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# FORUM

#### The Arab Crisis: Food, Energy, Water, Justice

By Vicken Cheterian, a journalist and political analyst who works for the non-profit governance organisation CIMERA, based in Geneva.

The single desperate act of an unemployed university graduate living in the Tunisian town of Sidi Bouzid sparked the recent wave of civil unrest leading to the January 2011 overthrow President Zine El Abidine Ben Ali's authoritarian regime.

The self-immolation of Mohamed Bouazizi has been echoed in other parts of the Arab world. In Algeria, riots and demonstrations in protest against steep rises in the cost of basic foodstuffs (the price of sugar and cooking oil, for example, went up by 30 percent on 1 January 2011) forced authorities to rescind the increases; and protests continue in Egypt and elsewhere, even in the face of deaths and injuries, as initial unrest has broadened into demands for greater freedom.

The explosive combination of mass unemployment and rising food prices threatens societal stability in other parts of the Arab world. Jordan too witnessed violence on 3 January in a jobs-related dispute between two rival tribes in the southern city of Maan, which led to three deaths, dozens wounded, and over 90 arrests. A few days later, an inter-tribe clash took place in Karak. The government took urgent measures (including cancelling taxes) in order to reduce market prices, while the United States government sent an emergency grant of \$100 million to help the Jordanian authorities stabilise the markets and ease social tensions.

#### The food-energy-water nexus

The urgent measures being taken by these Arab governments are necessary. But they remain short-term solutions, while the underlying problem is structural and will only get worse. A World Bank report published in 2009 stresses that Arab countries import more than half their food, and that they are the greatest importers of cereal in the world. In other words, Arab countries depend on other countries for their food security, which makes them as sensitive to floods in Australia and big freezes in Canada as on the yields in their own countries.

In 2009, Arab countries' food imports cost \$30 billion. Rising prices in global markets from mid-2008 already caused waves of rioting in dozens of countries around the globe, and also left millions of unemployed and impoverished people in Arab countries even more exposed.

The demographics of the Arab world add to the problem. The population increased fivefold during the 20th century, and growth continues at an annual average of 2.3 percent. This demographic revolution of the past century occurred in parallel with the Green Revolution in agriculture, whereby technological innovations and the industrialisation of agriculture increased food production. The availability of oil was crucial to the Green Revolution's success. But a number of factors now suggest that this progress has reached its limits. For example, rising oil prices were a major cause of the global food-price spike in 2008. An International Energy Agency (IEA) report published in November 2010 says that "peak oil" could already have been reached.

The dilemma of Arab economies is that they depend on oil prices (whether as oil producers or as countries dependent on petro-dollar investments) while higher energy prices make their food more expensive.

With regard to land and water resources, the two basic components of agriculture next to energy, the situation is little better. Industrialised agriculture, massive use of pesticides, and the loss of topsoil has led to widespread land degradation and lower yields. Global water resources are also heavily invested: most major rivers are already dammed for irrigation and hydropower, their number currently being 45,000 and with only limited further capacity for harnessing major rivers.

Many Arab countries, such as Jordan in light of the fall of Dead Sea levels, are in waterdeficit; they are now using non-renewable water - as well as non-renewable energy - for agricultural production.

Climate change is an additional source of uncertainty, and it will have major negative impacts on agriculture in the Arab world. The Intergovernmental Panel on Climate Change forecasts that during this century, shifts in rain patterns could lead to decreases in rainfall of up to 20 percent in the Middle East and North Africa. Moreover, a rise in temperature of 2-4 degrees means more evaporation and even less water availability. Some climate models predict that several rivers could simply disappear with such changes.

In combination, these trends will lead to increases in demand for energy, food, and water, while hydrocarbon-based industry and agriculture will simultaneously have difficulty expanding.

# Environment and security

What does all this mean for stability of political systems in the Arab world? It is difficult to say, due to a lack of hard understanding. Research on the linkages among environment degradation, resource depletion and political systems is new. For example, it is not clear whether there is a relationship among Arab demographic growth, new urban environments, the emergence of marginalised but educated youth, and the rise of specific types of Islamic militancy.

The signals are mixed, making a country-wide picture somewhat unclear. But at the level of the individual, and of many individuals acting together, there is greater clarity. In Tunisia, Mohamad Bouazizi did not rebel because he did not find a job reflecting his ambitions and education. He did not burn himself when a police officer confiscated the fruits and vegetables he was selling at a street-corner on the pretext he had no permit. But when he went to file a complaint to seek justice, his request was rejected. It was this feeling of injustice that led Mohamed Bouazizi to his desperate act.

