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## **COMPETITION OVER RESOURCES: Drivers of insecurity and the Global South**

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## COMPETITION OVER RESOURCES: Drivers of insecurity and the Global South

The current security paradigm adopted by most governments and their defence forces is based on the flawed premise that insecurity can be controlled through military force or containment, thus maintaining the status quo. This has been termed the ‘control paradigm’ (see Abbott et al, 2006). We argue that a new way of approaching security is needed, one that addresses the drivers of conflict: ‘curing the disease’ rather than ‘fighting the symptoms’.

One alternative is the concept of ‘sustainable security’. The approach is inherently preventative (where the ‘control paradigm’ is reactive), in that it addresses the likely causes of conflict and instability well before there effects are felt.

Oxford Research Group aims to encourage in-depth, original thinking amongst decision-makers and civil society around sustainable responses to long-term trends in global security that are likely to cause unprecedented international tension and loss of life in the coming decades. Perhaps the four most important underlying drivers of insecurity are climate change, increasing competition over resources, global militarisation and the phenomenon of marginalisation across much of the ‘majority world’<sup>1</sup>. The sustainable security framework aims particularly to highlight the interconnected nature of these drivers of insecurity.

This is the first in a series of four papers<sup>2</sup>, each of which will examine one of these four potential drivers of insecurity, and the variety of ways in which each trend (in this case, competition over resources) will engender local and international discord.

Each paper is the result of long-term collaboration between ORG and partners across the ‘Global South’<sup>3</sup>. This collaborative network – made up of activists, analysts and academics from a range of think tanks, civil society organisation and research institutes – have recommended background reading, provided expert review and written illuminating case studies commissioned for this paper.

### The importance of North-South engagement

The likely future drivers of insecurity do not respect national boundaries, and will not be sustainably addressed by unilateral approaches. For example, as competition over energy resources increases with depleting supplies of fossil fuels, it will become more vital that positive collaboration between consumer nations in the West and resource-rich nations in the South occurs<sup>4</sup>.

In a globalised world in which no nation’s security is independent of their region or of the wider international community, the opinions of the majority world can no longer be neglected by the major powers who seek to dictate global security policies.

The sustainable security approach posits global justice and equity as key requirements of any effective response to global insecurity. Voices from the Global South remain on the periphery of discussions around

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<sup>1</sup> A note on terminology: ‘majority world’ refers to the majority of the world’s population living in poorer nations. It also relates to the ‘global South’, which denotes countries in the regions covered by our consultations: sub-Saharan Africa, Latin America and the Caribbean, Asia and Australasia, and the Middle East and North Africa (with some exceptions that are included in the consultations given their membership of poorer regional communities e.g. New Zealand, Japan). The ‘global North’ relates to countries of Europe, North America and parts of Oceania, and the term is used interchangeably in public discourse with ‘the West’.

<sup>2</sup> Each paper will be published on [www.sustainablesecurity.org](http://www.sustainablesecurity.org).

<sup>3</sup> This series of papers follows a sequence of reports published between 2008 – 2010, which details the result of four regional security consultations that examined specific drivers of insecurity in regions of the Global South (one each covering Latin America and the Caribbean, Sub-Saharan Africa, Middle East and North Africa and Asia and Australasia). Many of the security experts who attended one of these consultations have also been active in the development of these research papers. The reports of the consultations are all available for download on the ‘Regional sustainable security consultations’ pages of the [www.oxfordresearchgroup.org.uk](http://www.oxfordresearchgroup.org.uk) website.

<sup>4</sup> Many ‘southern’ energy-supplying nations have not had positive relationships with Western powers historically, including Iran, Venezuela and Libya.

global political and security issues, and particularly at the negotiating tables of international institutions<sup>5</sup>. The implementation of a newly egalitarian approach to international relations can begin with a close engagement in western organisations with majority world thinking. Security analysts and policymakers must continue to engage and collaborate with counterparts in the Global South, ensuring that the sustainable security project puts into practice the idea of a truly inclusive global politics.

Many future security problems, and also the solutions, will be found in the Global South, within the very populations whose marginalisation has resulted in much contemporary insecurity. Whilst climate change, for example, will hit the poorest communities hardest<sup>6</sup>, it is with emerging economies like China, India and Brazil that the West must engage if mitigating climate chaos is to have any success at all. These non-Western perspectives must be recognised and addressed in concrete policies in the countries of the Global North. Such policies should be focused on transforming tensions at their root rather than solely attempting to control violent conflicts.

Our hope is that this series of research papers will contribute towards 'North-South' communication, giving Western decision-makers greater reasons and resources with which to engage with their colleagues in the majority world to build a genuinely sustainable global system.

### **The pressing threats to global security in the twenty first century: Competition over resources**

By 2050, the global population is expected to peak at 9 billion<sup>7</sup>. In an environment already constrained and changed by human activities, we can expect greater scarcity of three resources vital to the maintenance of both the economic order as it now stands, and the preservation of human life in general: energy, water and food. At current population levels, demand for some key resources is already unsustainable<sup>8</sup>. As the number of people on the planet - and the number of people living "affluent" lifestyles - increases, and the effects of climate change are factored in, greater competition over resources is highly probable - affecting individuals, communities and states.

We are already witnessing greater military engagement in the management of natural resources<sup>9</sup>, as well as conflicts over the control of natural resources. As tensions over resources grow, we can expect insecurities to result in violent conflict more often, unless these are carefully managed and mitigated.

Competition over resources is closely linked to processes of global environmental change and energy consumption. Climate change and 'peak oil' are not organic developments, but primarily the product of global economic structures that already marginalise most of the world's population<sup>10</sup>.

Communities in the Global South are those most vulnerable to resource scarcity; with income poverty already limiting access to resources that sustain life, further depletion of resources will serve to reduce opportunities for development and empowerment, both locally and nationally. Moreover, climate change

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<sup>5</sup> This has already been subject to much debate. For example, the Global Governance Group (3G) - an informal group of small and medium sized non-G-20 member states - recently came together to assert the need for 'more effective global governance mechanisms' that recognise the impact of G-20 decisions outside of G-20 countries, and engage all nations in decision-making on issues of global concern (Ambassador Vanu Gopala Menon, 2010).

