

29 and counting

GRID-Arendal Annual Report 2018



Established in 1989 as a non-profit foundation under Norwegian law, GRID-Arendal's mission is to create environmental knowledge that encourages positive change. We do this by organising and transforming available environmental data into credible, science-based information products, delivered through innovative communication tools and capacity building services targeting relevant stakeholders.

GRID-Arendal works closely with United Nations Environment, other UN agencies and partners around the world to connect science to policy. Our goal is to shorten the distance between the emergence of new science and policy actions. We seek to influence thinking and action at the level of the global community on issues that require collective efforts because many problems cannot be solved at the national level alone.

Acknowledgements

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Foreword

We hear a lot of news about the state of the world's environment and much of that news is not good. It would be easy to assume that nothing positive is happening. It's our role at UN Environment to present all perspectives on the story.

These stories and information need to go somewhere. Then someone has to bring about changes and improvements. And it all starts with science. New research and knowledge need to be converted into concepts and language that is easy to understand, and act upon, by decision-makers and the general public. This latter group, while large and somewhat undefined, is important because public understanding can be converted into pressure on governments to act.

To make all this happen, we rely on partners around the world. One of UN Environment's most important relationships is with GRID-Arendal which is able to use language and its communications expertise to make complex information understandable to decision makers – and the public at large. GRID-Arendal connects science to policy in a way that creates a climate for change, something that is needed if we are to deliver in the 2030 Agenda for Sustainable Development.

An example of this support is GRID-Arendal's participation in UN Environment's sixth Global Environment Outlook (GEO-6). GEO-6 is an independent assessment of the state of the environment. It also looks at how effective different kinds of policies have been in addressing global environmental challenges, and what is needed to make these policies transformative.

GRID-Arendal staffed chapters on the oceans and cross-cutting issues, and contributed to the analysis of the state of the polar regions. The organisation's expertise has also helped in the formal editing and finalisation of this massive report.

GRID-Arendal has been involved in past GEO reports and its efforts illustrate the flexibility of the organisation and the wide expertise its multinational staff possesses. It is a partnership that is valued by UN Environment and we look forward to it continuing in the future.



Jian Liu
Chief Scientist
UN Environment

“

Our daily work takes place in the context of rapid globalisation, an overall declining state of the environment and illegal behaviour, all of which challenge the very idea of sustainability.

This reality guides everything we do and is the source of our determination to help make the world a better place.

From the desk of the Managing Director

We live in a rapidly changing world. Institutions and traditional ideas of governance and top-down decision making are being challenged by new arrangements, technologies and players. Globalisation has brought with it an increased understanding that we live in a connected world – one where global challenges require collective action. Ideas and solutions come not only from countries, but increasingly from civil society, business, academia and other actors. Forming partnerships based on the recognition of mutual interest and common cause is a hallmark of GRID-Arendal's approach.

GRID-Arendal's overall goal is to have a healthy planet with healthy people. Our work is motivated by the fact that human beings are stretching the limits of the planet's finite resources. The consequences of overconsumption and population growth confront us daily. Climate change, biodiversity loss, resource depletion and other environmental problems threaten human security at a global scale. The burden of rapid environmental change often falls on the most vulnerable people in poorer nations who are struggling to lift themselves out of poverty. Marginalisation, environmental degradation and conflict often go hand in hand and threaten fundamental human rights, and the ability of countries to meet the Sustainable Development Goals agreed to by the United Nations in 2015.

Our daily work takes place in the context of rapid globalisation, an overall declining state of the environment and illegal behaviour, all of which challenge the very idea of sustainability. This reality guides everything we do and is the source of our determination to help make the world a better place.

Anticipating that the world will continue to change, we took steps this year to refocus our work into five themes: polar regions and climate change, environmental

crime, transboundary governance, ecosystems and communities, and waste and marine litter. Our 50+ projects are organised under these themes.

This thematic approach is closely linked to a new strategic plan adopted in 2018 following months of internal discussion. This new plan outlines three strategic directions for GRID-Arendal as we approach our 30th anniversary in 2019.

- Providing knowledge for action
- Facilitating responsible use of resources
- Building GRID-Arendal's impact

Key to all of these directions is the work we do with our partners. Finding like-minded organisations and identifying common concerns is the first step in collaboration. As you will see in this report, collaboration continues to underlie everything we do.

I am immensely proud of what GRID-Arendal has accomplished in the last 12 months. If you scan through this report I think you will agree with me that there have been many significant accomplishments. But our work continues and we have much more to do as well as much to look forward to in 2019.



A handwritten signature in blue ink that reads "Peter T. Harris". The signature is written in a cursive, flowing style.

Peter Harris
Managing Director

Stories

GRID-Arendal's work covers all parts of our troubled planet. Whether raising global awareness about the scourge of environmental crime, supporting governance of developing coastal states or exploring the challenges of thawing permafrost in the Arctic and mountain regions, our focus is on solutions. It's no longer enough to simply present problems. Instead, new ideas, efforts and solutions are required, that go into resolving these problems.

This year's Annual Report gives a small sample of GRID-Arendal's more than 50 projects. We hope you find them interesting and inspiring.

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Action to make mine waste dams safer

Getting a report out on an urgent environmental problem is not always easy. When you work with partners, as GRID-Arendal does with all its projects, it's important to take time to ensure that all views are considered and concerns addressed. There is a lot of give and take, and occasionally heated discussions.

This was the case with a 2017 report called *Mining Tailings Storage: Safety is no accident*, released by UN Environment and GRID-Arendal. It was prompted by tailings dam disasters and rising global concerns about the safety of storing and managing increasing volumes of mine waste or tailings.

The report was the subject of vigorous debate during its development with some industry representatives pushing back hard on recommendations that could cost mining companies money if implemented. But the bottom line was always human health and safety and a need to properly manage the thousands upon thousands of waste sites around the world. It is a huge challenge.

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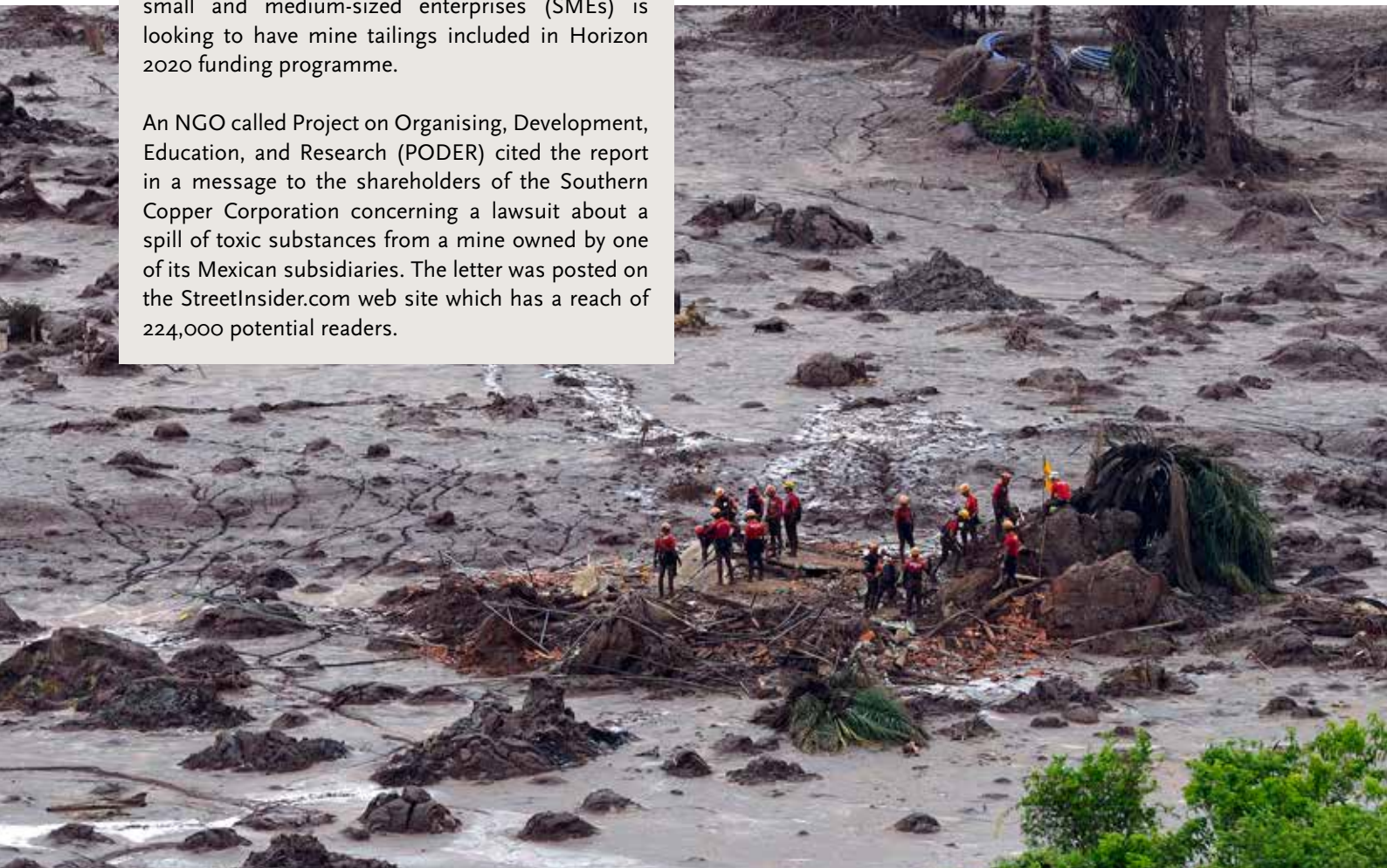
The European Commission Directorate-General for Internal Market, Industry, Entrepreneurship and small and medium-sized enterprises (SMEs) is looking to have mine tailings included in Horizon 2020 funding programme.

