and Mountain Environments
- Environmental Crime
- Transboundary Waters
- Blue Carbon
- Green Economy
- Marine Spatial Planning
- State of Environment Reporting
- Marine and Coastal Resources.

And finally, 2014 has provided the opportunity to look back on ten years of successful capacity building, technical and scientific support and see the tangible results of the pioneering Shelf Programme. A comprehensive review of the Shelf Programme is being distributed as a stand-alone supplement to this Final Report.

# 7. Programme Delivery and Results

## 1 Environmental Crime

The Environmental Crime programme<sup>2</sup> evolved and diversified in 2014, to cover issues including electronic waste, illegal fisheries, illegal logging, and the poaching of wildlife and other resources. Developed jointly with the UN Office on Drugs and Crime (UNODC), the International Criminal Police Organization (INTERPOL), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), it receives project funding from a range of donors. The programme supports national and international law enforcement initiatives to combat transnational crime, mainly through the development of better information and analysis techniques, preparation of practical manuals and field training for detection and enforcement personnel.

Illegal trade in wildlife was a major topic of the Ministerial discussions of the first United Nations Environment Assembly (UNEA) in June 2014. GRID-Arendal provided substantive input to the Information Document informing

2. <http://www.envcrime.org>

SIGNIFICANT OUTCOME	EC
<b>Strengthening field operations to combat wildlife poaching</b>	
Extract from an e-mail received from <b>J M Lyimo</b> , Project Manager, Ugalla Game Reserve, Tanzania, 14 August 2014:	
<i>"I am writing to ... appreciate the [tracking and crime scene management] training my Game Wardens received from Rosemary Kweka two weeks ago ... we had a group comprising of young to old wardens whom were all experienced with field works (Antipoaching) but doing it their own way (old and local fashioned) ... to be honest things have changed alot. If you visit Ugalla today and join the patrol team, its easy to identify those wardens who attended tracking and crime scene management training and those who didn't. We are now encouraging those who attended training to train their fellows ..."</i>	



Forest rangers training in Tanzania. Photo: Rosemary Kweka

### Combating environmental crime

The information document and environmental crime report provided key background information for a detailed resolution on wildlife crime adopted by UNEA, which strengthens UNEP's role in documenting environmental information related to illegal trade and supporting other agencies including the UN Secretary-General's work on the Rule of Law (see Resolution 1/3 Illegal Trade in Wildlife at [http://www.unep.org/unea/UNEA\\_Resolutions.asp](http://www.unep.org/unea/UNEA_Resolutions.asp)).

Several countries and agencies are now engaging internationally to address this threat of illegal trade in wildlife. For example, at the first UNEA, high-level government representatives from Kenya, Uganda and Tanzania announced their intention to work together, along with INTERPOL and UN agencies, to curb the illegal timber trade that is stripping East Africa of one of its most valuable natural resources. With the support of INTERPOL and the engagement of police forces, the initiative will also strengthen exchange of intelligence and communication across borders.



*Sturgeon poaching in the Caspian. Photo: Pro-syanov/iStock.*

these discussions.<sup>3</sup> In addition, to raise international awareness of these serious issues, INTERPOL and UNEP released *The Environmental Crime Crisis*, a UNEP Rapid Response Assessment (RRA) report, during the UNEA. The report highlights how environmental crime is used to finance criminal, militia and terrorist groups and how it threatens human security and sustainable development. Key messages from the RRA were relayed through more than 30 press releases and over 2000 news articles across 112 countries globally, resulting in a combined potential audience of over 3 billion people.

The Environmental Crime Crisis report included a case study on 'Sturgeon poaching in the Northern Caspian'.<sup>4</sup> Further exploration and awareness raising on this issue continued in 2014. All available data, focusing on the illegal catch of sturgeon and the caviar trade in Russia and Kazakhstan, were analyzed and a more detailed report is due for publication in March 2015. A seminar and round table, held in Moscow in December on 'How to protect the sturgeon of the Caspian and Azov seas', was attended by 25 participants including eight journalists. Subsequently a team of journalists will undertake a media tour in May 2015 to assess the main driving forces of sturgeon poaching in the Volga delta and a joint campaign for the conservation of sturgeon has

been agreed between the Association of Environmental Journalists of the Russian Union of Journalists and the Worldwide Fund for Nature (WWF) Russia.

Also in partnership with WWF-Russia, an analytical report "Illegal logging in Russia" has been compiled and is being prepared for publishing in 2015.

Data on hazardous waste trade on e-commerce platforms have been compiled and a detailed outline prepared for a 2015 UNEP publication on hazardous waste crime. The information gathered so far has been discussed with selected national authorities such as the Norwegian Environment Agency and the Human Environment and Transport Inspectorate of the Netherlands. The data and draft text will serve as material for a RRA report scheduled for publication in 2015.

### 1+ Environmental Crime work funded from other (non-MFA) sources

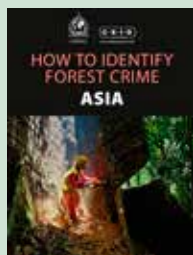
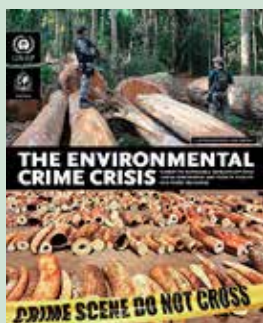
GRID-Arendal continued its involvement with the Law Enforcement Assistance for Forests (LEAF) project<sup>5</sup> and the Organised Forest Crime (ORGFORC) project through 2014, with financial support from the Norwegian Agency for Development Cooperation (NORAD). Under the ORGFORC project, port units are being set up in East Africa by UNODC and a prosecutor training workshop was held in September. To help tackle the problem from the front end, 1,200 forest rangers were trained in Tanzania.

3. UNEP/EA.1/INF/19

4. Pages 42-3

5. <http://www.interpol.int/Crime-areas/Environmental-crime/Projects/Project-Leaf>





Nellemann, C., R. Henriksen, P. Raxter, N. Ash, and E. Mrema (Eds.). 2014. *The Environmental Crime Crisis – Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources*. A UNEP Rapid Response Assessment. United Nations Environment Programme and GRID-Arendal, Nairobi and Arendal. ISBN: 978-82-7701-132-5. Available in Arabic, Chinese, English, French, Russian and Spanish. <http://www.grida.no/publications/rr/crime>

INTERPOL and GRID-Arendal. 2014. *How to Identify Forest Crime in Africa*. ISBN: 978-82-7701-127-1. Available in English, French and Swahili. <http://www.grida.no/publications/forest-crime>

INTERPOL and GRID-Arendal. 2014. *How to Identify Forest Crime in Asia*. ISBN: 978-82-7701-126-4. Available in English, Indonesian and Chinese. <http://www.grida.no/publications/forest-crime>

INTERPOL and GRID-Arendal. 2014. *How to Identify Forest Crime in Latin America*. ISBN: 978-82-7701-128-8. Available in English, Spanish and Portuguese. <http://www.grida.no/publications/forest-crime>

Rainforest Foundation Norway and GRID-Arendal. 2014. *State of the Rainforest 2014*. Ellen Hofswang (Ed.). <http://www.grida.no/publications/soe-rain-forest>

## 2 Transboundary Waters

### 2A Support to Basin Commissions (Lake Victoria, Okavango River, Limpopo River) in Africa

With nearly 90 per cent of the world's population living in countries where freshwater resources cross borders, the peaceful cooperation and sustainable use of shared waters are critically important. In Africa alone there are 64 shared river/lake basins. These basins are important hubs for economic development and regional integration. By focusing on transboundary waters, GRID-Arendal seeks to provide innovative communication tools and products that enable the sustainable use and development of such shared resources.

The Transboundary Waters Programme in Africa is currently focusing on projects in the three major basins specified in the MFA 2014 Work Programme. A plan to extend the programme into additional, internationally-significant catchments is also being explored.

Following agreement on the Lake Victoria Basin project concept, the Lake Victoria Basin Commission and GRID-Arendal prepared a detailed workplan for the production of an Atlas, by 2016, which will highlight changes in the Basin. Work on the Atlas commenced with agreement on the outline followed by the commissioning of authors and a training held in November 2014.

The Cubango-Okavango brochure that was published in June provides the foundation for the Okavango project's activities. On the basis of this brochure, the Southern Africa Regional Environment Programme (SAREP),<sup>6</sup> one of the project partners, has embarked on detailed field and desk studies to identify and describe the various ecosystem

goods and services available in the Cubango-Okavango River Basin. Once this task is accomplished GRID-Arendal will map the goods and services, including updating the current map in the brochure. Parallel to these tasks is the scoping of the valuation of the ecosystem services in the basin, which UNEP is leading. The three tasks – identification and description of the ecosystem goods and services in the Cubango-Okavango basin, mapping of the services, and valuation studies – will lead to a report that is aimed for completion in mid-2015. The report will also form the justification of a Payment for Ecosystem Services proposal for the basin, which will be prepared in 2015. The Okavango Basin Commission<sup>7</sup> is a fourth project partner, in addition to GRID-Arendal, SAREP and UNEP.

A stakeholders meeting in August resulted in an agreement on the scope of an Atlas for the Limpopo River Basin and milestones that will lead to its delivery in the last quarter of 2015. The four project partners are GRID-Arendal, Global Water Partnership (GWP),<sup>8</sup> Resilience in the Limpopo Basin Programme (RESILIM),<sup>9</sup> and the Limpopo River Basin Commission.<sup>10</sup> RESILIM has since initiated the process of commissioning the authors for the Atlas, while GWP and GRID-Arendal are planning the first training for the authors in early 2015.

### 2B Support to the Interim Secretariat of the (Tehran) Framework Convention for the Protection of the Marine Environment of the Caspian Sea

GRID-Arendal continued to support the Interim Secretariat of the Tehran Convention, focusing on the preparation of key documents to inform the Fifth Conference of the Parties (COP5) and further development of the Caspian Environmental Information Centre (CEIC).<sup>11</sup> The long-term support provided by the Interim Secretariat has now been officially evaluated by the UNEP Evaluation Office, with the draft report made available in January 2015.<sup>12</sup>

Ministers of environment and other high-level government officials of the five Caspian States met from 28 to 30 May in Ashgabat, Turkmenistan for COP5, where they took major decisions towards ensuring a sustainable future for the Caspian Sea.

SIGNIFICANT OUTCOME	TW
<b>UNEP collaboration with GRID-Arendal under the Tehran Convention</b>	
<p>Extract from a letter from <b>Jan Dusik</b>, Director and Regional Representative, UNEP Regional Office for Europe, to the Norwegian Ministry of Foreign Affairs, Section for Russia, Eurasia and Regional Cooperation, 26 February 2015:</p>	
<p><i>“Our collaboration with GRID-Arendal, a partner and implementing agency for activities under the Tehran Convention, is longstanding, and has already yielded fruitful results. Not only is GRID-Arendal a close partner in overseeing and managing the work of the Secretariat, it also acts as resource institute for supporting a range of activities in the context of the implementation of the Convention's Programme of Work, within the areas of its competence and expertise ...”</i></p>	

6. <http://www.okacom.org/okacoms-work/partners-and-projects/projects/partner-projects/sarep>

7. <http://www.okacom.org/okacom-commission>

8. <http://www.gwp.org>

9. <http://www.icp-confluence-sadc.org/projects/resilience-limpopo-river-basin-resilim>

10. <http://www.limcom.org>

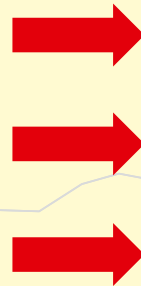
11. <http://www.grida.no/news/default/5357.aspx?p=4> and <http://kaspinfo.net>

12. UNEP Evaluation Office. 2015. Terminal Evaluation of the UNEP Project: (Interim) Secretariat services to the Framework Convention for the Protection of the Marine Environment of the Caspian Sea. Project CP/50230901. Draft Evaluation Report. January 2015. 103pp

# Payment for Ecosystem Services Scheme in the Cubango-Okavango

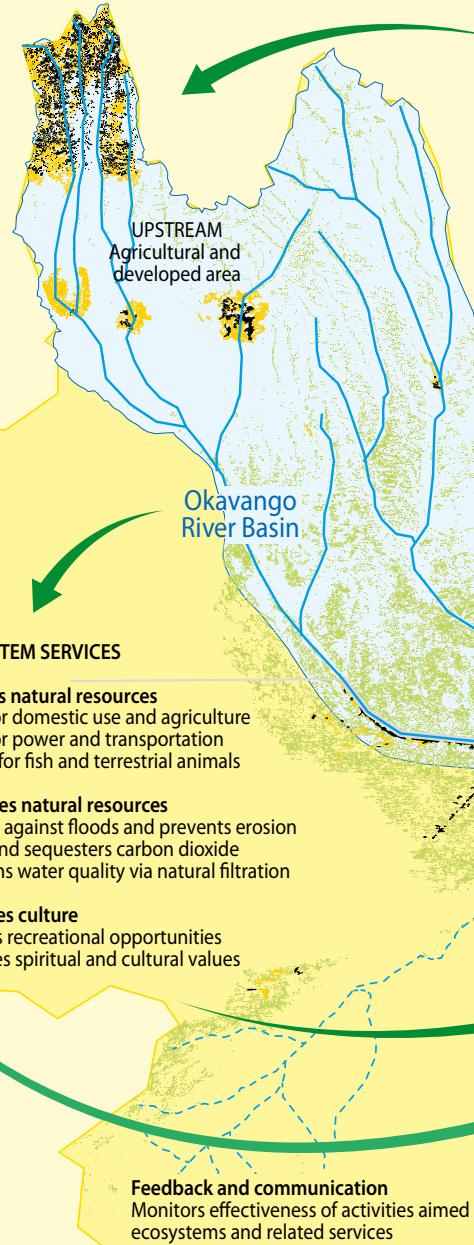
## THREATS TO THE CUBANGO-OKAVANGO RIVER BASIN

Increased pressure on land  
Deforestation  
Unsustainable water abstraction from the basin  
Overfishing  
Habitat loss  
Wildfires  
Reduced water flow and sediment load into the Okavango Delta



ANGOLA

NAMIBIA



The Cubango-Okavango brochure that was published in June provides the foundation for the Okavango project's activities. On the basis of this brochure, the Southern Africa Regional Environment Programme (SAREP), one of the project partners, has embarked on detailed field and desk studies to identify and describe the various ecosystem goods and services available in the Cubango-Okavango River Basin.



# o River Basin

Funds collected through Endowment Fund are used to implement improved land management activities in the upper catchment that help to secure and conserve environmental services.

Conservation agriculture  
Riparian forest rehabilitation  
Livelihood diversification  
Protected areas management  
Water efficient commercial irrigated agriculture

Contribution to the endowment fund

Member States  
Private sector  
Development partners

Z A M B I A

OKAVANGO  
ENDOWMENT FUND

BENEFITS FROM THE PES SCHEME IMPLEMENTATION

Willingness of tourism enterprises to provide voluntary financial support could constitute a strong basis for the development of an endowment fund

Healthy ecosystems  
Improved livelihoods of people  
Viable business opportunities  
Improved natural resources management  
Enhanced trans-boundary cooperation

Okavango  
Delta

DOWNSTREAM  
Tourism and  
conservation area

Z I M B A B W E

B O T S W A N A


at protecting

activities through  
cial audits

Although GRID-Arendal has kept the Caspian Information Portal of the CEIC updated, further funding is needed to continue this work. British Petroleum (BP) has now agreed to finance the second phase of the CEIC (Tehran Convention) linking its support to the opening of the permanent Secretariat in Baku, Azerbaijan in 2015.

SIGNIFICANT OUTCOME	TW
<b>Agreements at COP5</b>	
<p>The Conference of the Parties held in May 2014 ended as an outstanding success:</p> <ul style="list-style-type: none"> <li>• After nine years of negotiations COP5 adopted the decision to have the permanent Secretariat of the Tehran Convention administered by UNEP and located in the region, following a four-year rotation schedule starting in Baku, Azerbaijan in January 2015.</li> <li>• COP5 adopted the Protocol on the Conservation of Biological Diversity. Called the Ashgabat Protocol, it follows the Aktau Protocol on the handling of oil spills and the Moscow Protocol on the prevention of pollution from land based sources and activities. It is important because it deals with protected areas, an issue that touches upon the legal status of the Caspian Sea which has been, and remains, contested since the fall of the Soviet Union.</li> <li>• COP5 adopted a number of other important decisions advancing the implementation of the Aktau Protocol, the Environmental Monitoring Program, the operation of the web based Caspian Environment Information Centre and the preparation of the next Caspian State of Environment (SoE) report (both of which are coordinated and supported by GRID-Arendal), and supporting further efforts to engage the oil and gas industry and obtain a fourth grant from the Global Environment Facility (GEF).</li> </ul> <p>(<a href="http://www.tehranconvention.org/spip.php?article79">http://www.tehranconvention.org/spip.php?article79</a>)</p>	

SIGNIFICANT OUTCOME	TW
<b>Successful Secretariat Support to the Tehran Convention</b>	
<p>GRID-Arendal's long-term support to the (Interim) Secretariat for the Tehran Convention (TCIS) under the guidance of the UNEP Regional Office for Europe has produced impressive outcomes, its effectiveness and efficiency confirmed by the UNEP Evaluation Office in its Terminal Evaluation report. The report concluded that "Against the backdrop of modest resources and complex geo-politics, the TCIS achieved a high level of success in the attainment of project objectives and results. The most relevant evidence consists of the fact that Parties have agreed to the following: adoption of three out of four ancillary Protocols; to the location of the Permanent Secretariat; annual contributions to the new trust fund".</p> <p>The report has also mentioned that:</p> <ul style="list-style-type: none"> <li>• The TCIS has performed an excellent role in assisting the Parties to operationalise the Tehran Convention.</li> <li>• TCIS's efforts in supporting national implementation structures were highly appreciated by the Caspian littoral States.</li> <li>• TCIS succeeded in assisting the countries in integrating their Public Participation Strategies (NPPS) into their National Convention Action Plans.</li> <li>• TCIS's efforts in monitoring and information-sharing were very successful. Of particular relevance to GRID-Arendal's contribution it stated that "<i>Coordinated by the Secretariat, GRID-Arendal has been able to train and empower the key actors and to create the enabling environment necessary for the systematic monitoring of the health of the Caspian Sea region. Equipped with the state-of-the-art information, the Caspian countries will be able to make informed policy and legislative decisions to advance the cause of the Tehran Convention.</i>"</li> <li>• Interviewees were unanimous in their praise for the project management team.</li> </ul>	

2014 PUBLICATIONS	TRANSBOUNDARY WATERS
	<p><i>PES Scheme and Endowment Fund for the Cubango-Okavango River Basin.</i> Cubango Okavango River Basin Brochure. <a href="http://www.grida.no/about/programmes.aspx?id=6229">http://www.grida.no/about/programmes.aspx?id=6229</a></p>

## 3 Support to ODA Countries in Environmental Management

### 3A Keeping the environment in Africa under review

The Africa Environmental Information Network (AfricaEIN)<sup>13</sup> supports African countries as they keep their state of the environment under review. One application is the development of country environment profiles. In 2014 10 countries published their profiles online: Cameroon, Ghana, Kenya, Lesotho, Malawi, Mauritius, Tanzania, Uganda, Zambia and Zimbabwe. To enable countries to actively upload their contributions, they were assisted by a User Guide prepared by GRID-Arendal on how to input data into country environmental profiles. In order to better profile the AfricaEIN, a stand-alone website is being developed. In addition, a simpleshow video explaining the network was also produced in English and French.<sup>14</sup>

SIGNIFICANT OUTCOME	EM
<p><b>Zambia: Atlas of Our Changing Environment</b></p> <p>The Zambia Environmental Management Agency (ZEMA) (<a href="http://www.necz.org.zm/">http://www.necz.org.zm/</a>) was given an award in October 2014 for their work on the Zambia Atlas (published in 2013) (<a href="http://www.grida.no/publications/zambia-atlas">http://www.grida.no/publications/zambia-atlas</a>).</p> <p>The Zambia Atlas was a joint effort of GRID-Arendal, ZEMA and UNEP. The research benefited from the FK Norway Exchange (<a href="http://www.fredskorpset.no/en/">http://www.fredskorpset.no/en/</a>) whereby Joel Simwanga of ZEMA was seconded to GRID-Arendal and Bernardas Padegimas, a GRID-Arendal staff member, was seconded to ZEMA. Additional support was received from GRID-Sioux Falls. ZEMA received the Best Public Sector Campaign Award, in recognition of the collaborative approach used in producing the Atlas and its influence on the public, from Zambia Public Relations Association (ZAPRA), a professional association for communication and public relations specialists. (<a href="http://www.zambiapra.org/news/2014-zapra-public-relations-awards">http://www.zambiapra.org/news/2014-zapra-public-relations-awards</a>)</p>	

In an attempt to secure long-term funding for the project, a medium-sized proposal was jointly developed with UNEP and submitted to GEF. There is been no decision on the proposal other than an acknowledgement of receipt.