<sup>6</sup> The UK's Stern Review recognises that 'Climate change is a grave threat to the developing world and a major obstacle to continued poverty reduction across its many dimensions...developing regions are at a geographic disadvantage: they are already warmer, on average, than developed regions, and they also suffer from high rainfall variability...Second, developing countries - in particular the poorest - are heavily dependent on agriculture, the most climate-sensitive of all economic sectors, and suffer from inadequate health provision and low-quality public services. Third, their low incomes and vulnerabilities make adaptation to climate change particularly difficult' (2006: vi).

<sup>7</sup> See United Nations Population Division, 2009. NB - in 2010, it stood at 6.89 billion (Population Reference Bureau, 2010).

<sup>8</sup> Demand for fresh water, for instance, is at a level beyond that which can be sustained (BBC, 2005).

<sup>9</sup> In Latin America, Bolivia's army already have a role in the 'protection of mother earth' (Escobar, 2010), and in Honduras, armed forces cooperate with the State Secretariat of Natural Resources and the Environment in relation to issues of illegal wood cutting, wildlife protection, forest fire-fighting and reforestation (Salomón, 2010).

<sup>10</sup> The population of less developed countries stands currently stands at c. 5.5 billion (Population Reference Bureau, 2010).

will further entrench the multiple-index poverty of the 'bottom billion'<sup>11</sup>, with developing nations with extensive coastlines such as Bangladesh, and island states like the Maldives, most likely to be devastated<sup>12</sup>.

## Energy

Our industrialised global economy is based on carbon – a resource that is increasingly scarce. A decreasing use of fossil fuels such as coal and oil (both because they are more scarce, and because effects on the climate have been recognised) has the potential to reshape the global political economy, giving greater influence to those regions with a greater share of these resources, and forcing 'consumer' nations such as the United States to address their dependence on imports. Whilst this reliance may force 'consumer' nations into investment in the development of renewable energy sources, it may also be used as a justification for taking a greater interventionist interest in the political situations of resource-rich nations – as these circumstances will increasingly determine the price and availability of the fuels they rely upon, and to invest in non-renewables erstwhile too 'hard to reach', such as tar sands oils and shale gas<sup>13</sup> (as the United States has done over the past few years).

Many analysts suggest we have already seen these interests played out in the Persian Gulf (which contains 60% of the world's known oil reserves): for example, the 2003 invasion of Iraq<sup>14</sup> and the 2011 NATO intervention in Libya (the 2011 intervention in Libya has already caused convulsions in the international oil market: Kotsev, 2011). These interventions are highly contentious, and any involvement on humanitarian grounds is often mistrusted outside of the West as a justification for the need to control strategic interests: as one Egyptian campaigner put it, as he went to join his Libyan counterparts in the early-2011 uprisings – '[I cannot] trust countries involved in the air strikes; they seek nothing more than to 'stake their claim to Libya's oil resources' (Daily News Egypt, 2011).



Wind farm, The Netherlands.

Photo credit: [Nikola Nikolski](#)

The growing importance of scarce non-renewable energy will have considerable implications for global security. The growing interdependence between nations as a result of the deepening need for energy is both an opportunity and a challenge. In the following case study, Dr Lim Tai Wei examines the way in which future energy concerns could play out in four key Asian states.

<sup>11</sup> Climate change is also controversial as an issue of justice; whilst 'A wealthy minority of the world's countries and corporations are the principal cause of climate change; its adverse effects fall first and foremost on the majority that is poor' (Adow, 2009). See *Climate change: drivers of insecurity and the Global South* in this series.

<sup>12</sup> See Moniruzzaman (2010) for an insight into these nations' responses.

<sup>13</sup> These resources are more polluting than conventional fossil fuel alternatives.

<sup>14</sup> The occupying forces' Coalition Provisional Authority took control of oil fields after the invasion; this authority withheld numerous Iraqi attempts to regain jurisdiction over the sites (Janabi, 2004).

### **Competition over resources and the Global South: Key Asian players**

'I will single out four Asian players for analysis: Gulf states, Japan, India and China. Amongst these four entities, the three energy-related security issues that may stand out are the "3s": supply/shortage, sea-lanes and search (for alternative sources and alternative energy).

If an energy-related word has to be selected to describe the Gulf states, it may be 'integration'. Integration may be necessary for the facilitation of regional infrastructural development like trans-boundary pipelines, satisfaction of domestic demand, collective investments in clean energy, supply stability and mitigation of conflicts (economic and otherwise) - all of which are crucial for regional security. **Given that the region is the world's major supplier of fossil fuels, it will be crucial in determining global 'supply and shortage'.**

In the case of Japan, it may be 'efficiency'. As an energy-efficient economy since the oil crises of the 1970s, **Japan is in a good position to share its knowledge and technologies** with other Asian nations - particularly large emerging ones like India and China - through technical aid, loans, capacity-building projects and training. Given Japan's successes in clean and green energy implementation, the last 'S' of 'search' may fit it well. **Such help may counterbalance security tensions over territorial claims and rising energy prices.**

For China, the focus may be on looking for alternative sources that may include both renewable energies (e.g. solar, hydropower, wind) or non-fossil fuels like nuclear. China's usage and consumption patterns may determine the global structure of energy supply and its transition into a cleaner, more energy-efficient and hi-tech energy industries may set global trends for decades to come. China falls under the first and second 'S' of supply/shortage and search of energy security.

In terms of India, given its strategic position overlooking the Indian Ocean which guards the maritime access of fossil fuels from the Gulf to East Asia, the second 'S' or sea-lanes may fit it well. India's policy with regards to the Indian Ocean will be crucial to determining the free flow of oil to manufacturing centers in East Asia that in return affect the counter flow of oil financing in exchange for the oil from East Asia. **India's policy of free access to sea-lanes in the Indian Ocean will see many major powers courting it for years to come.**

Going forward, the sprawling Asian continent will contain many other important players including major energy suppliers in Southeast (biofuels, natural gas, etc.) and Central Asia (nuclear resources, access to overland pipelines, etc.)'