An NGO called Project on Organising, Development, Education, and Research (PODER) cited the report in a message to the shareholders of the Southern Copper Corporation concerning a lawsuit about a spill of toxic substances from a mine owned by one of its Mexican subsidiaries. The letter was posted on the StreetInsider.com web site which has a reach of 224,000 potential readers.

Last year this somewhat painful consultative process began to pay off with increasing recognition that the issues highlighted were serious enough to warrant more detailed consideration and action.

That action has taken off on a number of fronts – the first UN stakeholder forum to discuss mine safety took place in Vancouver, Canada, in December. The forum developed a vision for improved mine waste management and this will be taken to a larger group of stakeholders in 2019.

The report findings are continuing to be referenced to support increased stakeholder involvement in mining decisions, improve safety and develop innovation in the industry. It was also mentioned at the European Union Raw Materials Week in November and the European Commission will examine its recommendations for follow up.



Participatory mapping in Vietnam

A couple of hours drive south from Hanoi, the capital of Vietnam, is the Van Long Nature Reserve. The varied terrain of Van Long includes limestone pinnacles, tropical forest ecosystems and a vast system of marshes. The Nature Reserve is about 2700 hectares, but its natural and cultural values are diverse. The unique landscape, the rare biodiversity and a number of sacred temples make Van Long a popular tourist destiny. The forest of Van Long, combined with the Kim Bang area to the north, is one of the last wild refuges of the endangered Delacour's langur and the wetland provide a home for rare birds. In the outskirts of the forest, small-hold farmers make a living from crops, a few livestock and fishponds. This important natural area is threatened by infrastructure development and limestone quarrying. The neighbouring villages are also affected by the noise and dust from the quarrying.

To counter these threats, GRID-Arendal is gathering GIS data and local knowledge and experiences from different stakeholders in the Van Long and Kim Bang areas as part of the International Union for Conservation of Nature and Natural Resources (IUCN) project "Protected Areas Solutions". The project is funded by the German government's International Climate Initiative (IKI) and its goal is to promote and strengthen the governance of the Delacour's langur habitat in a way that balances local needs and conservation priorities. GRID-Arendal contributes by providing innovative spatial analysis and participatory mapping tools to support fair and sustainable management of protected areas.

In 2018, we spent three days in the field together with IUCN Vietnam, Fauna and Flora International (FFI) and the Frankfurt Zoological Society (FZS). We visited different sites inside the Van Long Nature Reserve, the buffer zone to the reserve and sites close to the Kim Bang forest habitat. The main objective was for us to collect spatial information and to get an overview of the area and the different land-use interests and needs.

Before leaving Arendal, we had made large printed maps. During meetings with farmers, guards, rangers, tourist industry representatives and politicians the maps stimulated exchanges of stories and experiences tied to the land. The different actors added information to the maps that gave added insights into the land-use activities that pose a threat to the Delacour's langur habitat. Information added to the maps included current trails and planned roads, tourist resorts and quarries.

Based on the data collected, GRID-Arendal has mapped different scenarios for land-use in the area. The collected data and scenarios are presented through an online interface to view, pan, zoom, and turn GIS layers on and off in the project area. These scenarios will be used in a second field visit to discuss more detailed management regimes for sustainable land-use. The interface developed and tested in Vietnam is a tool that can be used to inform planning and governance of protected areas also in other regions of the world. This and other tools will be made available through Panorama, an IUCN portal for sharing experiences and solutions for conservation and sustainable development.



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"Wow! This is now such a powerful tool. This is the first time that we can show, objectively, just how terribly damaging the mining and road will be for the langurs. Indeed, they will drive their extinction here, unless we do something."

– Josh Kempinski, Country Director, Fauna and Flora International, Vietnam

On the coast of West Africa

A fisherman in Guinea gets up early and pulls his small wooden boat into the water. He spends the day near the coast of his West African home and by evening has enough fish to feed his family as well as a few left over to sell at the local market. It is a routine repeated all along the coast, up to Mauritania in the north.

The West African coastline stretches 3500 kilometres and is home to over 100 million people. It covers a variety of habitats – rocky cliffs, sandy beaches and mangrove forests on the coasts, and extensive seagrass beds beneath the water's surface. The seagrass provides a nursery for many of the fish caught by West African fishing boats. Sea turtles feed on the grasses and lay eggs on the coastline. These coastal waters are visited by millions of migratory birds every year.

It is a rich region supporting many highly productive ecosystems and biodiversity hotspots. In turn, these ecosystems support the livelihoods, cultures and nutrition of millions of people like the Guinean fisherman. While it produces an abundance of sea life, the region is also under pressure from a growing coastal population, unsustainable fishing and large commercial operations, as well as oil exploitation.

Given these challenges a comprehensive knowledge-base is required to manage human activities in these ecosystems. GRID-Arendal helped Sierra Leone's Environmental Protection Agency (EPA) develop a Centre of Expertise and launch the region's first State of the Marine Environment Report in 2015.

This project is bearing fruit because now Sierra Leone's EPA will assist Benin, Ghana and Ivory Coast to develop their State of the Marine Environment reports. The EPA organised a capacity building workshop in Freetown in October that brought together participants from multiple sectors to begin the work of developing the pilot projects for the three countries. These pilot projects will play an important role in the region by testing ideas and providing opportunities to learn skills needed to carry out what is known as Integrated Ocean Management. This planning method combines many sources of information – scientific, technical, social and economic. Its purpose is to make the kinds of decisions needed to balance the health of ecosystems and coastal economies.

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GRID-Arendal helped Sierra Leone develop its first State of the Marine Environment Report in 2015. Now that country's Environmental Protection Agency is helping three other West African countries produce theirs.

“The experts from GRID-Arendal ... contributed tremendously on the preparation of the Integrated Ocean Management tools.”

Momodu Airashid Bah, director of the Sierra Leone Environmental Protection Agency.¹



It is definitely “hands-on” learning. Quoted in the Sierra Leone media Momodu Airashid Bah, the director of the EPA, told the workshop that “capacity building has immense prospects in making positive change in ocean governance systems.” By “recognising that marine conservation and protection has a gross benefit for our livelihoods, integrated ocean management serves as a whole strategy to achieve the sustainable development goals.”

Since the Sierra Leone report was launched, GRID-Arendal's work in the West African region has expanded to include Mami Wata, a four-year project financed by the German Ministry of the Environment through its International Climate Initiative. Mami Wata, named for a water deity, works with countries that are members of the regional Abidjan Convention to improve management of marine and coastal ecosystems. GRID-Arendal is also leading the ResilienSEA project which is working with seven countries in the region to improve the understanding and importance of seagrass beds to regional ecosystems – and to the livelihoods of people like the fisherman from Guinea.

Helping Vanuatu and France hold historic meeting

The small Pacific Island nation of Vanuatu, an independent republic since 1980, met at the University of Sydney with a French government delegation to talk about the important issue of maritime boundaries. Due to historic sensitivities, the two countries have never discussed their shared maritime boundaries. However, high-level meetings between the states opened a new spirit of cooperation.

The Pacific Maritime Boundaries Consortium hosted this technical meeting between Vanuatu and France in the margins of the 17th Pacific Maritime Boundaries Workshop. This long-running workshop series, in which Pacific Island countries work on maritime boundaries issues, is supported by technical experts from GRID-Arendal and the other consortium partners.

At this first meeting, fundamental progress was achieved with both countries agreeing to future talks on the boundary delimitation issues. In a spirit of cooperation, they agreed to exchange important information which will provide a sound technical foundation for future negotiations. The two teams will now consult their home country teams with a view to continuing discussions during 2019.

Pacific States continue to work on securing their extended continental shelf. The Cook Islands and the joint submission from Papua New Guinea, the Solomon Islands and the Federated States of Micronesia recently received recommendations from the Commission on

the Limits of the Continental Shelf. In both cases the states have not accepted the recommendations and are exploring options for resubmitting parts of the submissions which were disputed by the commission. This may involve the collection of additional data – it appears that the current members of the commission require increased data accuracy and coverage than the previous commissions. This is a worrying trend for developing states and something that GRID Arendal is investigating through the development of an Extended Continental Shelf website.

