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# ENVIRONMENT CONFLICT AND COOPERATION

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## Focus: Climate Diplomacy

### ➤ Wanted! Institutional Home to Tackle Climate-Induced Displacement!

by Dennis Tänzler, adelphi

### ➤ Keynote: the Security Implications of Climate Change in Fragile States

by Stéphane Dion, Minister of Foreign Affairs, Canada

## Regional Highlights

### North America

### ➤ Disaster Risk Reduction: a Task for Military, Intelligence and Diplomacy?

Interview with Chad Briggs, Global Interconnections and American University in Kosovo

### Asia

### ➤ Is India Ready for a Leadership Role in Times of Environmental Change?

by Dhansree Jayaram, Manipal Advanced Research Group (MARG), Manipal University

### Europe

### ➤ Russia after Paris: Green Light to International Dialogue on Low-Carbon Development

by Julia Melnikova, adelphi

## Topics

### Technology & Innovation

### ➤ The European Innovation Imperative: Closing the Innovation Gap

by Johannes Ackva, Emilie Magdalinski, Benjamin Pohl, adelphi, and Dominic Roser, University of Oxford

### Minerals and Mining

### ➤ Climate Change and Mining: a Foreign Policy Perspective

by Lukas Rüttinger, adelphi

## Tools

### Upcoming Events

### ➤ Business & Climate Summit 2016

### ➤ Resilient Cities

### ➤ High-Level Political Forum on Sustainable Development

### Publications and Resources

### ➤ Factbook News

### ➤ European Climate Policy after Paris

### ➤ Climate Change & Security in South Asia

### ➤ The Great Water Grab

### ➤ Global Report on Internal Displacement (GRID)

### ➤ Protecting People Through Nature

### ➤ Climate, Development, Growth: Opportunities for Foreign Policy

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# Wanted! Institutional Home to Tackle Climate-Induced Displacement!

by Dennis Tänzler, adelphi

The landmark decision on a new climate agreement in Paris in December 2015 is a major step in preventing dangerous climate change. How dangerous climate change could be is indicated by the [Global Report on Internal Displacement 2016](#), just published by the [Internal Displacement Monitoring Centre \(IDMC\)](#). According to the report, 19.2 million new displacements in 2015 can be associated with disasters in 113 countries across all regions of the world. Of course, only part of these events, such as floods, storms, wildfires, landslides or extreme temperatures may be influenced by a changing climate. Others, like earthquakes and volcanic eruptions, are not. However, looking at concrete events that are relevant in the context of climate change, the impacts reveal the dangerous potential of a rise in the greenhouse gas concentration in the atmosphere:

- Two major flood and storm events in India were responsible for 81 per cent of the displacement, forcing three million people to flee their homes
- Three large scale typhoons and a flood disaster triggered a combined 2.2 million displaced people or 75 percent of the total displacement in China in 2015
- Seasonal floods in Malawi displaced the majority of the 343,000 people who fled their homes in 2015, and caused widespread damage to agriculture.

*“The history of climate negotiations is not poor in examples when it comes to institutional innovations which can guide the more formal administrative questions.”*

Policymakers, civil society representatives and experts have been discussing for quite some time how to address the challenges of climate induced displacement, not least as part of the climate change architecture. From a legal, political and scientific perspective this is a challenging task due to the complex cause-and-effect relationship.



Photo by United Nations / Flickr.com

Against this backdrop, the [decision text to the Paris Agreement](#) may have opened the door for an institutional framework pertaining to this challenge: The Paris Conference of the Parties (COP) asked for the establishment of a task force to develop recommendations for further action. More concretely, the aim is to ensure integrated approaches that help “to avert, minimize and address displacement related to the adverse impacts of climate change.” The main body to guide this process is the [Executive Committee](#) of the [Warsaw International Mechanism](#), which plays the ball into the field of the loss and damage debate within the climate negotiations. However, there is some reason to align it with the processes of adaptation planning in order to really move the discussion to the field of implementation.

This brings us to core questions on how to design an institutional framework and what partners to involve? The current discussions of and with the Executive Committee are devoted to the mandate, scope of activity and the development of a work plan, among others. The history of climate negotiations is not poor in examples when it comes to institutional innovations, including task forces, which can guide the more formal administrative questions. Moreover, it will be important to involve the right partners within and beyond the UNFCCC family. If the climate regime

wants to offer meaningful and sustainable responses to the climate-displacement nexus, close collaboration with those institutions reaching out to the implementation level by offering guidance and financial support is imperative. In this regard, the Adaptation Committee and the Least Developed Countries Expert Group have been important players in the past. The activities of the [Green Climate Fund](#), also directed towards resilience building and transformative change, can be a game changer as well. One of the key questions in this context will be how the design of a climate change related programme or project needs to be adjusted to appropriately address the displacement challenge(s). Most likely, specific guidance needs to be developed to inform programming and planning processes such as the [National Adaptation Plan process \(NAPs\)](#).

In addition, there are quite a number of institutions and initiatives that can offer meaningful advice to ensure an integrated approach. Apart from the more obvious UN and inter-governmental organizations such as the [UNHCR](#) and the [International Organisation for Migration](#), knowledge

hubs have already been established, such as the [Global Knowledge Partnership on Migration and Development \(KNOMAD\)](#) or the [Environmental Migration Portal](#). An important bridge to regional experience can also be offered

“One of the key questions in this context will be how the design of a climate change related programme or project needs to be adjusted to appropriately address the displacement challenge(s).”

by the follow up process of the [Nansen Initiative](#). Though the initiative put a stronger focus on displacement caused by disasters than by climate change in 2014 and 2015, the idea to develop a “protection agenda” based on numerous consultation rounds at a regional and global level created an inclusive process that is awaiting the next steps. The Task Force likely to be established in the second half of 2016 can benefit from these already existing approaches but also needs to prove how activities at the programme or project level can help avoiding or managing displacement trends.

#### Focus: Climate Diplomacy

## Keynote: the Security Implications of Climate Change in Fragile States

by Stéphane Dion, Minister of Foreign Affairs, Canada

March 30, 2016 - Ottawa, Ontario

Ladies and gentlemen, to speak in front of you about climate change as a risk amplifier for security is quite a challenge. After all, you are among the best experts that the United States and Canada have produced on this crucial issue. So I will not pretend to teach you anything; my objective is rather to reassure you that as a minister, I am fully seized with how critical the topic of this conference is for humankind.

Critical? Certainly. But how many people really know? For most, conflict and unrest have nothing to do with climate change. Yet look at the facts.

Five years ago, when hundreds of thousands of [Egyptians](#) filled Tahrir Square during the Arab Spring, they were not

shouting “climate change.” They shouted “down with injustice, corruption and poverty.” But the motto on the square was “bread, freedom, social equality.”

Bread. It accounts for almost 40 percent of the Egyptian diet. And food accounts for roughly 40 percent of Egyptians’ household budget. With serious land and water scarcity issues, the country cannot produce enough wheat for domestic demand. Egypt is the world’s largest wheat importer.