This article in a longer version was first published at the website "<u>Open Democracy</u>". ▲ Top

# **POLICY & RESEARCH**

# Sudan after the Referendum: Independent or Oil-dependent?

With the remapping of Sudan's political coordinates, the issue of sharing oil revenues will play a key role in the country's long-term political stability and economic development. Oil will compel even a politically independent Southern Sudan to cooperate closely with Khartoum. Transparency in oil production is thus a prerequisite for sustainable peace.

In a referendum held from 9 to 15 January 2011, the population of Southern Sudan voted in favour of secession from the north. The government of Southern Sudan, installed after the official end of the civil war in 2005, finances virtually its entire budget through oil revenues. Even in the capital, Khartoum, the oil fields account for roughly every second Sudanese pound. This fountain of wealth, however, gushes almost entirely in the southern part of the country, where most of the oil reserves are located. Refineries and pipelines, on the other hand, are largely found in the north. Since Southern Sudan has no access to the sea, this dependent relationship is unlikely to change in the short term. Both the north and south will therefore have to continue to cooperate in the future notwithstanding their conflict-ridden past.

This status quo is a prime illustration of the resource curse dilemma. Weak institutions encourage corruption, and the political leadership will have to grapple with the deleterious impacts of the lengthy civil war and extreme widespread poverty for decades. The unresolved issue of border demarcation in the oil-rich Abyei region provides further fuel for conflict. Global Witness recently criticized the continuing discrepancies in oil production figures as well as other irregularities. Maximum transparency in administering oil revenues – and independent monitoring – is therefore essential. Joining the Extractive Industries Transparency Initiative (EITI) could serve as an important signal in this respect.

CNPC, the Chinese oil company operating in Sudan, refers to it as the "land of hope" and "beautiful spirits". These may sound like callous compliments in a country ravaged by war. Yet, if oil is managed intelligently and in a transparent manner, it could, in fact, ensure a better future. Both the north and south would be well advised to adopt a pragmatic approach and leave the past behind. If they do not, sustainable peace will prove elusive - and both sides would be the losers. *(Stephan Wolters)* 

The study "Crude Calculations" published by Global Witness is accessible <u>here</u>.

You can find more information on EITI <u>here</u>. ▲Top

# Walking a Tightrope: Climate Protection Versus Food Security in Nepal's Forest Regions

It can prove difficult to reconcile the conflicting objectives of climate and forest protection on the one hand and food security on the other. Nepal is a case in point. A majority of households in rural Nepal are dependent on access to public forests for collecting fodder for their livestock. However, due to climate and ecological concerns, the amount of livestock each household is permitted to hold is being systematically reduced and controlled along with restrictions on forest use. Such restrictions have had an extremely negative impact on private livestock farming, one of the pillars of food security in Nepal. A study entitled "Forests for Food Security and Livelihood Sustainability" by Bhubaneswar Dhakal et al. has, for the first time, attempted to quantify these losses and also identify policy approaches that simultaneously address climate change, nature conservation, and food security.

The problem originated in the 1970s and '80s when efforts were taken to counteract the effects of heavy rains and landslides. Key measures included reforestation initiatives in combination with limits on private livestock holdings. In recent years, climate change mitigation has also resulted in increased investment for conserving forest cover. This, too, has been at the cost of food security. The numbers of goats, buffaloes, and cows have since declined by about one third. Animals are often a household's only source of income, thus malnourishment and diseases are on the rise, especially among the poorer sections of the population.

The authors consider agroforestry an appropriate approach to resolve this problem and for offering an alternative to current forest management practices. Under this approach, parts of the forest are leased to individual households. The community monitors forest use and has a share in the income. Not only does this contribute to food security, it also helps generate additional sources of income. Simultaneously, erosion is controlled and soil quality is improved while gains are made on climate protection and biodiversity conservation. The need for such an approach in Nepal will become even more urgent if the government expands protected forest areas to 25 percent of total land area, as it ambitiously announced at the Copenhagen climate summit in 2009. *(Stefanie Schaefter)* 

The study "Forests for Food Security and Livelihood Sustainability: Policy Problems and Opportunities for Small Farmers in Nepal" by Bhubaneswar Dhakal, Hugh Bigsby, and Ross Cullen was recently published in the *Journal of Sustainable Agriculture*. It can be downloaded <u>here</u>.

Further information on climate protection in Nepal's forest sector can be found <u>here</u>. The report "Climate Change Mitigation and Adaptation Strategies in Nepal's Forest Sector: How Can Rural Communities Benefit?" was published in the framework of the Nepal Swiss Community Forest Project NSCFP.