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The 22 Pacific Islands manage more than 20% of the global ocean in their Exclusive Economic Zones (EEZ). There are 48 shared maritime boundaries delineating these EEZs. Twenty of these bilateral boundaries have been secured with treaties as a result of the Pacific Maritime Boundaries Consortium with the assistance of GRID-Arendal. The Pacific Island nations are currently working with the Consortium partners to develop a strategy to deal with sea level rise and its potential impact on these boundaries. The settlement of maritime boundaries is urgently required to ensure that Pacific Island states do not lose any of their jurisdiction as a result of climate change. GRID-Arendal's efforts in this area are likely to continue for many years.



Representatives from Vanuatu and France sign an historic agreement to continue discussions on resolving their shared maritime boundary and dispute territory.

Blue Carbon – “critically important in our fight against climate change”

The carbon linked to natural coastal and marine ecosystems is often referred to as “blue carbon.” Blue carbon ecosystems include tidal marshlands, mangrove forests and seagrass meadows, all of which are not only naturally beautiful but also filter pollution, provide fish nurseries and buffer shorelines against storms. These “blue forests” can aid in the mitigation of climate change by fixing and storing atmospheric carbon. At the same time proper management of these ecosystems can improve the well-being of the people who rely on them for their livelihoods.

GRID-Arendal has a number of blue carbon initiatives underway, including managing the UN Environment Blue Forests Project and as a partner in the Norwegian Blue Forests Network (NBFN).

The Blue Forests Project continued implementation at seven sites across the globe and provided support to international research and policy fora including the United Nations Framework Convention on Climate Change, UN Oceans Conference Voluntary Commitments to address ocean health, and the International Partnership for Blue Carbon, among others. A Global Blue Forests Toolkit Workshop was held with project partners in Jakarta, Indonesia, to assist in the development of international

carbon and ecosystem services methodologies and approaches. This toolkit will be produced in 2019. GRID-Arendal also visited project sites in Ecuador and Kenya to provide support to partners and assess progress.

Continuing its leading communication role under NBFN, GRID-Arendal produced two blue forests videos: What You Wanted to Know About Kelp (...But Were Afraid to Ask) and Sustainable Growth with Blue Forests. At last year’s national Norwegian political gathering, Arendalsuka, the NBFN highlighted innovative thinking on the use of marine resources, blue economy and growth, outlining the reasons why blue forests of seaweeds and seagrasses are both ecologically and commercially important. Invited speakers included small-scale entrepreneurs and innovators who make food that contains seaweed, create plastic-free packaging with low environmental impact, and use seagrass that is washed ashore as a primary raw material for products such as sunglasses and mobile phone cases.

Seagrasses are among the most threatened ecosystems on the planet. In 2018 GRID-Arendal and UN Environment initiated the International Seagrass Experts Network (ISEN) which will explore the global state of seagrass health, science, policy and management.

An Oceanic Blue Carbon Story Map was launched at the Eye on Earth Summit in Abu Dhabi. The story map describes the various ways that marine life contributes to carbon storage in the ocean and illustrates the latest science on the subject. News stories on the launch and the concept were circulated by the UN Environment, and Global Environment Facility and others. This work was greatly facilitated by the Fulbright Program, which supported Heidi Pearson, a visiting scholar, to spend four months at GRID-Arendal working with the Blue Carbon Programme.

“We have laid the groundwork for establishing the current state of knowledge surrounding oceanic blue carbon and have communicated this information to various stakeholders,” Pearson said. “Now, the next step is to build upon this to continue to advance the science so that, ultimately, these concepts can be incorporated into conservation and climate change policy.”



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“Recognising the role marine life may play in mitigating climate change may help small island developing states, especially those who are large ocean nations, include ocean actions in their Nationally Determined Contributions under the Paris Agreement. Seychelles believes that the sustainable management of life in our ocean is critically important in our fight against climate change. Given the dire warnings from the recent IPCC report, can we afford not to explore this option?”

– Ronald Jumeau, Permanent Representative to the United Nations and Ambassador for Climate Change Republic of Seychelles

Success in the Caspian Sea

The Caspian Sea is best known for its famous caviar-producing sturgeon. The sea is home to several ancient species, many of which are on the brink of extinction. The Caspian is the world's largest inland sea and has a surface area of more than 370,000 square kilometres, and a maximum depth of 1000 metres. The sea supports the economy and livelihoods of the people who live along the coasts of the states that surround it – Azerbaijan, Iran, Kazakhstan, Russia and Turkmenistan. Unfortunately, pollution, habitat destruction, biodiversity loss and climate change have been negatively affecting the sea for years.

The surrounding states signed the Tehran Convention in 2003, the first legally binding agreement among the Caspian littoral states. The expanding work under the Convention identified the need for a reliable and easy way to exchange information. GRID-Arendal has been working with countries in the region for many years to help and in 2018 saw a major achievement in the opening of the Caspian Environment Information Center. This online information-sharing platform was developed by GRID-Arendal with support from British Petroleum Exploration (Caspian Sea) Limited in Baku, Azerbaijan.

The new information centre will help overcome some of the challenges in sharing environmental information in the region. The project includes an online library that has made it easier for stakeholders, such as government officials and scientists, to cooperate and collaborate securely on environmental protection issues.

“The Caspian Environment Information Centre is a portal that is a kind of library where you can find information related to Caspian environment, biodiversity, monitoring,

the economic potential of the region,” says Nurgul Tastenbekova, a 23-year-old user from Kazakhstan. “The portal is very convenient to use and well thought out.”

The portal contributes to the achievement of several of the Sustainable Development Goals (SDGs), particularly number 17 “Partnerships for the goals” and 16 “Peace, justice and strong institutions”. By ensuring inclusive and participatory knowledge creation aimed at informing decision-makers, scientists and civil society stakeholders, it will support sustainable use and conservation of the sea and its marine resources. This will in turn contribute to achieving SDG goal 14 “Life below water”.

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The portal has been used to draft the second State of the Environment of the Caspian Sea report scheduled for release in 2019. The hope is that this project will have a long-term positive influence and provide stakeholders with training and skills to support their efforts to protect the Caspian Sea.



And Caspian sturgeon better protected

The prospects of protecting the Caspian Sea's endangered sturgeon populations have improved since GRID-Arendal contributed to putting environmental crime on the international agenda a few years ago. To raise awareness and spur action, our Environmental Crime unit organised a tour of journalists to the Caspian and produced a report on sturgeon poaching in Russia called *Losing the Tsar-Fish*.

That was in 2015. Since that time, the report helped influence the Russian government to hold parliamentary hearings at the High Environmental Council of the State Duma on the need to strengthen environmental control and ensure that populations of sturgeon, which are poached for their caviar, are preserved and restored. GRID-Arendal helped the council make a series of recommendations to curb illegal activities.

Following up on these recommendations, the Federal Agency for Fisheries (Rosrybolovsvo) discussed including some sturgeon species in the Red Data Book of the Russian Federation which documents threats to biodiversity. It also looked at creating a database of genetic materials for sturgeon and a study of Siberian sturgeon in the Kolyma river basin. Finally, it reviewed the status of sturgeon stocks in the Siberian region and the Azov-Black Sea basins and identified both as "critical".

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The impact of this project was recently confirmed by changes to sections of the Criminal Code of the Russian Federation, Article 258-1: Illegal hunting.

"Illegal extraction and trafficking of especially valuable wild animals and aquatic biological resources belonging to species listed in the Red Data Book of the Russian Federation and (or) protected by international treaties of the Russian Federation..."

The changes became law in 2018 and provide severe penalties for organised poaching, a major element of environmental crime in the region:

The criminal acts... committed by an organised group, are punished by imprisonment for a term of six to nine years with a fine in the amount of one million five hundred thousand to three million rubles....

These changes are aimed at increasing penalties for illegal activities related to poaching and are expected to curb its negative impact.



Marine plastic pollution in the Arctic

Our year started looking into how ocean currents bring pollution from all over the world into the Arctic. There is concern that because of the way these currents work, the Arctic Ocean is becoming a “sink” for marine litter. Plastic debris is now found in all Arctic waters – along the coasts, on the surface, in the water column and on the sea floor. It is even being released from sea ice as climate change melts the Arctic’s frozen cover.



Scientists studying Arctic coast and waters, as well as the people who live in the region, have been warning for some time about the rapidly increasing amounts of plastic waste reaching the Arctic. But where is it coming from? GRID-Arendal produced a map to help answer this question. The map is another step on the way to understanding the source of the problem in the Arctic.

The effect of plastics in Arctic environment is on the agenda of the Arctic Council which includes eight Arctic states and six Indigenous Peoples Organizations. Through its Protection of the Arctic Marine Environment (PAME) Working Group, it has focussed on the need to gather knowledge on this new environmental threat in the region. This information will help the Arctic Council explore the development of a regional action plan on marine litter and microplastics.