In the winter of 2010 and 2011, China – the world’s second-largest wheat producer – was struck by a “once-in-a-century” drought. At the same time, wheat production in Russia, Ukraine, Australia, Pakistan and Canada also fell dramatically due to drought, wildfires, floods and abnormal weather.

With global wheat supplies down and protectionist mea-



suers up, the Egyptian government failed to balance its massive subsidies, and market prices shot up. At the time of the uprisings in early 2011, food prices had increased by 20 percent, and 40 million Egyptians—about half of the population—were receiving food rations.

Or look at Syria. The 2007-2010 drought in Syria was the worst drought on record, causing widespread crop failure and a mass migration of farming families to urban centres. A United Nations Development Programme report found that nearly 75 percent of farmers in northeastern Syria experienced total crop failure and herders lost 85 percent of their livestock. Another United Nations report found that more than 800,000 Syrians lost their entire livelihoods as a result of the droughts.

“Climate change did not cause the Syrian civil war; climate change did not cause the Arab Spring; climate change did not cause the Egyptian uprising. The cause of the political turmoil was multi-faceted, with a democratic deficit playing the leading role. But climate change amplified the risks.”

This environmental disaster and resultant migration put significant strain on Syria’s economically and water-stressed cities. Displaced farmers had to compete for jobs, housing and services.

Egypt, Syria, the list goes on: 14 of the world’s 33 most water-stressed countries are in the Middle East and North Africa.

Climate change did not cause the [Syrian civil war](#); climate change did not cause the Arab Spring; climate change did not cause the Egyptian uprising. The cause of the political turmoil was multi-faceted, with a democratic deficit playing the leading role. But climate change amplified the risks. It exacerbates droughts and other disruptive natural phenomena. It is undeniable that the food prices spike had a catalytic effect in Egypt, and we know that climate change will render this kind of situation more salient and more frequent.

Climate change is a risk amplifier for security, indeed.



Photo by Brandon McKay /Flickr.com

A recent G7 report called [A New Climate for Peace](#), identifies seven ways in which climate change plays a role as a risk multiplier in fragile states. Let me sum them up in my own way.

First, increased risk of conflicts over natural resources. Our high commissioner to Kenya, David Angell, was recently in Virunga National Park in eastern Democratic Republic of Congo with the UN Environment Programme executive director. There, he encountered first-hand the competing and often violent actions of armed groups, including even the state and local businesses—all of them vying for control of scarce climate-related resources, such as hydroelectric power generation and forest conservation.

[Somalia](#) is also a case in point. As a result of frequent droughts, civil war and disrupted livelihoods, pastoralist communities in Somalia increasingly turn to charcoal production as an alternative source of income. Charcoal production in Somalia not only causes significant deforestation, environmental degradation and communal conflict, it also provides steady revenues for rebel groups, such as al-Shabaab, which control the distribution of this resource. Yet, at a recent international summit on Somalia that I attended in Istanbul, potential permanent lack of water as a cause of tension was hardly mentioned.

Second, increased risk of migration crises. Fragile states are disproportionately dependent on natural resources for their livelihood, and climate change can change the calculus of how people survive, forcing them to consider migration as a coping tool. Migration in turn creates new challenges.

Third, natural disasters are a particular risk to fragile and conflict-affected states. Between 1980 and 2011, natural disasters are estimated to have caused over 3.3 million deaths and cost more than \$1.2 trillion. A state's capacity to reduce or respond to natural disasters can be the difference between peace and violence.

Fourth, climate change is highly likely to decrease yields and disrupt food production on a planet with a population approaching eight billion people.

Fifth, water management disputes. Historically, **water disputes** are resolved diplomatically. In fact, through mediation they have proven to be a source of peace- and confidence-building. However, that may change because most water agreements fall short on dealing with climate challenges such as flood management, water flow and volume for hydro generation, agriculture and human consumption.

Sixth, rising sea levels. There is a heightened risk of sea-level rise and coastal degradation, further increasing migration and the disruption of livelihoods and the economy, and contaminating freshwater along the coasts. Some 147 to 216 million people live on land that will be below sea level or regular flood levels by the end of the century.

**“Addressing climate change in fragile states requires us to move out of our professional comfort zones, the silos within which we each often work, and focus on truly interagency, cross-sectoral and multilateral efforts.”**

Finally, to add to all of this, the unintended negative consequences of some climate policies and programs. A classic example is addressing water shortages through irrigation improvements, to the disadvantage of communities downstream, without a keen attention to a conflict-sensitive approach.

Climate change will not create these conflicts, but it is very likely to multiply them.

We need action. And **action in an integrated way**. Addressing climate change in fragile states requires us to move out of our professional comfort zones, the silos within which we each often work, and focus on truly interagency, cross-

sectoral and multilateral efforts.

And this is true for ministers as well. Prime Minister Justin Trudeau has asked all his ministers to work together on this issue, not only the environment and climate change minister, the Honourable Catherine McKenna, but also the international development minister, the defence minister, the public safety minister, the foreign affairs minister and in fact, the whole cabinet.



Photo by European Commission DG ECHO /Flickr.com

This holistic approach is what we need within our countries, but also between countries. We cannot work in isolation. When they met in Washington, Prime Minister Trudeau and President Barack Obama recognized the particular impact of climate change on countries already dealing with conflict and fragility. The leaders committed to addressing the intersection of climate change and security as an issue for foreign, defence and development policies.

That is the right approach. That is the way for developed countries to engage fragile states on adapting to climate change now, before they fall into chaos and become failed states. As the rest of the world marches forward with adapting to climate change, we should not leave fragile states behind.

I am convinced that Canada has a lot to offer and must do more. We have world-class expertise on water management issues because of our work with our American neighbours. We could share that expertise throughout the world.

Canada also has experience in climate risk insurance. There are too many countries that don't have access to insurance against natural disasters. At the COP21 UN Climate Change Conference in Paris last December, countries contributed to the **G7 Initiative on Climate Risk Insurance**.

Canada also has a good reputation in effective conflict mediation and prevention and in ensuring that women have a prominent role. We should use this expertise to address climate-related natural resource disputes before they happen.

In conclusion, the day when climate change is as mainstream for security experts as arms control is, as the evolution of interest rates is for economists, as the weather is for farmers, then we will be much better equipped to meet our objectives.

But we are not there yet. We will be there when a world summit on Somalia appreciates and recognizes the role that climate change, the lack of water and other environmental stresses play in exacerbating security conditions. We will be there when economists fully factor in the impacts of the

prolonged droughts in California when they are speculating on the rate of economic growth in North America.

Let me finish by quoting Wangari Muta Maathai, who became in 2004 the first African woman to receive the Nobel Peace Prize for her contribution to sustainable development, democracy and peace. At that time she stated that “in a few decades, the relationship between the environment, resources and conflict may seem almost as obvious as the connection we see today between human rights, democracy and peace.”

That decade is upon us now.

Thank you.

The address was originally delivered at the *Climate Change and Security: Fragile State Conference*.

