

# perspectives

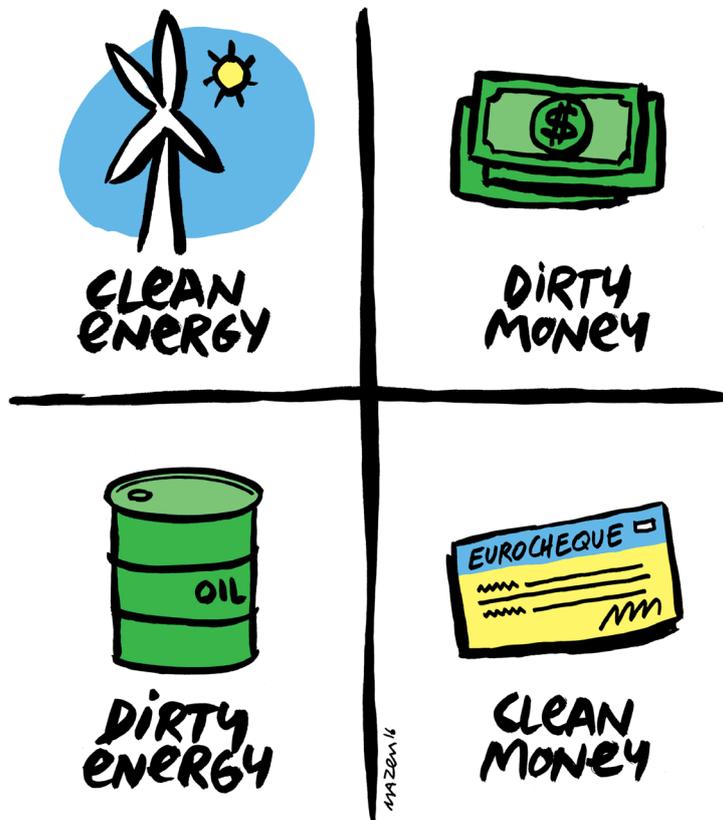
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POLITICAL ANALYSES AND COMMENTARY

## Middle East & North Africa

### A Region Heating Up: Climate Change Activism in the Middle East and North Africa

## *in this issue*



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# Editorial

The Middle Eastern and Northern African (MENA) region, faced with tumultuous changes in the last five years, shows a picture of shrinking spaces for civil society activism. In contrast, ecological activism is growing and connecting the fight for climate justice to other demands for community and indigenous rights, gender equality, democracy and transparency.

In recent negotiations based on the United Nations Framework Convention on Climate Change (UNFCCC), international geopolitical power dynamics have been reproduced and economic lobby groups, although formally belonging to the group of civil society observers, have commanded a great deal of power. The influence of the rest of civil society on the negotiators has depended greatly on their ability to make themselves heard. This has been attempted by joining large coalitions, holding side events, exhibitions, mobilizations or whenever possible securing an invitation to join the official delegations of their governments.

The status quo is unsatisfactory. It raises political, economic and social questions at various levels; from the small scale at the local community level up to the larger scale on the regional and global levels.

In the run up to the next iteration of the Conference of Parties in the UNFCCC, 'COP 22' in Marrakesh, in November 2016, this issue of Perspectives explores the complex relationship

between climate change and governance in the MENA region. In the following pages, activists, journalists, researchers and experts reflect on resources and climate change, climate activism, and the politics of climate negotiations in the MENA region. Throughout their focus is on those who bear the bulk of the negative effects of climate change, and on the areas where there is the most pressing need for action.

Suzanne Baaklini and Safa Al Jayoussi explore climate activism in the MENA region; Soraya El Kahlaoui, George Kurzom, Wim Zwijnenburg and Fedia Gasmî (interviewed by Simon Ilse, ecology program coordinator in the Heinrich Böll Tunis office) discuss the impact of climate change on resources in Morocco, Palestine, Syria and Tunisia; Ghassan Waïl El Karmouni examines the consequences of the way renewable energies are being introduced in Morocco; Rana El Hajj, Jawad Moustakbal and Wael Hmaidan analyze the politics of international climate negotiations; and taking a 'transversal' approach, the Jordanian agricultural engineer, Fidaa Haddad, argues that climate forces are likely to raise gender specific issues in the MENA region.