**By Dr Lim Tai Wei, East Asia Institute**

### **Energy dependency: trade and aid**

Through economic growth and population increase, developing countries are joining traditional powers as major consumers. China has, in fact, recently overtaken the United States as the world's largest energy consumer (Saran, 2011) although per capita consumption remains low, at only one-third of the OECD average (IEA, 2010: 5). Recently, the energy needs of emerging economies have prompted investment in crude oil extraction, for example from Asian companies in Africa. Whilst these relationships have the potential to be mutually beneficial (as the President of Angola put it, "China needs natural resources and Angola wants development": Angop, 2007), both international development specialists and local commentators have been critical of the impacts of China's 'oil rush' on Africa and the increasing interest in Africa that this has evoked (Cape Times, 2007).

To court African states, unconditional aid is sometimes offered by the Chinese government<sup>15</sup> (colloquially known as ‘cheque book diplomacy’). This policy of “non-interference” may become problematic when translated into ‘support for dictatorial regimes, which may prolong their stay in power’ (Yaw Baah and Jauc, 2009: 45).

At a meeting of Sub-Saharan regional security analysts in 2009, the negative impacts of the ‘scramble for resources’ were named as the ‘propping up’ of unpopular governments through this income, the opportunities for corruption unrestricted payments provide, and the distortion of benefits between the elites and the local populations: ‘projects are primarily carried out using Chinese labour that denies the recipient countries the benefit of jobs and knowledge transfer’ (Abbott and Phipps, 2009). This frustration can be felt keenly at the local level; recently in South Kordofan, a key oil-producing region of Sudan, protests were held by unemployed graduates unable to find work through CNPC, a Chinese oil consortium (AllAfrica, 2011). This lack of benefits can further entrench the feeling of marginalisation of impoverished communities. This is not a homogenous picture however, as Chinese institutes have also provided training for African professionals, including health professionals, and collaborated with African research in project exploring fields of ‘mutual interest’, such as ‘bio-agriculture, mining and medicines’ (ANIE, 2010).

Amongst security specialists, there is also concern that ‘consumer’ nations, anxious to stabilise their energy imports, may neglect their responsibilities to the oppressed populations of the states with whom they trade. Claims have recently been made that anxiety around oil supplies – the power that the Angola government wields through its oil wealth - has limited the leverage of the international community in relation to governance and human rights (Human Rights Watch, 2010). The government of Angola, which is one of the top two oil producers in the region, is cultivating diplomatic relationships with major oil consuming countries in Europe and Asia and with the United States. With a variety of eager customers to choose from, should any trading partner make stringent transparency measures, the Angolan state can threaten to take their business to any number of alternative buyers (ibid.).

Moreover, the scramble for remaining fossil fuels may make extraction industry corporations increasingly indifferent to the impact on local populations. A reminder that marginalised communities are not exclusively to be found in the geographically Southern regions is found in campaigns in Canada, the United States and Australia for the rights of ‘first nation’ or indigenous populations. Exploitation of tar sands in Canada has provoked widespread condemnation.

Tar sands (a mixture of sand, clay and heavy crude oil) in the Canadian province of Alberta are potentially extremely rich sources of oil. First Nations in Alberta, Saskatchewan and the Northwest Territories have stated that traditional lands are being destroyed for tar sands exploration and extraction, and that First Nations are not being included, or properly compensated for their lost and destroyed lands and water supplies (Tar Sands Watch, 2011). Land sacred to the Akaitcho Dene First Nations have been infringed upon by exploration companies seeking uranium in order to power tar sands exploration, in the Thelon



UK anti-tar sands protest, 2009.

Photo credit: [hidden side](#).

Basin (ibid.), and local wildlife, including caribou herds, are in marked decline because of the incursion into their habitat (Indigenous Environmental Network, 2011).

There are also extensive tar sand deposits in Madagascar. Given the difficulty in curbing the destruction of land and the impact on local communities in Canada (a developed Western nation), the prospects for a highly impoverished country with low levels of education (and currently without a recognised government - between March 2011 and the 30 September 2011 elections) are daunting (Banktrack,

<sup>15</sup> However, unlike the Structural Adjustment Programmes of the World Bank and International Monetary Fund, Chinese aid is not conditional on ‘privatisation, trade liberalisation or cuts in social spending’ (Yaw Baah and Jauc, 2009: 45).

2011).

Disregard for the human security of local populations can only drive tension, mistrust and resentment between residents of energy-rich areas, and the multi-national corporations that hope to export their resources.

### ***Competition over resources and the Global South: Routes of insecurity***

**'The Caribbean Sea has an extremely high level of shipping activity, but low levels of maritime policing.** The region holds key routes to the continental US from the Atlantic Ocean – the Windward Passage and the Panama Canal. It facilitates the shipping of manufactured goods and the export of natural resources such as petroleum, natural gas, ammonia and copper (from South America). **Recently, Petro-China's acquisition in 2010 of Aramco based in St. Eustacius (one of the largest oil storage and shipping corporations in the Caribbean, with an 11.3 million barrel capacity), has greatly increased commerce in the region.**

The Panama Canal in particular is a key choke point for international trade flows and has reached near maximum capacity. Major expansion work on the canal is scheduled for completion in 2012. Once this occurs, some of the current tensions in the US logistics systems will be alleviated.

**The immediate challenge, however, confronting Caribbean governments and the companies exporting resources from the region is the securing of these territorial waters from the insidious passage of illegal cargo including drugs and firearms.** This is a key route for drug trafficking in particular – for example, according to the United Nations 2010 Annual Drug Report, Colombia, Peru and Bolivia are the world's primary sources of cocaine, whilst 36% of the world's cocaine users reside in North America.

This problem inevitably places prohibitive demands on domestic finances, given the assets and trained manpower that need to be harnessed. To address this issue, the Caribbean states have worked with key partners in the region, producing the Caribbean-United States Security Framework in May 2010, and the Caribbean Basin Security Initiative (CBSI) in March 2011, to assist in addressing this problem. The US government has drawn upon an array of sources for funding including the Development Assistance Fund, the Economic Support Fund, the International Narcotics Control and Law Enforcement and Foreign and Military Accounts. US support also goes toward non-monetary items such as the provision of command and control systems, radios, logistical and maritime support to increase maritime interdiction capability, information sharing and maritime support for the Regional Security System as well as technical assistance aimed at improving financial crime investigations.

This program is bolstered by significant benchmarks, including a new **political consensus that heralds a "new era of partnership"**, and the collective assets of regional security forces, including the USA, UK, Trinidad and Tobago and Venezuela.