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# **Rare Earth Diplomacy in the United States**

In order to provide for the great transformation of industrial societies, the adequate supply of rare earth elements is of crucial importance. Technologies to promote sustainable energies such as solar cells, wind turbines, and batteries in hybrid-electric vehicles depend on metals like neodymium – most recently only known by a very limited number of experts. However, due to rapidly increasing demand, states have started to develop strategies to ensure a sufficient supply in the years to come. After Germany published a resource strategy in the fall of last year, the Department of Energy of the United States presented its own document on the subject by mid-December. As Secretary of Energy Steven Chu pointed out: "Each day, researchers and entrepreneurs across the United States are working to develop and deploy clean energy technologies

that will enhance our security, reduce carbon pollution, and promote economic prosperity. This strategy is an important step in planning for growing global demand for clean energy products that will help strengthen the U.S. economy and create jobs."

The so-called Critical Materials Strategy provides a risk analysis for 14 elements of the periodic table. As a result, five rare earth metals, as well as indium, are considered the most critical ones due to existing supply risks and their important to accomplishing a sustainable energy transformation. Apart from stockpiling, recycling and further research & development have been identified as crucial policy areas to ensure sufficient supply of rare earth metals. The strategy also mentions the field of diplomacy as an effective strategy, as cooperation with other partners such as the European Union and Japan can help provide useful information and improve transparency in critical materials markets. The overall objective of the diplomatic efforts is, therefore, focused on a global open market for rare earth metals. In addition, it may also be useful for the transatlantic partners to enter into a dialogue on how to improve the capacity of countries for recycling, reuse, and more efficient use of critical materials. In doing so, the US would combine the field of diplomacy with one of its three main goals outlined in the strategy, namely to use critical material as efficiently as possible. (*Dennis Taenzler*)

See also the EU website providing information on the Raw Materials Initiative <a href="http://ec.europa.eu/enterprise/policies/raw-materials/documents/index en.htm">http://ec.europa.eu/enterprise/policies/raw-materials/documents/index en.htm</a>.

The linkages between resources and conflict are subject to a paper series just published by adelphi and the Wuppertal institute.

The Critical Materials Strategy is accessible <u>here</u>. ▲ Top

# **Risk Management Frameworks for Green Gene Technology**

Already in March 2009, the UK Government's chief scientific adviser, Professor Sir John Beddington, declared that the planet faced 'a perfect storm' of food shortages, scarce water, and insufficient energy resources. "Green gene" technology and products are one possible solution to such resource crunches since agricultural productivity can be increased by use of genetically modified organisms (GMOs). Moreover, crops can be engineered to use less water, or to resist diseases. However, the increasing use of GMOs raises important questions about the different institutional arrangements in place for managing any associated risks to human health and to biodiversity. Different risk management approaches are followed in different countries, sometimes giving rise to disputes which have to be settled at the international level. Worldwide, cultivation of GM plants is increasing; the main modified crops are soy, maize, cotton, and rapeseed. Eurobarometer surveys over the last decade show that skepticism is slowly decreasing among European consumers about the environmental and health impacts of GM foods. However, the arrival of more transgenic crops on agricultural markets is testing the EU's recently overhauled regulatory framework for approving and labeling transgenic crops.

In 2009, Luxembourg, Austria, Greece, and Germany all imposed cultivation bans on genetically modified maize despite approval by the EU, leading to disputes between EU and trade partners like the United States with commercial interests in GM crops. The European Food Safety Authority (EFSA) considers the studies cited against the GM maize

to be scientifically unfounded. The World Trade Organisation (WTO) recently decided that national cultivation bans not based on scientifically valid studies constituted a violation of world trade agreements, with potentially expensive consequences. In the case of GM maize, the national authorities disagreed with EFSA's scientific opinion. Experts anticipate the need for more assessments before widespread GM use. In the short-term, disputes are expected to increase. (*Clementine Burnley*)

For further information, please visit <u>http://www.gmo-compass.org</u> or <u>http://www.efsa.europa.eu/en/efsajournal/pub/1879.htm</u>. ▲ Top

# **CONFERENCE REPORTS**

# **Flight and Migration in Cancun**

As evidenced by the climate negotiations in Cancun last year, the challenges of climateinduced migration have arrived on the international climate policy agenda. The Ad-Hoc Working Group on long-term Cooperative Action (AWG-LCA) took up the issue by inviting all parties to enhance action on adaptation; topics included "Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels". In order to explore how the issue fits in the larger context, representatives of various UN institutions discussed the role of displacement and migration in the framework of future adaptation needs and coping capacity at a COP-16 side event.