This issue of Perspectives is illustrated by the Lebanese artist Mazen Kerbaj.

Dorothea Rischewski, Bettina Marx, Joachim Paul and Bente Scheller

# How Serious are Arab Countries about Climate Change?

## A New Era of Climate Change Policy

Rana El Hajj



Rana El Hajj is the senior program coordinator for Climate Change and Environment at the Issam Fares Institute for Public Policy and International Affairs at the American University of Beirut. Prior to her current position, Ms. El Hajj held various positions in environmental non-governmental organizations in Lebanon. The most notable of these include; project manager for several environment and development projects, Program Coordinator for Research and Project Development at the Association for Forests, Development and Conservation; and Biosphere Reserve Manager at the Association for the Protection of Jabal Moussa. Ms. El Hajj Holds a B.Sc in Agriculture, an Agricultural Engineering diploma and a Master's degree in Environmental Sciences with a focus on Ecosystem management, all from AUB.

The contribution of the Arab world to global Green House Gas (GHG) emissions is estimated at 4.2%. This includes extreme variations such as the member countries of the Gulf Cooperation Council (GCC) producing 85% of the region's GHG emissions, and Qatar having one of the world's largest per capita carbon footprints while Yemen has one of the world's smallest.<sup>1</sup> Overall the region has some of the highest emissions intensity (tonnes CO<sub>2</sub> equivalent / GDP) in the world.

The United Nations Framework Convention on Climate Change (UNFCCC), came into force in 1994, and yielded the Kyoto Protocol in 1997. The Kyoto Protocol set legally binding GHG emission limits to industrialized countries, and non-binding limits to developing countries. It was the first multilateral agreement that mandated a country-by-country reduction in GHG emissions. However, the implementation of the agreement was poor and not uniform across nations, and it was widely viewed as a top-down approach with countries being 'forced' to adhere to limits set by others.

A new UNFCCC climate change agreement has since been adopted in Paris in December 2015. Under this agreement, and in contrast to the Kyoto Protocol, countries around the world have voluntarily indicated the level of commitment they are willing to make to the reduction of their GHG emissions. This approach has created an environment in which the countries of the Arab region are now expected to become part of the global fight against climate change and its impacts, by taking climate change action at a national level. Such actions are reflected in the 'Intended Nationally Determined Contributions' (INDCs)

1 Waterbury, J. (2013). The Political Economy of Climate Change in the Arab Region, in United Nations Development Programme Regional Bureau for Arab States. Arab Human Development Report; Research Paper Series.

that countries, including all the Arab states, submitted to the UNFCCC prior to the 21<sup>st</sup> Conference of the Parties in Paris in 2015. Given this context, the commitment of Arab countries to action on climate change at the national level is a question being asked, and one that should be answered.

INDCs are to all intents and purposes national action plans, including policies, which countries put forward as part of their contribution toward the global goal of limiting the increase in average global temperature to well below 2°C above pre-industrial levels. As the INDCs of the Arab countries are generally guided by already existing or planned policy, having a closer look at the INDCs of Arab countries provides an indication of their level of commitment to climate change mitigation and adaptation on the national level.

The timeline of INDC submissions from the Arab countries, shows that those who were already better established in their climate change policies, and considered more progressive, submitted their INDCs at a significantly earlier stage than the 'hesitant' countries, most of whom were from the GCC. In fact, it came as a surprise to many observers that the latter did actually submit their INDCs.

### Intended Nationally Determined Contributions of Arab Countries as Indicators

Morocco was the first Arab country to submit its INDC. This is in keeping with the pressure that comes with Morocco's status as host of the 22<sup>nd</sup> Conference of the Parties in 2016. Morocco's INDC is one of the most ambitious presented by any of the Arab countries and includes both mitigation and adaptation actions. In terms

of mitigation, the North African country plans economy wide GHG reductions of 13% below 'business as usual' levels by 2030, using 2010 as the base year. Not surprisingly, knowing the solar energy potential that the country has, Morocco has an ambitious goal of reaching 50% renewable electricity production by 2025.<sup>2</sup> It also plans to reduce fossil fuel subsidies, which is an important signal about the seriousness of its climate change intentions. On the adaptation front, the Kingdom plans to devote at least 15% of its overall investment expenditure to adaptation actions including the water and agriculture sectors.<sup>3</sup> All of the intended actions to reduce emissions in Morocco are rooted in national priorities and policies, such as the National Strategy for Sustainable Development (NSSD), the National Strategy to Combat Global Warming (NSGW), the Green Morocco Plan (GMP), the Green Investment Plan (GIP) and the Moroccan Solar Plan (MSP).<sup>4</sup> Despite its low contribution to global emissions both historically and currently, Morocco is already one of the more progressive countries in the region when it comes to policy planning for climate change.