The new joint initiatives are clearly win-wins for the Caribbean. Through consultation and dialogue Caribbean Community members have partnered with the US and have resolved common and competing priorities and concerns amidst the ebb and flow of resources at their disposal.'

***By Serena Joseph-Harris, formerly High Commissioner of the Republic of Trinidad and Tobago to the UK***

### **The 'oil curse'**

In nations with substantial energy reserves, the wealth generated from the sale of these resources is often not equally distributed amongst communities. Such areas have not witnessed a 'trickle down' of benefits to the poorest amongst their populations. This is particularly the case in Nigeria, where the Niger Delta region has been subject to internal tension over the past two decades – sometimes labelled fighting for freedom,

sometimes as plain criminality (Nwozor, 2010: 32) – as a result of the exploitation of their oil reserves by large multi-national corporations. There have also been calls for compensation (Agbu, 2004). Similarly in Gabon, an over-dependence on oil left no incentive to invest in other industries, wiping out diverse agriculture and industry interests, meaning that when the oil ‘ran out’, the country was left in an extremely vulnerable economic position (Bainomugisha et al, 2006: iv).

Frustration is engendered where valuable local resources serve only the ‘privileged elites, oil companies and their shareholders and Western industrialised countries’ (Bainomugisha et al, 2006: 3). In Nigeria, despite a ballooning of revenues from oil, poverty more than doubled between 1970 and 2006<sup>16</sup> (rising to 70%) and environmental degradation alienated people from their traditional livelihoods - farming, fishing and hunting (Nwozor, 2010). Such inequities have led to the foundation of a range of insurgent and splinter groups in the Niger Delta region e.g. the Movement for the Emancipation of the Niger Delta (MEND). Support for MEND comes primarily from young people and ‘impoverished peasants’ whose farm lands and fishing creeks – their sole source of livelihood – have been destroyed (Okonta, 2006). Their activity has been heightened by deepening inter-ethnic tension, and the massive ‘build of up arms’ around the 2003 election (Nwozor, 2010: 29).

The government response has often been severe. For example, after a truce was brokered between MEND and the Nigerian government in April 2006, the President Olusegun Obasanjo ordered his armed forces to ambush MEND militia men and assassinate them (Okonta, 2006 and Courson, 2009). The men were on their way to negotiate the release of a Shell Oil worker kidnapped by young people not associated with MEND’s hierarchy. This approach marked a distinct departure from the April agreement, in which development projects and dialogue were to be used as a catalyst to peace and accountable governance in the Niger Delta (ibid.).

More recently, a highly publicized militant amnesty has had mixed success. Under President Musa Yar’Adua, the Nigerian government brokered an amnesty with many of the Niger Delta militants, who gave their weapons up to the state, in return for a pardon and participation in a rehabilitation programme. Since then, some peace and business have returned to the Niger Delta. However, the Nigerian Labour Party argued that the 2010 programme of ‘re-orientation, rehabilitation and reintegration’ (Oboh, 2010) working with militants was insufficient without a parallel initiative addressing the underlying environmental problems that have wiped away the incomes of indigenous peoples (ibid). Until this is done, there is ‘no way the people of the region would forego violence as a means of protest’ (ibid.), they argue.

In the Niger Delta, the extended conflict has produced an alternative market, the ‘war economy’, which in itself becomes a driver sustaining the conflict. This economy is propelled by the arms trade (Abbott and Phipps, 2009: 4) and it also sustains it, underpinning ‘an extensive proliferation of arms and the institutions of violence’ (Ikelegbe, 2005: 208), and has benefited some profiteers so radically that they prefer this ‘black market’ to the potential of real economic justice for all (Nwozor, 2010: 33).

The influence of natural resources revenue on conflict is not a new phenomenon. Prior to Sudan’s CPA, the country had suffered decades of civil war between the oil-rich South and the power base in the North, intensified by late 20<sup>th</sup> Century explosion in the export of oil. As with civil war in Liberia, the profits from this enhanced petroleum production were rumoured to finance the conflict (Switzer, 2002). As resources dwindle and worldwide demand continues to rise, the concern now is that opportunities for the misuse of funds will increase through an upswing in income.

### **Fuelling conflict**

Competition over resources can also increase tensions and even conflict between countries across the South as well as within national boundaries. For example, on-going conflicts along the Kenya/Uganda border are partly as a result of competition over resources, through ‘reduced access to land, water and other natural resources’ because of demographic stress and environmental degradation, which interact with ‘reduced access to credit, markets and extension services’ and a ‘long history of economic and social marginalisation from central authority’ (Mwaura, 2005: 3).

<sup>16</sup> In this instance, living on less than a dollar a day.

The increasing scarcity of resources such as oil may build pressure on sites rich in natural resources with contested ownership. This was seen recently in East Africa, in the 2009 diplomatic tussle over ownership of the Island of Migingo in Lake Victoria. As well as being the home of hundreds of Kenyan fisherman, it was also rumoured that the waters around Migingo were rich in oil. The resulting public tension between Uganda and Kenya prompted local vigilante action, with residents of Kibera (the largest informal settlement in Africa) pulling up the train tracks that ran through the slum to prevent Uganda exports reaching the coast (Baguma, 2010).

In the same region, oil-rich land in Uganda's Lake Albert Rift Basin has recently been the site of conflict between livestock herders, indigenous communities, and an oil company, Tullow Oil plc. Tullow Oil had uncovered the presence of kasamene - an estimated 800 million barrels of recoverable oil reserves. In December 2010, Uganda's army forcibly evicted local residents, along with their cattle, without providing an alternative place to settle (Bariyo, 2010). This disregard for traditional land usage drives frustration and marginalisation, which can engender instability and unrest. As one local farmer put it: "For many years, the government has not allowed us near this forest, but now foreigners are comfortably occupying it...All we have been seeing in the past two years are trucks and white men" (ibid.).

The urban-rural divide may be a major factor in access to resources. Latin America and the Caribbean is around 75% urbanised, with most urban families still with family members in rural areas. Where arable land is key to livelihoods, and territory is contested e.g. for the use of land for biofuels and mining, minority groups such as women and indigenous ethnic communities are rendered particularly vulnerable to the powerful interests of corporations and the state (Zala, 2010: 5).