As part of this effort, GRID-Arendal contributed substantially to the development of the Desktop Study on Marine Litter including Microplastics in the Arctic where the knowledge available in scientific papers and reports has been compiled. GRID-Arendal has been in charge of preparing the Literature Summary Review for the study. The review compiles and analyses the literature on sources, drivers, pathways, distribution, ecological

and socio-economic impacts of marine litter in the Arctic. It includes information on solutions and actions aimed at reducing and monitoring marine plastic pollution. The draft text of this literature review was the basis of a seminar organized by PAME in Akureyri, Iceland, in May and includes a series of graphics to visualise its findings.

In another development, GRID-Arendal and the University of Tromsø, both members of the University of the Arctic, took the initiative to develop a new Thematic Network on Arctic Plastic Pollution which will foster the cooperation and knowledge exchange between academics in the Arctic.

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Although the final PAME desktop study will be launched at the Arctic Council ministerial meeting in May 2019, the methodology and work carried out by GRID-Arendal is already gaining recognition. It has been acknowledged as a valuable contribution to the work on marine litter by UN Environment, and possibilities to apply the same approach elsewhere in other regional seas are being explored. In this way, GRID-Arendal’s Arctic work will have a global application and benefit.

Marine litter – research, not talking trash

Despite the fact that there is a lot of research going on and new papers are being released almost every day, the issue of plastics in the marine environment is often blown out of proportion or misconstrued. One consequence of this is that there are a number of myths in wide circulation about the problem of plastic in the ocean, and what it means to the environment and human health. In order to deal effectively with the problem of plastic pollution – or any other environmental challenge – we need facts, not myths or scare stories.

To help people sort out fact from fiction GRID-Arendal launched “Marine Litter – Debunking Fake News”. The aim was to bring forward the research from which many of these statements originated, and to clarify their degree of accuracy. The website was launched by the Norwegian Government on World Environment Day and debunks 10 common myths, including that 90% of plastics comes from 10 rivers, that a huge trash island exists in the middle of the Pacific Ocean and – most important – “there is nothing I can do” about the problem. The website was well received and stirred considerable discussion.

The contamination of marine litter has also reached mangrove forests around the world. Many are becoming inundated by this pollution, threatening ecosystem health and the benefits they provide. GRID-Arendal produced a story map presenting the results from a survey of 24 mangroves sites conducted in 12 countries. Information

gathered included the general status and overall trend of mangrove health, impacts of pollution as well as local use and management.

Finally, GRID-Arendal continues to work with SALT Lofoten AS to develop a coastal marine litter accumulation mapping tool called the Marine Debris Action Planner (MDAP) which was developed and tested in the Lofoten archipelago and surrounding areas. The model will help us better understand how geographic variables such as the slope, curvature of the coastline, wind direction and human maritime and land-based activities, among others, are driving the accumulation of litter along the coast. The knowledge compiled through the PAME desktop study and this model will be also used in a project recently funded by the Norwegian Research Council and led by Akvaplan-NIVA focussed on “Mapping marine litter in the Norwegian and Russian Arctic Seas”.



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Three of the five most frequently downloaded papers in the Journal Marine Policy are on marine plastic pollution. Two out these three were co-authored by GRID-Arendal – one on marine plastic pollution and planetary boundaries and the other on the land-based plastic waste issue in Africa.

Sanitation and wastewater in Africa

Africa's slow pace in meeting sanitation targets calls for practical and transformative solutions in the management of wastewater and provision of sanitation services. Such solutions will help to boost public health and secure the sustainability of Africa's natural resources. They can also trigger wiser investments in integrated wastewater management and provide employment opportunities, while ensuring the integrity of water resources and water-based ecosystems.

The situation is urgent because the continent's rapid population growth and urbanisation rates lead to rising waste production levels. At the same time, industrialisation and the effects of climate change accentuate the problems.

GRID-Arendal is working with the African Development Bank and other partners to raise awareness about the sanitation and wastewater situation. Preparation of the first draft of the Sanitation and Wastewater Atlas was a key task last year. The atlas's nine chapters were put together by a team of authors from across Africa who met in April in Kigali, Rwanda, to review chapter outlines and identify overlaps and gaps. A significant outcome of

the workshop was the recommendation that a chapter on Rural Water and Sanitation be added. The Atlas is expected to be published in 2019.

Wastewater and sanitation issues in Africa continued to be monitored and publicised through a series of news articles published last year. Stories ranging from green technologies for wastewater treatment, to dangers of off-site sanitation facilities especially to women, to Africa's challenge with open defecation were published. A series of policy briefs focused on institutional arrangements, as well as funding mechanisms for sanitation provision and wastewater management in Africa. Both the articles and policy briefs are useful in awareness raising.

GRID-Arendal also produced a Story Map on Sanitation Provision in Africa which was won an award from ESRI, the company that produces the story map software, in its infrastructure, planning and government category. According to ESRI, the winners in this category were "The best story maps to display the systems that underpin modern society and inform constituents about the nature and scope of the infrastructure being managed". The GRID-Arendal story map also generated interest from media and communication scholars.

Olivia Rempel, a multimedia journalist from the University of Berkeley Graduate School of Journalism, used some of the material in the Story Map to produce a documentary on sanitation and wastewater in Africa.

The project's preliminary findings continue to be disseminated through important events such as the Stockholm World Water Week. A paper titled "The Value of Green Water Management in Sub-Saharan Africa: A Review", written by Clever Mafuta and published in the Journal of Contemporary Water Research and Education Issue 165, was presented at the 2017 Stockholm World Water Week in December 2018

IMPACT

In the Infrastructure, Planning, and Government category, ESRI recognised the Norwegian foundation GRID-Arendal as first-place winner for a compelling story about Sanitation and Wastewater in Africa.



IW:LEARN

GRID-Arendal continues to support projects of the Global Environment Facility's (GEF) International Waters portfolio through IW:LEARN (International Waters: Learning Exchange and Resource Network). The network was established to strengthen transboundary water management around the globe by collecting and sharing best practices, lessons learned and innovative solutions to common problems. It promotes learning among project managers, country officials, implementing agencies and other partners.



In addition to building and maintaining a new website for IW:LEARN, GRID-Arendal has developed a website toolkit which allows partners to easily create websites for their new projects. Work also continues on refining the IW:LEARN Spatial Lab, a unique visualisation tool to allows users to discover GEF International Waters activities around the world.

As part of its support to projects, GRID produces Synthesis Reports and Experience Notes. The Synthesis Report From Source to Sea: Protecting Our Oceans through Partnerships and Investments was produced for UN Environment for release at the Sixth GEF Assembly in June 2018. The report highlights the role that the GEF International Waters focal area has had over in

assisting countries implement actions towards meeting the objectives of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities.

The Ninth International Waters Conference (IWC9), a biennial event for training and experience sharing among International Waters projects, was held in Marrakech, Morocco in November 2018. GRID-Arendal had a strong presence at the IWC9, hosting a booth to promote the services available through IW:LEARN, conducting video interviews with selected projects, running a clinic on the IW:LEARN web and visualisation toolkits, and conducting a communications workshop to help projects promote their achievements using different media.

Moving mountains (onto the agenda)

Mountain nations have always faced the challenge of speaking with one voice on the international stage, as opposed to Small Island Developing States. The problem stems from the fact that most countries with mountains are not fully “mountainous”. For many countries, mountains form just a small part of their territory, although few realise how important that fraction may be for water and food supply.

The problem also exists at the regional level where just a handful of mechanisms exist to promote cooperation among mountainous countries. After all, why should you collaborate if you think you have nothing in common? Yet international cooperation between mountain regions is vital because climate hazards and challenges often extend beyond national borders.

Five years ago, GRID-Arendal and UN Environment started collaborating on a series of Mountain Adaptation Outlooks. The purpose of these assessments was to strengthen regional cooperation for adaptation to climate change by identifying the shared impacts and risks to sectors and people, and to find relevant policy solutions between countries within the same mountain region.

Fast-forward to 2018. We have now produced eight reports in the series, each focusing on an important mountain region: Tropical Andes, East Africa, Carpathians, Western Balkans, South Caucasus, Central Asia, Hindu Kush Himalayan. Last but not least, a Synthesis Report summarises the findings from these regions. Both the Hindu Kush Himalayan and the Synthesis Outlooks were launched on International Mountain Day (11 December) during United Nations Convention on Climate Change negotiations in Katowice, Poland.

Have these reports gathered dust on shelves?

Definitely not.

IMPACT

In 2017 in Bogotá, Colombia Argentina, Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela agreed on a strategic agenda for regional cooperation on climate change adaptation in the Andes Mountains.

The Strategic Agenda highlights common priorities and consensus in the region. This includes a broad approach to adaptation to climate change, which addresses socioeconomic vulnerability, ecosystem protection and strengthening of governance structures for effective and fair adaptation. It also includes 10 objectives, each of which includes a list of concrete measures.