Tunisia, which was the fourth country to submit its INDC, has, placed climate change relatively high on its political and economic

agenda. It is the first country in the region to recognize climate change in its new national constitution. The new climate clause obliges the state to guarantee 'a sound climate and the right to a sound and balanced environment'.<sup>5</sup> In Tunisia's INDC, submitted prior to COP21, the country plans to reduce its carbon intensity by 13% by 2030, unconditionally, also using 2010 as the base year.<sup>6</sup> Like Morocco, the energy sector will be the major source of the country's reductions with the share of renewable energy in electricity production set to increase to 14% by 2020 and 30% by 2030.

As for adaptation action, Tunisia estimated in its INDC a total of 1.9 billion US dollars of funding would be needed during the period 2015-2030. Tunisia's national climate change strategy (2012) and sustainable development strategy (2014-2020) along with Tunisia's Solar Energy Plan provide a suitable anchor for the INDC presented by the country. According to Donovan et al (2013), 'the national climate change strategy defines methods, activities and targets that are, in comparison to other mid-income countries, highly ambitious'.<sup>7</sup> As one of the few Arab countries with little by way of national energy resources, Tunisia is highly dependent on natural gas imports and therefore has a strong interest, as well as an opportunity, for further development of renewable energy. This in turn would also

2 Morocco: Intended Nationally Determined Contribution under the UNFCCC <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Morocco/1/Morocco%20INDC%20submitted%20to%20UNFCCC%20-%205%20june%202015.pdf> (accessed May 4, 2016)

3 Chan, H. Morocco First Arab Country to Submit Climate Pledge Ahead of Paris Negotiations. June 11 2015. <https://www.nrdc.org/experts/hanchen/morocco-first-arab-country-submit-climate-pledge-ahead-paris-negotiations> (accessed May 5, 2016).

4 Raven, M. Morocco's INDC - A strong signal coming from the first Arab country, June 10 , 2015, <http://www.climate-network.org/node/5211#sthash.zacLo4Ej.dpufhttp://www.climate-network.org/node/5211> (accessed May 8, 2016).

5 Paramaguru, Kh. (2014). Tunisia Recognizes Climate Change In Its Constitution. Time.29 January. <http://science.time.com/2014/01/29/tunisia-recognizes-climate-change-in-its-constitution> (accessed May 5, 2016).

6 The road towards COP21: an overview of INDCs from the MENA region. Climate Policy Observer, 18 September 2015. <http://climateobserver.org/the-road-towards-cop21-an-overview-of-indcs-from-the-mena-region> (accessed May 7 , 2016)

7 Duchrow, A et al. (2013) Adapting to Climate Change. Focus Tunisia. <http://revolve.media/adapting-to-climate-change> (accessed May 24,2016)



make the country less vulnerable economically.

Among the Arab group are the countries of the GCC whose economies rely on oil as their main source of export and fiscal revenues; this was clearly reflected by their 'cautious' INDCs. Saudi Arabia's INDC indicates that it will pursue economic diversification and adaptation with the aim of generating mitigation co-benefits. The INDC is contingent on: the country's economy continuing to grow; continuing robust oil export revenues, and economic and social consequences of international climate change policies and measures not posing a disproportionate or abnormal burden on the country economy.<sup>8</sup> Qatar, the country with the highest carbon footprint per capita, presented an INDC similar to that of Saudi Arabia with continued economic diversification and mitigation co-benefits at its core.<sup>9</sup> In recent years the GCC countries have already adopted a number of policies to diversify their economies and reduce their reliance on oil. This is likely to be the result of their realization of the vulnerability of their economies, due to their dependence on international oil markets,<sup>10</sup> and has not necessarily been motivated by climate change mitigation purposes.