Diego Palastios Jaramillo of the UN Population Fund stressed that implementing effective climate-related migration policy requires one to understand that such migration is not a failure to adapt, but rather an adaptation strategy. Further, the issue is so complex that a number of gaps still need to be filled in the research. Javier Hernandez of the UN High Commissioner on Human Rights (UN HCHR) advocated that any approach to the question of migration must place the protection of human rights at its core. Here, one must take note that vulnerability to climate change not only increases when people migrate, but also when they stay put, with repercussions such as resource scarcity that will only get worse. Koko Warner of the UN University in Bonn spoke about the effects of climate change that induce, and that will increasingly induce, migration. In addition to natural catastrophes, drought, and worsening desertification, such problems as resource conflicts, especially over water, will also contribute to migration. In order to come up with a comprehensive approach to the challenges of climate-induced migration, the international community needs to address the issue early in climate negotiations despite and taking note of existing research gaps. With this text in the work of the AWG-LCA, a small step has been made to recognize the nexus between migration, climate change, and the environment, and to develop future strategies in the area of adaptation. (Aki Kachi)

The AWG-LCA decision can be found at the following link: <u>http://unfccc.int/files/meetings/cop\_16/application/pdf/cop16\_lca.pdf</u>.

A collection of initiatives of the organizations involved in the side event can be found  $\underline{here}.$ 

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# The Long Journey to Desert Energy

The idea of the DESERTEC project, to make use of the enormous energy potential of the desert in North Africa and the Middle East (MENA), has caused quite a stir. Solar and wind energy on a giant scale are soon to supply local electrical demand and, starting in 2020, will even contribute to the European grid. Commentary on the subject has been mixed, with some talking about neocolonialism and the crowding out of decentralized renewable energy, and others talking about peace promotion and ensuring water and energy security. In light of the most recent developments in the far flung parts of the Arab world in North Africa, other questions are coming to the fore: Could the megaproject be the key to the regional stability in the EU-MENA region? Would it contribute to economic development and political participation of the general population? Or will European companies and local elites be the only beneficiaries?

At an event organized by the German Council on Foreign Relations (DGAP), to which the DESERTEC Foundation and the German development agency, the Gesellschaft für Internationale Zusammenarbeit (GIZ), were also invited, there seemed to be a general consensus about the question of whether or not the Mediterranean solar plan presented an opportunity for sustainable development of the EU-MENA region. Representatives of the DESERTEC Foundation, as well as representatives from the German Environment, Development, and Foreign Ministries were generally convinced that the desert energy project would have primarily positive effects. The discussion focused more on the "how" and less on the "whether or not" of the realization of DESERTEC; few critiques were fully addressed. Current political developments were not seen as a threat to the project's implementation. Rather, they were depicted as an opportunity to address fundamental questions, such as subsidies for fossil fuels in MENA countries, within the framework of a democratization process. Yet discussion of emerging price hikes on the relevant countries was left open.

The question of whether electricity from the first reference project in Morocco should be immediately exported to Europe or used in the MENA-Region proved to be divisive. The greatest obstacles for the project were thought to be the realization of a single European energy market and the construction of expensive, cross-border transmission lines. Despite the many enthusiastic perspectives on the issue, the dominant issue seems to be how to finance the undertaking—a topic no one wanted to take up. Further questions, such as how much of a catalyst would be necessary to get the ball rolling and who should take on such a feat, were also left unanswered. *(Lena Donat)* 

Additional information concerning DGAP can be found at <u>http://www.dgap.org/</u>.

For more information in the DESERTEC project, please visit <u>http://www.desertec.org/de/</u>. ▲Top

# Food for Thought: Impacts of Climate Change on Eastern Europe

On February 14-16, the Organization for Security and Co-operation in Europe (OSCE) jointly with the European Environment Agency (EEA) and the Environment and Security Initiative (ENVSEC) conducted a scenario workshop in Lviv, Ukraine. The workshop explored how different impacts of climate change and degrees of globalization may

impact food security in Eastern Europe. Aside from experts from Belarus, Moldova, and Ukraine, the workshop was attended by several international experts and representatives of international organizations.

A clear outcome of the discussion was that climate change may result in more varied impacts for Eastern Europe than for other regions. In case of only limited global and thus regional warming, climate change could actually boost agricultural productivity in the region. This would give Eastern Europe a competitive advantage internationally, as most regions in the world are projected to experience a decline in production. However, adaptation measures are still necessary and the current agricultural sector is less efficient than those of other regions. The zones most suitable for agriculture will likely shift northward, requiring new investments.