### 3B Resource Use Efficiency in Africa “Water grabbing”


This project profiles the extent of large-scale land investments in Africa, as well as highlighting their impact on livelihoods and on water ecosystems. A summary of the project's initial findings was published and distributed at the World Water Week in late August/early September 2014, and the findings were also presented in two plenary sessions. The full report was finalised in December and publication is expected in early 2015. The project was well received by the African Ministerial Conference on Water, and funding options for a future phase are now being explored.

### 3+ Support to ODA countries in environmental management funded from other (non-MFA) sources

A joint study with UNEP, *Food Wasted, Food Lost*, was undertaken to establish the contribution of ecosystems restoration in meeting the food needs of the world's growing population. The study was premised on the understanding that food producing ecosystems, including agro-ecosystems, forests and water ecosystems are reaching their full potential, and are therefore not the only solution to the world's increasing food needs. The study argues that ecosystem degradation is a major cause of loss in potential food production, while human practices and preferences are blamed not only for food loss but also food waste. It calls for investment in better management of food producing ecosystems. The publication is part of the Think.Eat.Save campaign by UN agencies in response to the 2014 Zero Hunger Challenge by the UN Secretary General.

13. <http://www.grida.no/publications/africa-ein>

14. <http://www.grida.no/news/default/6227.aspx>

2014 PUBLICATIONS	ENVIRONMENTAL MANAGEMENT IN ODA COUNTRIES
	<p>FAO, UNEP, GRID-Arendal and IWMI. 2014. <i>Project: Analysis of impacts of large-scale investments in agriculture on water resources, ecosystems and livelihoods; and development of policy options for decision makers</i>. Summary of project findings. <a href="http://www.grida.no/publications/water-grab">http://www.grida.no/publications/water-grab</a></p> <p>Formo, R.K., H. Jørstad, C. Nellemann, C. Mafuta, R. Munang, J. Andrews, and J.N.Hval. 2014. <i>Food Wasted, Food Lost – Food security by restoring ecosystems and reducing food loss</i>. United Nations Environment Programme and GRID-Arendal, Nairobi and Arendal.</p>

## 4 Adaptation to Climate Change

### 4A Climate Change and Security in EECCA region

UNEP and GRID-Arendal are partners in the Environment and Security Initiative (ENVSEC) Phase II.<sup>15</sup> Its goal is to contribute to the reduction of environment and security risks through strengthened cooperation among and within countries in four regions: Central Asia, Eastern Europe, Southern Caucasus, and South-Eastern Europe.

GRID-Arendal is responsible for the assessment component in the project entitled 'Climate change and security in Eastern Europe, Central Asia and the Southern Caucasus' which is part of a bigger EU-funded package, as well as contributing funding as a project consortium partner. The objective of the project is to facilitate ENVSEC-trademark participatory assessments of links between climate change and security in the three regions, highlighting hotspots, and presenting the assessment results in a visual and practical format. The results of the regional assessments will also be used to produce a cross-regional picture of climate change-security issues and linkages.

Two draft assessment reports, on Eastern Europe and Southern Caucasus based on background studies, have been prepared and are currently under review by partners. The third, on Central Asia, is in preparation by UNDP, and will then be finalised by GRID-Arendal. The project will continue into 2015, due to extended activities by partner organizations.

### 4B Enhancing the resilience of pastoral ecosystems and livelihood of nomadic herders

During 2014, GRID-Arendal together with international partners – the International Centre for Reindeer Husbandry (ICR), the Association of World Reindeer Herders (WRH), local partners in Mongolia and the Russian Republic of Sakha (Yakutia) – continued to develop a proposal for a multi-million dollar GEF project. UNEP's Project Review Committee has approved the project and it is currently pending submission by UNEP to the GEF Secretariat.

If funded by the GEF, this will be the largest international collaboration project focusing on reindeer husbandry, Indigenous Peoples and the environment. The project objective is to develop methods and skills to conserve and enhance biological diversity and reduce pasture degradation in selected areas of reindeer herding in Russia and Mongolia, while enhancing livelihood resilience and sustainability of nomadic herder communities.

15. The ENVSEC Initiative - Phase II is part of UNEP Subprogramme 2: Disasters and conflicts. With a view to its upcoming Chairmanship of the Initiative, UNEP presented to the inter-agency Management Board an outline of strategic objectives for 2015, which include water, disaster risk reduction and climate change and security.



Former GRID-Arendal Managing Director Peter Prokosch and Johan Mathis Turi from the International Centre for Reindeer Husbandry sign a new cooperation agreement in August 2014. Photo: Robert Barnes, GRID-Arendal

Promoting best practices in the co-management of natural resources with the equal involvement of reindeer herders and government administrations is an increasing focus of the Nomadic Herders' project. In 2014, the project organised a field visit for a group of 15 Russian and Mongolian reindeer herders and decision makers to the Laponia World Heritage Site in Sweden, enabling the participants to learn about a unique form of governance that allows for biodiversity objectives and traditional livelihoods of Indigenous Peoples such as reindeer husbandry to co-exist successfully. This is a model that could be transferred to other reindeer herding regions.

During GRID-Arendal's 25th Anniversary celebrations in August 2014, GRID-Arendal and ICR signed a new agreement to continue cooperation on nomadic reindeer husbandry in Mongolia and the Russian Far East.

In Mongolia, the project has also been working to increase the institutional capacity of the reindeer herding community (the Dukha), which is the smallest indigenous group and ethnic minority in Mongolia. Pilot activities are being implemented to establish the Dukha Reindeer Information Centre in Tsaganuur, northeast Mongolia. These include granting scholarships for students of reindeer herding families to interview their family members and document traditional knowledge about biodiversity, reindeer, land use and food culture. In addition, the project is piloting satellite-based internet connection for the centre, in order to connect Dukha herders to the outside world, and to other reindeer herders across the Arctic through social media. The project is also undertaking a feasibility assessment on the import of reindeer from Russia, in order to boost



livelihoods of the Dukha and aid in the restoration of traditional migration routes.

#### 4C Black carbon and health

A report focusing on the effects of emissions originating from incomplete combustion of fuels used for cooking, heating and lighting in the developing world and the combined benefits to health, climate and the economy that can be achieved by reducing them, is scheduled for completion in spring 2015. *Room to Breathe – How Reducing Household Air Pollution Improves Health, Saves Lives and Benefits the Climate* summarizes what is known about solid fuel (primarily wood fuel & charcoal) and kerosene use. It will provide an overview of the science of air pollution and its effects on human health, development and climate change. It will examine some of the key initiatives to reduce household air pollution and, based on lessons learned, provide a framework to help decision makers implement effective strategies.

#### 4+ Climate Change Adaptation work funded from other (non-MFA) sources

The Himalayan Climate Change Adaptation Programme (HICAP) is a multi-year initiative, which aims to enhance the resilience of mountain people, particularly women, by improving the understanding of vulnerability to change and identifying opportunities and potentials for adaptation.

Three organizations lead HICAP: the International Centre for Integrated Mountain Development (ICIMOD), GRID-Arendal, and the Centre for International Climate and Environmental Research – Oslo (CICERO), each bringing their unique skills and areas of competence to the programme. With significant research having been undertaken in the previous two years, 2014 was a year focused on consolidating this knowledge and packaging information in formats accessible to policy makers in the region and beyond.

GRID-Arendal took the lead or contributed to the production of several HICAP-related assessments. These included a regional food security assessment, led by GRID-Arendal. The assessment report, entitled *The Last Straw? Food security in the Hindu Kush Himalayas and the additional burden of climate change*<sup>16</sup> was launched at the Global Mountain Forum (Cuzco, Peru) at the end of May 2014 and was later officially launched by the Norwegian Minister of Foreign Affairs, Mr. Børge Brende, at the HICAP event during Arendalsuka in August 2014. The HICAP event also involved high-level staff from ICIMOD, including the Director General. Also launched at Arendalsuka was a short film produced by GRID-Arendal, entitled 'Scaling Mountains, Gaining Heights'. The film highlights the challenges, but also significant opportunities for mountain women to engage in adaptation to climate change.

16. <http://www.grida.no/publications/last-straw>



Over half of the world's population lives in watersheds of major rivers originating in mountains with glaciers and snow. A warming climate is now causing a global recession in glaciers, and some areas may lose their glaciers entirely in this century. Photo: Lawrence Hislop, GRID-Arendal

Cartographic and editorial contributions were similarly made to the ICIMOD report *Women's Empowerment at the Frontline of Adaptation: Emerging Issues, Adaptive Practises and Priorities in Nepal*.

HICAP is taking another pathway to create awareness in order to generate change. One of the most effective and inclusive approaches to building public awareness is communication through the media. Very often, however, the media are unfamiliar with environmental issues, and at times lack experience for investigating stories. Through HICAP, GRID-Arendal and partners have been working to strengthen the capabilities of journalists to investigate and report on environmental issues.

Hands-on training gives participants direct exposure to the most recent information on key environmental problems while working with senior environmental reporters and experts. Following the success of the regional training workshop in 2013, GRID-Arendal trained 12 Indian and Nepalese journalists in Assam, northeast India in February 2014. The workshop focused on climate and flood issues within the Brahmaputra river basin and led to the publication of numerous articles in the local, national and international press.<sup>17</sup>

In addition, GRID-Arendal and ICIMOD have launched a journalist grant programme in the region. The grant provides opportunities for journalists to report from remote areas directly affected by climate change. Such opportunities rarely exist for local environmental journalists, who are generally confined to writing about such events from a news desk. In 2014, the grant helped three journalists to carry out innovative reporting projects.

SIGNIFICANT OUTCOME	CC
<b>Policy recognition of why mountains matter</b>	
<p>GRID-Arendal, in collaboration with UNEP/Vienna, has had considerable success in pushing forward the mountain agenda within the post-2015 Sustainable Development Goals process through a series of Mountain Policy Briefs on why mountains matter for Energy, Climate Change and Disaster Risk Reduction, Forests and Biodiversity, and Water (<a href="http://www.grida.no/publications/mountain-policy-briefs">http://www.grida.no/publications/mountain-policy-briefs</a>).</p> <p>Partly as a result of the briefs and related outreach efforts, mountains have been included in the post-2015 Open Working Group's thematic paper on Water and Biodiversity. Our partner in the HICAP programme, ICIMOD, has congratulated GRID-Arendal on this effective policy work and wishes to engage further with GRID-Arendal on mountain issues that can connect the Himalayan region to global discussions and processes on mountain sustainable development.</p>	

During 2014 GRID-Arendal was also heavily engaged in preparing ICIMOD's annual flagship conference which was entitled 'Mountain People Adapting to Change: Solutions beyond Boundaries Bridging Science, Policy and Practice'.<sup>18</sup> GRID-Arendal took the lead with ICIMOD in designing the programme for the conference, which took the form of interactive dialogues and panel sessions - very different from the more traditional formats of previous years. Apart from the overall conference design, two panel sessions were developed by GRID-Arendal: one on 'Mountain to Mountain', which examined how the Himalayan region could learn from other mountain regions, and the other on 'Connecting the Dots', which examined the effectiveness of communications and where these could be strengthened.

The well-known GRID-Arendal project Many Strong Voices (MSV) helps to raise the profile of people in the Arctic and Small Island Developing States (SIDS) and their struggle against climate change. Following submission of the final report on the previous MSV project, GRID-Arendal submitted a new MSV proposal to the Norwegian Government in April 2014, and has lined up partnerships with many institutions for the new work that would be undertaken.

Based on the strength of the MSV programme, GRID-Arendal was asked to lead on a submission to the United States Agency for International Development (USAID) with partners in Canada, Fiji, Papua New Guinea, Vanuatu, Tuvalu, and Kiribati. This is the first step in submitting a full proposal for USD 500 000 to USAID to develop a transboundary adaptation plan in South Pacific countries. The proposal was submitted in February 2015.

SIGNIFICANT OUTCOME	CC
<b>MSV recognition from a business perspective</b>	
<p>In the same month that the new MSV proposal was submitted to the Norwegian Government, <b>Sir Richard Branson</b>, founder of Virgin Airlines, endorsed the project, saying "<i>organizations like Many Strong Voices collaborate, act and innovate to achieve lasting change. Their critical work fills the gap between those affected by adverse climate impacts and the political and business leaders focused on creating big picture solutions.</i>"</p> <p>Sir Richard's endorsement was reported in an e-mail received from Tricia Keller, Partnerships Director, Virgin Unite on 18 April 2014. In the same message Ms Keller stated: "<i>We're big fans of the work you're doing and your significant impact.</i>"</p>	

17. <http://www.icimod.org/?q=10364>  
18. <http://www.grida.no/news/default/6209.aspx>

## Keeping a finger on the Arctic pulse

As a UNEP Centre of Excellence on Polar issues, GRID-Arendal continues to maintain a strong focus on the Arctic.

The European-funded 'Strategic Environmental Impact Assessment of Development of the Arctic' project was successfully completed and officially closed in September 2014. GRID-Arendal attended the final seminar

in Brussels where the network of European expert institutions presented the project results. GRID-Arendal was extensively involved in the project by organizing eight stakeholders' consultation workshops, the outputs of which formed a significant contribution to the main deliverable.<sup>19</sup> GRID-Arendal's work on stakeholder engagement was well received. GRID-Arendal remains a

19. <http://www.arcticinfo.eu/en>

### SIGNIFICANT OUTCOME

CC

#### Improved media skills headlined

Extract from an e-mail received from **Kieran Cooke**, Principal Trainer, 22 January 2015:

*"There is a tendency among many journalists to editorialize and to express their own opinions in articles rather than present facts and interviews objectively. The training sessions helped correct these tendencies: the journalists gained from their exposure to international media and have quickly learned to present their articles and pieces in a clear, objective and well balanced way. Several of the journalists involved in GRID-Arendal's workshops have contributed articles to the Climate News Network and have been encouraged by the exposure of their work to a wider, international audience. As a HICAP trainer I am impressed by the continuing enthusiasm shown by the journalists concerned for reporting often complex environmental issues. They show commitment and work hard. It is a pleasure to work with them."*

The success of the journalist trainings are being felt in other ways. ICIMOD, which had little to no concerted media training engagement prior to HICAP, has decided to use this model to its other programmes and projects. Through these media trainings, a critical mass of informed and well-equipped environmental journalists is being developed across the region.

Feedback from some grantees can attest to the success of the trainings:

**Om Astha Rai** of Nepal wrote *"The grant program has been a great opportunity for me. It gave me a chance to visit remote villages of Mustang district, which is vulnerable to climate change. I would have perhaps never reached these remote Mustang villages had I not received the grant. What I saw and experienced in Mustang will always help me better understand impacts of climate change on mountain people. It will help me link scientific report with field experience for my future stories."*

**Saleem Shaikh** of Pakistan wrote *"Honestly speaking, I am highly indebted to ICIMOD, HICAP and GRID-Arendal for the award of media grant, which enabled me to go to unexplored area from climate change impacts view point and report on the impacts and local adaptation there."*



Journalists on the Brahmaputra river, Assam, India.



Photo journalist Karen Dias interviewing villagers in India.



Kieran Cooke leading a training session. All photos: Ieva Rucevska.



member of the Steering Committee of a potential future Arctic Information Centre and, pending support from the European Commission, is well placed to participate in any subsequent related projects.<sup>20</sup>

GRID-Arendal organized the final meetings of the Arctic NGO Forum, a three-year project funded by the European Commission and led by GRID-Arendal and Ecorys<sup>21</sup> from the Netherlands. The Arctic NGO Forum supports non-governmental organizations (NGOs) concerned with Arctic environmental issues and helps them to meet, exchange ideas and perspectives and provide advice to the global Arctic community. The final workshop in Iceland looked at the 'Future of Arctic Coastlines, Deltas and Wetlands'. The Forum also began working on the next stage of the project. One of the stipulations for further funding by the European Commission is for NGOs to contribute financially, within their means, to its operation. Doing so will ensure that the Forum is 'owned' by its members and not simply a service provided by outside agencies.

GRID-Arendal was a member of the Steering Committee of 'The Economics of Ecosystems and Biodiversity (TEEB) for the Arctic'<sup>22</sup> scoping study. The Arctic TEEB study focuses on the benefits received from Arctic nature by people living both within, and beyond, the Arctic and is the first step in investigating the potential for a full

TEEB assessment for the Arctic. GRID-Arendal has been actively involved in the design of the scoping study and contributing to the report, which will be delivered to the Arctic Council for endorsement at its Ministerial meeting in April 2015.

GRID-Arendal was commissioned by UNEP to produce a follow up to the successful Arctic chapter of the UNEP 2013 Yearbook, also coordinated by GRID-Arendal. This latest product, the UNEP Year eBook 2014 Update: Rapid Change in the Arctic, is entirely online<sup>23</sup> and is available as an eBook and through iTunes.

GRID-Arendal in collaboration with the University of the Arctic successfully completed a series of Snowy Owl videos.<sup>24</sup> A request has been received to broadcast the videos on Alaskan state TV. A proposal for additional work was submitted to the Norwegian government in early 2015.

GRID-Arendal also led the establishment of the University of the Arctic Thematic Network on Photography in 2014.