## Regional Highlights: North America

# Disaster Risk Reduction: a Task for Military, Intelligence and Diplomacy?

Interview with Chad Briggs, Global Interconnections and American University in Kosovo

Chad Briggs, Strategy Director of Global Interconnections and lecturer at the American University in Kosovo, spoke with ECC about the role of diplomacy as well as that of the intelligence and military communities in reducing disaster risk and vulnerability.

ECC: How can we obtain an accurate assessment of environmental risks?

Chad Briggs: There is a red line between doing the assessment and prescribing policy, meaning that the intelligence community, which was one of the first groups in the US to address climate change and climate security, could give warnings but was not responsible for giving policy prescriptions. I think that is a useful distinction because often, if people want to be influential in policy, they may water down the warnings because they want to make sure there is a clear link between what they are warning and what they are able to accomplish. However, looking only at the most



Photo by adelphi, screenshot

likely scenarios, we end up underestimating the risks. The reason for that is that we base most probabilities on historical records, but we are now outside of the historical records. We have shifted the boundary conditions of environmental systems, we find that disasters are now coming up that have never occurred before.

What is the role of military and intelligence communities in an appropriate response to climate change and environmental risks?

What the intelligence and military communities can do is give a very realistic assessment of the vulnerable points and the critical nodes in the system. We need to focus on those critical nodes. We also need to be able to identify the early-warning signals. Specifically for disasters, two types of those can be defined: discrete disasters that require traditional responses (e.g. typhoon in the Philippines, which leads to the responsibility of the US to send in the 3rd Marine Expeditionary Unit) and **complex disasters**, in which multiple things happen simultaneously. For the latter, we need to ensure that our allies are not overwhelmed by these issues and have the confidence that they will get assistance. It is also crucial to work in advance.

What precautionary measures can be taken to reduce disaster risk and what are the specific tasks of diplomacy?

The projects that the **US Pacific Command** has worked on for years are a good example. The aim of these projects is to do disaster scenarios in advance and invite all countries from across the Pacific to work together so that ahead of time all parties know who has the capabilities to respond

in case of a disaster. Those discussions in advance not only help increase disaster response capabilities but they also have diplomatic benefits of countries talking to one another about technical issues. Climate security is not only about coping with destabilisation and conflicts. If we start

“Climate security is not only about coping with destabilisation and conflicts. If we start acting ahead of time, we can create dialogue and form the structures and networks that can help prevent the conflicts.”

acting ahead of time, we can create dialogue and form the structures and networks that can help prevent the conflicts. Important things can be done in advance to strengthen governance (e.g. signing transboundary water agreements, agreements for intervention in airfield use, etc.). Only the diplomatic corps or related agencies can do this. The military may have a role in warning about what might happen in the future and advise on the actions needed, but the confidence-building and the formation of diplomatic networks are the tasks of other agencies, such as the Foreign Ministries, the US State Department and so forth.

Please [watch the video interview with Chad Briggs](#) as well as talks with other experts on our [Video Platform](#).

## Regional Highlights: Asia

# Is India Ready for a Leadership Role in Times of Environmental Change?

by Dhanasree Jayaram, Manipal Advanced Research Group (MARG), Manipal University

India, as one of the world's most vulnerable countries to environmental change, is at the undeniable centre of various discourses relating to the impact of environmental changes on human security and conflicts driven, or exacerbated by the exploitation of natural resources. India also has the potential to promote stability and peace through sustainable development and environmental cooperation. Integral to adelphi's project – “**Environment, Conflict and Cooperation**” (ECC) – these issues have been dealt with at length on numerous occasions and on a host of platforms. As the **ECC exhibition** travelled to Manipal University, the primary focus has been to examine the realities on the ground and

to integrate these into the larger national and international frameworks of climate diplomacy and environmental governance.

## The Inevitability of Water Conflicts

The drought-stricken **Marathwada** region of Maharashtra has yet again become a talking point with the inevitability of a “humanitarian crisis” unfolding in its villages. Four successive droughts have demonstrated two things. First, the role of resource scarcities (caused in part by environmental change) in exacerbating conflicts; and second, the need for



building resilience and exploring ways to achieve a transition to sustainable natural resource management. In this case mainly that of water, as observed by [Ulka Kelkar](#).

Water scarcity, being an existential threat, is caused by multiple factors – physical, economic, institutional and so on. In India's case, pollution is one of the biggest drivers of water scarcity. Rapid economic growth and growing population have put severe stress on Indian rivers, which are losing their self-purification abilities.

Cleaning the Ganges is part of India's diplomatic outreach to other countries, with [Israel](#), [Germany](#), [Japan](#) and a few others extending their cooperation in this endeavour. Measures including regulating the discharge of all pollutants into the river, increasing investments to set up waste water treatment plants across towns and villages of India, and strengthening the waste water treatment systems in places where they already exist are at the top of the government's priority list. It goes without saying that much more is required in order to prevent Indian rivers from complete degeneration.

### Fulfilling Energy Transition Goals

Energy is another component that lies at the focal point of India's climate diplomacy. As the international community underscores the need to build strategies to enhance energy security in order to prepare vulnerable populations, India simultaneously needs to equip the country's engineers and energy managers with practical education and technical level training. Indeed, this is possibly the only way in which India could make some headway in the gradual yet inevitable shift towards greener forms of energy.

**“India's top leadership realises that it cannot afford to go alone and that its role in the international environmental order is crucial”**

By choosing solar energy as the cornerstone of its policy for a low-carbon economy and a greener future, the Modi government has again made clear its commitment towards heralding a change in India's energy strategy, previously plagued by an over-dependence on fossil fuels. As a matter of fact, a point remarked by [Siddhartha](#), “the pressure to increase its energy supplies, combined with the consequent



Photo by Manipal University

negative environmental impact of fossil fuels, has led India to explore the potential of renewable energy sources to meet its energy demands, sustain economic growth and achieve human development objectives”.

### Socio-Economically Appropriate Climate Policies

Another point which shouldn't be overlooked is that the implementation of any climate change policy should take into consideration its risk of conflict generation as well. This becomes even more relevant in the case of climate diplomacy initiatives – when two or more countries engage in cooperative frameworks. They would not only be expected to understand each other's national requirements, but also to be able to penetrate societies on the ground in a positive manner. This is crucial in countries such as India, where governance is not centralised and environmental decision-making and implementation is carried out at all levels – national, state and local.

Any such policy has to be integrated with other general policies governing the social, financial and economic sectors of the particular country. As [Amarnatha Shetty](#), asserts, “Standalone environmental policy is incapable of bringing a comprehensive change in the system. Formulation of any policy has to deal with the issues concerning economic feasibility, social acceptability and technological capability vis-à-vis environmental benefits to the targeted social group, lest it remain only on the paper.” This is applicable in all cases, whether it is to promote climate friendly agricultural practices or to adopt green building technology or to popularise a low carbon economic development strategy.



### From 'Spoiler' to 'Conciliator' to 'Leader'

One of the most exploited and oft-used labels to characterise India is that of a 'spoiler' at major international forums like the climate change negotiations. This has begun to change slowly. In fact one of the points that was underscored during the course of the exhibition-related lecture series was that there has been a visible fundamental change in India's attitude. The new government under Modi's leadership is making efforts to work with the rest of the international community with a constant emphasis on commonalities. India's top leadership realises that it cannot afford to go alone and that its role in the international environmental order is crucial.