Policy makers in areas witnessing an expansion in resource extraction should be mindful of the security consequences marginalising local populations in areas rich in natural resources, such as the Niger Delta, taking heed of Bainomugisha et al's warning that 'abundant revenues from an oil boom can give a government false confidence that it can survive without the approval of the population' (2006: 6).

### **Sustainable solutions**

The increasing scarcity of fossil fuels is occurring at a time when the negative effects of carbon-based energy are being exposed by climate scientists. Climate change, coupled with 'peak oil'<sup>17</sup>, mean that we need to diversify our energy sources now. Dahr Jamail argues that there are signs that we may have already arrived at peak oil (2011).

The vast majority of these sources of energy will need to be renewable in order to be sustainable. A move away from carbon-based economies is crucial if the most traumatic effects of climate change (both for humankind, the planet itself and the countless other species who inhabit the earth with us) are to be avoided. This diversification will also ease tensions around competition over energy resources, at a local, inter-state and inter-regional level.

This means that investment into renewable energy sources must increase. Onshore and offshore wind power, thermal energy, and photovoltaic solar technology as well as some forms of marine energy (wave, tidal etc.) are all technologically viable alternatives to production of energy from fossil fuels. However, uptake of these should not occur without meaningful consultation with local groups, if the kind of marginalisation provoked at the site of existing energy sources<sup>18</sup> is to be prevented.

Investment into energy efficiency technologies and implementation of existing best practice is also crucial. University of Cambridge researchers have recently suggested that 73 per cent of global energy use could be saved by introducing "best practice" efficiency measures (Cullen et al, 2011). By reducing the amount of energy wasted, at all levels of the economy, from extraction and transportation to production and

<sup>17</sup> The time at which the maximum rate of global petroleum extraction is reached, after which the rate of production enters terminal decline.

<sup>18</sup> Lack of consultation with local communities has been a facet of renewable energy resources, as well as traditional fossil fuels. *Desertec* (a solar plant in the Sahara desert) has been recently criticised for repeating the mistakes of oil, gas and uranium industry in Nigeria, Namibia and Niger (Parrish, 2011) – ignoring the need for local capacity-building, and transforming the local community into 'passive consumers', allowing much of the profits to flow 'overseas, or into the pockets of a few warlords and local government officials' (ibid.).

consumption, we would make a huge difference to our carbon emissions, and prevent the potentially environmentally and politically destructive scramble for new sources of fuel<sup>19</sup>.

Moreover, non-fossil fuels cannot be embraced unthinkingly. Just because a source of energy is renewable, does not mean it is not environmentally and socially damaging. For example, the growing popularity of biofuels (also known as agrofuels) has encouraged governments (such as Brazil, India and Indonesia) and corporations to take over land blessed with diverse ecosystems (including rainforests) or which serve as important carbon sinks (such as peat lands and marshes) and replant them with monocultural cash crops such as soy, maize and rapeseed to be sold as biofuels<sup>20</sup>.

There are some examples of these plantations forcing out the indigenous pastoral populations of those lands (Peasant Movement of the Philippines et al, 2009). Social, economic and conflict sensitivity is crucial as decisions are made about when, where and at what scale such changes to energy sources are made.

Furthermore, growing many of the plants that can be used as biofuels produces high levels of nitrous oxide – a greenhouse gas far more potent than carbon dioxide (McKenna, 2007)<sup>21</sup>. This must be factored in, in addition to the reduction in carbon dioxide absorption that deforestation and other land use change causes. Indirect land use change (ILUC) - the expansion of agricultural land into environmentally sensitive areas, when food production is displaced by fuel crops - must also be accounted for when calculating overall greenhouse gas emissions from biofuels. In short, future energy policies must thoroughly consider issues of environmental and social impact before embracing renewable energy solutions.

### **Competition or cooperation?**

Oilfields that have until now been considered too expensive or inhospitable to exploit are attracting greater interest (Zala, 2010). Moreover, countries that possess newly sought-after natural resources will find their economies and governments empowered. In Latin America, Brazil is becoming a major exporter of biofuels (namely sugar-based ethanol), and its recent discovery of the deep-sea Tupi oil field gives it the potential to become one of the world's biggest oil producers (Neumann, 2010). Moreover, the demand for lithium (which has a use particularly in energy-efficient ion batteries used to power hybrid cars) may have serious impacts on three Latin American nations - Argentina, Bolivia and Chile – as their supply represent 90% of the world's total lithium resources.

As Vanessa Neumann puts it, 'Whether it is petroleum, biofuels or rechargeable batteries, Latin America holds the keys to most of our future energy supplies. The world simply cannot meet its energy demands without the co-operation of Central and South America' (2010). This may give these previously marginalised nations untold levels of influence in the international arena, and give groups with alternative visions of the economic future (the project of socialist capitalism espoused by the Bolivian premier Evo Morales, for example), a significantly greater voice in international affairs.

These global South nations need to benefit fully from the industries that operate on their lands. Currently, many states do not benefit fiscally, as many corporations elude tax bills in the countries in which they operate (see Hogg and McNair, 2009).

Furthermore, if the insecurities and inequalities that plague existing energy powers are to be avoided, the proceeds of these resource extractions also must be distributed more fairly amongst local communities<sup>22</sup>.

Recent positive examples of profit-sharing exercises should be replicated. For example, between the January 2005 Comprehensive Peace Agreement (CPA) and the February 2011 referendum, a fragile peace was kept between northern and southern Sudan. A significant aspect of this was the revenue-sharing

<sup>19</sup> If the EU reduced its energy consumption by 1%, 50 coal plants and 25,000 wind turbines would not be needed (Rankin, 2010).

<sup>20</sup> Nigeria witnessed a food shortage in 2005. The price of cassava rose as supplies were exported to China, for use as starch (Oshisada, 2005). Cassava can be used to make ethanol. Measures need to be put in place to ensure that the sale of cassava for biofuels do not further endanger the food security of the local populations used to buying the product in their local markets.

<sup>21</sup> The farming of rapeseed (a common biodiesel) produces nitrous oxide, a green house gas 200-300 times as potent a greenhouse gas as carbon dioxide (Johnson and Heinen, 2007).