20. <http://www.arcticinfo.eu/en/nfa>

21. <http://www.ecorys.com>

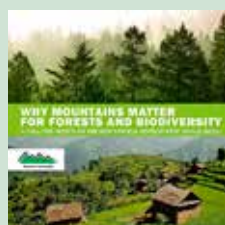
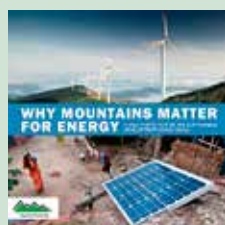
22. <http://www.grida.no/polar/activities/6102.aspx>

23. <http://www.grida.no/polar/news/6092.aspx>

24. <http://www.grida.no/polar/activities/5671.aspx>

## 2014 PUBLICATIONS

## CLIMATE CHANGE ADAPTATION



CICERO, GRID-Arendal and ICIMOD. 2014. *The Last Straw? Food security in the Hindu Kush Himalayas and the additional burden of climate change*. ISBN: 978-82-7701-129-5. <http://www.grida.no/publications/last-straw>

The Mountain Partnership. 2014. Mountain Policy Briefs on:

- *Why Mountains Matter for Energy: A Call for Action on the Sustainable Development Goals (SDGs)*
- *Why Mountains Matter for Forests and Biodiversity: A Call for Action on the Sustainable Development Goals (SDGs)*
- *Why Mountains Matter for Climate Change Adaptation and Disaster Risk Reduction: A Call for Action on the Sustainable Development Goals (SDGs)*
- *Mountains as the Water Towers of the World: A Call for Action on the Sustainable Development Goals (SDGs)*

<http://www.grida.no/publications/mountain-policy-briefs>

GRID-Arendal also contributed to:

*The Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC)*. 2014. Time to Act: To Reduce Short-lived Climate Pollutants. Content contribution, graphics and copy editing. <http://www.grida.no/publications/slcp>

*Future Imperfect: Climate change and adaptation in the Carpathians*. ISBN 978-82-7701-145-5. Editing. <http://www.grida.no/publications/future-imperfect>



## 5 Marine and Coastal Resources

### 5A Shelf Programme – Continental Shelf Delineation West Africa/Somalia

A major accomplishment in 2014 was the joint-submission by seven West African States to the UN Commission on the Limits of the Continental Shelf (CLCS) to claim areas of continental shelf beyond 200 nautical miles. GRID-Arendal has worked with national experts and partners from the Norwegian Petroleum Directorate (NPD) for over six years to realize the West African Continental Shelf Initiative. A meeting of the national technical experts with GRID-Arendal staff together with Mr Harald Brekke from NPD, was held in Sal, Cabo Verde, from 7–11 April to finalize the joint West Africa submission document. The meeting recommended some final amendments and cleared it for further processing at the subsequent Liaison Committee and Ministerial meetings.

Official country focal points gave final clearance to the submission document during the 8th Liaison Committee Meeting held in Praia, Cabo Verde, on 8-9 June and

forwarded it to the Ministerial meeting on 10 June. The Ministerial meeting led to the consensus amongst all coastal states that the submission was ready to be lodged with the CLCS.

In addition to the West Africa work, GRID-Arendal completed the final version of the Continental Shelf Submission of the Federal Republic of Somalia. This submission was lodged with the CLCS on 21 July concluding efforts of both the Norwegian Ministry of Foreign Affairs and GRID-Arendal over several years to support the Somali people with such an important process for their maritime jurisdiction and security.

### 5B Shelf Programme – Continental Shelf Delineation Global

In the Pacific region, in continued partnership with the Secretariat of the Pacific Community/Applied Geoscience and Technology Division (SPC/SOPAC),<sup>25</sup>

25. <http://www.sopac.org>

#### SIGNIFICANT OUTCOME

#### MC

#### Joint Submission on the West African Continental Shelf

In a historic moment, the seven West African States, represented by the Permanent Representative of Cabo Verde to the United Nations, Mr Fernando Jorge Wahnnon Ferreira, lodged their submission to claim areas of continental shelf beyond 200 nautical miles in New York on 25 September 2014. Mr Ferreira was joined by other representatives of Cabo Verde, Gambia, Guinea, Guinea Bissau, Mauritania, Senegal and Sierra Leone. Representatives of the Norwegian institutions that had provided support to the West African States for the preparation of the submission, GRID-Arendal, Norwegian Petroleum Directorate and the Legal Department of the Norwegian Ministry of Foreign Affairs, were also in attendance.

At its recent 11th Conference of the States Parties, member states of the Abidjan Convention unanimously recognized the contribution of the Government of Norway and GRID-Arendal with respect to assistance provided to West, Central and Southern African nations for the delineation of the outer limits of the continental shelf. Additionally, decision CP11/1 encourages the Abidjan Secretariat to work in partnership with GRID-Arendal to provide any needed remaining assistance to West Africa countries. (<http://cop11.abidjanconvention.org/media/documents/Report/COP11%20-%20%20Final%20Report%20En.pdf>)



*Permanent Representative of Cabo Verde to the United Nations, Mr Fernando Jorge Wahnnon Ferreira, presenting the joint submission of the seven West African coastal states to the Director of UN DOALOS, Ms Gabriele Goettsche-Wanl. Photo: Kristina Thygesen, GRID-Arendal*

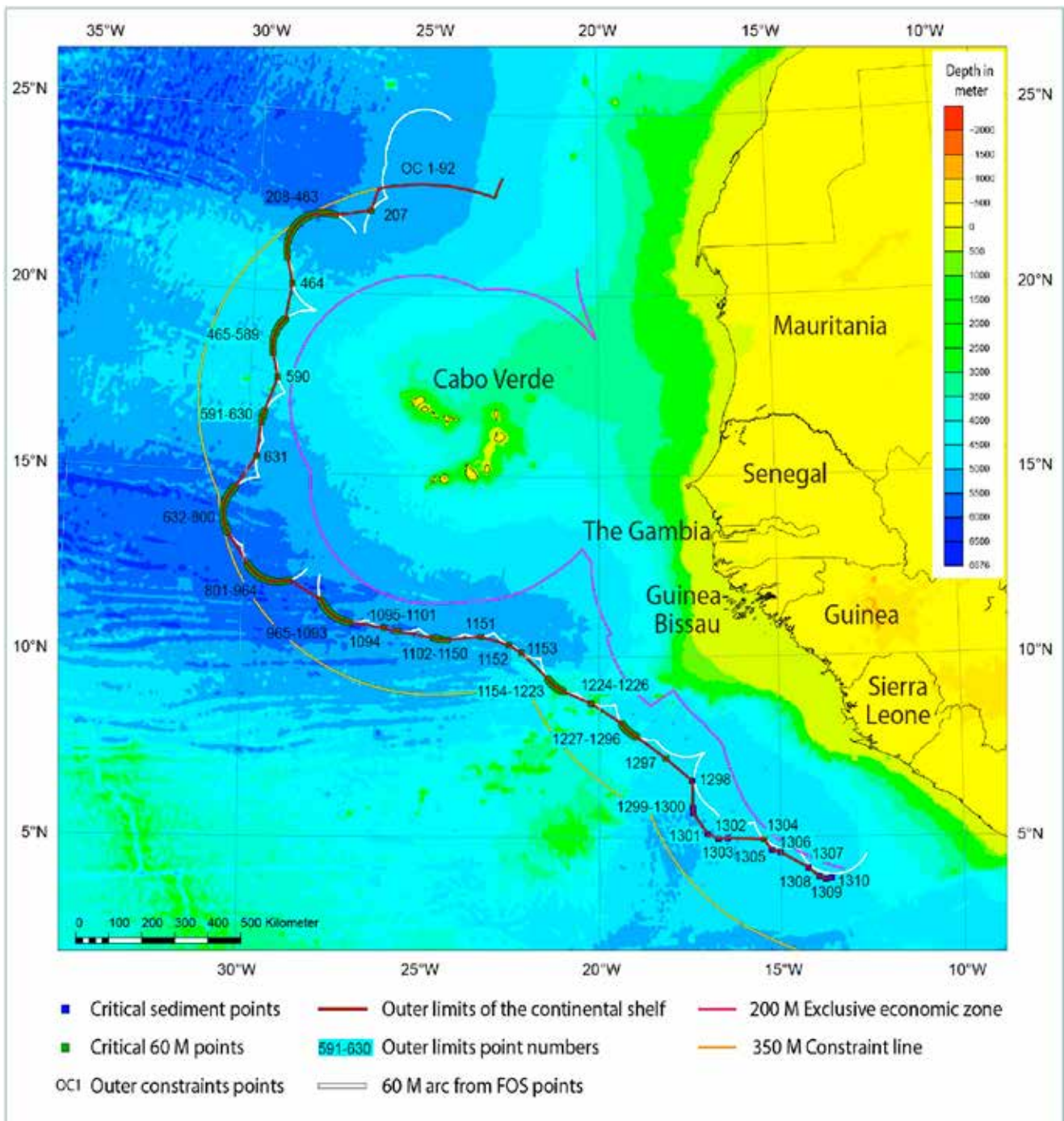
the Commonwealth Secretariat, Geoscience Australia, Geocap AS<sup>26</sup> and the University of Sydney, GRID-Arendal co-hosted the latest Pacific Maritime Boundaries working session. During this July workshop:

- States met to negotiate bilateral maritime boundaries.
- Technical teams from Papua New Guinea, the Solomon Islands and the Federated States of Micronesia worked together to finalise the Ontong Java continental shelf

26. <http://www.geocap.no>

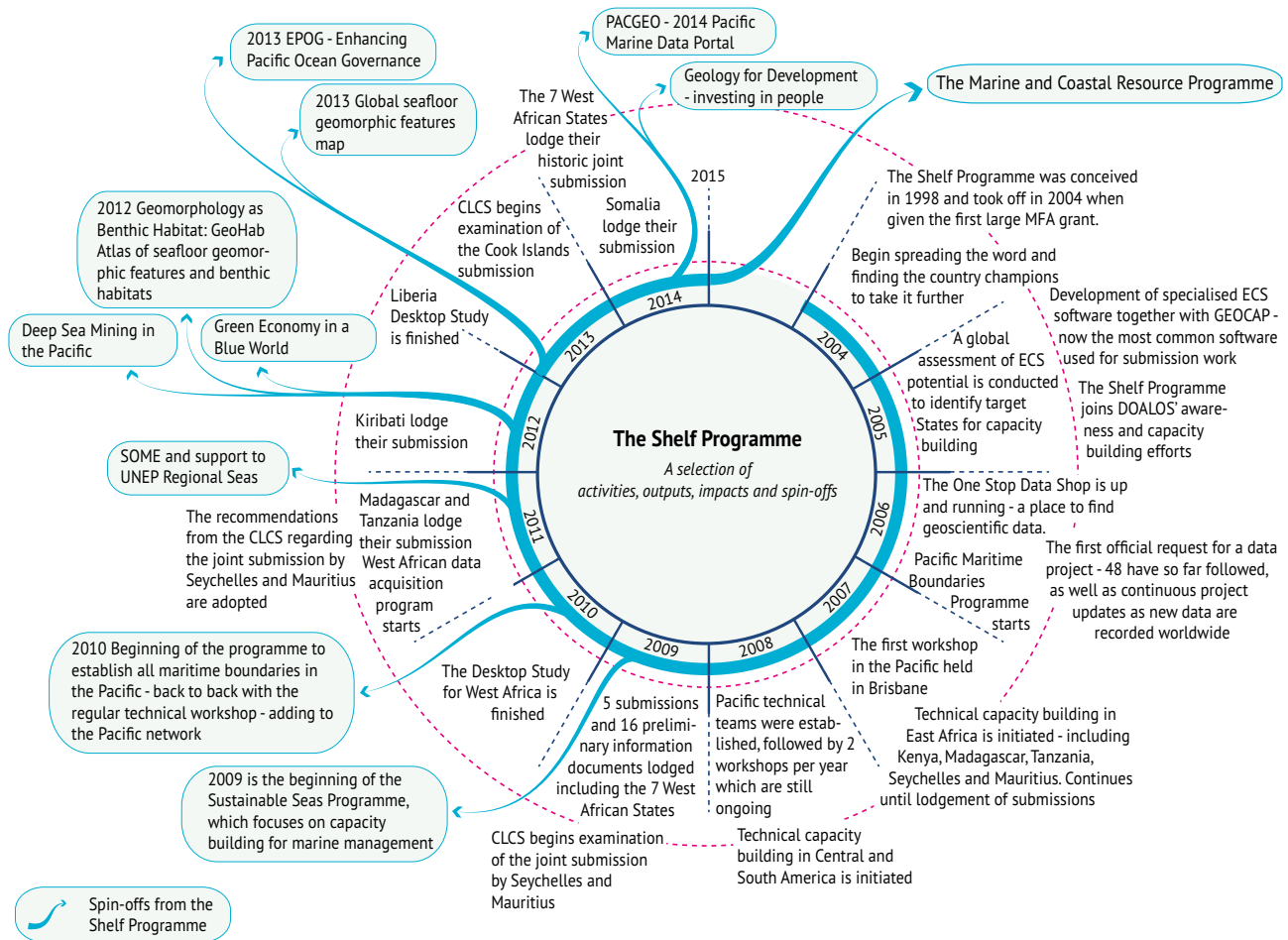
joint submission amendments.

- Meetings were held with Palau to discuss maritime boundaries negotiations with Indonesia and Philippines.
- Marine spatial planning training was provided using quantum GIS (QGIS) software.
- Advanced Geocap training was provided on the seafloor module and its integration with QGIS.
- Technical infrastructure was provided to four countries (Kiribati, Vanuatu, Cook Islands and Fiji) and SPC/SOPAC for offline access to the PacGeo marine spatial planning portal (see also section 5D+ below).



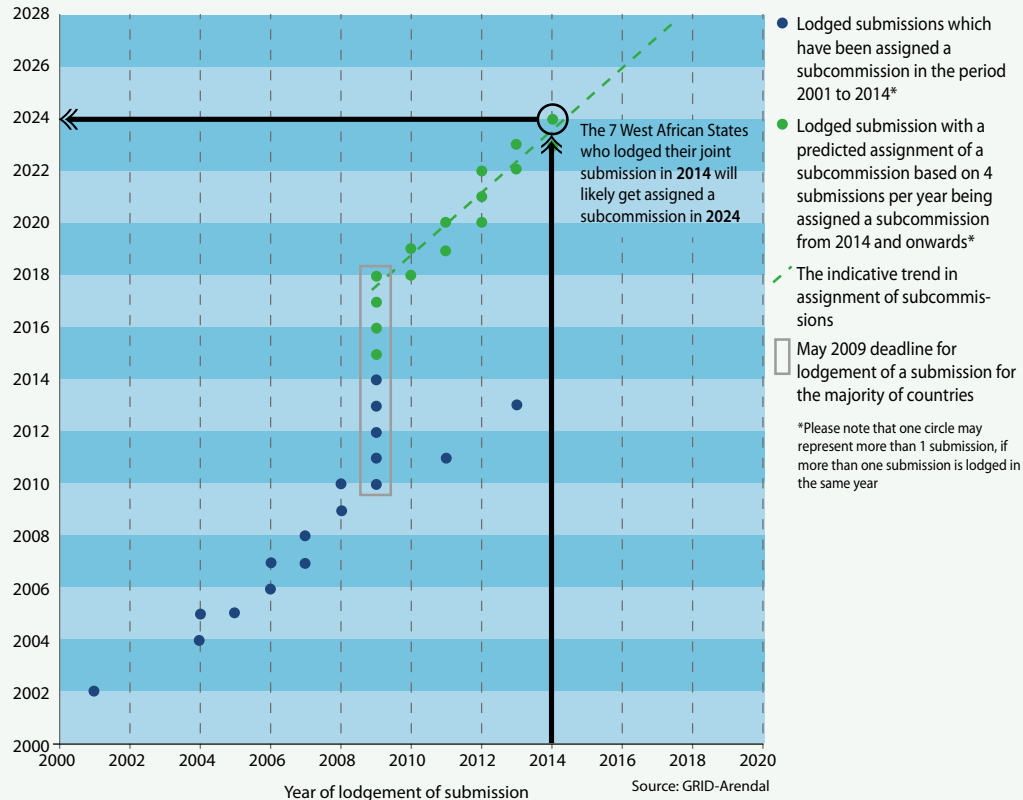
Extended continental shelf of seven West African coastal states. This map is taken from the Executive Summary of the joint submission by the seven West African countries (Cabo Verde, The Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal and Sierra Leone) to the CLCS. The map shows the area outside the coast of the seven states, where the purple line marks the Exclusive Economic Zone (EEZ), and the red line indicates the outer limits of the extended continental shelf (ECS).

## Core activities, outputs, impacts and spin-offs during the last decade of the Shelf Programme



## Expected waiting period from lodging a submission to review

Year of a submission being assigned a subcommission





GRID-Arendal has assisted Ecuador and Costa Rica with the process of completing their submissions for extended continental shelf. GRID-Arendal has provided Ecuador with a comprehensive data project sourced from the One Stop Data Shop and also assisted Ecuador with an application to the United Nations trust-fund to cover the cost of specialist maritime boundary software and training. GRID-Arendal is currently assisting Costa Rica to develop the geological argument to support the repositioning of its outer ECS limits. This has involved a detailed examination of existing data. A new trust fund application has also been prepared in order to co-fund our work with Costa Rica through 2015.

## 5C Shelf Programme – Areas Beyond National Jurisdiction

The GEF-funded 'Areas Beyond National Jurisdiction' project was approved in June 2014. The project contracting is currently being finalised by UNEP/World Conservation Monitoring Centre (WCMC), with project activities set to commence in the first half of 2015.

27. <http://cop11.abidjanconvention.org/media/documents/Report/COP11%20%20Final%20Report%20En.pdf>

## 5D Sustainable Seas – Management of Human Impacts on the Marine Environment

GRID-Arendal has been actively involved in building capacity in ecosystem-based marine management in developing countries. Having worked with UNEP and the International Oceanographic Commission (IOC) of UNESCO to develop a 'Capacity Building for State of the Marine Environment Reporting' programme, a draft workplan has now been prepared by GRID-Arendal, and consultations are ongoing with UNEP and IOC. GRID-Arendal also helped UNEP design a global support programme for the Regional Seas Programme that is now being tested in West Africa.

The State of the Marine Environment (SoME) web-based reporting portal commissioned by the Secretariat of the Abidjan Convention was delivered and presented at the 11th Conference of the State Parties to the Abidjan Convention in March. The basic approach was also adopted by the states parties in decision CP11/I3,<sup>27</sup> for implementation throughout the entire region.

During a workshop held in February, GRID-Arendal assisted the Environmental Protection Agency (EPA)

The screenshot displays the Elsevier website interface for the journal *Marine Geology*. The top navigation bar includes the Elsevier logo, a search bar, and links for 'Advanced search', 'Follow us' (with social media icons), and 'Help & Contact'. Below this is a secondary navigation bar with links for 'Journals & books', 'Online tools', 'Authors, editors & reviewers', 'About Elsevier', 'Community', and 'Store'.