The country has to play a major role in promoting not only sustainable economic development but also sustainable lifestyle, so the international community's focus does not solely lie on cutting down fossil fuel consumption. India must adopt a **two-pronged approach** towards climate diplomacy – first, through bilateral partnerships (such as in clean coal, solar and wind) and second, through a global facilitation mechanism and network, by which countries with less

diplomatic clout could advance their climate policy without affecting their national interest.

From a conciliator, India now has to make the next big leap towards becoming a 'leader'; and for this, India has to create agencies of positive transformation in the global environmental order by exploring both micro and macro perspec-

**"From a conciliator, India now has to make the next big leap towards becoming a leader."**

tives on environmental change. As the famous saying goes, "Lead change from within yourself and you will change everything." This is the path that India also needs to espouse in order to become a global leader in climate and environmental policy.

**Acknowledgement** – The author duly acknowledges inputs from Ramu C. M., a scholar of geopolitics and international relations, India.

Disclaimer: The views expressed in this article are personal.

To read the full version of the article, please follow the [link](#).

### Regional Highlights: Europe

## Russia after Paris: Green Light to International Dialogue on Low-Carbon Development

by Julia Melnikova, adelphi

Intensive international cooperation is a key prerequisite for successful and ambitious global climate action. Russia, one of the world's **top 5 greenhouse gas emitters** and **the second largest producer of crude oil and natural gas**, has long been regarded as one of the major veto players in international climate politics. Nevertheless, during the last decade climate awareness among Russian policymakers and other relevant stakeholders has increased dramatically. This is illustrated by the fact that the updated **Strategy of National Security** of the Russian Federation refers to climate change as a threat to national and public security. The Paris Agreement gave the Russian climate policy a strong new impetus.

At present, Russia's climate action is guided primarily by the

government's action plan on mitigation, which was issued in 2014. According to the plan, first priority areas include the establishment of an MRV system at the corporate level, the assessment of emissions reduction potentials as well as the choice of the most suitable mitigation instruments. Although the current objective to reduce greenhouse gases by at least 25% below 1990 levels by 2020 and by 25-30% by 2030 is considered to be fairly moderate in terms of ambition, important decisions regarding emissions management have intentionally been delayed until the period after 2017, when the MRV system is to be completed. Over the course of the next two years, Russia will develop the economic model for managing emissions and modify the relevant legislation.

Although these high-level political signals are encouraging, national climate policies are largely formed as a result of bottom-up processes. This occurs at multiple levels, involving a wide range of stakeholders, such as business actors, academia, civil society and subnational authorities. In Russia, think tanks, businesses and federal subjects are taking their first steps in bringing the economy onto a low-carbon development path. In particular, in 2015, the **Climate Partnership of Russia** was launched comprising 11 large enterprises favouring green development, increased carbon transparency and the introduction of market-based instruments that would stimulate technology modernisation.

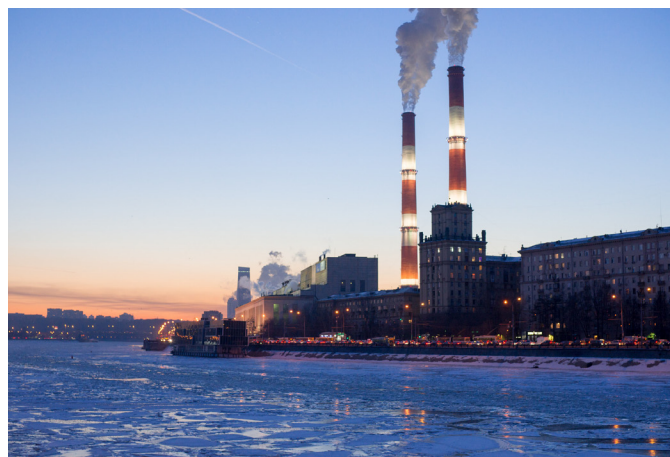


Photo by kishjar?/ flickr.com

Along with the business community, several pioneer regions and municipalities are developing climate-friendly strategies and adopting concrete measures. For instance, projects on sustainable transport have been realised in the Republic of Tatarstan and Kaliningrad, several federal subjects have adopted climate change mitigation and sustainable development strategies and action plans; Saint Petersburg prepared the first regional adaptation strategy. Sustainable forest management is being promoted in Altai Krai, whereas other federal subjects are enhancing the use of renewable energy (e.g. solar plants in Belgorod Oblast, Republic of Bashkortostan, Sakha Republic).

**“In Russia, low-carbon development is increasingly seen as an attractive opportunity for modernising the economy by introducing energy-efficient technologies and further innovations.”**

Notwithstanding the progress made, there is still an urgent need for strengthening the Russian climate change agenda. Thus far, Russia has not adopted a national strategy of low-carbon development. Private actors and subnational entities lack comprehensive understanding of what measures are most feasible and beneficial to follow a low-emission path. Limited institutional, technological and legal capacities are only some of the problems faced by the actors, together with insufficient experience in introducing climate-friendly policy instruments. Many of the problems mentioned can be solved by means of intensifying bilateral and multilateral cooperation in climate diplomacy. Here are some important aspects for Russia's international partners to consider:

- **Modernisation of the economy is a key policy priority.** In Russia, low-carbon development is increasingly seen as an attractive opportunity for modernising the economy by introducing energy-efficient technologies and further innovations. As one of the most energy-intensive countries in the world, Russia has a special interest in modernising its economy in order to maintain its competitiveness. As early as 2008, the government set a target to reduce energy intensity by 40% of 2007 levels by 2020. In 2014, however, support for energy-efficiency programmes was substantially cut due to economic stagnation. Nevertheless, the country is still interested in projects that aim to enhance technological modernisation and increase energy efficiency.
- **Knowledge transfer is crucial for low-carbon development in Russia.** International experience shows that knowledge transfer is especially valuable for the development of climate policy instruments, such as emissions trading systems. In spite of the huge potential for cooperation on climate and low-carbon development, the number of existing bilateral projects and programmes in these spheres involving Russia is extremely low. The situation is exacerbated by political sanctions, which have resulted in a de-facto termination of many bilateral contacts. It is, however, essential to restore dialogue and support the green transformation of the Russian economy by encouraging knowledge transfer and exchange.
- **Civil society actors are key strategic dialogue partners.** Civil society organisations such as the **National Carbon Sequestration Foundation** or **ECOPOLIS** occupy an

important niche in the formation of Russian climate policy. They inform the law-making process, keep track of the fulfilment of Russia's international commitments, engage in resource mobilisation and raise climate awareness. They are also key strategic dialogue partners, as they have strong ties to other relevant stakeholders including the business community and regional actors.