<sup>22</sup> Efforts have been made in this direction, through the Extractive Industries Transparency Initiative: [eiti.org](http://eiti.org).

guidelines implemented. The two regions are co-dependent: the south being rich in oil, but with the majority of the pipe lines running through the north (Tadesse, 2011). Agreements to fairly divide the profits from the sale of this oil allowed both communities to benefit economically, and avoided entrenching the economic and political marginalisation that has driven conflict in Sudan over past decades. As the independence of Southern Sudan takes place officially in July 2011, oil is the main driver of national contestation over border demarcation (Concordis International, 2010: 10); one of the most important factors in upholding stability when these borders have been defined will be the adoption of a 'transparent and verifiable oil deal' (Global Witness, 2011) which both North and South Sudan benefit from.

## Water

The availability of water has already begun to be heavily influenced by climate change. Many areas that have endured flooding or drought are suffering these more intensely and frequently than is usual, making their access to water more insecure.

This increased water insecurity will put pressure on arrangements that have long been used to manage competition over shared resources such as reservoirs and rivers. Local and diplomatic stresses on these agreements may drive conflict. In situations where a local 'race for water' occurs, it will be marginalised populations that are likely to suffer most.

Ironically, the same processes that have caused anthropogenic climate change, the extraction and combustion of fossil fuels, are adding to increased water stress in another way. As conventional fossil fuels are increasingly scarce, unconventional sources, like oil sands and shale gas, which require vast amounts of water for their extraction, are becoming increasingly popular. Water needed in the extraction is often supplied by depleting aquifers, thereby exacerbating water tensions further.

The issue of water scarcity needs to be tackled with urgency, underpinned by the principles of fairness and minimum harm in potential water-conflict regions. Cooperative resolutions to competing needs, such as joint basin management of key water resources, are the only solution.

### A changing climate

The Intergovernmental Panel on Climate Change predicts that freshwater availability will decrease in many regions and, ironically, more water in the form of storm surges and heavy rainfall may actually contaminate available supplies. There is genuine concern about the possibility of 'water wars' being fought in the future. At the very least, exacerbated water scarcity as a result of climate change will aggravate existing tensions. (Abbott, 2008).

Climate change will impact in diverse ways in different regions. The Middle East and North Africa region (MENA) is set to experience a decrease in annual renewable water availability of approximately a third (El Hassan Bin Talal, 2010). There are regions within Jordan, Syria, Israel and Turkey that already have a serious deficit (ibid.). Hamed Assaf also warns of a 'grim outlook' for parts of the Arab world, with climate change meaning a reduction in precipitation, an increase in evaporation, and subsequent reduction in both runoff and soil moisture resulting in a major reduction in available water resources (2010: 26).

Adaptation measures to problems such as these must be managed cooperatively and with the needs of other communities in mind. Policies that hinder the water access of other nations and peoples with water insecurity have the potential to catalyse conflict, multiplying the security implications of the initial problem - lack of water. For example, Iran has constructed a dam on the Khabour River that cuts off vital supplies to the wetlands and marshes of Southern Iraq (Assaf, 2010: 26). Both nations can be expected to divert water from their rivers over coming years and particularly through extended period of drought - this will accentuate water scarcity in neighbouring Syria (ibid.). Whilst it is not inevitable that this will lead to violent conflict between states, it is likely to intensify mistrust and resentment between local communities, at least.

### Water-sharing agreements

Competition over water is by no means a new problem. It is a traditional threat to the ability of different communities to live together on common ground. Mechanisms to deal with the issue of water sharing range from local informal customs, regional government processes (such as India's Interstate Water Disputes Tribunal and Rivers Boards, which adjudicate disputes over use and development of interstate river waters (Rema and Padikkal, 2009) to binding international agreements (such as the Indus Waters Treaty between India and Pakistan).

The last of these, the Indus Waters Treaty, was in 1960 a groundbreaking development in the organization of water sharing. Having endured two wars and various periods of mistrust and unease, climate change may now prove 'the toughest test' for this agreement (Jena, 2010), as levels of run off from the melting snow increase, and then eventually steeply decrease, severely curbing river flows. India is developing dams along the upper reaches of the Indus river, to secure its own water access, raising questions in Pakistan over whether falling water availability 'is due to climate change or to India's reserves' (ibid.). As Pakistan has few other options in terms of alternative water resources, its anxieties are severely heightened by these developments. This could provoke conflict between the two nuclear powers.

Climate change is not the only stress factor on the Indus Waters Treaty. Rising populations in both nations increase the demand for water for drinking, sanitation and agriculture; inefficiency in the transportation and use of water increases demand, and businesses that rely on water have increased in number (Habib, 2005).

Inequalities in the sharing of water in this region have long historical precedents. British canal construction from the mid-nineteenth century resulted in interprovincial conflict over water access between Sindh and Punjab provinces (now part of Pakistan); and in India, Punjab, Haryana and Rajasthan provinces, competition over water has been a real catalyst for distinctive separatist insurgencies (Mustafa, 2010). However, Daanish Mustafa rejects the idea that increased water scarcity in this region will inevitably lead to conflict. He argues that these tensions are in themselves resolvable, and that it is in fact the trust deficit between the two nations, and the inefficiencies and inequities in supply within the two nations, that are likely to lead to conflict unless addressed (2010).

### The local race for water

With the potential for conflict around interstate competition over water, there is concern that conflicts at the local level are not given adequate attention by researchers (Rema, 2009). Increased competition over water at a local level however is already feeding violent conflict, however. These conflicts are fuelled by real and perceived inequities in water access.

For example, in Syria recently a drought caused food and water shortages. While wealthy members of the community could cope with these problems - being able to purchase water, energy and transport easily - poorer households suffered disproportionately (CircleOfBlue, 2010). Syria, Israel, Lebanon, Jordan, and the Palestinian Authority actually all share one source of water: the Jordan River Basin. Water scarcity is intensifying with growing populations and a changing climate. The related insecurity impacts unequally on rich and poor, for example the Israeli settlers and the Palestinian inhabitants of the West Bank and Gaza respectively (Heske, 2009). As water prices rise, priority will be given to those who can afford to pay more, leaving marginalised communities at even greater risk. The distribution of water must be addressed in any viable peace agreement between the Israeli and Palestinian communities (Dwiek and Shuval, 2004).