It is not guaranteed, however, that the population will benefit from increased production. Currently, households spend between 40 and 50 percent of their income on food purchases. Should markets be opened further, prices will rise, despite increasing regional production. This paradoxical consequence could occur as a result of globally declining production, increasing demand as a result of population growth and changing consumption patterns, and liberalized trade driving global rather than regional or local prices for goods. Thus, should an open market strategy be pursued, it would require complementary social and economic policies, in addition to adaptation measures and investment into the agricultural sector, to keep prices down.

Improving human, institutional, and technical capacities, as well as good governance and early action, were discussed as important measures to minimize the threats and harness the opportunities of climate change. In particular, the period until 2030 was identified as critical to design and implement relevant policy measures. (Achim Maas)

Further information on the OSCE and the FAO can be found at <u>www.osce.org</u> and <u>http://www.fao.org/world/index\_en.htm</u>.

If you want to know more about the corresponding project carried out by adelphi, please visit the following website: <u>http://www.adelphi.de/en/resources/project\_database/dok/43525.php?pid=408</u>. <u>A Top</u>

# **UPCOMING EVENTS**

Upcoming events are also regularly published at <u>http://www.ecc-platform.org/</u>.

# "Defense, National Security and Climate Change: Mitigating Risks and Seizing Opportunities in a Rapidly Changing Global Environment" in Washington, D.C. (30-31 March)

Organized by the Association of Climate Change Officers, this event is directed at the US defense and intelligence community. It aims to provide participants with insights on existing mandates, operational strategies, and opportunities for collaboration in the context of the security-related implications of climate change. Moreover, it will feature

roundtable sessions on clean energy infrastructure, green design in defense installations, and national security implications, among others.

More information is available <u>here</u>. ▲Top

# "Global Food and Agriculture: Policy Options in Response to Increased Volatility" in Steyning, UK (11-13 April)

This conference is the first in a series entitled "Agriculture, Food and Land Use: The International Policy Challenges", organized by Wilton Park in association with the University of Exeter. It aims to examine the causes of volatility, to investigate repercussions across and beyond the food system, and to assess policy responses. In light of the G20 meeting on food security this May, the conference will focus on how changes to the international regulatory framework can enhance food security around the globe.

More information is available <u>here</u>.

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# "Second Workshop on Adaptation to Climate Change in Transboundary Basins: Challenges, Progress and Lessons Learnt" in Geneva, Switzerland (12-13 April)

This workshop will bring together countries and stakeholders involved in climate-related adaptation strategies, particularly of transboundary basins. It is targeted at governmental representatives, water managers, researchers, and representatives of non-governmental organizations. The workshop aims to facilitate exchange of practical experiences, to analyze specific challenges and identify best practices, and to provide support to institutions concerned with the preparation of adaptation strategies. It is organized under the leadership of the Governments of the Netherlands and Germany and with support from the United Nations Economic Commission for Europe.

More information is available <u>here</u>.

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# **IN BRIEF**

# Water as a Valuable Resource in the Middle East, the EU Policy in the Arctic Region, Transatlantic Responses to the Climate-Security-Nexus and Land Deals in Africa

The Center for Strategic and International Studies has published a new report entitled "Clear Gold – Water as a Strategic Resource in the Middle East". It predicts that water is the most likely source of future political and social unrest in the Middle East. Complementary video and audio clips summarize the arguments and provide commentary on current developments in Egypt.

Closely related, a study by the Finnish Institute for International Affairs, "Managing Blue Gold: New Perspectives to Water Security in the Levantine Middle East", stresses the urgent need for cooperative water management policies. The European Parliament has adopted a resolution regarding **EU policy in the Arctic region**. It calls for a coordinated Arctic policy at the EU level, and makes recommendations with respect to research funding, the management of natural resources, multilateral governance, transport routes, and the role of indigenous people.

The International Institute for Strategic Studies has presented its **final report on the "Transatlantic Dialogue on Climate Change and Security**". The report concludes that the impacts of climate change pose a clear threat to collective security and global order in the first half of the century.

The International Institute for Environment and Development has released a new study entitled "Land Deals in Africa: What is in the Contracts?". The report analyses the contracts of 12 land deals. It finds that contractual issues of the acquisition of land by agribusiness, investment funds, and government agencies have important repercussions on food security of the local population, and emphasizes that their participation in the negotiation process is crucial.

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# Imprint

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