- Providing support for already launched initiatives is essential. Significant progress has already been made and it is highly important to support the existing initiatives and prevent current developments from stagnating. What is more, many of the initiatives are open and willing to cooperate with international partners. This applies, for instance, to the businesses comprising the Climate Partnership of Russia and the influential business association "Delovaya Rossiya" ("Business Russia") that unites small and medium-sized enterprises

from more than 40 sectors. Supporting progress at the regional level is also vital, because instruments adopted by the regions can have a bottom-up effect and be a source of knowledge and experience both for the neighbouring regions and the federal level.

There has never been a more suitable and strategically important moment to cooperate with Russia on climate change and low-carbon development. What can be observed now is a reverse tendency towards freezing international ties with Russia. Cutting cooperation, especially in the areas of investment and technology, can, however, result in the loss of all the progress made so far. Intensive international collaboration can, on the contrary, reinforce the decarbonisation of the Russian economy. Taking into consideration the aspects mentioned above will ensure that cooperation is fruitful and strategically focused.

#### Topics: Technology & Innovation

## The European Energy Innovation Imperative: Closing the Innovation Gap

by Johannes Ackva, Emilie Magdalinski, Benjamin Pohl, adelphi, and Dominic Roser, University of Oxford

On **June 3rd 2016**, the European Union joined six of its Member States and 14 other countries – including China and the United States – and became the 21st member of **Mission Innovation**, an initiative of governments committing to double their clean energy research budgets over the next five years. This, we argue in this short version of a **longer essay**, is a vitally important first step of taking Europe's energy innovation imperative more seriously.

The **energy innovation imperative**, accelerating the clean energy revolution through strengthened innovation policy, should be a central guiding principle for European policy makers seeking to close the staggering ambition gap in the Paris Agreement. The argument substantiating this recommendation has three steps:

I. Europe's historical responsibility and the magnitude of the ambition gap imply a focus on global, not European decarbonisation



Photo © by European Union, 2016

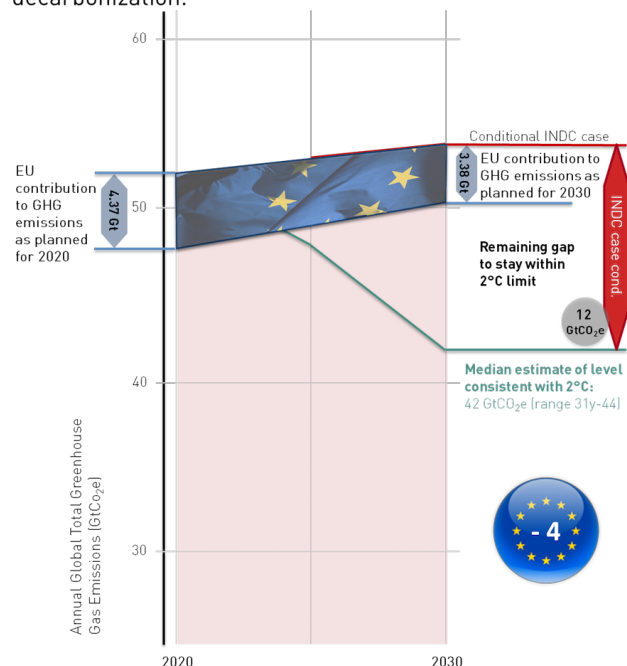
The main result of the Paris Agreement is the ambition to limit global warming to significantly below 2 °C. The collective national commitments (INDCs), however, are a far cry from what is needed to achieve this goal. Assuming optimistically that countries will indeed implement their INDCs in the conditional version by 2030, there will still be a



huge gap – about 12 GtCO<sub>2</sub>e per year – to the 2°C emission trajectory. Even decarbonising Europe entirely would be far from sufficient to close the ambition gap. Indeed, to close the emissions gap in 2030 one would need almost four Europes less.

### Four Europes less would close the ambition gap

That's why European energy policy should focus on global decarbonization.



Sources: UNEP 2015; European Environment Agency 2015 ; UNFCCC.

Figure 1: Four Europes less would close the ambition gap

This basic fact, illustrated in Figure 1, should make one point abundantly clear: Our ethical responsibility for curbing emissions, motivated **either by past emissions and/or our capability to invest in mitigation**, should lead us to focus our effort on those policies that best advance global decarbonisation, not merely Europe's. This is a practical point but also a deeply ethical one: While there are no convincing **ethical arguments** why bearing historical responsibility implies a focus on local decarbonisation, the ethical imperative to **minimise the negative consequences** of climate change strongly suggests a focus on global decarbonisation when designing European energy policy.

Bluntly put: There are no brownie points for successfully decarbonising Europe when humanity fails at global decarbonisation. We thus need to ask: What are the best ways in which Europe can make global decarbonisation more likely?

## II. The ambition gap in global decarbonisation requires closing the energy innovation gap

To answer this question, we need to understand the **drivers of historical and current decarbonisations**. The most **significant decarbonisations in OECD countries** between 1971-2006 that were not the result of economic change were the French and Swedish decarbonisations of the electricity sector in the 1970s driven by oil price shocks. Recently, the declining cost of wind and solar has driven decarbonisation efforts beyond those countries where it was massively supported by policy.

In those countries – such as **Germany, South Korea** and the **US** – where massive deployment subsidies created the economies of scale and incremental innovation responsible for cost declines, climate policy was one driver among many, with anti-nuclear sentiment and stimulus spending being other dominant national motivations. In contrast, the Kyoto Protocol and subsequent efforts to set internationally binding targets and compel countries through climate arguments alone have had little if any effect on decarbonisation.

The importance of **incentivising climate mitigation and adaptation has been recognised in climate finance and European climate policy**. Yet, it is not supported by European energy policy choices focusing on global decarbonisation potentials. Even if there is more climate ambition in the future, the availability of superior technological alternatives will make the politics and economics of international climate policy significantly easier.

Yet, **technological progress is too slow and incremental**. The decarbonisation of the electricity sector – generally considered easier than decarbonising other sectors – is still lagging behind and is hindered by storage costs that make renewables, even when competitive for electricity generation, uncompetitive at the **level of the energy system** (as expressed by the levelised cost of electricity (LCOE)). Moreover, as most recently demonstrated in an article in Nature Energy titled **"Solar power needs a more ambitious cost target,"** renewables still need to get continuously cheaper because each additional unit of renewable energy in a specific location creates less additional value since it will mostly generate electricity when it is not scarce (**value deflation**). Importantly, advanced solar and storage technologies **will not necessarily be advanced by current market participants**

since such technologies draw on new materials, which is not in the interest of existing firms heavily invested into supply chains and manufacturing infrastructure for silicon solar and lithium-batteries.

Research into other decisive technologies, such as carbon capture (followed by utilisation or storage; CCUS) is still heavily underfunded (EUR 1.3 billion provided by EU policies so far), despite this technology having the largest expected returns across low-carbon RD&D opportunities and the fact that the cost of climate mitigation without CC(U)S would increase by EUR 1.2 trillion for Europe and double globally – making successful climate mitigation appear a distant and unlikely prospect.