The main content area is titled 'Most Downloaded Marine Geology Articles' and lists the top three articles from ScienceDirect in the last 90 days:

- 1. Geomorphology of the oceans**  
Available online 4 February 2014  
P.T. Harris | M. Macmillan-Lawler | J. Rupp | E.K. Baker  
We present the first digital seafloor geomorphic features map (GSFM) of the global ocean. The GSFM includes 131,192 separate polygons in 29 geomorphic feature categories, used here to assess differences...
- 2. Coral reefs and sea-level change**  
Available online 14 December 2013  
Colin D. Woodroffe | Jody M. Webster  
Coral reefs provide significant evidence for former sea-level positions because of their geological preservation and suitability for dating. Interpretation of this evidence presumes an understanding...
- 3. The Messinian Salinity Crisis: Past and future of a great challenge for marine sciences**  
Available online 22 February 2014  
Marco Roveri | Rachel Flecker | Wout Krijgsman | Johanna Lofi | Stefano Lugli | Vinicio Manzi | Francisco J. Sierralta | Adele Bertini | Angelo Camerlenghi | Gert De Lange | Rob Govers | Frits J. Hilgen | Christian Hübner | Paul Th. Meijer | Marius Stoica  
Forty years after the image of the Mediterranean transformed into a giant salty lake was first conceived, the fascinating history of the Messinian Salinity Crisis (MSC) still arouses great interest...

Each article entry includes a 'Share Article' button with social media icons (Facebook, Twitter, LinkedIn, etc.). On the left side of the page, there is a sidebar with a 'Marine Geology' logo and a list of links: 'Guide for Authors', 'Submit Your Paper', 'Track Your Paper', 'Order Journal', 'View Articles', 'Open Access Options', 'Most Downloaded Articles', 'Recent Open Access Articles', and 'Review Articles'.

of Sierra Leone with the drafting and review process of their SoME report. The results from the workshop and the graphs are available online, as well as the draft text of the report.<sup>28</sup> It is expected that the text will be approved by the Sierra Leone Government in early 2015. Draft reports for Cote D'Ivoire, Gabon and Congo are also

28. <http://some.grida.no/sierra-leone-%28draft%29.aspx>

29. <http://www.bluehabitats.org>

30. To date the data have been downloaded over 160 times, with indicated uses including marine spatial planning, whale and dolphin research, climate change research and teaching and learning.

under production, and discussions are underway with the Abidjan Convention Secretariat on how to produce SoME reports for the entire Abidjan Convention region.

GRID-Arendal, in collaboration with Conservation International (CI) and Geoscience Australia, published the first digital map of global seafloor geomorphology.<sup>29</sup> The map was published in the scientific journal *Marine Geology*, and was one of the top three most downloaded articles in 2014. The spatial data for the map has been made available to support planning, research and improved environmental management.<sup>30</sup>

## SIGNIFICANT OUTCOME

MC

### Recognition of a successful SoME workshop

Extract from a letter to MFA received from Mrs **H Jallow**, Executive Chairperson, Environment Protection Agency, Office of the President, Sierra Leone, 5 March 2014:

*"Between 4th and 7th February, 2014, a team comprising three Experts from GRID-Arendal ... were in Freetown, Sierra Leone on a capacity building and technical assistance mission under the auspices of the UNEP/Abidjan Convention. The five-day visit was dedicated to facilitating a national workshop on the development of the state of marine environment report. The results of the workshop formed a good basis for the production of the report and the outcome of the workshop met our expectations. It is therefore our pleasure to commend GRID-Arendal and the Government of Norway for their efforts and support to Sierra Leone. We greatly appreciate this collaboration and pledge our firm commitment in strengthening the relationship for the common good of the two nations."*



SoME Workshop. Both photos: Peter Harris.





GRID-Arendal has provided the global seafloor geomorphic habitat map and additional analysis of seamounts, canyons and marine minerals to the Pacific Ocean Ecosystem Analysis (PACIOCEA) project.<sup>31</sup> This project is exploring marine spatial planning in the island nations of the south-western Pacific and is jointly run by the French Marine Protected Areas Agency<sup>32</sup> and coordinated by the Secretariat of the Pacific Regional Environment Programme (SPREP).<sup>33</sup> Staff from GRID-Arendal attended a PACIOCEA project workshop in August 2014 in Noumea to present this analysis and engage with other project partners in exploring spatial issues in the wider Pacific Region.

## SIGNIFICANT OUTCOME

MC

### Appreciation of the work on seafloor geomorphology

Extract from an e-mail received from **J.M.Herndon**, San Diego, California, 10 February 2014:

*"I just downloaded the proof copy of your paper "Geomorphology of the Oceans". You and your colleagues have indeed done a magnificent and thorough job. These days few understand the importance of thorough work of global perspective. This work will benefit many, including me."*

## 5D+ Sustainable Seas – Management of Human Impacts work funded from other (non-MFA) sources

PacGeo<sup>34</sup> is a web-based interactive mapping and decision support system that provides access to integrated marine information in the Pacific Region. Currently 185 separate geospatial data layers and associated information have been uploaded into PacGeo, including maritime boundaries, fisheries, regulatory, environment, offshore minerals and aerial photographs. The data have been sourced from the SOPAC marine data catalogue but there is the facility to include country specific data. At the last Pacific Maritime Boundaries workshop (July 2014, Sydney, Australia) GRID-Arendal and partners provided training for technical personnel from Fiji, the Cook Islands, Vanuatu and Kiribati to develop their own instances of Geonode (the open source platform that supports PacGeo) and are currently uploading country data that will be accessible via PacGeo.<sup>35</sup> Since the training, Fiji has established FijiGeo, the Fiji Geospatial Data Services Portal, administered by the Ministry of Lands

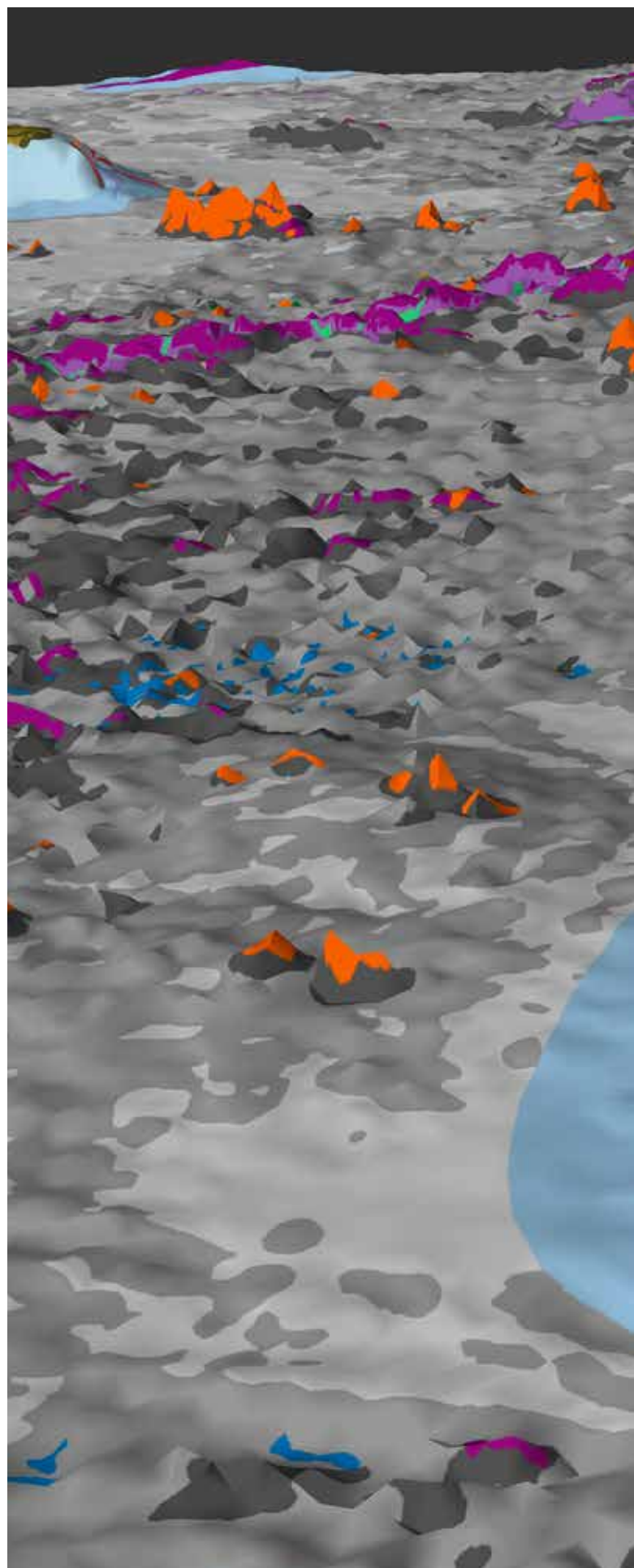
31. <http://www.sprep.org/biodiversity-ecosystems-management/french-polynesia-and-new-caledonia-to-enhance-ocean-management>

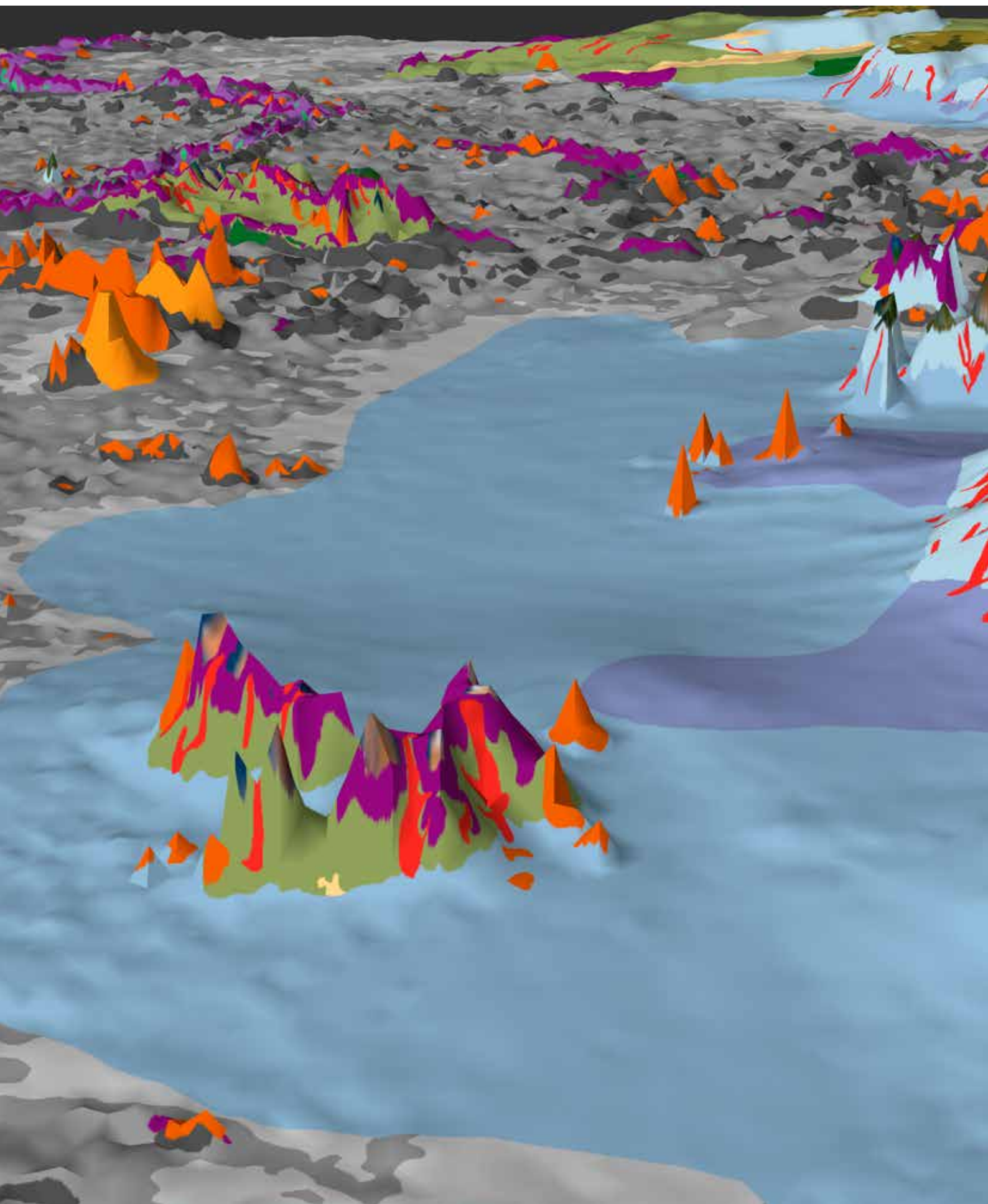
32. Agence des aires marines protégées (<http://www.aires-marines.com>)

33. <http://www.sprep.org>

34. <http://www.pacgeo.org>

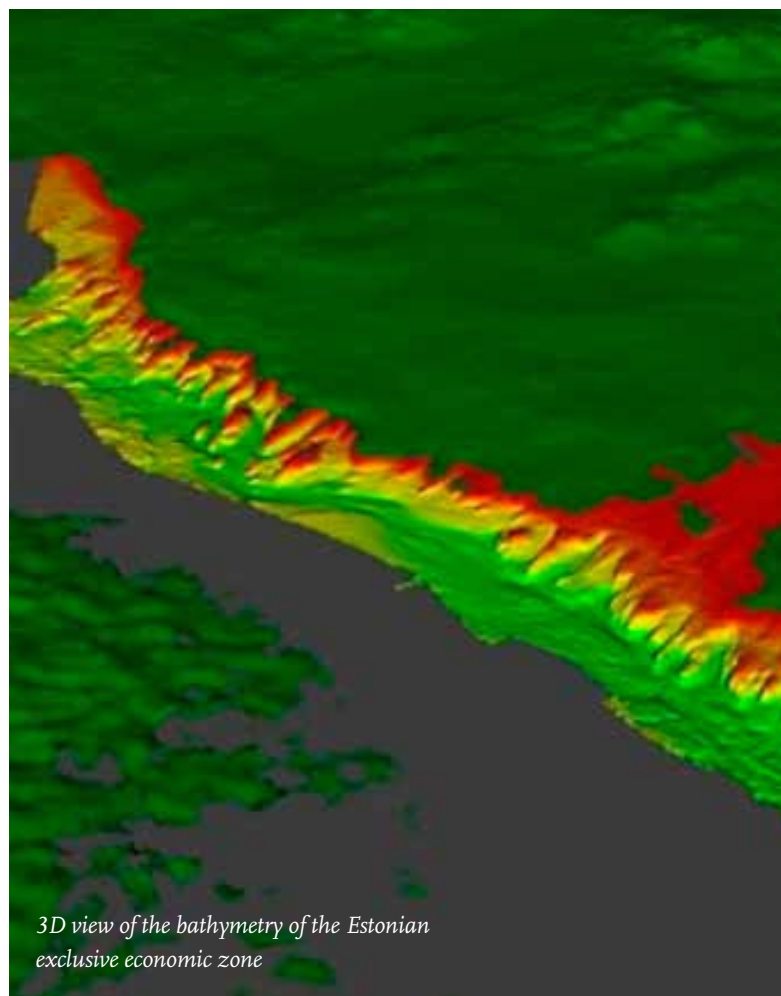
35. PacGeo was engineered to be sustainable, using open source software and cloud storage







SIGNIFICANT OUTCOME	MC
<h3>Replicating PacGeo</h3> <p>Recently our SOPAC partner was invited to demonstrate PacGeo to Australian Government GIS experts from 13 agencies at a meeting in Canberra organised by Geoscience Australia. PacGeo is considered to be a model for web services delivery of marine data and information and a similar system is being deployed by the Australian Government.</p>	



and Minerals Resources in collaboration with other Fijian agencies (Roads, Health, Forestry, Lands, Statistics). The Solomon Islands is discussing the establishment of SoLIS – the Solomon Islands Land Information System.

GRID-Arendal, as lead for the Task 6: Environmental Considerations on the EU Deep Sea Mining Policy report commissioned by the EU Directorate-General for Maritime Affairs and Fisheries (DG MARE)<sup>36</sup> and led

by Ecorys, delivered its outputs on time and on budget. This effort, aimed at informing EU policy makers, is a direct consequence of GRID-Arendal's work on deep sea minerals and mining in the Pacific region.

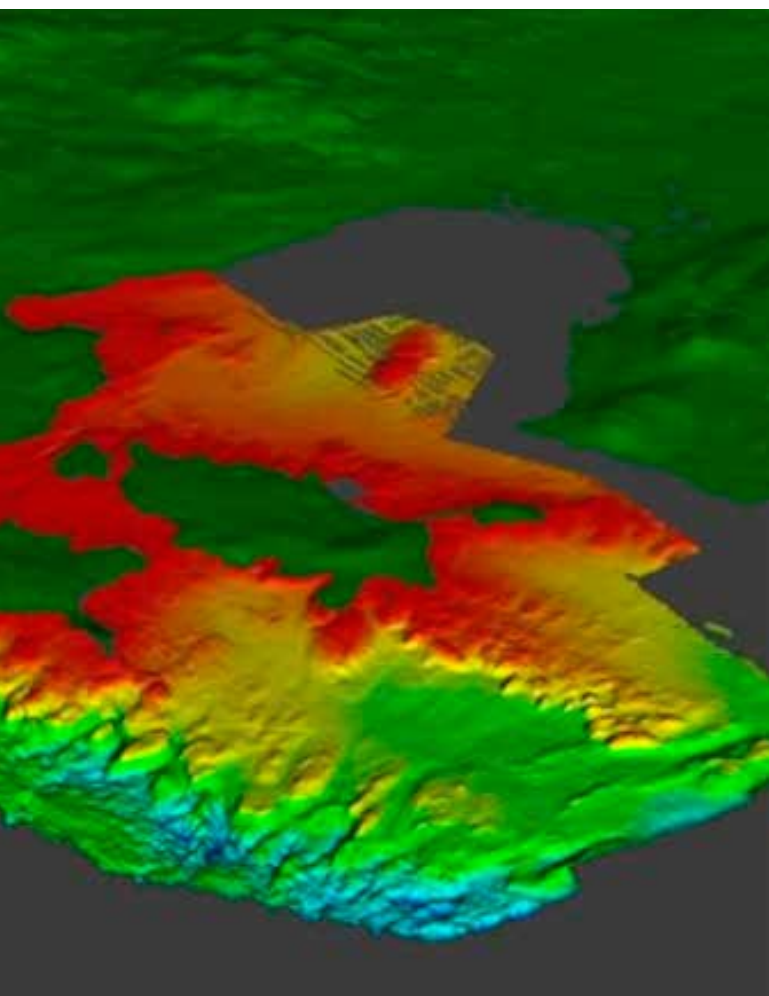
'Habitat Mapping in Estonia' is an EU-funded project in collaboration with the University of Turku. GRID-

36. [http://ec.europa.eu/dgs/maritimeaffairs\\_fisheries/index\\_en.htm](http://ec.europa.eu/dgs/maritimeaffairs_fisheries/index_en.htm)



SIGNIFICANT OUTCOME	MC
<h3>Positive feedback on Deep Sea Minerals booklets</h3> <p>Extract from an e-mail received from <b>A Swaddling</b>, Environment Advisor, Deep Sea Minerals Project, SPC, 18 February 2014, on the Deep Sea Minerals booklets published at the end of 2013 (see <a href="http://www.grida.no/publications/deep-sea-minerals/">http://www.grida.no/publications/deep-sea-minerals/</a>):</p> <p><i>"I am tasked to disseminate environmental information on Deep Sea Minerals to build capacity in the region, as well as increase public awareness ... The production of the Deep Sea Minerals booklet series is a fantastic achievement. I would like to use some of the imagery and graphics ..."</i></p>	





Arendal participated in the kick-off meeting with Estonian partners in September and agreed a work plan for production of a geomorphic habitat map of the Baltic Sea in Estonia. A draft background paper on best practices for assessment methodologies for marine habitats (EU Habitat Directive), with examples from five EU member states, Australia, USA and Norway, was submitted to the project in December 2014. This paper, together with the habitat map, will be finalised in 2015.