In recent years the United Arab Emirates has distinguished itself with regards to national climate change policy, without breaking the

8 The Intended Nationally Determined Contribution of the Kingdom of Saudi Arabia under the UNFCCC <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Saudi%20Arabia/1/KSA-INDCs%20English.pdf> (accessed May 5, 2016).

9 State of Qatar Ministry of Environment Intended Nationally Determined Contributions (INDCs) Report <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Qatar/1/Qatar%20INDCs%20Report%20-English.pdf> (accessed May 5, 2016).

10 Callen, T. et al. (2014) Economic Diversification in the GCC: Past, Present, and Future. IMF Staff Discussion Note,

united front of GCC on the international arena. The UAE recently restructured its national institutions to create an independent ministry for climate change and has announced the planned phase out of oil exports. The Emirates INDC is supported by current policy such as the UAE Vision 2021, Green Growth Strategy and Innovation Strategy as well as several renewable energy and energy efficiency plans and projects.

Still within the region are Arab countries who are highly dependent on energy imports such as Jordan and Lebanon. Jordan was the first Arab country to develop a national climate change policy in 2013.<sup>11</sup> The high cost of importing energy and the associated risks with a potential increase in prices has led Jordan to develop its policy on energy efficiency and diversifying energy sources; updating the Energy Sector Master Strategy (2007-2020). Nevertheless, Jordan's INDC is not considered as ambitious as it could have been, with the kingdom seeking to increase its renewable energy to only 10% by 2020.

Lebanon on the other hand appears to be quite progressive in terms of its submitted climate change actions with an unconditional target of a 15% reduction in national GHG emissions by 2030, mostly from the energy sector. Lebanon's INDC is rooted in several sectorial policies as the country still lacks a national climate change strategy. Even though Lebanon appears to be taking steps towards moving climate change up its national agenda, any progress to be made in that regard will depend on the success and seriousness of translating the policy into action. To date this remains a weak link. In regard to adaptation,

11 Hashemite Kingdom of Jordan Intended Nationally Determined Contribution (INDC) <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Jordan/1/Jordan%20INDCs%20Final.pdf> (accessed on May 4, 2016).

## Climate Change Policy in Arab Countries; Varied Levels of Advancement but Far from Expectations

Despite the progress made in Arab countries in recent years, still not enough is being done in a region projected to be highly vulnerable to the effects of climate change. Mitigation policy remains subject to national interests and especially vested economic interests, while adaptation policy remains by and large fragmented and imbedded within sectorial silos. In a region that is facing security issues, stability issues, mass migration, resource scarcity, and economic dilemmas, climate change is overshadowed by other priorities; despite the fact that many of these problems could be a result of an already changing climate.

The region in general is more concerned with adaptation to than mitigation of climate change, and with the impacts of climate change already starting to be felt, adaptation will certainly be necessary as a survival mechanism. This can be sensed in policies related to water scarcity, which is already high on the agenda of several countries in the region - as a national security priority. Mitigation actions will also witness a boost in Arab countries as the economic benefits become more and more apparent; the region has a high renewable energy potential and a wide margin for energy efficiency improvements. However, policies to facilitate such actions may not be as fast in arriving as could be hoped for.

The new Paris Agreement, with all the financial and technical opportunities it provides, is expected to act as an important incentive for Arab countries to start prioritizing climate change policy. However, this may prove to be a longer transition for some Arab countries, especially the major polluters of the GCC states.

Lebanon has already made some progress in mainstreaming climate change adaptation into the biodiversity (draft National Biodiversity Strategy and Action Plan, NBSAP, 2015), water (National Water Sector Strategy, 2012), and forestry and agriculture sectors (National Forest Plan, NFP, 2015 and Ministry of Agriculture Strategy, 2015).<sup>12</sup> However, the level of integration of climate change adaptation within sectorial policy remains shallow and insufficient considering the vulnerability of the country to the impacts of climate change.