Figure 2 schematically summarises the preceding discussion on the global energy innovation gap by highlighting five central challenges:

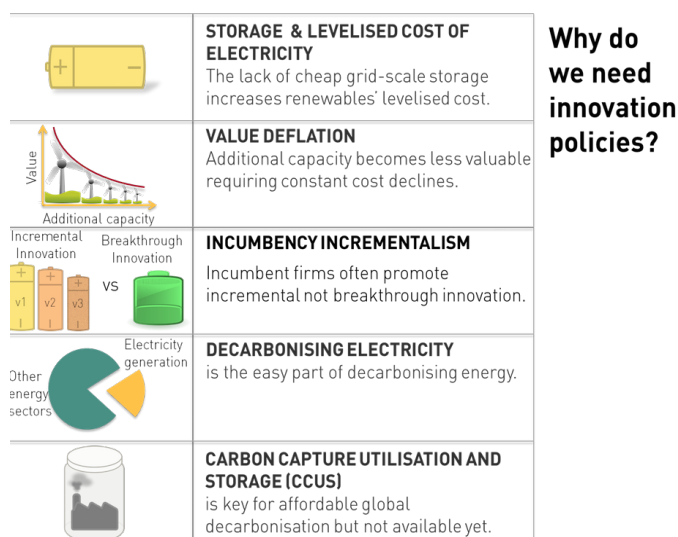


Figure 2: Five Energy Innovation Challenges

Despite a lot of progress, there is thus a tremendous energy innovation gap that hinders global decarbonisation. Furthermore, we are **not on a trajectory** where closing this gap is just a matter of time and business-as-usual. Instead, it appears that energy innovation is systematically neglected despite comparatively low costs and its necessity for global decarbonisation. It is this innovation gap we should close to enable the closing of the ambition gap.

III. Europe can and should do much more to close the energy innovation gap through dedicated innovation policy

While the EU and its Member States have some of the most  
Newsletter Edition 2/2016

ambitious climate policies in the world – displayed schematically in Figure 3 – they are primarily designed to drive European, not global decarbonisation.

### An Energy Policy Instrument Triangle

Three strategies to drive low-carbon energy deployment and/or innovation.

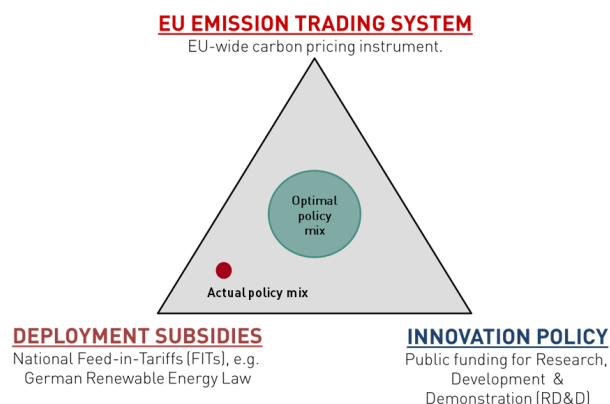
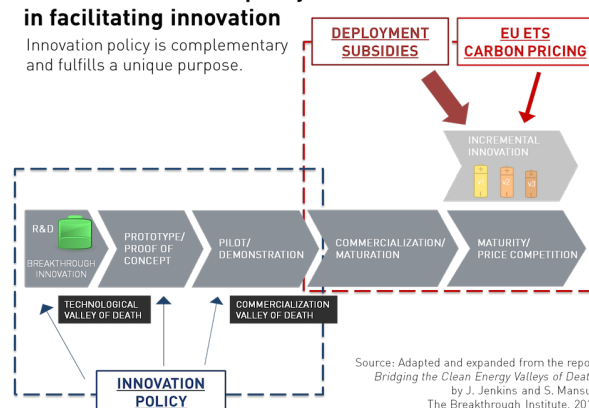


Figure 3: An energy policy instrument triangle for decarbonisation

The European Emissions Trading System (EU ETS) fosters incremental and process innovation, but is unlikely to induce breakthrough technological innovation. The reason for this is that the price signal set mostly affects technologies that are on or close to market, whereas technologies that are further from the market may be 'trapped' in the 'valley of death', unlikely to come to market without public RD&D support (see Figure 4). While thus reducing European emissions, the EU ETS does relatively little to facilitate global decarbonisation.

### The role of different policy instruments in facilitating innovation

Innovation policy is complementary and fulfills a unique purpose.



Source: Adapted and expanded from the report *Bridging the Clean Energy Valleys of Death*, by J. Jenkins and S. Mansur, The Breakthrough Institute, 2011

Figure 4: The role of different energy policy

Feed-in tariffs have been the most significant national energy policies providing massive deployment support for existing low-carbon technologies, particularly wind and solar. Arguably, resultant deployment contributed to economies of scale and incremental innovation that drove down the cost curve of these technologies. However, **this has come at an extremely high cost**, while explicit innovation policy

(RD&D), generally considered to be much more effective in inducing innovation, has been extremely neglected. In 2014, for example, Germany alone spent over ten times more on deployment subsidies for renewables than all of Europe combined on renewable RD&D (see Figure 5).

### Disorders of Magnitude

Germans alone spend 10x more on deployment than all of Europe on RD&D for renewables.

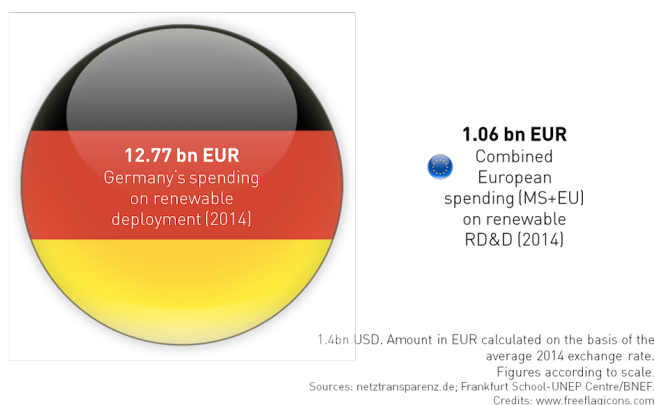


Figure 5: Disorders of Magnitude

Since electricity is covered in the EU ETS, this deployment had no effect on European emissions, while its effect on global decarbonisation – through price declines and improved technologies – could most likely have been multiplied had a larger share been spent on RD&D rather than on deployment within an emissions-capped market. Furthermore, public RD&D would have benefited European high-tech industries whereas deployment subsidies mostly benefit renewable manufacturers outside the EU.

To summarise, there is thus a strong ethical imperative as well as an economic, political, and technological case for significantly scaling up the European energy innovation effort.

Besides scaling up the innovation effort – as committed to by joining Mission Innovation but moving beyond as well – we recommend five general principles on which European energy policy choices could be based to better reflect the energy innovation imperative:

1. **Make global decarbonisation potential a criterion:** When selecting innovation priorities, not only focus on European (decarbonisation) benefits but on global decarbonisation potential.