A small scale study on 'Gender and Decision Making' focusing on ocean and coastal management policy was commissioned by UNEP and executed by GRID-Arendal. The study was conducted by the London School of Economics Complexity Group to inform and make recommendations for a broader, multi year effort seeking to enable a shift in decision-making dynamics that will lead to improvements in relevant social and environmental systems. The small scale study has already identified insights that often remain hidden when trying to investigate gender related issues,

including gender as a power relationship conditioned by history, culture, religion and the economic structure of society.

## **5E Sustainable Seas – Ecosystem-based Adaptation (EbA): incorporating Scientific and Traditional Knowledge to Reduce Community Vulnerability**

GRID-Arendal staff contributed to two papers relating to marine EbA. *Comparing tools and methodologies for climate change adaptation in Small Island Developing States (SIDS)* was presented at the ADAPTtoCLIMATE conference in Cyprus, March 2014.<sup>37</sup> *Ecosystem-Based Adaptation for Food Security in the AIMS SIDS: integrating External and Local Knowledge* was published in a peer-reviewed journal in August.<sup>38</sup>

## **5E+ Sustainable Seas – Marine EbA work funded from other (non-MFA) sources**

A Small Scale Funding Agreement (SSFA) was signed with UNEP in July for a 'Baseline study and methodology to visualize progress in applying the Ecosystem Approach in national and regional policies, strategies or management plans to sustain ecosystem services from coastal and marine systems'. GRID-Arendal was asked to develop and implement the study as part of the ongoing development by UNEP of an integrated Global Support Programme for National Marine and Coastal Planning. The baseline study was finalised for UNEP in December 2014.

## **5F GRID-Arendal Blue Carbon Initiative**

2014 was a busy year for blue carbon at GRID-Arendal. It saw the successful completion of the Abu Dhabi Blue Carbon Demonstration Project and the launch of the international GEF/UNEP Blue Forests Project, with demonstrations and project work in five continents.

One of the last deliverables of the Abu Dhabi Blue Carbon Demonstration Project was a report entitled *Building Blue Carbon Projects: An Introductory Guide*. This report, put together with many international partners including UNEP, explores how blue carbon can work, by using the value of carbon stored and sequestered in coastal and marine ecosystems to support conservation and sustainable management. The report was downloaded 3000 times in the first three months of its posting on the Blue Carbon Portal website.<sup>39</sup> GRID-Arendal presented an invited webinar on the subject matter in November, through the Ecosystems-based Management (EbM) Tools Network and the OpenChannels Forum for Ocean Planning and Management.<sup>40</sup> The report was also cited in the Blue Carbon research manual released by CI, IUCN, and UNESCO.<sup>41</sup> All deliverables for the project have been provided to the Abu Dhabi Global Environmental Data Initiative (AGEDI), which commissioned it.

37. [http://adapttoclimate.uest.gr/full\\_paper/Mavrogenis\\_Kelman\\_Mercer\\_Kurvits.pdf](http://adapttoclimate.uest.gr/full_paper/Mavrogenis_Kelman_Mercer_Kurvits.pdf)

38. <http://www.mdpi.com/2071-1050/6/9/5566>

39. <http://bluecarbonportal.org>

40. <http://openchannels.org>

41. <http://thebluecarboninitiative.org/manual>

November saw the launch of an innovative concept report entitled *Fish Carbon: An Exploration of Marine Vertebrate Carbon Services*<sup>42</sup> which explores natural mechanisms of carbon cycling for all marine vertebrates in all marine ecosystems, from shallow coasts to ocean depths. The report was released at the Blue Forests Project Inception Workshop in November 2014 (see 5G below) and has been hosted on the GEF International Waters website. As with the Blue Carbon Projects report, an invited webinar on the subject matter was presented by GRID-Arendal in November, through the EBM Tools Network and OpenChannels Forum.

The Blue Carbon Portal<sup>43</sup> continues to be updated consistently and serves as a home for the blue carbon publications, presentations and other materials.

42. <http://www.grida.no/publications/fish-carbon>. See also <http://www.grida.no/news/default/6221.aspx>

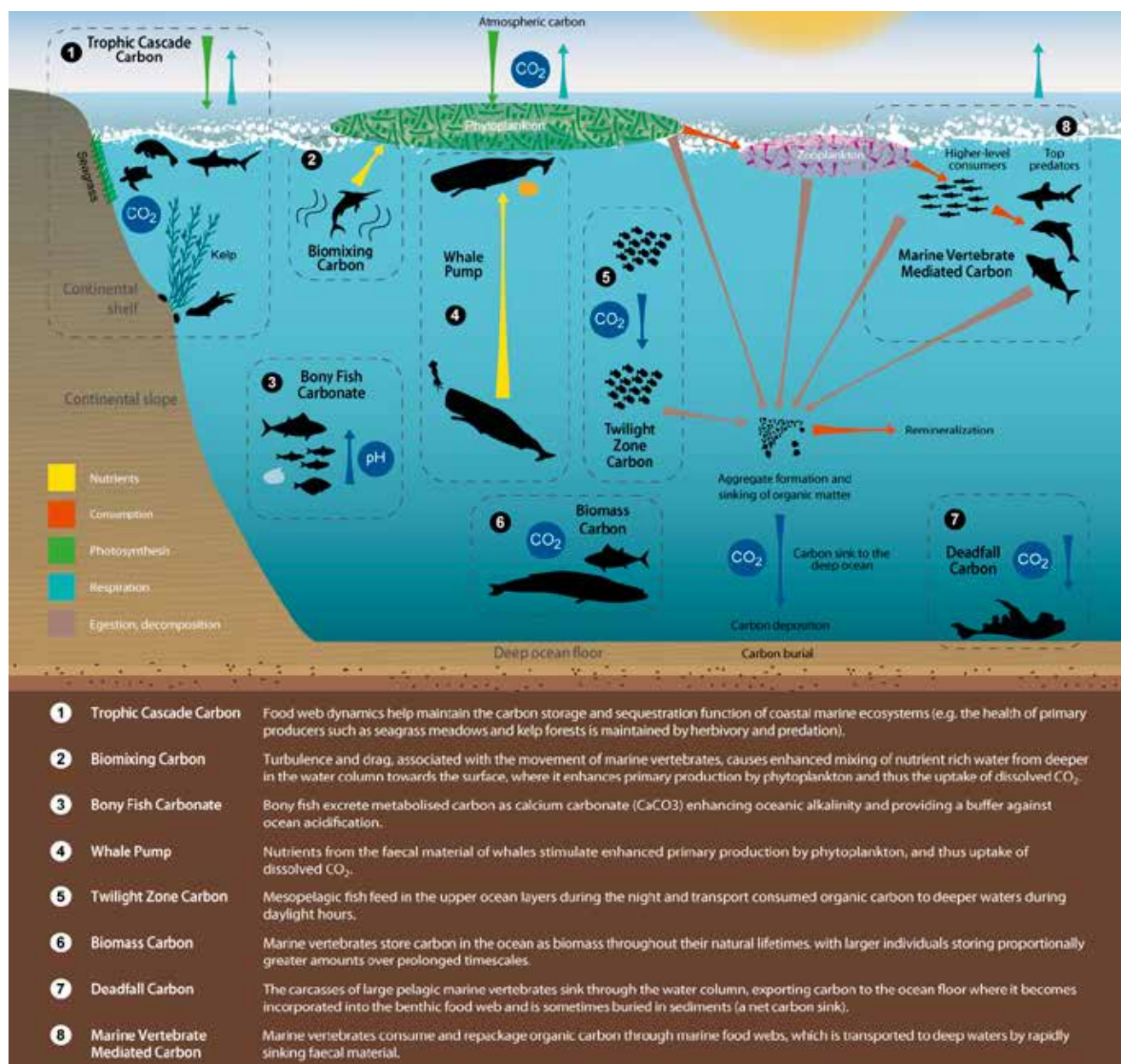
## SIGNIFICANT OUTCOME

MC

### Linking fish to climate change

Extract from the Preface of *Fish Carbon: Exploring Marine Vertebrate Carbon Services* provided by **Dr. Sylvia Earle**, Founder of Mission Blue and a former Chief Scientist of NOAA:

*“Fish Carbon: Exploring Marine Vertebrate Carbon Services’ highlights the direct relevance of marine vertebrates to climate change mitigation and presents an opportunity to secure this service ... through the protection and conservation of marine vertebrates. Acknowledging the importance of marine life in climate change will not only provide much needed opportunities for climate mitigation, but will simultaneously enhance food security for coastal and island communities, while safeguarding biodiversity and marine ecosystems on a global scale, particularly in the unprotected high seas.”*





## Widespread interest in the Blue Carbon project

The Abu Dhabi Blue Carbon Demonstration Project attracted international attention including from countries soliciting GRID-Arendal for information and possible assistance in replicating the approach. The Environment Agency – Abu Dhabi (EAD) has expressed high regard for the work:

*“The Blue Carbon ecosystems are an extremely important part and parcel of the cultural identity of the Emirate of Abu Dhabi, and indeed the UAE. The Blue Carbon project demonstrated the power of data collaboration in the field of the environment, and its use in decision-making, policy making, as well as urban planning. It is extremely critical to understand what and where our natural capital is, and ensure that not only do we protect it, but that we also capitalise on it.”*

– **H.E. Razan Khalifa Al Mubarak**, Secretary General, EAD

AED and AGEDI have started to replicate blue carbon research activities throughout the UAE:

*“The Abu Dhabi Global Environmental Data Initiative (AGEDI), supported by the Environment Agency – Abu Dhabi (EAD) has launched Phase II of its ‘Blue Carbon’ Project, expanding the project to a national level in an effort to link local natural coastal ecosystem management with climate change mitigation. This Project has evolved from its first phase, the Abu Dhabi Blue Carbon Demonstration Project, which was completed in 2013 which not only enhanced local capacity to better manage Blue Carbon ecosystems, but also has provided exemplary lessons learned for regional and international replication and up-scaling.”*

The project contributes to the GEF/UNEP Blue Forests Project as one of its featured small-scale interventions, which includes other country sites and project work in Madagascar, Ecuador, Indonesia, Kenya, Mozambique and Central America:

*“GEF is honoured and pleased with the collaboration with UAE/AGEDI in the global Blue Forests project. Indeed, AGEDI is a crucial partner and is already providing cross support and knowledge management to developing countries that are benefitting from the project, such as Indonesia and Madagascar,”*

– **Nicole Glineur**, Sr. Environmental Specialist for the GEF

(All three comments posted 24 November 2014 on <http://ameinfo.com/finance-and-economy/archive/abu-dhabi-expands-ongoing-blue-carbon-work-emirate-national-level>)



## 5F+ Blue Carbon Initiative – additional work funded from other (non-MFA) sources

GRID-Arendal participated in discussions with Norsk Institutt for Vannforskning (NIVA),<sup>44</sup> Institute of Marine Research (IMR)<sup>45</sup> and a number of Norwegian NGOs, regarding the creation of a Norwegian working group for advancing blue carbon. This Norwegian Blue Forests Network (NBFN) was officially launched in November 2014 and is comprised of three founding members: GRID-Arendal, NIVA and IMR. The NBFN will focus on strengthening and sharing national competence on ‘blue forest’ habitats both domestically and internationally.

## 5G Blue Forests GEF

GRID-Arendal is the Executing Agency for the GEF/UNEP Blue Forests Project. The project was formally launched in November 2014 and will be granted USD 4.5 million from the GEF Trust Fund. Implementation will run until December 2018.

The focus of the project work during the inception period since June, was on setting up all project processes.<sup>46</sup> The Project Inception Workshop and the 1st Project Steering Committee Meeting were held in Abu Dhabi in November, in conjunction with the Oceans and Blue Carbon Meeting of the Eye on Earth Secretariat. A project brochure was prepared for the December UNFCCC COP20 held in Lima, Peru. By the end of 2014, four partners had signed their contracts and three others were ready to sign. The other five partners are addressing internal matters within their respective institutions.

43. <http://bluecarbonportal.org>

44. <http://www.niva.no>

45. <http://www.imr.no/en>

46. Including partner contracts, revising and adjusting project documentation, formation of the Project Coordination Unit, creating the project website, and circulating a press release



*Building on the Abu Dhabi Blue Carbon Demonstration Project and contributing to the GEF/UNEP Blue Forests Project, blue carbon investigations continue on the national scale in the UAE. Photo: AGEDI/EAD.*



*As climate mitigation benefits, mangrove forests provide many ecosystem services including helping to protect shorelines from the impacts of storms and tsunamis. Photo: Sarah Fraix-Torres/ Marine Photobank.*

During the inception period, significant in-country progress has been made towards the two key country-scale project outputs of ‘improving understanding’ and ‘improving ecosystem management and capacity building’. For example, activities of the Madagascar small-scale intervention site included:

- Data collection in 76 mangrove forest inventory plots
- Finalisation of a first draft of the Project Idea Note for advancing mangrove carbon under REDD+
- Completion of the first round of analysis of soil organic carbon for all sub-samples
- Discussions held at the Institut de Recherche pour le Développement in France, regarding soil carbon results, with a focus on loss of carbon following deforestation.

## **5H Green Economy – The Economics of Ecosystems and Biodiversity for Oceans and Coasts**

Development of the TEEB for Oceans and Coasts (TEEB4OC)<sup>47</sup> GEF proposal has continued with the level of international interest growing quickly. By the end of December, an extensive group of parties<sup>48</sup> had submitted formal Expressions of Interest with indicative co-financing (currently totaling USD 81 million) to help support the project through the GEF approval process.

47. <http://teeb oceans.org>

48. GRID-Arendal, The Nature Conservancy, Government of New Zealand (National Institute of Water and Atmospheric Research, Ministry of Primary Industries, Department of Conservation), Government of Barbados, Government of Abu Dhabi (via its Abu Dhabi Global Environmental Data Initiative), European Commission, German Agency for Development Cooperation (GIZ), World Resources Institute, WWF International, Université de Bretagne Occidentale, Massachusetts Institute of Technology Presencing Institute, UNEP Regional Seas Programme, UNEP-WCMC, Calouste Gulbenkian Foundation, World Ocean Council, Caribbean Environment Programme, Skandinaviska Enskilda Banken AB (SEB).

49. <http://www.forest-trends.org>

50. <http://www.ieep.eu>

Additionally, the governments of Norway, Sweden, the USA and Canada are engaged in internal processes to become project partners. A second advanced draft will be submitted to UNEP by June 2015 and a final proposal will undergo UNEP review with planned submission to GEF Council at the October 2015 Council meeting.

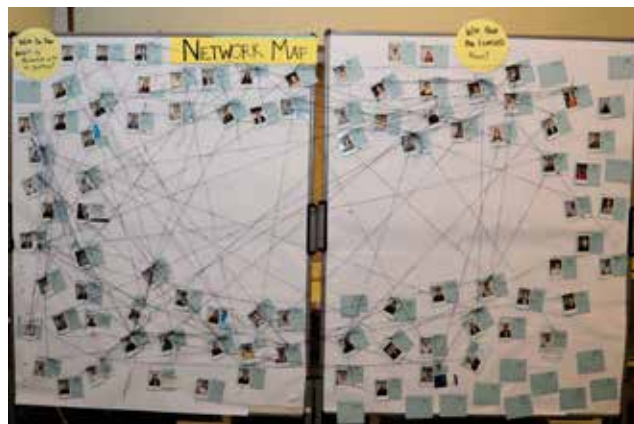
The TEEB4OC effort will respond to the growing demand from decision makers to better manage human activities and their impact on marine ecosystems and their services and to better understand and acknowledge the dependence of societal progress, sustainable economic development and the success of ocean-based business and enterprise on healthy marine ecosystems.

## **5I Green Economy – Blue World Capacity Development**

The Blue Solutions partnership project of GIZ, GRID-Arendal, IUCN and UNEP was established in June 2013 through an award grant of Euro 425k from GIZ. The project aims to support marine and coastal planners and decision makers by collecting and promoting approaches and tools that have proven successful, and inspired others to apply them. Peer-to-peer knowledge sharing is at the heart of the project. Between the partners, the project covers a range of marine management topics, including Marine Protected Area Governance, Marine Spatial Planning, Ecosystem-based Adaptation to Climate Change, and Conservation Finance and Ecosystem Services, for which GRID-Arendal has the lead. The project grant extends until November 2015.

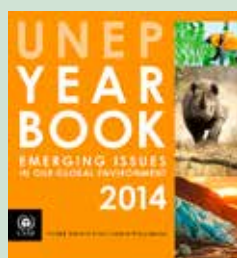
Several activities were organized during 2014. To help the uptake of ecosystem services into decision-making, GRID-Arendal organized a session at the August International Marine Conservation Congress (IMCC) in Glasgow, Scotland, which brought together Forest Trends,<sup>49</sup> the Institute for European Environmental Policy,<sup>50</sup> Duke University





## 2014 PUBLICATIONS

## MARINE AND COASTAL RESOURCES



AGEDI. 2014. *Building Blue Carbon Projects – An Introductory Guide*. Published by AGEDI. Produced by GRID-Arendal. <http://bluecarbonportal.org/the-new-blue-carbon-homepage-2/document-inventory/?download-info=building-blue-carbon-projects-an-introductory-guide>

Harris, P.T., M. Macmillan-Lawler, J. Rupp, and E.K. Baker. 2014. Geomorphology of the Oceans. *Marine Geology*, Volume 352, pp 4–24. <http://www.sciencedirect.com/science/article/pii/S0025322714000310>

Lutz, S.J. and A.H. Martin. 2014. *Fish Carbon: Exploring Marine Vertebrate Carbon Services*. Jointly produced by GRID-Arendal and Blue Climate Solutions and published by GRID-Arendal. ISBN: 978-82-7701-146-2. <http://www.grida.no/publications/fish-carbon>

Neumann, C. 2014. Marine Fish and Shellfish Farming. Chapter 3 in *UNEP Yearbook 2014*, pp 18-23. <http://www.unep.org/yearbook/2014>

Mavrogenis, S., I. Kelman, J. Mercer, and T. Kurvits. 2014. *Comparing tools and methodologies for climate change adaptation in Small Island Developing States [SIDS]*. [http://adapttoclimate.uest.gr/full\\_paper/Mavrogenis\\_Kelman\\_Mercer\\_Kurvits.pdf](http://adapttoclimate.uest.gr/full_paper/Mavrogenis_Kelman_Mercer_Kurvits.pdf)

Mercer, J., T. Kurvits, I. Kelman and M. Stavros. 2014. *Ecosystem-Based Adaptation for Food Security in the AIMS SIDS: Integrating External and Local Knowledge*. *Sustainability* 2014, 6(9), 5566-5597.