Water scarcity actually threatens the survival of some vulnerable communities. Others are seriously hindered by lack of water - aridity being a key limiting factor in their socio-economic development (Assaf, 2010: 28). Greater competition will also result in struggles between sectors with different needs. For example, the tourist industry is a major user of water, putting pressure on a resource vital to the survival of the local community. Tourism can divert water from agricultural uses, which that impacts upon local food security, instead feeding an industry that mainly benefits tour operators and 'big companies' (Khattabi: 2009, 126).

As with sources of oil, power dynamics may determine whether the benefits of natural resources are shared between local needs and capitalist initiatives that require the resources for development. How these competing requirements are managed will determine the security implications of competition over resources.

## Food

### Livelihoods under threat

Water insecurity has significant impacts on food production. As with water access, food insecurity will hit the poorest hardest, further deepening poverty and marginalisation. Unlike in Northern states, most of the food consumed in the countries of the South is grown in these countries themselves. Therefore the impact of a decrease in the ecological carrying capacity of the croplands will be catastrophic (Rogers, 2009).

In May 2011, at least 34 people were killed in conflict between Kenya's Turkana and Ethiopia's Merille communities in border regions (Tekle, 2011). Members of Kenya's Turkana community have been crossing the Ethiopia border to purchase food, often leading to clashes. Whilst such tribal struggles are not uncommon, the scale of the recent conflict has raised security concerns for the governments of the neighbouring countries, who met in Addis Ababa to explore the issues. They made a commitment to enhanced 'security along common borders [through] addressing the challenges created by anti-peace elements, competition for scarce resources and the proliferation of small arms' (ibid.). The Kenyan government started distributing food aid to villages to deter them travelling to purchase supplies. At the meeting of Ministers, the two countries agreed to push on infrastructure and development projects connecting the two countries including "in electricity, roads, railways, information communication and technology as well as civil aviation" (ibid.).

There is a likelihood that other impacts of climate change will result in land degradation e.g. flooding and soil erosion. There may also be a decline in non-arable food stuffs such as global fish stocks, as these are affected by changing sea levels and temperature (Abbott, 2008: 6), and already on the brink of collapse from overfishing. Moreover, the increasing demand for biofuels makes it likely that investors will see Southern arable land as a viable source of income, as Northern countries see them as a viable source of energy. This often impinges onto land historically used for food production. Since the demand for that food



does not disappear, this can push food production onto previously forested or highly bio diverse land, leading both to further soil erosion and ecological degradation, as well as carbon emissions associated with land use change (deforestation, draining marsh land and peat bogs etc.). It can also mean price rises, where crops and seeds used for food are now sold as cash crops for biofuel production.

The impacts of climate change will vary enormously over time and region; in some areas, it will actually increase crop yield and

Flooding in Bangladesh. Photo credit: [Dfid](#)

therefore have a positive effect on the food security of the community. For example, pastoralists in arid and semi-arid regions in sub-Saharan Africa, who track resources opportunistically, may be more resistant to the more variable rainfall than arable farmers, and have a greater demand for the supplies of milk and meat they sell, through increasing urbanisation caused partly through climate change (Swift, 2009).

In many areas however, climate change presents a risk to food security. This case study, focusing on the South Kordofan region of North Sudan, illustrates this.

### ***Competition over resources and the Global South: Peacebuilding in Sudan***

South Kordofan is an illustration of problems seen throughout different areas of Sudan. In recent years, pressure on the land has increased for a variety of reasons, including **changes in climate (leading to increased levels of drought and harsher environmental conditions), land grabbing for mechanised farming systems and massive population displacement following the signing of the Comprehensive Peace Agreement in 2005**. As a result, these resources are depleting and the pressure on those that remain is increasing over time.

As this pressure grows, already fragile relationships have broken down between different tribal groups: in this case the Misseriyya (traditionally nomadic pastoralists) and the Dinka (settled farmers) who are mutually distrustful, having fought on opposite sides in Sudan's long civil war. As they face increased competition over land use, further disagreements are sparking greater conflict. **The residual problems of mistrust are exacerbated by political manipulation of ethnic identities by those in power** (including those based outside Kordofan).

As these tensions build, and due to a lack of accountable civil society groups, local peace keepers are finding it harder to successfully resolve conflict through traditional methods. **The exclusion of women and youths also serves to weaken traditional peace building methods.**

As a result of the problems above, SOS Sahel works to improve access to natural resources by developing supplies through the construction and rehabilitation of *hafirs* (water reservoirs), and to encourage the sustainable management of natural resources in close coordination with local communities from both the Dinka and the Misseriyya tribes. Workshops, exchange visits and forums are organised to strengthen communities' understanding of one another and to develop peace building skills enabling them to handle conflict when problems arise and preventing situations erupting into more serious conflict. SOS Sahel also seeks to address the lack of involvement and empowerment of women and youths by developing training sessions in this field for both of these target groups specifically, as well as working with the communities more generally.

**Close relationships with the local communities are vital to the success of conflict reduction work in the region;** respect needs to be paid to the concerns of farmers and pastoralists over natural resource issues and awareness of the deeper cultural issues also need to be addressed.

Even the most dedicated efforts to rehabilitate its natural resource base will take years – therefore there is an immediate need to stop this competition for natural resources escalating into further violent conflict.

***By SOS Sahel, Sudan***

Food insecurity, ultimately an existential threat to a communities' livelihood, is a threat to human security, and therefore to national security. For example in Pakistan, Abid Qaiyum Suleri notes that whilst all members of the Taliban are assumed to be Islamist hard-liners, many are actually impoverished young people 'outraged by chronic hunger, endemic corruption...and the governments' inability to supply basic education or other services'; in North-West Frontier Province some Taliban groups have begun redistributing land, in order to provide local populations with adequate access to food (2010). Given the links of the Pakistani Taliban to al-Qaeda, it is not alarmist to suggest that socio-political instability, including food insecurity at a local level, actually threatens global security generally (ibid.).

### Indigenous farming under threat

The development of a global intellectual property regime based on fairness and equity is becoming increasingly relevant to the food security of the Global South. Farmers in developing nations often use selected seeds from one year's harvest in the next, and also breed new ones that are better adapted to local ecological conditions; these farm-saved seeds contribute to long-term food security worldwide and maintain agricultural biodiversity.