Over the past four years, UN Environment has been engaging with governments, using these reports as a basis for spurring collaboration. Some of the spin-offs include projects on the ground, ranging from strengthening the capacity of municipalities in the South Caucasus countries of Azerbaijan and Georgia, to a new project called “Vanishing Treasures”, which will focus on conserving three mountain flagship species – the mountain gorilla, snow leopard, and Royal Bengal tiger – also with GRID-Arendal’s participation.

Perhaps the greatest success so far has been in the Tropical Andes where, with the help of UN Environment, governments have taken the unprecedented step of adopting a Strategic Agenda on Climate Change under the Andean Mountain Initiative. The Strategic Agenda, which is based on the recommendations of the Adaptation Outlook for the Tropical Andes, is a tool for governments in the region to work together on adaptation to climate change. The first draft of the Agenda was based directly on the recommendations of the Outlook. In 2018, the countries met in Quito to present their progress on implementing the Strategic Agenda.

Another reason for this area gaining importance lies in the fact that UNESCO is also focusing on climate change effects on water resources in the Andes. UNESCO and GRID-Arendal produced the Andean Glacier and Water Atlas last year. This important publication highlights the current trends in glacier melt and implications for downstream communities throughout the Andes. The publication was launched in Paris in October and at the climate change meetings in Katowice in December.

GRID-Arendal in numbers

Our team

Our international team of experts include

29 employees

and **2** fulltime consultants

representing **19** nationalities

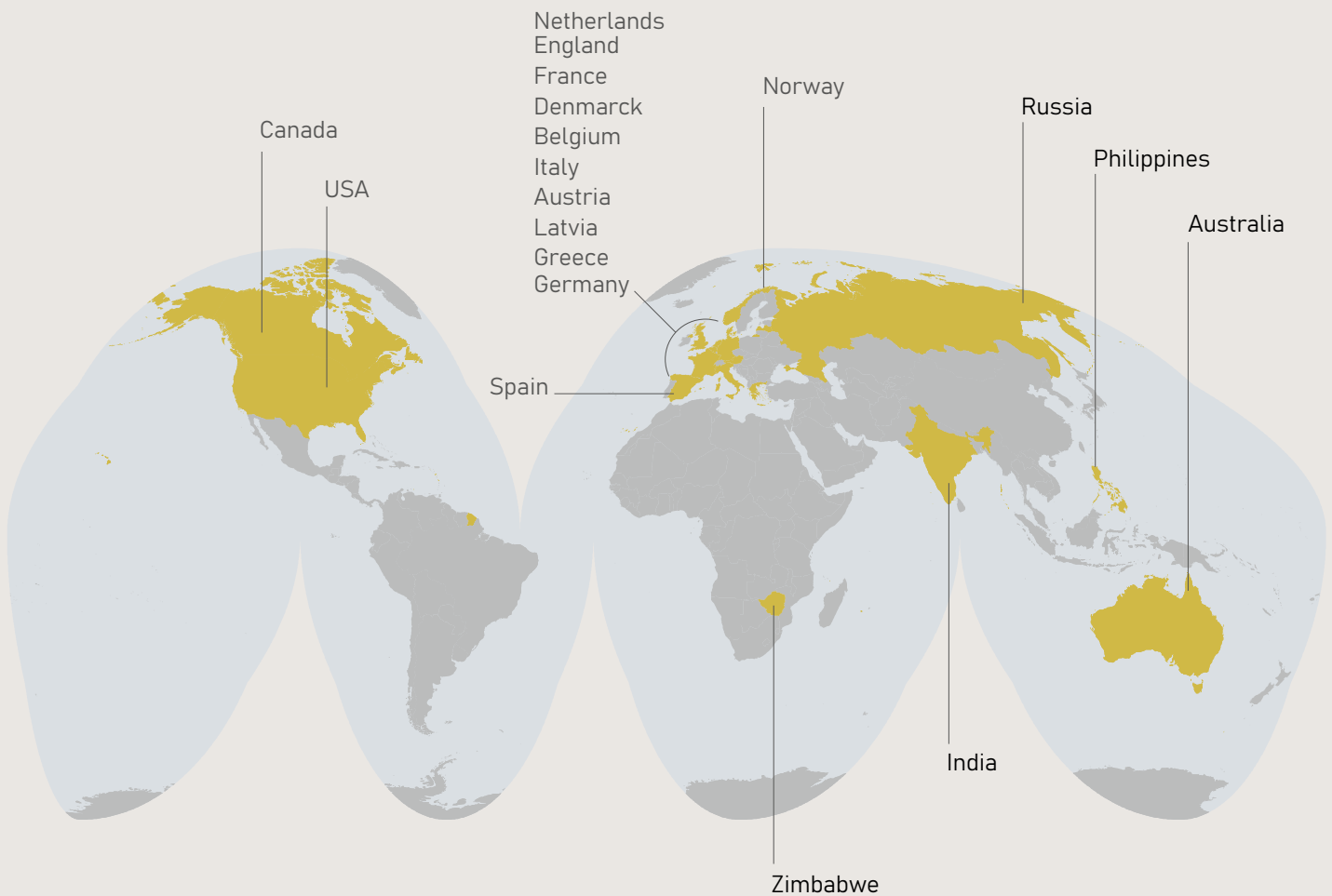
across **5** continents.

We hosted **4** interns

and **1** fullbright scholar.

16 women and **18** men

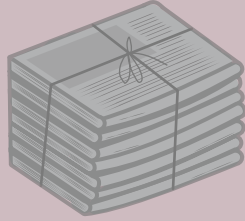
Countries our staff are from



We managed more than **50** projects and worked with more than **300** partners around the world.

Our publications

65 news stories

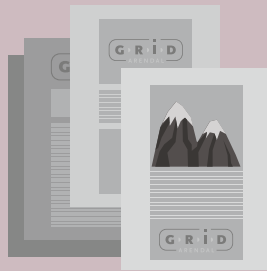


6 story maps

2 of which won awards



9 reports



1 atlas, the Andean Glacier and Water Atlas

in 2 languages

english

spanish



Our website



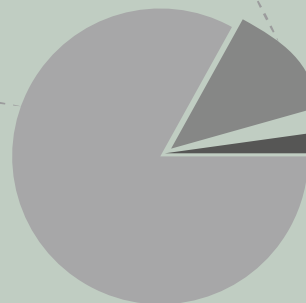
Our media presence

Followers on our key social media channels reached a total of

6,600

We were cited 3,140 times in social media
The main platform was **twitter**

We were mentioned in 558 editorial sources



in English, French, Spanish, Norwegian ...

and in 83 public documents



@ArendalGRID



@GRIDArendal



@gridarendal

prepared by Alyne Spencer Goncalves

Outreach

UN Environment Assembly

GRID-Arendal hosted four successful events during the Third Session of the UN Environmental Assembly (UNEA3).

1. The launch of two new Story Maps: “Marine Pollution and Biodiversity in the Ocean” and “Plastic forests? Assessing the impact of pollution on the world’s mangrove forests”.
2. UN Environment, the Canadian International Resources and Development Institute (CIRDI) and GRID-Arendal presented Taking Action to Reduce Pollution in the Extractive Sector.
3. A closed meeting called “No time to waste for mountains”, organized by GRID-Arendal, UN Environment, the Environment Ministry of Austria, the Government of Luxembourg and International Climbing and Mountaineering Federation (UIAA).
4. GRID-Arendal and the Global Partnership of Marine Litter organized a breakfast event on marine litter and microplastics called “Beat #marinelitter – does international governance get it?”. The event was hosted by the Norwegian Ministry of Climate and Environment.

Managing Director receives medal

Peter Harris, GRID-Arendal’s Managing Director, became the first Australian to be awarded the Francis P. Shepard Medal for Marine Geology from the Society for Sedimentary Geology. The medal has been awarded every year since 1967 to scientists “who have a sustained record of outstanding research contributions to Marine Geology.” Harris received the award because of significant contributions he has made in a number of areas over the last 25 years. He has carried out pioneering work on tide-dominated coastal and shelf deposits, the sedimentary records of the Antarctic glaciation and of Antarctic bottom water formation and the geomorphology of ocean basins, especially submarine canyons.

Before coming to GRID-Arendal Harris served as the head of Geoscience Australia’s Antarctic and marine and coastal environment programmes. He has published over 120 peer-reviewed articles and book chapters, documenting different aspects of the Australian and Antarctic continental margins. As a contribution to global marine science, Harris completed a seafloor geomorphic features map in 2014 (after compiling the first nation-scale version).

Arctic Frontiers

During Arctic Frontiers 2018, GRID-Arendal hosted three successful events:

1. “Frozen Plastic” – a panel debate on marine litter in the Arctic environment.
2. Can the Arctic Council model work for the Hindu Kush Himalayas? – a discussion exploring the potential for cooperation between the Arctic and the Hindu Kush Himalayas.
3. A meeting on reindeer herding with participants from the Yak and reindeer herders from the Himalayas and Scandinavia to discuss challenges and identify possible areas of collaboration.