GRID-Arendal also contributed to:

Ajonina, G. J., G. Kairo, G. Grimsditch, T. Sembres, G. Chuyong, D. E. Mibog, A. Nyambane and C. FitzGerald 2014. *Carbon pools and multiple benefits of mangroves in Central Africa: Assessment for REDD+*. 72pp. ISBN: 978-92-807-3426-3 (production and layout). [http://www.unep.org/pdf/REDDcarbon\\_lowres.pdf](http://www.unep.org/pdf/REDDcarbon_lowres.pdf)

*Blue solutions from Asia and the Pacific: regional forum on solutions for oceans, coasts and human well-being in Asia and the Pacific, Cebu, Philippines* (in its capacity as a partner in Blue Solutions). <http://bluesolutions.info/publication-blue-solutions-asia-pacific>

Herr, D., E. Trines, J. Howard, M. Silvius and E. Pidgeon (2014). *Keep it fresh or salty. An introductory guide to financing wetland carbon programs and projects*. Gland, Switzerland: IUCN, CI and WI. ISBN: 978-2-8317-1700-5. <http://bluecarbonportal.org/blog/keep-it-fresh-or-salty-an-introductory-guide-to-financing-wetland-carbon-programs-and-projects>



and 60 participants to investigate ways to bridge the language gap between science, the public and decision makers. A paper called Learning to speak ecosystem services, based on participants' input, will be published in the February/March 2015 issue of Marine Ecosystems and Management.

The Blue Solutions project organized a Regional Forum on 'Solutions for Oceans, Coasts and Human Well-Being in Asia and the Pacific', which took place on Mactan Island,

Cebu, Philippines in May 2014. More than 100 policy-makers and practitioners from 17 countries in Asia and the Pacific met to exchange experiences on marine and coastal management and governance. Twenty-five 'solution providers' shared their approaches and processes and their successful elements, with an explanation of why and how something worked in the context of their home country. The forum was convened in collaboration with the Secretariat of the Convention on Biological Diversity (CBD) and hosted in partnership with the Department of Environment and Natural Resources, Republic of the Philippines.

Together with GIZ, GRID-Arendal has developed a highly participatory one week training module on integrating marine and coastal ecosystem services into development planning, which was tested in the week following the Regional Forum. GRID-Arendal trained 25 coastal management practitioners from development, environment and fisheries agencies.

After revisions, GRID-Arendal delivered the training to a similar group of practitioners during a workshop called 'From Ecosystem Services Valuation to Action – Informing Decision Making in the Caribbean' that brought a wide range of coastal management practitioners from the Caribbean to Bonaire in September. Workshop partners included UNEP, the World Resources Institute and the International Coral Reef Initiative.

## Forging New Directions: GRID-Arendal's new Green Economy Programme

GRID-Arendal's new Green Economy Programme continues to attract interest and project sponsors to synthesize and deliver findings from ongoing Green Economy National and Regional Reports.

In August, GRID-Arendal finalized a Synthesis of UNEP's Africa Green Economy reports and an accompanying Synthesis for Policy Makers. The reports are titled *Building Inclusive Green Economies in Africa: Experiences and Lessons Learned, 2010-2014*. GRID-Arendal also produced country summaries of Green Economy Assessments, Modeling, and Sectoral Reports for the countries of Burkina Faso, Egypt, Ghana, Kenya, Rwanda, Senegal, Mauritius, and South Africa. Many of the highlighted country examples feature prominently in the Africa Regional report, and are particularly valued for their tangible, quantified, and retrospective look at the lessons learned from countries leading the Green Economy Transition in Africa. In summary, the Africa outputs contribute to a tally of 10 new publication and communication outputs, over and above the outputs GRID-Arendal had forecast for the year.

As word spreads about GRID-Arendal's Green Economy capacity, additional interest and project instigation is

expected from other UNEP Units and Regional Offices. For example, the Regional Office for Europe approached GRID-Arendal based on a recommendation resulting from the Africa outputs. An additional four outputs are anticipated as the result of this second SSFA. Titles include: *Sustainable Consumption and Production policies in Eastern Europe and the Caucasus: Review of Progress and Way Forward*; *Potential for Green Jobs: The Waste Recycling Sector in Serbia*; *Assessing the Impact of Green Economy Investments in Bosnia and Herzegovina: A Sectoral Study Focused on Energy and Mountain Agriculture*; and *Assessing the Impact of Green Economy Investments in Moldova: A Sectoral Study Focused on Energy and Organic Agriculture*. Two additional modeling reports (Belarus and Ukraine), their respective translations, and a number of other communication products for Eastern European Green Economy audiences are anticipated for production in 2015.

Our work on Green Economy has widespread geographical interest, and GRID-Arendal is rapidly gathering experience with tangible 'best practice' examples and country policies from those nations who are actively targeting a Green Economy Transition.

# 8. Financial report for 2014

## Financial summary

Funding for GRID-Arendal's 2014 work programme with the Ministry of Foreign Affairs (MFA) was MNOK 27, with the Framework Agreement extending over a 14-month period ending February 2015. In addition the foundation received MNOK 4.5 core funds from the Ministry of Climate and Environment (MCE).

At the beginning of 2014, 58% (or MNOK 19.3) of the budgeted external funding from UNEP and other external clients had not yet been contracted. Despite these fundraising challenges, the 2014 project expenditures ended at MNOK 52.0, which was only MNOK 2.4 less than budgeted. The variance is mainly related to delayed implementation of three large projects. Figure 1 shows the amounts and sources of funds for the six thematic programme areas.

Overall the foundation generated a financial surplus of MNOK 0.4 for 2014, which was MNOK 1.1 less than budgeted. The equity balance was NOK 7.3 at the end of 2014, which equals an equity ratio of 30%. The financial results have been audited by an external auditor (KPMG).

During 2014 GRID-Arendal operated with staff rates from junior level to senior experts in the range of NOK 654 to NOK 908 per hour. In order to be internationally competitive and attract external funding, the foundation has not increased the staff rates or the 13% mark-up on costs for the last six years although costs have increased. In a few cases, such as for EU and EEA externally funded projects, rates are lower than those given above. For travel and accommodation public Norwegian rates are used ("Statens Reiseregulativ").

## Programme funding 2014

The actual funding reported for 2014 does not equate with the total long term secured funding. Only funding to be spent on 2014 activities according to contracts, work programmes and budgets are reported as 2014 funding in this report.

Beyond the MFA funding of MNOK 27.0 and the MCE funding of MNOK 4.5 in 2014, GRID-Arendal raised a total of MNOK 9.0 from UNEP and MNOK 11.4 from other external sources. This represents 39% of the total funding of MNOK 51.9 (see Table 1).

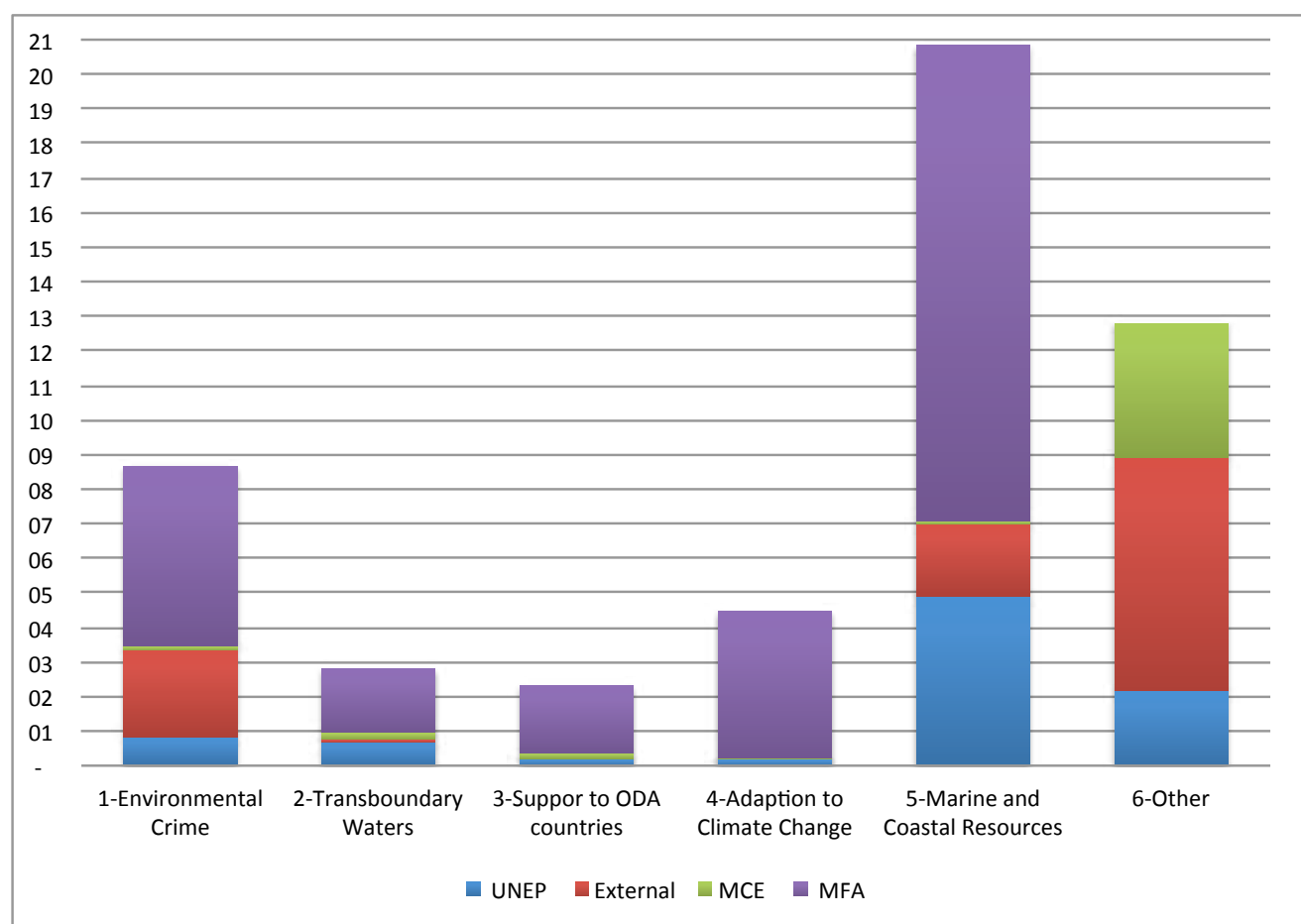


Figure 1: Actual 2014 funding by source (MNOK)

Programme	Actual funding 2014 (KNOK)				
	UNEP	External contributions secured by GA	GA Core Funding (MoCE)	MFA	TOTAL
1-Environmental Crime	840	2 500	120	5 200	8 660
2-Transboundary Waters	671	93	195	1 850	2 809
3-Support to ODA countries	200	0	168	1 953	2 320
4-Adaption to Climate Change	185	0	40	4 247	4 473
5-Marine and Coastal Resources	4 895	2 089	107	13 750	20 841
6-Other	2 161	6 752	3 871	0	12 784
<b>TOTALS</b>	<b>8 952</b>	<b>11 435</b>	<b>4 500</b>	<b>27 000</b>	<b>51 887</b>

Table 1: Overview of GRID-Arendal's total funding, 2014 (KNOK)

The map 'Funding and collaborating partners' on pages 42–43 outlines the major partners of GRID-Arendal in 2014.

#### Expenditures 2014

Table 2 reveals that project-related expenditures in 2014 totaled MNOK 52, inclusive of project activities not covered by the Programme Cooperation Agreement 2014 between MFA and GRID-Arendal.

On the next page, figure 2 graphically displays expenditure categories. The most significant is personnel costs, which represent 63% of the total (or MNOK 32.7) and is generated from employees charging hours against projects. It includes a mark-up to cover overheads and a calculated surplus.

Expenditures related to subcontracted services, travel and associated project expenses ('Other') are based on actual costs plus the 13% mark up to cover overhead.

#### Expenditures versus funding 2014

Table 3 shows how the funding balances at year-end relate to the project activity (expenditures) by Programme.

There are two MFA-funded project balances – MNOK 1.6 for Environmental Crime and MNOK 1.2 for Adaptation to Climate Change (Black Carbon) – which MFA agreed to allow GRID-Arendal to transfer to 2015 and spend by the end of February. Transfer of funds is also related to unspent external funding on projects (prepayments from donors).

#### Budget 2015

The main financial target is to create sustainable financial results through the organizational restructuring of the foundation. The new structure is fully incorporated in the 2015 budget with eight new Programmes (see Annex 2), which replace the previous four divisions, a new administration team, adjusted staff members, and new overhead rates.

The satisfactory funding situation at the beginning of 2015, together with increased rates and better-defined roles and responsibilities, indicates a high probability of achieving the budgeted surplus of KNOK 2.2 for 2015.

PROJECT EXPENDITURES 2014 (KNOK)	PERSONNEL	DIRECT COSTS	TOTAL EXPENDITURES
1-Environmental Crime	3 388	3 987	7 375
2-Transboundary Waters	1 931	983	2 914
3-Support to ODA countries	1 368	899	2 267
4-Adaption to Climate Change	1 905	1 188	3 093
5-Marine and Coastal Resources	16 295	6 198	22 493
6-Other	7 835	5 993	13 828
<b>TOTAL</b>	<b>32 723</b>	<b>19 248</b>	<b>51 972</b>

Table 2: Overview of GRID-Arendal's total Project Expenditures, 2014 (KNOK)



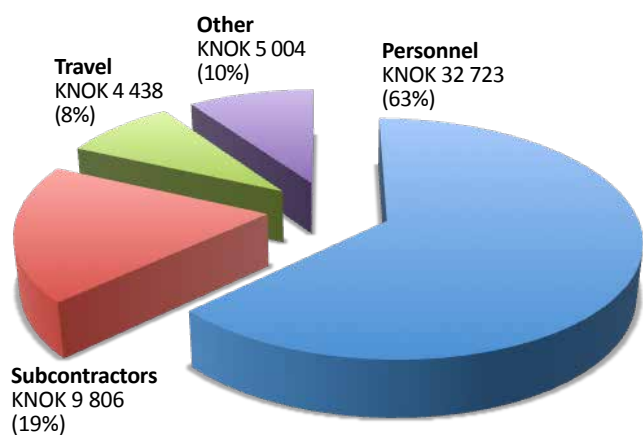


Figure 2: Breakdown of the 2014 expenditures of KNOK 51,972

The 2015 budget serves as the basis for the draft MFA work plan and is normally prepared in November and approved by the Board of Directors in the beginning of December. The budget is based on the present fundraising outlook.

Figure 3 shows the Board-approved funding budget of MNOK 61.6 for 2015, distributed by Programme. The budget includes MNOK 4.5 from MCE, MNOK 24.0 from MFA, MNOK 15.1 from UNEP and MNOK 19.8 from other external sources. The leveraging percentage linked to MCE and MFA funds is 122%. More than 65% of this leveraged funding was secured by the end of 2014.

Programme	Expenditures versus funding and impact on funding reserves (KNOK)			
	Transfer from 2013	Actual funding 2014	Expenditure 2014	Variance (transfer into 2015)
1-Environmental Crime	549	8 660	7 375	1 834
2-Transboundary Waters	-1	2 809	2 914	-107
3-Support to ODA countries	-53	2 320	2 267	0
4-Adaption to Climate Change	-242	4 473	3 093	1 137
5-Marine and Coastal Resources	3 463	20 841	22 493	1 810
6-Other	1 452	12 784	13 828	408
<b>TOTAL</b>	<b>5 167</b>	<b>51 887</b>	<b>51 972</b>	<b>5 083</b>

Table 3: Expenditures versus funding 2014 and impact on funding reserves (KNOK)

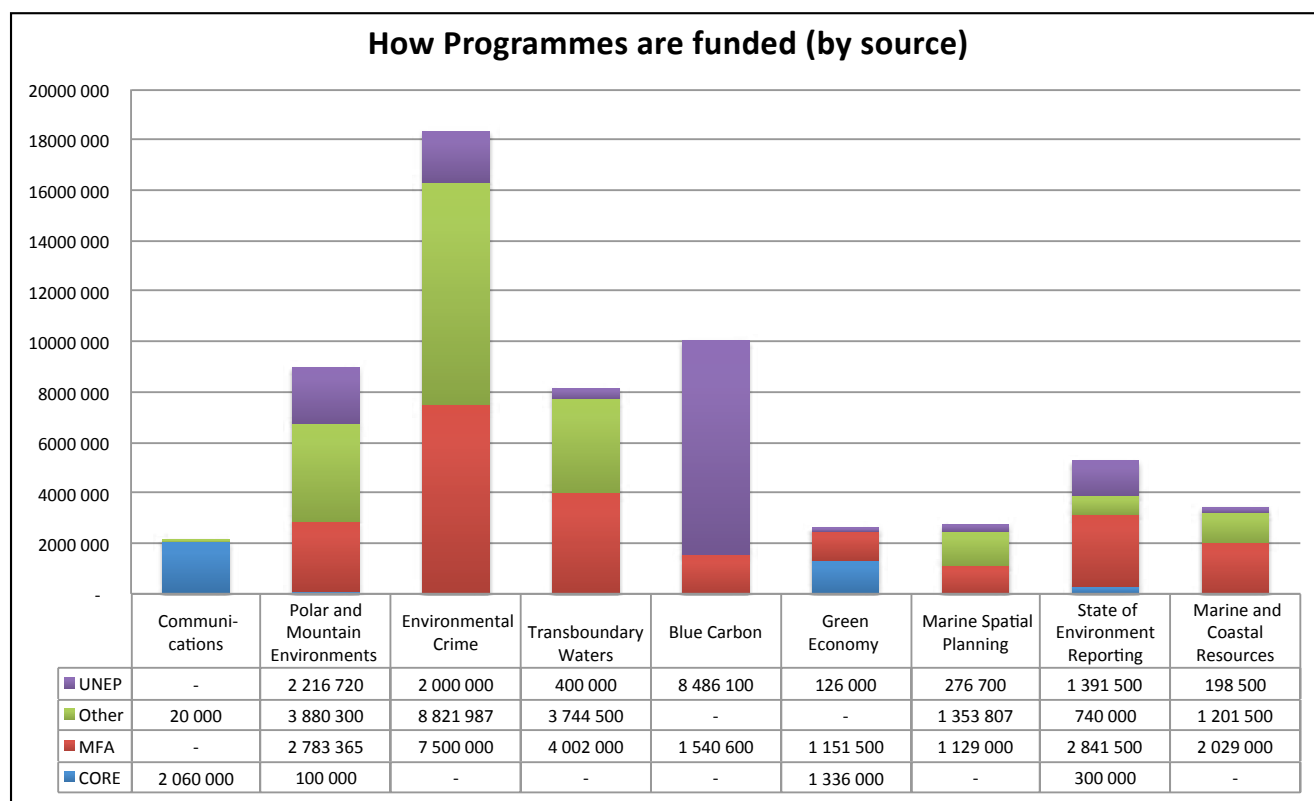
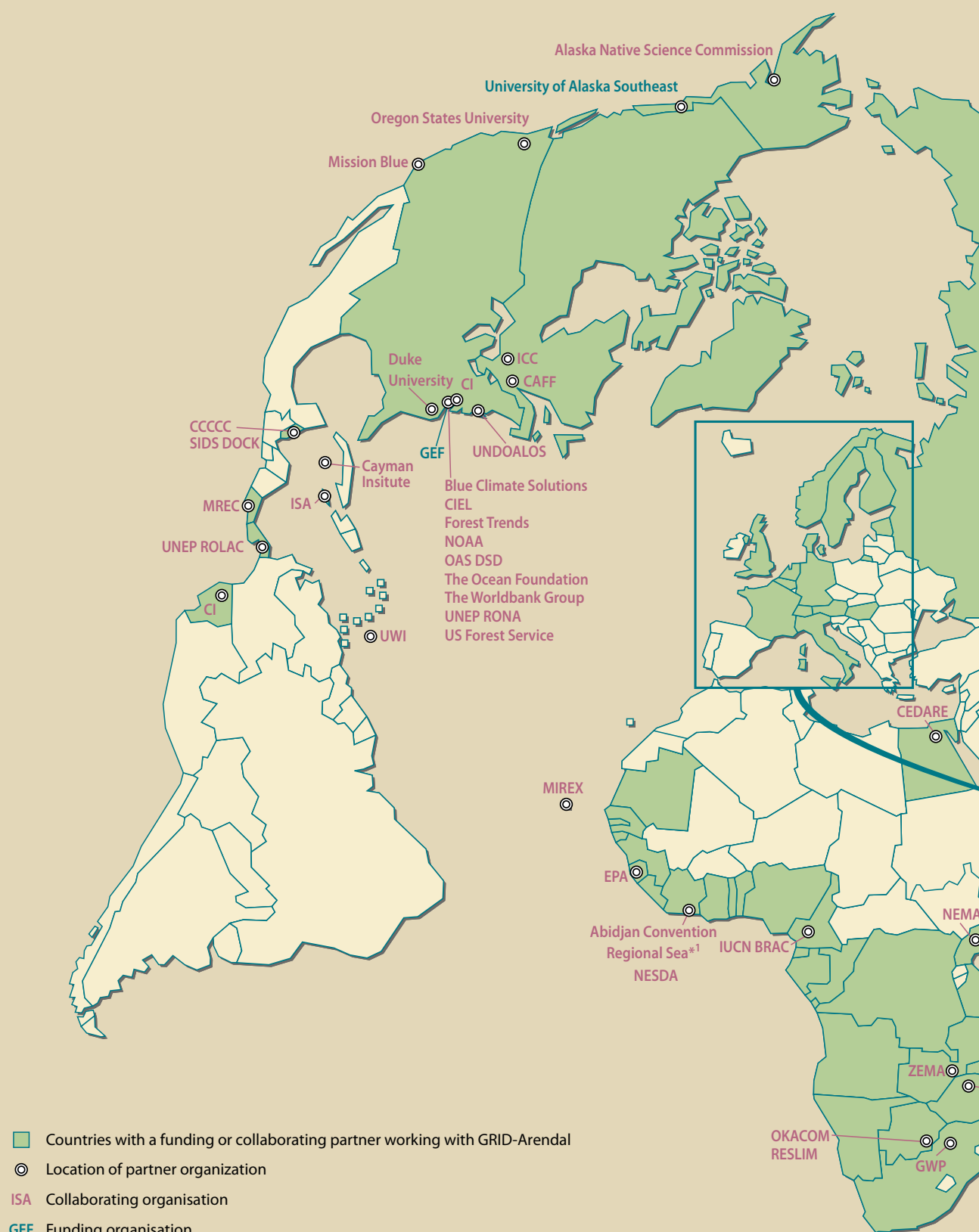