2. **RD&D Cost Effectiveness:** Given current levels of funding, the expected returns to additional innovation funding (public RD&D) are much higher than for additional deployment support. However, even within public RD&D there are differences in expected returns. Based on a meta-study aggregating a wide range of expert elicitations, the highest returns to RD&D are expected for carbon capture and storage (about twice higher than for other technologies), while RD&D into other technologies have fairly similar expected returns, motivating Principle 3.
3. **RD&D Portfolio Approach:** The similarity of expected returns leads the authors of the meta-study to conclude that it's "too early to pick winners", which provides a techno-economic rationale for a broad innovation portfolio.
4. **Utilise Europe's diversity...** Use Europe's diversity of energy systems and policy priorities as a strength rather than a source of conflict to develop a broad set of crucial technologies for global decarbonisation.
5. **...while at the same time pooling resources:** In case of shared innovation priorities, it is of course hugely beneficial to pool resources and pursue joint research programmes. This is all the more prudent for energy innovation because the spillover effects – those benefits from innovation that cannot be privatised / nationalised – appear even larger for clean than conventional energy technologies, making it unlikely that self-interested governments would invest in them optimally without cooperation institutions such as the EU or, globally, Mission Innovation.

In the longer version of this essay, we analyse current EU policies in light of these principles and provide concrete recommendations for funding instruments and innovation priorities.

As we have argued above, these types of measures contributing to an increased energy innovation effort are the most likely drivers of increased ambition for global decarbonisation. Closing the energy innovation gap should thus be a pragmatic and an ethical climate policy priority if Europe is serious about its historic responsibility.



# Climate Change and Mining: a Foreign Policy Perspective

by Lukas Rüttinger, adelphi

In 2010-11 Australia's coal-rich Queensland region was hit hard by flooding events of historic proportions. They were the result of one of the strongest **La Niña phenomena** since 1917. Almost 80 % of the entire state was declared flood-affected. The state's mining sectors, in particular, suffered huge losses. According to estimates, the 2010-11 floods led to a total loss in excess of USD 5.15 billion to Queensland's gross state product that included more than USD 2.06 billion in lost coal export earnings.

The growing number and impact of these kinds of extreme weather events has led to increasing awareness in the extractives industries of the potential negative impacts of climate change. The industry has started thinking about its own vulnerabilities and the risks climate change could

**"The industry has started thinking about its own vulnerabilities and the risks climate change could pose."**

pose. However, while there has been research on the role of the extractives sector as a major emitter of green house gases, there has been little research and debate that takes a more comprehensive look at the links between climate change impacts and mining. The report **Climate Change and Mining. A Foreign Policy Perspective** tries to fill this gap by shedding some light on these links and providing an overview of the complex challenges around extractive resources in the context of climate change.

It argues that foreign policy makers should pay more attention to the links between mining and climate change because

- the mining sector is one of the major emitters of green-house gases and it produces fossil energy resources that also significantly contribute to global CO2 emissions,
- mining is a sector that is particularly vulnerable to



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climate change,

- mining is a significant contributor to the development of many countries around the world, in particular many developing and emerging economies, and
- developed, industrialised economies are dependent on functioning supply chains and security of supply of the resources that drive their economies.

These links pose significant risks not only for the extractives sector, but also the larger economy that are shared by resource-dependent and resource-rich countries.

Against this background, foreign policy should take a more active role in addressing these risks and engage with the extractives sector as part of its **climate diplomacy** efforts. Based on an analyses of current policy approaches and initiatives, the report provides four recommendations and policy options:

1. Climate-proof critical minerals policies and security of supply strategies that up to now have largely neglected climate risks
2. Actively contribute to improving social and environ-

mental standards in the extractives sector to address climate risks and augment the resilience of the sector

3. Support national and regional dialogues on responsible mining to increase transparency, improve consultations for prior decision-making and prevent conflicts

4. Proactively use extractives as a topic for climate diplomacy to link climate change to the broader development discourse of a country or region.

Together these actions could form the starting point for a more strategic climate diplomacy approach towards mining.

## Upcoming Events

London, United Kingdom (28-29 June 2016)

### Business & Climate Summit 2016

The Summit aims to bring together business representatives and policy makers to strengthen a common understanding of how low-carbon development can be achieved and provide economic opportunities. Panels are organised by organisations like the World Economic Forum, Sustainable Energy for All (SE4All) and World Business Council for Sustainable Development. Please see the [website](#) for more details.



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Bonn, Germany (6-8 July 2016)

### Resilient Cities

The 7th Global Forum on Urban Resilience and Adaptation is being organised by ICLEI – Local Governments for Sustainability. With over 400 participants from different expert and practitioner communities, it offers insights on current trends and good networking opportunities. More information on this year's focus topics and registration is available [online](#). Please also watch the [video invitation](#) from the Mayor of Bonn, Ashok Sridharan.

New York, USA (11-20 July 2016)

### High-Level Political Forum on Sustainable Development

This meeting is the first follow-up to the adoption of the Sustainable Development Goals (SDGs) in September 2015, including a review of progress in implementation. The Sustainable Development Knowledge Platform provides [information](#) about the programme and participation opportunities for different stakeholders. It also provides information on the 22 national voluntary progress reviews and [inputs](#) for the Forum.



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# Factbook News: A Spotlight on Large-Scale Land Acquisitions

by Emilie Magdalinski, adelphi

Global land grabbing: growing demand for land in the wake of food price shocks

**Land grabbing** is the “transfer of the right to own or use the land from local communities to foreign investors through large-scale land acquisitions”. Land-related deals have dramatically increased since 2005, peaking in 2009. Since 2007, 45 million hectares of land might have been acquired according to the World Bank, mainly in Africa and Asia, having significant social and environmental costs. These land grabs also affect **all the associated resources**, especially water, which can be the hidden targets of the deal.

The increased purchase of foreign land has been understood as **a new form of colonialism**, aiming at securing the food and energy requirements of the grabbing country. The rapid development of the phenomenon is closely linked to issues where environmental factors played a role, such as the 2007-2008 **food price crisis** and the increasing demand for biofuels. Guardian journalist John Vidal introduced the term “**green grabbing**” to characterise “the appropriation of land and resources for environmental ends”.

Land acquisitions have also been driven by financial incentives and favourable regulations, notably novel instruments lowering the market risk and the promotion of land acquisition deals by international organisations as a way to bring capital to under-developed regions. These investment opportunities have added to the states’ fragility risks which might play a significant role in the land grabbing phenomenon.

## Cases of land grabbing in the ECC Factbook

This is the case in **Ethiopia**, where large-scale land acquisitions by foreign and domestic investors have been motivated by these environmental factors and attractive land lease conditions. These projects frequently infringe on land

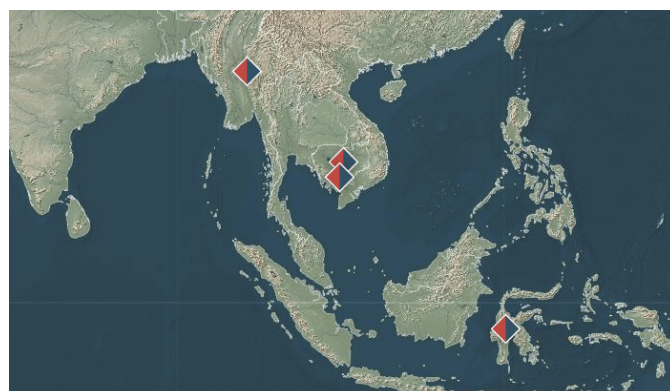


Photo: Video Screenshot, adelphi

traditionally used by local communities and thus threaten the **livelihoods of some 650,000 farmers and pastoralists**. Some local communities have been evicted without consultation or **adequate compensation** to make way for large plantations. This trend contributes to landlessness and impoverishment of small farmers, creating grievances against public authorities and in some cases leading to **protests and their violent repression** by state security forces.