Kveldsmat

GRID-Arendal, Innoventi, UN City Arendal and Batfish created a concept for an event series, called Kveldsmat, designed to focus on creating awareness on the UN Sustainable Development Goals (SDG). The first event took place on 12 March and explored SGD 4 (quality education). The series aims to inform the residents of Arendal and the Agder region about the SDGs and regional initiatives supporting them.



UN Environment Assembly



Internasjonalt Marked

Researcher Svanaug Lunde from University of Stavanger talked about “playful learning” and how it supports development of young children. The event was announced at NRK Radio Sør and covered in an article published by Arendals Tidende in March 17. The event was well attended with an audience representing kindergarten and primary school staff and university researchers within the field of education. The feedback was positive and we are happy to see that the event series is well-received in our local community. All events will be recorded and will be made accessible to the public.

Grønn Dag, 26 May

GRID-Arendal, in collaboration with Arendal Kommune and Klimapartnere, organized Grønn dag (Green Day), a local event started in 2017 to promote awareness on sustainable living among individuals and families in the local community. More than 20 organizations and businesses took part in demonstrating green solutions. In conjunction with this event and in support of UN Environment’s campaign Beat Plastic Pollution, an exhibition of more than 100 children’s paintings on the

theme “Stopp plastmonsteret” was held at the Arendal Library. A member of the Communications team also delivered a presentation about marine litter.

Arendal Internasjonale Marked, 16-17 June

GRID-Arendal provided communications support to the 25th anniversary celebration of Internasjonalt Marked in Arendal. Video messages were produced and disseminated to promote the event which resulted in high visibility and reach in our social media channels.

Internasjonale Dager

Since 2006, GRID-Arendal has taken part in the annual celebration of Internasjonale Dager in Arendal. It is a week-long event in late October that features seminars, exhibitions, panel discussions, movie screenings and other activities targeting students and other audiences to create awareness on the chosen theme of the celebration, to facilitate dialogue and to promote action. Internasjonale Dager 2018 featured 12 events focusing on issues related to the UN Sustainable Development Goals to promote awareness about the importance of these goals.



Internasjonale Dager



Arendalsuka

Arendalsuka

GRID-Arendal has taken part in Arendalsuka since 2013 and this year the week-long event was bigger than ever before. GRID-Arendal organized seven events attended by more than a thousand people. Our events covered a wide range of topics including marine litter, blue forests, the shift to clean technologies and sustainable development in the Arctic.

UN Day

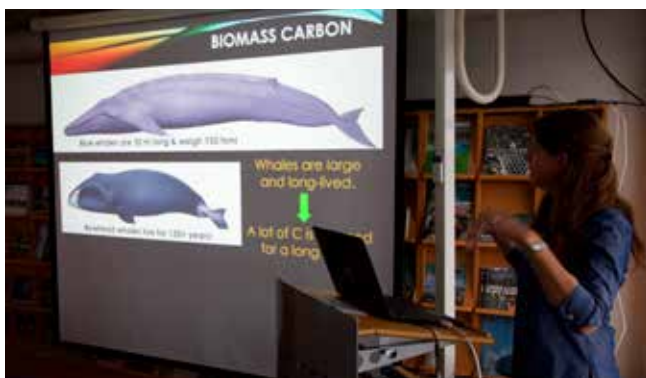
UN organizations in Norway organized a seminar and panel discussion on the challenges and opportunities of international migration in the Nordic region on 24 October at Litteraturhuset in Oslo. Speakers included: Anne Cathrine da Silva, Secretary-General of the UN Association Norway; Torkil Åmland, State Secretary for the Minister of Justice, Public Security and Immigration; Henrik M. Nordentoft, Representative of the UNHCR Regional Representation for Northern Europe; Louis Hoffman, Head of Recovery and Transition, International Organization for Migration (IOM); Sarah Lister, Director of UNDP Oslo Governance Center; and Gro Lindstad, Executive Director of FOKUS – Forum for Women and Development.

Children's International Press Centre Climate Change Summit

GRID-Arendal hosted 17 high school students from several European countries in a Climate Change Summit for youth organized by the Children's International Press Centre in Arendal in September. The students met with our experts and attended a seminar on the role whales and other sea life play in climate change.

Collaboration with Trefoldighetskirken

GRID-Arendal contributed two articles to the newsletter of Trefoldighetskirken's parish. The first article, Vår felles miljøutfordring was featured in the 3rd issue of the newsletter published in September 2018. The article focussed on the work of GRID-Arendal and the important role partnerships play in tackling today's environmental challenges. The second article, Gradvis håp, was published in the 4th issue of the newsletter in November 2018. It focussed on the need to think about climate change and other environmental challenges; understand that our decisions will make a difference in the future; and maintain a sense of hope to inspire collective action. The original, English versions of the articles were written by John Crump, Senior Science Writer.



Children's International Press Centre Climate Change Summit

Publications

Reports

Alfthan, B., Gjerdi, H.L., Puikkonen, L., Andresen, M., Semernya, L., Schoolmeester, T. and Jurek, M. (2018). Mountain Adaptation Outlook Series – Synthesis Report. Nairobi, Vienna, and Arendal: UN Environment and GRID-Arendal. www.unenvironment.org, www.grida.no.

Alfthan, B., Gupta, N., Gjerdi, H.L., Schoolmeester, T., Andresen, M., Jurek, M., and Agrawal, N.K. (2018). Outlook on climate change adaptation in the Hindu Kush Himalaya. Mountain Adaptation Outlook Series. Vienna, Arendal and Kathmandu: UN Environment, GRID-Arendal and the International Centre for Integrated Mountain Development. www.unep.org, www.grida.no, www.icimod.org.

Deltares, A., Alfthan, B., Danks, F., Andresen, M., Jurek, M., Kurvits, T., Bonn, A., Mantel, M. and Westerveld, L. (2018). Synthesis Study on Integration of EO Data/Tools in Decision Making. Ecopotential.

GRID-Arendal (2018). Connect: GRID-Arendal Annual Report 2017. Arendal: GRID-Arendal.

GRID-Arendal (2018). GRID-Arendal Strategic Plan 2018-2021. Arendal: GRID-Arendal.

ICIMOD, CICERO and GRID-Arendal (2018). Adaptation in the Himalayas: Knowledge, Action and Results: Highlights from the Himalayan Climate Change Adaptation Programme (HICAP), 2012– 2017. Kathmandu: HICAP.

Potouroglou, M. and Davis, J. (2018). Communicating Ecosystem-Based Management. Nairobi and Arendal: UN Environment and GRID-Arendal.

Schoolmeester, T., Johansen, K.S., Alfthan, B., Baker, E., Hespings, M. and Verbist, K. (2018). The Andean Glacier and Water Atlas: The Impact of Glacier Retreat on Water Resources. UNESCO and GRID-Arendal.

Schoolmeester, T., Johansen, K.S., Alfthan, B., Baker, E., Hespings, M. y Verbist, K., 2018. Atlas de Glaciares y Aguas Andinos: El impacto del retroceso de los glaciares sobre los recursos hídricos. UNESCO y GRID-Arendal.

GEF, IW:LEARN, UN Environment and GPA (2019). From Source to Sea: Protecting our Ocean through Partnership and Investment. Arendal: GRID-Arendal.

Story Maps

Ager-Wick, E., Westerveld, L. Weltzien, F-A, Mayer, I., Crump, J. and Barnes, R. (2018). R. Fitter Fish for Stocking Purposes – Report from a H2020 MSCA ITN project (IMPRESS). Arendal: GRID-Arendal.

Alfthan, B., Westerveld, L. and Drakou, V. (2018). Protecting Marine Mammals in Crowded Waters. Arendal: GRID-Arendal.

Johansen, K., Westerveld, L., Schneider, L., Bhakta, D. Weber, H., Kuris, M., Veidemane, K. and Remmelgas, L. (2018). Eutrophication in the Baltic Sea. Arendal: GRID-Arendal and Baltic Environmental Forum

Lutz, S., Pearson, H., Vatter, J. and Bhakta, D. (2018). Oceanic Blue Carbon. Arendal: GRID-Arendal.

Mafuta, C., Westerveld, L., Barnes, R. and Plummer, L. (2018). Sanitation and Wastewater in Africa. Arendal: GRID-Arendal.

Villanueva, A., Vatter, J. Bhakta, D., and Lutz, S. (2018) Plastic Forests. Arendal: GRID-Arendal.