Figure 3: How the Programmes are funded (funding source)

# Funding and collaborating partners



\*<sup>1</sup> Abidjan Convention includes: Angola, Benin, Cameroon, Cape Verde, Republic of Congo, Democratic Republic of Congo, Cote d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mauritania, Namibia, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, South Africa, and Togo.

\*<sup>2</sup> Tehran Convention includes: Azerbaijan, Iran, Kazakhstan, Russian Federation, and Turkmenistan.



All staff rates have been recalculated and increased for 2015. There are two categories of staff hourly rate with 'Expert' set at NOK 950 and 'Junior Expert' set at NOK 750. The average increase in staff hourly rate between 2014 and 2015 is 9.9%. The project overhead rate on 'Travel and Other Expenses' has also increased from 13% to 15% during the same period.

The principle of fixed consultants who have been charged close to full overheads like ordinary staff is replaced by a fixed mark up of 30% on all subcontractors. Exceptions are

made for GEF and a few other projects, where there is no mark-up for partners' funding. All subcontracts are based on either partnering or tendering.

Figure 4 shows how the Programmes create their share of the total Contribution Margin of MNOK 17.2 to cover costs for admin hours, fixed overhead costs (admin) and the budgeted surplus for 2015. This amount consists of contributions from staff overheads (MNOK 13.4), subcontractor mark ups (MNOK 2.7, travel overheads (MNOK 0.5) and other expenses overheads (MNOK 0.6).

**Break down of the Programmes part of the overall MNOK 17.2 Contribution Margin (kNOK)**

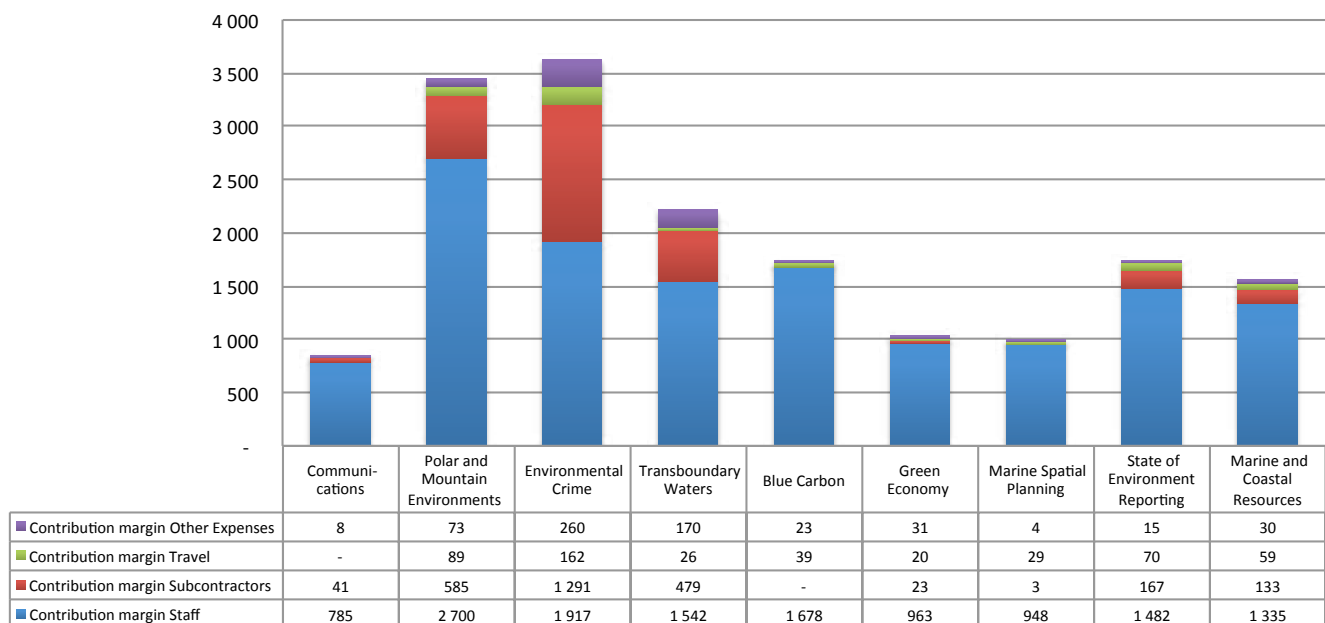


Figure 4: Programme contribution margin

# 9. Annual deviations from and adjustments to the annual work plan

Programme	Outputs	Deviation
<b>2A</b> Support to Basin Commissions (Lake Victoria, Okavango River, Limpopo River) in Africa	<b>2A-OP2</b> Capacity building activities are identified and conducted	<b>2A-OP2</b> Capacity needs for the 3 basins have been identified. 2 trainings were conducted (Lake Victoria and Okavango); The Limpopo training is scheduled for 2015.
<b>2B</b> Support to the interim Secretariat of the (Tehran) Framework Convention for the Protection of the Marine Environment of the Caspian Sea	<b>2B-OP4</b> Monitoring and evaluation is undertaken	<b>2B-OP4</b> The activity is partially implemented (preparatory work has been done), due to delay with funding from the BP exploration. Implementation will be continued in 2015, once the Secretariat of the Tehran Convention is settled in Baku, Azerbaijan. Requires matching funding.
<b>3A</b> Environmental Information: Keeping the environment in Africa under review	<b>3B-OP4</b> A full GEF proposal for the medium-term funding for the project is prepared and submitted to the 6th GEF Council	<b>3B-OP4</b> The PIF was submitted, but the GEF decision process will go into late 2015 due to the delayed GEF6 cycle.
<b>4A</b> Climate Change and Security in EECCA region	<b>4A-OP1</b> Three regional reports on climate change highlighting hotspots in Eastern Europe, Southern Caucasus and Central Asia are published	<b>4A-OP1</b> The activity is partially implemented (draft assessment reports prepared) due to the delay in implementation of the project by the lead organization (OSCE). The SSFA with UNEP for the preparatory phase has been completed, but a new one is not in place yet. Completion is expected in Q2, 2015.
<b>4B</b> Nomadic Herders: Enhancing the resilience of pastoral ecosystems and livelihoods of nomadic herders	<b>4B-OP1</b> UNEP/GEF Nomadic Herders project management is efficient and operating within contractual limits <b>4B-OP2</b> 2014 UNEP/GEF deliverables are produced on time <b>4B-OP3</b> Reindeer herders, PA administrations are trained and dialogue is facilitated <b>4B-OP4</b> Awareness within Mongolia and internationally about sustainable reindeer herding livelihoods is increased	The outputs for Nomadic Herders were not achieved due to revision of the full project proposal during 2014 following UNEP guidance. The proposal is now completed, UNEP's Project Review Committee has approved the project, and it is currently pending submission by UNEP to the GEF Secretariat.
<b>5A</b> Shelf Programme – Continental Shelf Delineation West Africa/ Somalia	All agreed outputs achieved.	Additional outputs for which extra funds from MFA have been requested: – linked to 5A-OP1: French translation and layout of the West Africa submission – linked to 5A-OP4: Editing, layout and printing of one last revised version of the Somali submission document. Comment: A further revision to the submission documents for Somalia provided to MFA in March 2014 was made during July 2014 in order to incorporate some final changes regarding the country name and the way the bilateral boundaries were displayed on the maps. This resulted in the need for laying out the document again.

<p>.....</p> <p><b>5B Shelf Programme</b> – Continental Shelf Delineation Global</p>	<p>All agreed outputs achieved.</p>	<p>Additional output related to <b>5B-OP1</b>: an additional, partly externally funded, technical workshop was provided to the Pacific States linking ECS, bilateral boundaries and marine spatial planning.</p> <p>Related to <b>5B-OP3</b>: 2 meetings with UNDOALOS were held to prepare for a possible partnership focusing on continuing education and data and technical support for countries waiting for their submissions to be evaluated.</p>
<p><b>5C Shelf Programme – Areas Beyond National Jurisdiction</b></p>	<p><b>5C-OP2</b> A review and outlook of tools (methodology/approaches) used for ABP/MSP and how they could be adapted to ABNJ is completed</p> <p><b>5C-OP3</b> Regionally-specific data to develop ABP tools and technologies for deep sea areas of the Southeast Pacific pilot area, including capacity building activities is gathered</p>	<p><b>5C-OP2</b> Deliverables delayed to 2015 due to the prolonged GEF process.</p> <p><b>5C-OP3</b> Deliverables delayed to 2015 due to the prolonged GEF process.</p> <p>Reportable outputs for 2014: A kick off meeting of partners was held in June 2014 to further plan for ABNJ GEF component 2.</p>
<p><b>5E Sustainable Seas – Ecosystem-based Adaptation (EbA): Incorporating Scientific and Traditional Knowledge to Reduce Community Vulnerability</b></p>	<p><b>5E-OP1</b> Additional funding is secured to allow two pilot projects to proceed</p> <p><b>5E-OP3</b> A toolkit is developed for communities to use (possible Phase II) and training carried out to develop capacity related to the toolkit</p>	<p><b>5E-OP1</b> Not achieved.</p> <p><b>5E-OP3</b> Not achieved (since funding was not secured as part of 5E-OP1)</p> <p>Applications for additional funding were made to JPI Climate and Klimaforsk. The proposals were rated highly but were not successful.</p>



# 10. Assessment of effectiveness

September 25th 2014 saw the seven West African countries of Cabo Verde, The Gambia, The Republic of Guinea, Guinea-Bissau, Mauritania, Senegal and Sierra lodge a joint continental shelf submission to the United Nations. This was the climax of the Norwegian-led efforts of the Shelf Programme in West Africa. The submission is a testament to the combined commitment and skills of the national experts and decision makers from the seven countries, and the effectiveness and value-added of Norwegian support to GRID-Arendal for the implementation of the Shelf Programme over the past decade.

There was strong evidence during the year that GRID-Arendal continues to be seen by UNEP as a valuable member of the 'UNEP Family'. Request from UNEP for a Rapid Response Assessment of the Environmental Crime Crisis reached a global audience and a series of countries and agencies are now engaging internationally to address the threat of illegal trade in wildlife. Another example of requests for innovative, high quality publications are Atlases of the Changing Environment which are received on a regular basis. A total of 26 publications were produced for and with UNEP and with other partners in 2014.

In addition to the publications stream, various UNEP divisions consistently approach GRID-Arendal for support on training and capacity building activities and the development of new initiatives. The Environmental Crime programme in particular evolved and diversified in 2014 to cover issues including electronic waste, illegal fisheries, illegal logging, and the poaching of wildlife and other resources. Developed jointly with the UN Office on Drugs and Crime (UNODC), the International Criminal Police Organization (INTERPOL), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), it receives

project funding from a range of donors. GRID-Arendal's skills, networks and partnerships are clearly adding value to UNEP's Programme of Work and are routinely called upon by UNEP to help deliver desirable outcomes. This includes projects as varied as continued support to the Tehran Convention, collaboration with the UNEP Vienna office on assessment of climate change challenges in mountain regions, and a partnership with the Abidjan Convention (UNEP Regional Seas). It also includes support to the Green Economy efforts of UNEP DTIE and the UNEP Regional Office for Europe and our collaborative efforts in three transboundary river basins in Africa with UNEP DEWA.

Beyond our support to UNEP, GRID-Arendal continued to strengthen key partnerships with regional organizations. With SPC/SOPAC (Pacific Islands region), we delivered capacity building support on marine spatial planning, deep sea mining issues and maritime boundary delineation. Working with the German Development Agency (GIZ) we helped identify, communicate and replicate best practices or 'Blue Solutions' related to marine and coastal settings. We also supported the European Union in developing a seafloor map of EU waters and informing policy makers on the environmental considerations linked to potential deep sea mining. For the Hindu-Kush mountain region we assisted ICIMOD in its efforts to assess and build capacity for adaptation to uncertain climate futures. And on Polar issues, we provided technical support to workgroups of the Arctic Council on monitoring changes in the Arctic Environment and secretariat support to the University of the Arctic to enable a vibrant pan-Arctic academic collaborative platform. These diverse activities exemplify how our support to UNEP is also leveraged in a variety of directions, and further demonstrates the far-reaching impacts and effectiveness of Norwegian support to GRID-Arendal.

# 11. Summary of lessons learned

GRID-Arendal continues to respond to, and learn from, the needs of its many partners. To increase its effectiveness, it reorganized its internal structure to focus more strongly on core areas that support UNEP's Programme of Work and other key strategic partnerships. As detailed in Annex 2, the new programmes replace our previous divisional structure and result from an internal evaluation of skills and competencies, in other words a learning exercise aimed at providing a clearer demonstration of GRID-Arendal's value-adding potential. These changes also aim to foster increased internal collaboration in response to requests and needs expressed by GRID-Arendal staff.

GRID-Arendal continues to try and secure longer term and larger scale collaborative efforts. This is based on lessons learned from previous years that such efforts are a more effective way of focusing our human and financial resources. In 2014, a tremendous amount of knowledge and experience was gained on how to navigate the complicated waters of the Global Environment Facility (GEF) processes. This new knowledge and experience is valuable both to GRID-Arendal and to UNEP. GRID-Arendal has gained a keen understanding of the realistic time and financial investment needed to secure GEF funding and has developed critical risk assessment processes designed to ensure that the investment by Norway in GRID-Arendal is leveraged in the most effective and beneficial way for developing country recipients.

In addition to the Blue Forest GEF effort which is now in progress, GRID-Arendal is bringing its recently acquired GEF knowledge to bear as it supports the UNEP-FAO

led Spatial Management in Areas Beyond National Jurisdiction GEF project (approved by GEF Council in 2014), the development of a TEEB (The Economics of Ecosystems and Biodiversity) for Oceans and Coasts GEF project under the auspices of UNEP, and the prospect of a GEF application with UNEP Vienna focused on mountain regions facing uncertain climate futures. Risks related to pursuing GEF projects continue to be similar to those noted in previous years: political decisions beyond the control of GRID-Arendal and UNEP; challenges with the internal implementation structure of GEF projects within UNEP; and, responsiveness of project partners and challenges with respective interests and agendas. GRID-Arendal continues to work on a variety of ways to minimize organizational risk and enable a safe space to operate large scale GEF efforts.

GRID-Arendal continues to learn from a variety of routine project planning and management challenges in order to update and improve its processes and practices. There is a positive trend in our UNEP-related project planning work with UNEP focal points being increasingly pro-active at involving GRID-Arendal experts early on in planning processes. This leads to more efficient project implementation and increased attention on the steps needed to achieve desired results. As part of GRID-Arendal's revised institutional arrangement with UNEP, a guidance committee established as part of the new Memorandum of Understanding and made up of top level GRID-Arendal and UNEP representation, will undoubtedly foster a much more efficient and productive relationship.