The situation is similar in **Kenya** where large-scale land acquisitions added fuel to existing land use tensions between the delta’s communities. In several Asian countries like **the Philippines, Myanmar and Cambodia**, rural populations also suffer from land tenure insecurity and are thus directly affected by land grabbing.

## Outlook

Climate change is very likely to impact crop yields negatively in many parts of the world. The changing weather patterns are likely to worsen income insecurity among small farmers and make them more likely to lease their land to foreign entities. Lack of investment in rural areas in many developing countries makes them more vulnerable to large-scale land acquisitions. It is thus important to understand this type of conflict and the potential resolution strategies. To learn more about land grabbing and other environmental conflicts, check out the **ECC Factbook**.



## European Climate Policy after Paris



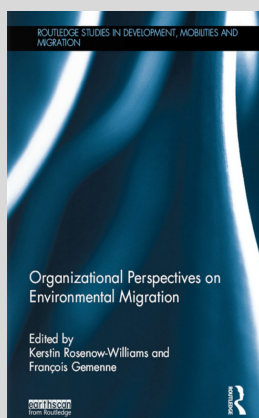
Two recent publications look at the options for the future EU climate action. The European Union Institute for Security Studies (EUISS), the l'Institut du développement durable et des relations internationales (IDDRI) and adelphi reflect on the priorities for the EU foreign policy after the COP21. The brief is based on the insights of a meeting of senior experts that was organised to review and build on the outcomes of the climate conference. A paper by Sebastian Oberthür (IES – Institute for European Studies) discusses the EU's position in climate geopolitics after COP21, highlighting the importance of fora beyond the UNFCCC and of internal decarbonisation policies.

## The Great Water Grab



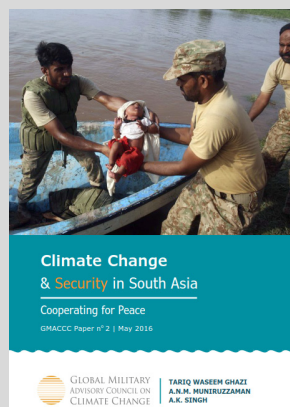
This report focuses on energy-water conflicts that are linked to the coal industry's impact on current and future water demand. Published by Greenpeace International, the report features five case studies of water conflicts due to coal expansion and identifies regions in which already existing and planned coal plants will further aggravate water scarcity. The authors conclude with several recommendations for policy makers on how to avert a more severe water crisis in the future by investing in less water-intensive forms of energy generation.

## Protecting People Through Nature



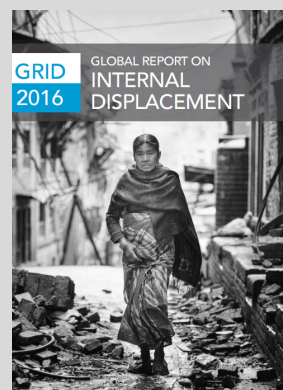
This report explores natural World Heritage sites, which, being large areas of habitat, play an important role in increasing resilience and providing vital protection against climate change impacts. Alarming, the report finds that almost half of these sites are currently threatened by operations such as mining, large-scale infrastructure or oil and gas exploration, since too often short-term financial gain is favoured over long-term sustainable development. Therefore, the report calls on governments to make the protection of these sites part of their commitment to achieve the Sustainable Development Goals and engage in a broader dialogue with civil society and the private sector on this issue.

## Climate Change & Security in South Asia - Cooperating for Peace



The Global Military Advisory Council on Climate Change (GMACCC), a global network of military and security experts, has just released a report analysing the implications of climate change for South Asia including its security dimension. The report discusses the consequences of a recent drought in India which has affected over 330 million people as an example of how natural conditions could destabilise the South Asian region, in absence of adequate measures to confront climate change.

## Global Report on Internal Displacement (GRID)



The Norwegian Refugee Council (NRC) through its Internal Displacement Monitoring Centre (IDMC) recently issued its annual publication "The Global Report on Internal Displacement (GRID)". The report reflects on how climate change and related environmental risks, such as droughts, sea-level rise and desertification, drive internal displacement. According to the authors, in 2015, disasters triggered by natural hazards caused twice as many new displacements as conflict

and violence, leaving more than 19 million people displaced from their homes.

## Climate, Development, Growth: Opportunities for Foreign Policy



Photo:  
Screenshot,  
adelphi

The Paris Agreement on climate change was a big success, but it only marks the promising beginning of a long journey. Catalysing the climate economy will be the key to steering our societies on a much-needed climate-friendly trajectory. adelphi and the German Federal Foreign Office organized a workshop with experts to discuss the ensuing challenges for foreign policy, as documented by this video.

The newsletter „Environment, Conflict, and Cooperation“ is published several times a year. To subscribe or unsubscribe, please click [here](#).

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**adelphi** is a leading think tank for policy analysis and strategy consulting. We offer creative solutions and services on global environment and development challenges for policy, business and civil society communities. Our projects contribute to sustaining natural life systems and fostering sustainable enterprises.

**Energy Poverty Research Group** at the University of Queensland: EPRG was established at the University of Queensland (UQ), Brisbane by the UQ Energy Initiative and the School of Chemical Engineering in 2013. The EPRG is a transdisciplinary group which investigates how energy access and poverty alleviation are interconnected in developing contexts. It incorporates the disciplines of engineering, economics and business, communications and social change, and behavioural sciences to support enabling environments that can positively shape energy dynamics in impoverished communities. Bringing together research capability and innovation across disciplines, the group explores sustainable, reliable and affordable energy systems that are tailored to local and regional socio-economic contexts.

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**Fundación Futuro Latinoamericano (FFLA)** mission is to promote constructive dialogue, strengthen citizen, political and institutional capacities, and articulate processes towards sustainable development in Latin America. Therefore it utilizes multi-sectoral public policy dialogues and conflict prevention methodologies as its main strategies.

The **Manipal Advanced Research Group (MARG)** was formed in early 2006. Given the wide variety of expertise available at Manipal University this initiative seeks to establish synergies between fundamental research in the natural (physical) sciences and engineering. MARG has also launched the **Science, Technology and Security Forum (STSf)** website, which is intended to provide a platform to the larger strategic, academic, diplomatic and scientific community to participate in debates on matters impacting international security with a particular focus on Asia and in particular, India. The need for such a forum has its origin in the necessity to integrate scientists and technologists with the matrix of decision-making in matters of policy.