Web sites

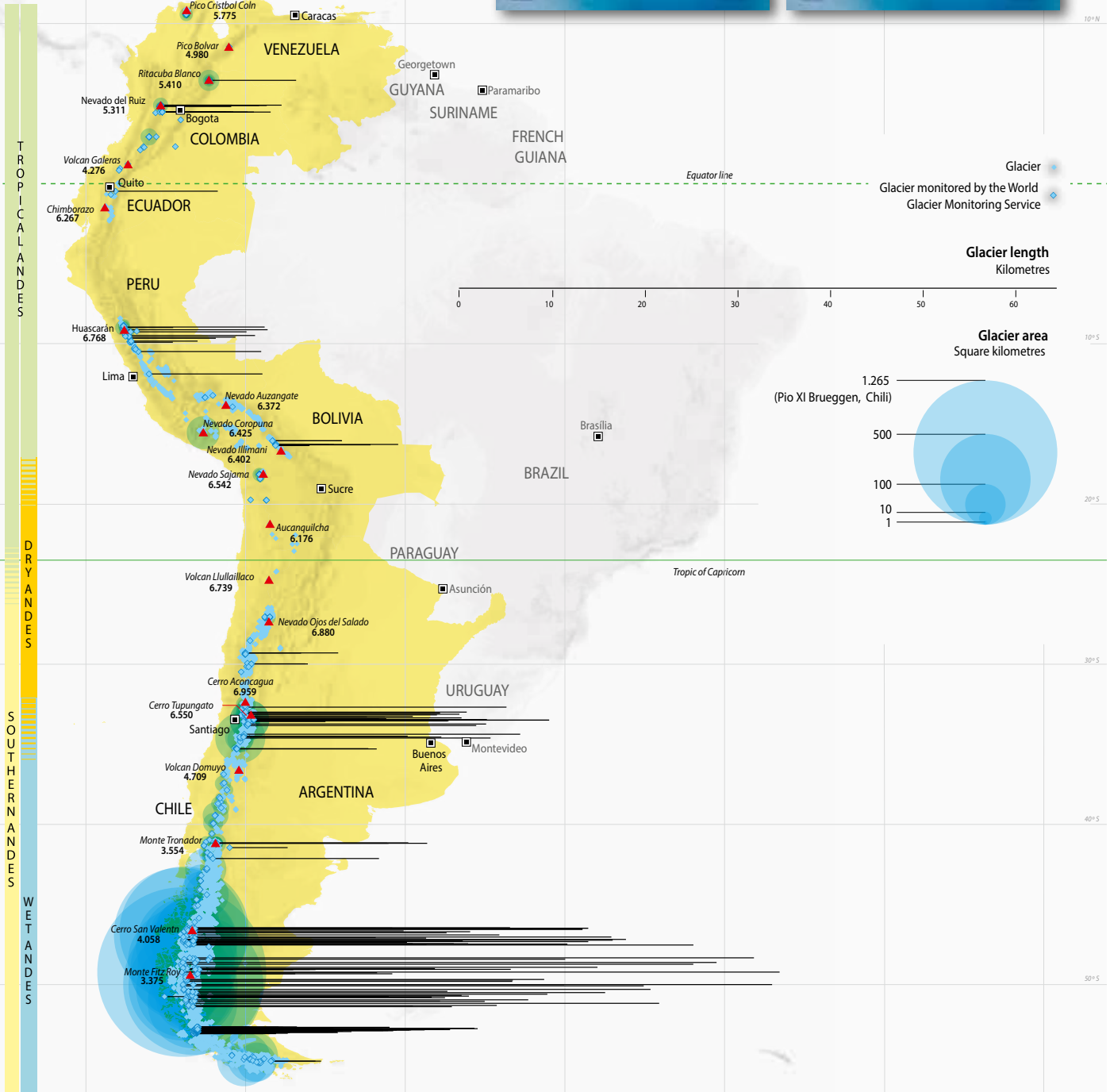
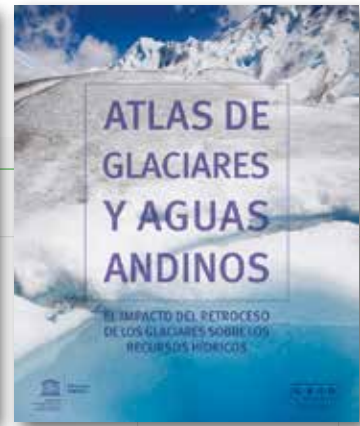
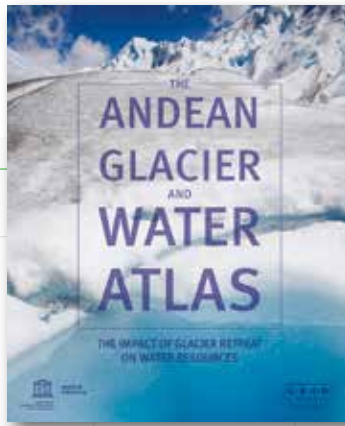
Ecosystem services assessment Toolkit: (toolkit.grida.no)

Stop Talking Trash about Marine Litter: Debunking the Myths about Plastic Debris in our Ocean (www.marinelitter.no)

Watch-IT: Inspection Tool App (www.grida.no/publications/397)



Glaciers in the Andes



Source: World Glacier Monitoring Service database, accessed February 2018.

Board report

GRID-Arendal is a foundation established by the Norwegian Ministry of Environment in 1989 to support the work of United Nations Environment Programme (now called UN Environment). The foundation produces environmental information, communications and services to build capacity in environmental management and motivate decision-makers to take sustainable actions.

The Foundation conducted its activities in 2018 in line with its bylaws, approved budgets and work plan approved by the Ministry of Foreign Affairs. Its reports and websites describe the activities of the different programs and the results achieved.

2018 has been financially satisfactory with healthy operations, leading to a surplus of NOK 187,014 which will be added to last year's equity, creating a new equity balance of NOK 11,010,156.

In 2018 GRID-Arendal's NOK 15,000,000 grant from the Ministry of Foreign Affairs was administered by Norad. The grant is based upon an agreement signed in 2017 covering the two years 2017-2018.

GRID-Arendal's environmental policy is based on the foundation's "green" values and commitment to operate in an environmentally responsible and resource efficient manner. Employee flights constitute the largest category for environmental impact. As compensation, GRID-Arendal is investing in emission credits to finance concrete climate action in developing countries. GRID-Arendal is a certified Miljøfyrtårn (environmental) organization and member of Climate Partners (Klimapartnere). We have our offices in an environmentally friendly building with good energy solutions.

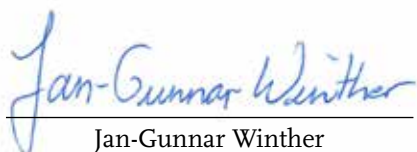
Working conditions at GRID-Arendal are considered very good. Long term sick leave in 2018 amounted to 2.15 % of total working days, while short-term sick leave was 1.51%. There were no injuries to staff in 2018, and there was no significant damage to the equipment of the organization. We strive to reduce stress, improve teamwork and collaboration through efficient communication through the organization's Work Environment Committee. GRID-Arendal offices have ergonomic furniture for all employees.

At the end of 2018, the Board consisted of 8 board members, 4 women and 4 men. The staff consisted of 14 women and 19, including two persons temporary employed. GRID-Arendal aims to be a workplace where there is full equality between women and men. It has incorporated provisions aimed at preventing gender discrimination in matters such as salary, promotion and recruitment, and conducts annual employee surveys, which include attempts to capture the differences between the sexes.


Project funding is satisfactory, activity levels are high and the Board is therefore optimistic about the outlook for 2019. The Board welcomes in particular the substantial increase in funding from Norad in 2019 that has been indicated. The Board concludes that GRID-Arendal's activities are consistent with its mandate and that it has a competent staff for continuing operations and for planning further strategy-relevant operational activities in the future.

The financial statements are based on the assumptions of continued operations, as the Board is aware of no factors that indicate otherwise. The Board considers the financial statements to give a true and fair view of assets and liabilities, financial position and results. There were no events in the past year that had special impact on GRID-Arendal's development or position.

Arendal, 27.05.2019



Jan-Gunnar Winther
Chair



Randi Eidsmo Reinertsen
Deputy Chair



Peter Townsend Harris
Managing Director



Karoline Andaur



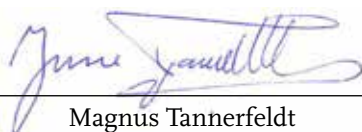
Nils Audun Karbø



Colin Daniel Martin



Beate Nossum



Magnus Tannerfeldt



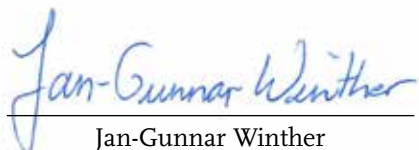
Kathrine Ivsett Johnsen
Staff Representative

Financial report

Balance sheet (NoK)

| Assets | Note | 2018 | 2017 |
|-------------------------------------|------|-------------------|-------------------|
| <i>Fixed assets</i> | | | |
| Equipment and other movables | 4 | 76 062 | 0 |
| Investments in subsidiaries | 8 | 15 012 000 | 13 012 000 |
| Total fixed assets | | 15 088 062 | 13 012 000 |
| <i>Current assets</i> | | | |
| <i>Debtors</i> | | | |
| Accounts receivables | | 4 034 716 | 1 386 607 |
| Other short-term receivables | | 3 494 880 | 1 040 730 |
| Total receivables | | 7 529 596 | 2 427 337 |
| Cash and bank deposits | 6 | 13 261 358 | 21 774 406 |
| Total current assets | | 20 790 954 | 24 201 742 |
| Total assets | | 35 879 015 | 37 213 742 |
| Equity and liabilities | | | |
| <i>Equity</i> | | | |
| Basic capital | | 500 000 | 500 000 |
| Other equity | | 10 510 156 | 10 323 142 |
| Total equity | 7 | 11 010 156 | 10 823 142 |
| <i>Current liabilities</i> | | | |
| Trade creditors | | 2 473 981 | 2 301 751 |
| Public duties payable | | 1 584 852 | 1 278 689 |
| Other current debt | 5 | 20 810 026 | 22 810 161 |
| Total liabilities | | 24 868 859 | 26 390 600 |
| Total equity and liabilities | | 35 879 015 | 37 213 742 |