# 12. Acronyms

AAMP	Agence des aires marines protégées
ADB	Africa Development Bank , Abidjan Côte D'Ivoire
AFRICAEN	Africa Environmental Information Network
AGEDI	Abu Dhabi Global Environmental Data Initiative
AIMS	Atlantic, Indian Ocean, Mediterranean, and South China Seas
AMCEN	Africa Ministerial Conference on the Environment
APN	Asia-Pacific Network for Global Change Research
AWRH	Association of World Reindeer Herders
AUSAID	Australian Agency for International Development
BP	British Petroleum, Aktobe, Kazakhstan
CAFF	Conservation of Flora and Fauna Working Group of the Arctic Council
CBD	Convention on Biological Diversity
CCAC	Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants
CCCCC	Caribbean Community Climate Change Centre
CCS	Carpathian Convention Secretariat
CDE BERN	Centre for Development and Environment, University of Bern
CEDARE	Centre for Environment and Development for the Arab Region & Europe
CEES	Center for Ecological and Evolutionary Synthesis
CEIC	Caspian Environmental Information Centre
CI	Conservation International, Arlington
CICERO	Center for International Climate and Environmental Research – Oslo
CIEL	Center for International Environmental Law
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLCS	Commission on the Limits of the Continental Shelf
COP	Conference of the Parties
DCPI	Division of Communication and Public Information of UNEP
DEFRA	Department for Environment, Food & Rural Affairs, UK
DEWA	Division on Early Warning and Assessment of UNEP
DG MARE	Directorate General for Maritime Affairs and Fisheries, EU
EAD	Environment Agency – Abu Dhabi
EbM	Ecosystem-based Management
EEA	European Environment Agency
EECCA	Eastern Europe, Caucasus and Central Asia
EEZ	Exclusive Economic Zone
EIA	Environment Integrated Assessment
ENVSEC	Environment and Security Initiative
EOSD	European Organisation for Sustainable Development
EPA	Environmental Protection Agency
ESA	European Space Agency
EU	European Commission
EU WFD	European Union Water Framework Directive
FAO	Food and Agriculture Organization of the United Nations
FFA	Pacific Islands Forum Fisheries Agency
GA	Geoscience Australia
GEF	Global Environment Facility
GIS	Geographic Information Systems
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (German Development Agency)
GWP	Global Water Partnership, Pretoria
HICAP	Himalayan Climate Change Adaptation Programme
ICC	Inuit Circumpolar Council
ICIMOD	International Centre for Integrated Mountain Development
ICLEI	International Council for Local Environmental Initiatives
ICR	International Centre for Reindeer Husbandry
IAEA	International Atomic Energy Agency

IMCC	International Marine Conservation Congress
IMO	International Maritime Organization
IMR	Institute of Marine Research
INTERPOL	International Criminal Police Organization
IOC	Intergovernmental Oceanographic Commission
ISA	International Seabed Authority
IUCN	International Union for Conservation of Nature
IUCN BRAC	World Conservation Nature - Regional Office for Central Africa
KMFRI	Kenya Maritime & Fisheries Research Institute
LEAD	Law Enforcement Against Deforestation
LEAF	Law Enforcement Assistance to Forests
LIMCO	Limpopo River Basin Member Countries
LIMCOM	Limpopo Water Course Commission
LVBC	Lake Viktoria Basin Commission
MARIS	Marine Information Service
MFA	Norwegian Ministry of Foreign Affairs
MIREX	Ministry of External Relations
MMAF	Ministry of Marine Affairs and Fisheries
MCE	Ministry of Climate and Environment
MREC	Ministerio de Relaciones Exteriores y Culto
NATO	North Atlantic Treaty Organisation
NBFN	Norwegian Blue Forest Network
NEMA	National Environment Management Authority
NESDA	Network for Environment and Sustainable Development in Africa
NGO	Non- governmental Organisation
NIVA	Norwegian Institute for Water Research
NOAA	National Oceanic and Atmospheric Administration
NORAD	Norwegian Agency for Development Cooperation
NOK	Norwegian Krone
NPD	Norwegian Petroleum Directorate
ODA	Official Development Assistance
ODINAfrica	The Ocean Data and Information Network for Africa
OKACOM	Okavango River Basin Commission
ORGFORC	Organised Forest Crime
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PACIOCEA	Pacific Ocean Ecosystem Analysis
PCA	Programme Cooperation Agreement
PI	Presencing Institute , Cambridge, USA
REC	Regional Environmental Centre for Central and Eastern Europe
REDD	Reducing Emissions from Deforestation and Forest Degradation
RESLIM	Resilience in the Limpopo Basin Programme
RRA	Rapid Response Assessment
SADC	Southern African Development Community
SAICM	Strategic Approach to International Chemical Management
SARDC	Southern African Research and Documentation Centre
SAREP	Southern Africa Regional Environment Programme
SDWG	Sustainable Development Working Group, Arctic Council
SEB	Skandinaviska Enskilda Banken AB
SIDA	Swedish International Development Agency
SIDS	Small Island Developing States
SoE	State of Environment
SoLIS	Solomon islands Land Information System
SoME	State of the Marine Environment
SPC/SOPAC	Secretariat of the Pacific Community/ Applied Geoscience and Technology Division
SPREP	Secretariat of the Pacific Regional Environment Programme
SSFS	Small Scale Funding Agreement
TEEB4OC	The Economics of Ecosystems and Biodiversity for Oceans and Coasts, Geneva Switzerland
TERI	The Energy and Resources Institute, Dehli India



UAE	United Arab Emirates
UARCTIC	University of the Arctic, Arendal, Norway
UBO	Université de Bretagne Occidentale, Brest, France
UIA	University of Agder
UIT	University of Tromsø
UN	United Nations
UN REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
UNCLOS	United Nations Convention on the Law of the Sea
UN-DESA	United Nations Department of Economic and Social Affairs
UNDOALOS	United Nations Division for Ocean Affairs and the Law of the Sea
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNEP DEPI	UNEP's Division of Environmental Policy Implementation
UNEP DEWA	UNEP's Division of Early Warning and Assessments
UNEP DTIE	UNEP's Division of Technology, Industry and Economics
UNEP ROA	UNEP's Regional Office for Africa
UNEP ROAP	UNEP Regional Office for Asia and the Pacific
UNEP ROE	UNEP Regional office for Europe
UNEP ROLAC	Regional office for Latin America and the Caribbean
UNEP RONA	Regional office for North America, Washington DC
UNEP-WCMC	UNEP World Conservation Monitoring Centre
UNEP/MAP	UNEP's Mediterranean Action Plan
UNESCO IOC	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNODC	United Nations Office on Drugs and Crime
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
WCMC	World Conservation Monitoring Centre
WCO	World Customs Organization
WHO	World Health Organisation
WRH	Association of World Reindeer Herders
WRI	World Resource Institute
WWF CEA	World Wide Fund for Nature – Coastal East Africa Initiative
ZAMCOM	Zambezi Watercourse Commission
ZAPRA	Zambia Public Relations Association
ZEMA	Zambia Environmental Management Agency



# Annexes

## Annex 1:

Audited Financial statement

## Annex 2:

GRID-Arendal's Organigram

## Annex 3:

Overview of GRID-Arendal's Programmes for 2015



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### Report regarding

- Framework Agreement for 2014 between the Norwegian Ministry of Foreign Affairs and UNEP/GRID-Arendal: Work Programme 2014

We have performed the procedures agreed with you and enumerated below with respect to the financial statement for the "Work Programme" for the period 01.01.2014-31.12.2014. The Work Programme components are:

- Environmental Crime
- Transboundary Waters
- Support to ODA countries in environmental management
- Adaptation to Climate Change
- Marine and Coastal Resources
- Other

Our engagement was undertaken in accordance with the ISRS 4400 Engagements to Perform Agreed-upon Procedures Regarding Financial Information. The procedures were performed solely to assist you in evaluating the validity of the financial statement for the Work programme for 2014 and are summarized as follows:

1. We have checked on a sampling basis that fees are based on hours recorded in the Work Programme's accounts.
2. We have checked on a sampling basis that expenditures are supported with vouchers in the Work Programme's accounts.
3. Accounting has been carried out in accordance with accepted principles in Norway.
4. We have checked that the funding have been utilized to the correct purpose as agreed with the Norwegian Ministry of Foreign Affairs.

We report our findings below:

1. Fees amounting to NOK 32 723 351 are based on hours recorded in the Work Programme's accounts.
2. Expenditures amounting to NOK 19 248 210 are supported with vouchers recorded in the Work Programme's accounts. In this amount 13 % overhead is included.
3. With respect to item 3, accounting has been carried out in accordance with accepted principles in Norway.

#### Offices in:

Oslø	Hamar	Sandefjord
Ålta	Haugesund	Sandnessjøen
Arendal	Kristiansund	Stavanger
Bergen	Larvik	Stord
Bodo	Mol i Rana	Tromsø
Elverum	Molde	Trondheim
Finnseie	Narvik	Tønsberg
Grimstad	Roros	Ålesund

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Statautoriserte revisorer - medlemmer av Den norske Revisorforening



4. All programmes are carried out in areas approved by the Norwegian Ministry of Foreign Affairs, apart from the project "Other", which consist of projects that will not be carried out in developing countries. The fees on these are included in the above listing of findings in number one, with NOK 7 835 370. Costs are included in number two, with an amount of NOK 5 992 333.

Based on the performed procedures described above on the account statement for the "Work Programme" in our opinion costs with a total amount of NOK 51 971 561 are documented satisfactorily and properly recorded in GRID-Arendal's project's accounts.

Grid- Arendal has in the period from 01.01.2014 to 31.12.2014 utilized NOK 24 189 580 of the total funding of NOK 27 000 000 received. The remaining amount of NOK 2 810 420 has been transferred to 2015, and will be utilized in the period from 01.01.2015 to 28.02.2015.

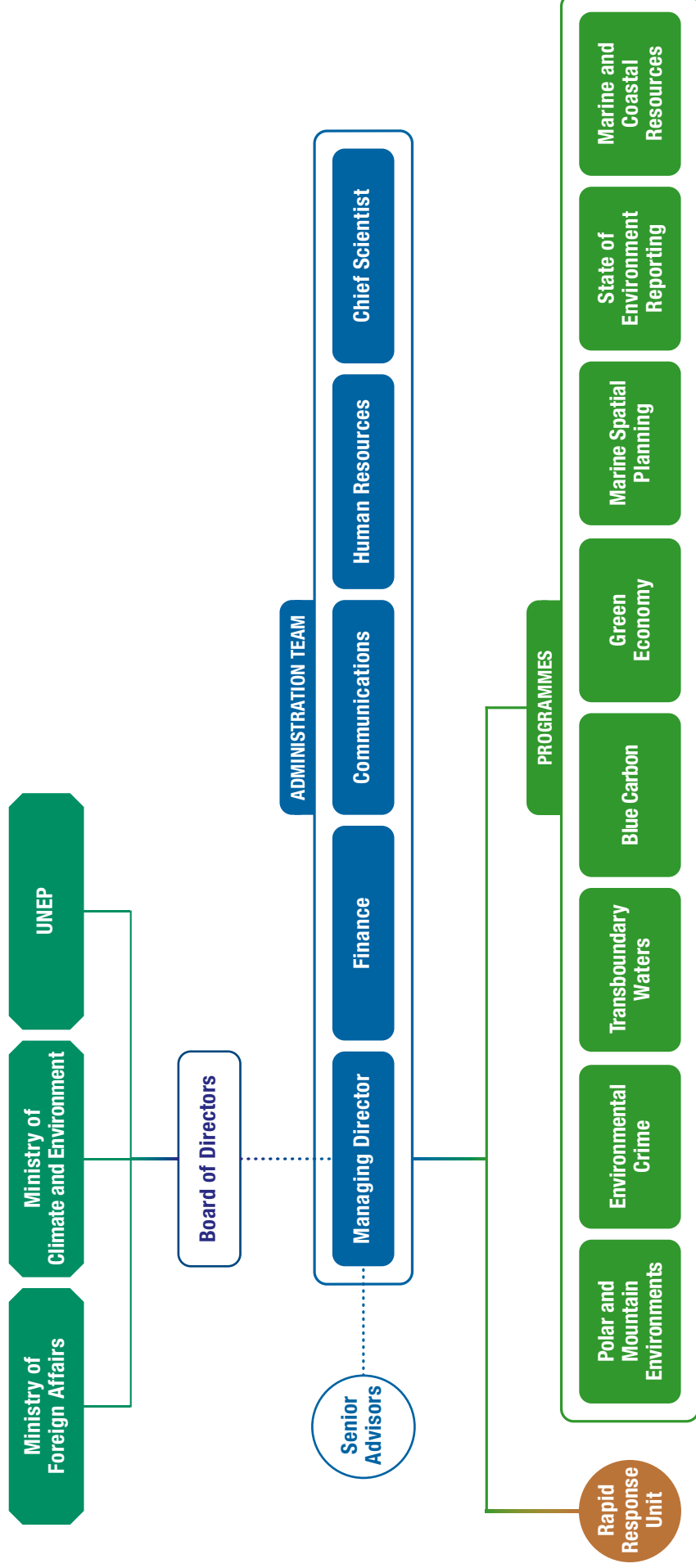
Our report is solely for the purpose set forth in the first paragraph of this report and for your and the Norwegian Ministry of Foreign Affairs information, and is not to be used for any other purpose or to be distributed to any other parties. This report relates only to the accounts and items specified above and do not extend to any financial statements of GRID-Arendal, taken as a whole.

Arendal, 18<sup>th</sup> of February 2015  
KPMG AS



Terje H. Holst  
State Authorised Public Accountant

# GRID-Arendal's Organigram



# **An Overview of GRID-Arendal's Programmes for 2015**

## **BLUE CARBON**

Blue Carbon refers to the carbon linked to natural coastal and marine ecosystems and includes tidal marshlands, mangrove forests, and seagrass meadows. These ecosystems can slow climate change by fixing and storing atmospheric carbon. They filter pollution, house fish nurseries and buffer shorelines against storms. The sustainable management of Blue Carbon ecosystems benefits the people who rely on them for their livelihoods.

GRID-Arendal aims to promote the sustainable management of Blue Carbon ecosystems by improving our understanding its value and connection to related ecosystem services. Our major efforts this year include:

- The Abu Dhabi Blue Carbon Demonstration Project on the value of Blue Carbon and related ecosystem services for the Emirate of Abu Dhabi;
- The GEF/UNEP Blue Forests Project, a global initiative to explore the value of Blue Carbon and related ecosystem services with project sites in Madagascar, Indonesia, Ecuador, Mozambique, UAE, Kenya, and Central America.

## **ENVIRONMENTAL CRIME**

Transnational organized environmental crime is a rapidly growing threat to the environment and sustainable development. It deprives governments of revenues from natural resources and threatens state security. It involves illegal activities in five key areas: logging and deforestation, fisheries, mining and trade in minerals, dumping and trade in hazardous and toxic wastes, and trade in and poaching of wildlife and plants.

GRID-Arendal's Environmental Crime Programme aims to raise global awareness of the losses and risks associated with the rise in organized crime and illegal exploitation of natural resources. In doing so, this year it will

- Support UN efforts to reduce deforestation worldwide through projects in partnership with a number of international bodies including UNEP, FAO and INTERPOL;
- Support West African nations in reducing illegal fisheries and curtail piracy;
- Help combat wildlife crime in East Africa by training frontline rangers, prosecutors and customs together with UNODC and INTERPOL; and
- Reduce surgeon poaching in the Caspian Sea.

## **GREEN ECONOMY**

The ideas behind green, new or sustainable economics are quickly developing as a viable, important evolution of the global economic system. A major contemporary challenge is to move innovation on Green Economy from the fringes into the mainstream.

GRID's Green Economy Program supports UNEP units to meet policy, modeling, capacity building and reporting goals for Green Economy.

This year GRID-Arendal will develop and deliver products and activities based on its Green Economy competencies (in house and through partner networks). These are principally oriented to assist developing countries at different stages of Green Economy Transition. Findings from this work will be framed to create incentives for green economics in developed countries, including innovative policies, use of technology, and new ways of engaging citizens.

Specific technical capacities include advising on Green Economy in a number of areas and providing advisory services to GRID and UNEP Units upon request.

## **MARINE SPATIAL PLANNING**

Increasing competition for marine resources results in conflict and affects the marine environment. Marine spatial planning brings together stakeholders (including users and managers) to build an understanding of these human uses, resource distribution and natural values. It develops scenarios for area based resource usage that minimise conflict and improve sustainability.

GRID-Arendal supports developing nations and small island states in negotiating and declaring maritime boundaries, which provide the framework for marine spatial planning.

This year the marine spatial planning programme is

- Working with Pacific nations and partners on finalising maritime boundaries and providing training on marine spatial planning through the Enhancing Pacific Ocean Governance project;
- Developing capacity for area based planning for areas beyond national jurisdiction; and
- Working with partners in Estonia to develop maps of marine habitats and develop methods to assess their status.

## MARINE AND COASTAL RESOURCES

Developing states in Africa and the Pacific have sovereign rights over vast areas of the ocean filled with fish, petroleum and minerals plus a number of undiscovered resources. These countries are rightfully beginning to question the current methods of exploiting resources.

While there is a strong push for the rapid development of these sectors to drive economic development, there is also an emerging need to ensure marine and coastal ecosystems continue to provide long-term sustainable benefits.

The Marine and Coastal Resource programme encourages innovative thinking in sustainable development based on marine and coastal ecosystems and resources. Its goals are to:

- Support true “green-growth” that increases human well-being while maintaining and enhancing the health of our oceans and coasts.
- Ensure that resource use adds tangible local value and leaves a significantly smaller environmental footprint than is currently seen throughout the world.

## POLAR AND MOUNTAIN ENVIRONMENTS

The polar and high mountain regions of the world play an important role in the Earth’s climate system. They help regulate global temperatures, drive ocean circulation, and store water in the form of glaciers and ice sheets. The Polar and Mountain Environments Programme works with governments, UNEP and UN agencies, academic institutions, civil society and local communities to address the challenges of adapting to rapid climate and environmental changes in the Arctic and in mountain regions.

Examples of our work include:

- Generating new knowledge about the impacts of climate change on water availability, food security, ecosystem function, and societies in the Hindu Kush Himalayas; and
- Supporting the United Nations Environment Programme in the Arctic through our role as a Centre of Excellence on polar issues and engaging in the work of the Arctic Council’s working groups.

## STATE OF THE ENVIRONMENT REPORTING

Countries need to be able to measure and monitor the condition and trends in ecosystems in their marine jurisdictions. Developing countries have identified the lack of capability to undertake State of the Marine Environment (SoME) reporting as a major gap. They have experts available with knowledge of their marine environments, but there is a lack of reporting skills in government agencies responsible for this task.

The goal of this programme is to enhance the capability of developing countries to undertake their own, independent assessments using an internationally recognized methodology. GRID-Arendal will work with partners this year to:

- Finalise guidelines for SoME reporting and marketing the method;
- Publish Sierra Leone’s SoME report as the first national report based on the guidelines; and
- Use the reporting template for other purposes, such as State of the Environment Reports for lake or river basins.

A scientific paper will be produced based on what was learned in the Raet National Park SoME demonstration assessment. The park is located near Arendal/Tromøy.

## TRANSBOUNDARY WATERS

With nearly 90 per cent of the world population living in countries where freshwater resources cross borders, the peaceful cooperation and sustainable use of shared waters are critically important. In Africa alone there are 64 shared river/lake basins. These basins are important hubs for economic development and regional integration.

GRID-Arendal provides innovative communication tools and products that enable the sustainable use and development of such shared resources. It helps develop local expertise in environmental assessments, and provides a platform for dialogue on transboundary water issues between governments, civil society, media, youth and other stakeholders.

Activities in 2015 will include:

- An assessment of major environmental changes that have occurred in the Lake Victoria Basin, their causes and impacts;
- Analysis and mapping of major disasters and risks to which the Limpopo River Basin is vulnerable, with a focus on the role played by climate change and vulnerability;
- A study on the threats to ecosystem services provided by the Okavango River Basin with a view of suggesting innovative governance strategies such as Payment for Ecosystem Services; and,
- Supporting the institutional and legal framework for the management of the Caspian Sea.







*A Centre Collaborating with UNEP*

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