However, global trade laws have allowed agriculture in many developing countries to become subject to patents and other forms of plant variety protection. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), an accord overseen by the World Trade Organisation, has been criticised for requiring countries to introduce patenting or microorganisms (Hepburn, undated). Outside of these agreements, bilateral and regional trading deals often go further, containing mandatory requirements concerning the patenting of indigenous plant organisms.

By patenting seeds, companies aim to prevent farmers from freely reusing seeds year-on-year, thus providing them with revenue from licences (ibid.). Seed patenting is likely to promote monocultures, which not only reduce biodiversity, but are more susceptible to pests and diseases, reducing food security. Intellectual Property Rights around plants negatively impacts on 'traditional knowledge, indigenous rights [and] environmental protection', and jeopardizes food security, making it harder for a population to feed itself (3D, 2007).

Such developments are profoundly unwelcome in areas struggling to maintain a secure food supply, made harder by a changing climate and increased water insecurity. Moreover, imposed external mandates that have made the lives of marginalised people harder will only serve to increase frustration and resentment against corporations and governments in the Global North. This is extremely damaging to North/South relations.

### Collaboration

The converse of patenting – the sharing of knowledge – provides an alternative that will ease food insecurity. The issue provides opportunities for international collaboration. As the Global North now imports most of its food, and much of it from developing nations in the Global South, it is in their interests, as well as being a humanitarian imperative, to work to make sure the Global South is a breadbasket, not a desert.

Such collaboration is already taking place. For example, Israel has been developing drip-irrigation systems that reduce the amount of water needed for farming: Ben-Gurion University's International Program for Arid Land Crops has developed a Family Drip Irrigation System (FDIS). Israel's *Center for International Cooperation* have partnered with local NGOs to deliver FDIS to Eastern Cape, one of South Africa's poorest provinces at minimal costs. The implementation means that farmers, once at the mercy of erratic rainfall patterns, can now plant four rounds of crops, leading to an increase in output of around 400% (Nierenberg and Madan, 2010).

## TOWARDS LONG-TERM AND SUSTAINABLE ENERGY SECURITY

Competition over resources is an increasingly urgent humanitarian issue. It is also an issue likely to be of concern to security and defence analysts over coming decades, as insecure access to key resources, coupled with marginalisation and inequality, generates struggles in which competing communities turn to violence in order to secure the resources they need to survive. Where Northern states and corporations buy access to Southern resources, regulatory principles may be required to ensure this competition does not impair the human rights and security of local populations.

Increasing demand for rare earth minerals, such as cobalt (an essential component in some batteries and synthetic fuels), coltan (used in the production of mobile phones) and cassiterite (also used in mobiles) has also driven violent conflict as groups attempt to control supply. Conflicts over such minerals are likely to be more localised than the water, food and energy resource conflicts this paper has focused upon (and hence do not feature in the scope of this paper): the Democratic Republic of Congo has 80% of the world's coltan supplies (Moyroud and Katung, 2002), for example, and also supplies of cobalt and cassiterite (ibid.).

Although not global security concerns therefore, competition over these resources is already having horrendously destructive effect on local populations, as profits from the sale of these minerals have been used in recent years to fund militias who enact dire human rights abuses (Githaiga, 2011). We therefore have an humanitarian-based interest.

In the case of energy, sustainable alternatives to fossil fuels must be adopted with haste. A shift away from carbon-based economies will not be an immediate or easy transition, but it is necessary if conflict over remaining supplies of non-renewable energy is to be avoided, and in order to prevent catastrophic levels of climate change. Energy efficiency and savings must also be invested in, and current knowledge shared (see Lim Tai Wei's case study) to make best use of the energy supplies we are using.

Increasing scarcity of resources also makes the routes along which these resources travel potential sites of conflict. As Serena Joseph-Harris' case study highlights, it is necessary to collaborate with all stakeholders now to ensure these routes do not become the location of future violence, and also, using the same example, to firmly tackle the economic situations in 'supplier' nations e.g. some Latin America countries, that make coca production the most viable form of income.

In terms of water security, livelihood-oriented water availability for local populations must be central to any sustainable solution to water scarcity (Habib, 2005). Where water is scarce, and a perception of inequality of water access exists, whether or not there is in reality a differential in water access, the perception in itself is damaging, particularly if one group are perceived to be enjoying unfettered water access, whilst others are struggling to survive. As the examples from SOS Sahel demonstrate, communities must be listened to, and seen to be listened to, in resource sharing negotiations.

To avert 'water wars', water-sharing agreements must be pre-emptively revised to take account of sustainability and environmental limits, or they will fail when the water resources they were designed to manage reduce. A deeper trust between competing parties must be engendered, with transparency and communication encouraged. This is particularly relevant to the relationship between India and Pakistan, which is hampered by a sense of defensive (rather than positive) engagement, and a media that sensationalises bilateral dialogues around water issues, presenting 'essentially technical arguments...as existential threats' (Mustafa, 2010: 2), feeding mistrust between the nations'.

In policy discussions around water security, it should be remembered that access is a fundamental human right<sup>23</sup>. This should oblige governments and international institutions to better safeguard people's access to water, giving citizens a right to seek legal recourse when deprived of access to basic water resources (El Hassan Bin Talal, 2010). Such resource-focused economies would represent a substantial shift, away from people serving economies, towards economies serving people (ibid.). A 2010 decision by Indian courts disallowing a bauxite-mining project in the Niyamgiri hills in Orissa (considered sacred by local tribal groups) was a positive example of this. It was argued that the rights of two indigenous groups would be infringed in favour of a private company (Rao, 2010). The decision declared that 'natural resources were national assets and local communities enjoy entitlements, if not full ownership, on them' (ibid.).

It is crucial that Southern perspectives feed into the process of reshaping the economy and energy security infrastructure to meet basic human needs: not merely because the West is reliant on the South's 'cooperation' to mitigate security threats and energy access, but because it is impossible for Western governments to build a sustainable future without recognising their Southern counterparts as equal partners in guaranteeing peace and global human security.

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<sup>23</sup> UN resolution 64/292 was passed in July 2010. It recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights (UN, 2010).

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