Arendal, 27.05.2019



Jan-Gunnar Winther
Chair



Randi Eidsmo Reinertsen
Deputy Chair



Peter Townsend Harris
Managing Director



Karoline Andaur




Nils Audun Karbø



Colin Daniel Martin



Beate Nossu



Magnus Tannerfeldt



Kathrine Ivsett Johnsen
Staff Representative

Income statement (NoK)

| Operating income and operating expenses | Note | 2018 | 2017 |
|---|------|------------|------------|
| Operating income | | 53 045 773 | 44 933 262 |
| Project expenses | | 12 692 521 | 7 126 913 |
| Personnel expenses | 2,3 | 26 820 751 | 24 569 170 |
| Depreciation of operating and intangible assets | 4 | 18 360 | 0 |
| Other operating expenses | 2 | 13 699 564 | 12 536 757 |
| Operating expenses | | 53 231 196 | 44 232 840 |
| Operating profit | | -185 423 | 700 422 |
| <i>Financial income and expenses</i> | | | |
| Interest income | | 112 211 | 24 789 |
| Other financial income | | 1 181 400 | 1 280 141 |
| Interest expenses | | 376 656 | 492 094 |
| Other financial expenses | | 544 518 | 1 539 071 |
| Net financial income and expenses | 7 | 372 437 | -258 930 |
| Ordinary result | | 187 014 | 441 491 |
| Annual net profit | | 187 014 | 441 491 |
| <i>Brought forward</i> | | | |
| Net brought forward | | 187 014 | 441 491 |

Note 1

Accounting principles

The annual accounts have been prepared in conformity with the Accounting Act, Foundations Act and NRS 8 - Good accounting practice for small companies.

Operating revenues

Income from the sale of services are posted to income as they are delivered.

Cost recognition/matching

Costs are expended in the same period as the income to which they relate is recognised. Cost that cannot be directly to income are expensed as incurred.

Classification and valuation of fixed assets

Fixed assets include assets included for long-term ownership and use. Fixed assets are valued at acquisition cost. Property, plant and equipment are entered in the balance sheet and depreciated over the asset's economic lifetime..

Classification and valuation of current assets

Current assets and short-term liabilities normally include items that fall due for payment within one year

of the balance sheet date, as well as items that relate to the stock cycle. Current assets are valued at the lower of acquisition cost and fair value.

Shares in subsidiaries

Subsidiaries are valued using the cost method in the company accounts. The investment is valued at acquisition cost for the shares unless a write-down has been necessary. A write-down to fair value is made when a fall in value is due to reasons that cannot be expected to be temporary and such write-down must be considered as necessary in accordance with good accounting practice. Write-downs are reversed when the basis for the write-down is no longer present.

Receivables

Receivables from customers and other receivables are entered at par value after deducting a provision for expected losses. The provision for losses is made on the basis of an individual assessment of the respective receivables.

Foreign currency

Monetary foreign currency items are valued at the exchange rate on the balance sheet date.

Pension liabilities

Pension schemes financed through insured schemes are not entered on the balance sheet. The pension premium is treated in these cases as a pension cost and classified together with wage costs.

Note 2

Salary costs and benefits, remuneration to the chief executive, board and auditor (NoK)

| Salary cost | 2018 | 2017 |
|----------------|-------------------|-------------------|
| Salaries | 19 865 277 | 16 940 526 |
| Employment tax | 3 020 963 | 2 871 873 |
| Pension costs | 2 215 626 | 2 118 157 |
| Other benefits | 1 718 884 | 2 638 614 |
| Total | 26 820 750 | 24 569 170 |

In 2018 the company employed 28 man-years.

Pension liabilities

The company is liable to maintain an occupational pension scheme under the Mandatory Occupational Pensions Act. The company's pension schemes satisfy the requirements of this Act.

Remuneration to leading personnel (NoK)

| Remuneration | Chief Executive | Board |
|--------------------|------------------|----------------|
| Salaries | 996 872 | 154 500 |
| Other remuneration | 18 199 | 0 |
| Total | 1 015 071 | 154 500 |

Auditor

Audit fees expensed for 2018 amount to 52 200. In addition there is a fee for other services of NOK 54 700.

Note 3

Defined-contribution pensions

Contributions expensed amounted to NOK 2 215 626 in 2018 and the premium is charged to the personnel costs.

Note 4

Fixed assets (NoK)

+ Inflow purchased fixed assets
= **Acquisition cost 31.12.18**
Accumulated depreciation 31.12.18
= **Book value 31.12.18**
This year's ordinary depreciations

Note 5

Inter-company balances between companies in the same group

As of 31.12.2018 Stiftelsen Grid-Arendal has a debt of NOK 10 500 000 to Teaterplassen AS. The interest rate is equal to the market rate.

Note 6

Bank depositss

The amount on the tax withholding account (restrivted funds) at year end are NOK 976 441.

Note 7

Equity capital (NOK)

| Equity capital | Basic | Other | Total |
|---------------------|---------|------------|------------|
| As at 01.01.2018 | 500 000 | 10 323 142 | 10 823 142 |
| Result for the year | | 187 014 | 187 014 |
| As at 31.12.2018 | 500 000 | 10 510 156 | 11 010 156 |

Note 8

Subsidiaries (NOK)

Teaterplassen AS

| | |
|-------------------------|------------|
| Municipality | Arendal |
| Owners share | 94,3% |
| Purchase cost | 15 012 000 |
| Brought to balance val. | 15 012 000 |
| Equity | 22 301 782 |
| Profit | 630 279 |



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To the Board of Directors of Stiftelsen Grid-Arendal

Independent Auditor's Report

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Stiftelsen Grid-Arendal showing a profit of NOK 187 014. The financial statements comprise the balance sheet as at 31 December 2018, income statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements are prepared in accordance with law and regulations and give a true and fair view of the financial position of the Foundation as at 31 December 2018, and its financial performance for the year then ended in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway.

Basis for Opinion

We conducted our audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Foundation as required by laws and regulations, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. The other information comprises information in the annual report, except the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director (management) are responsible for the preparation in accordance with law and regulations, including fair presentation of the financial statements in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Foundation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern. The financial statements use the going concern basis of accounting insofar as it is not likely that the enterprise will cease operations.

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Statsautoriserede revisorer - medlemmer av Den norske Revisorforening

Offices in:

| | | | |
|---------|--------------|--------------|-----------|
| Oslo | Elverum | Mo i Rana | Stord |
| Alta | Finnsnes | Molde | Straume |
| Arendal | Hamar | Skien | Tromsø |
| Bergen | Haugesund | Sandefjord | Trondheim |
| Bodø | Knarvik | Sandnessjøen | Tynset |
| Drammen | Kristiansand | Stavanger | Ålesund |

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error. We design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundation's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Foundation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Foundation to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

Opinion on the Board of Director's Report

Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report concerning the financial statements, the going concern assumption and the proposed allocation of result is consistent with the financial statements and complies with the law and regulations.

Opinion on Registration and Documentation

Based on our audit of the financial statements as described above, and control procedures we have considered necessary in accordance with the International Standard on Assurance Engagements (*ISAE*) 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, it is our opinion that management has fulfilled its duty to produce a proper and clearly set out registration and documentation of the Foundation's accounting information in accordance with the law and the bookkeeping standards and practices generally accepted in Norway.

Opinion on Distribution and Governance

Based on our audit of the financial statements as described above, and control procedures we have considered necessary in accordance with the International Standard on Assurance Engagements (ISAE) 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, it is our opinion that the Foundation is governed and distributions are made in accordance with the law, the Foundation's purpose and the articles of association.

Arendal, 27 May 2019
KPMG AS

Ragnar Fosse
State Authorised Public Accountant

Note: This translation from Norwegian has been prepared for information purposes only.

Notes

1. Quoted in Standard Times, 25 October 2018, pg 8.
2. The Standard, 25 October 2018.
3. The 21 countries on the African Atlantic coast from Mauretania to South Africa.
4. The University of Sydney, Geoscience Australia, The Secretariat of the Pacific Community, The Australian Attorney Generals Department, The Pacific Forum Fisheries Agency and the Commonwealth Secretariat
5. UNESCO, UNICEF, UNDP, FN-Sambandet, Forum for Women and Development, International Organization for Migration and GRID-Arendal

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