Egypt too proves to be highly vulnerable to the effects of climate change. Egypt was one of the first Arab countries to realize the threat that climate change poses to its future development and as such has worked towards improving its understanding of this vulnerability.<sup>13</sup> This is strongly reflected in its INDC which is much more focused on adaptation and building resilience than other countries of the region. Its adaptation actions are a reflection of the Egyptian National Strategy for Adaptation to Climate Change and Disaster Risk Reduction (2011) as well as the Egyptian National Strategy for Sustainable Development.

12 Republic of Lebanon Lebanon's Intended Nationally Determined Contribution under the United Nations Framework Convention on Climate Change <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Lebanon/1/Republic%20of%20Lebanon%20-%20INDC%20-%20September%202015.pdf> (accessed on May 6, 2016).

13 Gelil, A. (2014). History of Climate Change Negotiations and the Arab Countries: The Case of Egypt, Issam Fares Institute for Public Policy and International Affairs at the American University of Beirut, 2014 [https://www.aub.edu.lb/ifi/public\\_policy/climate\\_change/ifi\\_cc\\_texts/Documents/20140723\\_Abdel\\_Gelil.pdf](https://www.aub.edu.lb/ifi/public_policy/climate_change/ifi_cc_texts/Documents/20140723_Abdel_Gelil.pdf) (accessed May 5, 2016).

# Advocacy Against Climate Change: What it Takes for the Civil Society to Attain its Full Potential

Suzanne Baaklini

Poor environmental awareness, lack of funding and support, and an insufficient understanding of the problem - these are some of the obstacles blocking adequate action on climate change by many non-governmental organizations (NGOs) in Lebanon.

On the 19<sup>th</sup> of March, along with many countries across the world, Lebanon celebrated 'earth hour' an event which encourages individuals, households and organizations to turn off all non-essential lights for one hour - to save energy and raise awareness of the effects of global warming. A local TV station covered the 'turning off the lights' ceremony in one of the city's major malls. The atmosphere was very festive.

Although this initiative by local activists was commendable, the celebration, which could have been meaningful elsewhere, loses much of its significance, when one considers the bigger picture in Lebanon. Most notably, the ongoing deficiency in the country's energy sector - most of our electricity doesn't even come from the national grid - and recent developments in the environmental sector, which have done nothing to combat climate change.

A few days before the ceremony, on the 10<sup>th</sup> of March, the Lebanese government announced its plan to finally end the eight month garbage crisis in Beirut and Mount Lebanon, Lebanon's two most crowded areas. This plan consisted of creating two big landfills in locations near the sea, to the north and to the south of Beirut. Very few new facilities for sorting, composting and recycling waste will be built into the framework for this highly controversial four-year plan. In the absence of a comprehensive system for waste management,

these landfill sites are likely to become a major source of methane emissions in the future - one of the most harmful greenhouse gases (GHG).

At the same time, Lebanon's 'Intended Nationally Determined Contribution' (INDC), presented to the United Nations Framework Convention on Climate Change (UNFCCC) in October 2015, included a goal of a 15% decrease in GHG emissions by 2030. Furthermore, if significant aid is made available, Lebanon will commit to a more ambitious 30% decrease in emissions. It is therefore a sad irony that this INDC was presented in October 2015 - in the midst of the garbage crisis, the 'solution' to which will lead to an inevitable increase in GHG emissions due to the methane emitted by piled garbage, rather than their promised diminution.

Amidst such contradictions between the announcements made and the reality on the ground, how have the NGOs charged with raising awareness of climate change and strengthening the country's relevant policies responded? A quick look leads to the unavoidable conclusion that few NGOs are tackling this complex issue in any comprehensive way, and fewer still in a way that will make a difference.

There are plenty of reasons why this is so, the challenge of engaging people who are so tired from so many other problems, and rarely interested in an issue that seems so far away from their immediate needs, being not least among these. (A possible exception was the 2013-2014 drought, when the effects of climate change took on a tangible reality). There also exists in Lebanon a belief that, as they are only a 'small polluter' on the international scale, they should not be expected to do very much towards 'saving the planet'. The response that the same measures needed to combat climate change can also be beneficial for lowering levels of pollution nationally, is rarely put forward.

Along with the scientific and political complexity of the issue, this lack of awareness and motivation, has been identified by NGOs as a key factor hindering the response to climate change from Lebanese civil society. However, this has not prevented some action taking place in the country.

## Raising Awareness and Momentum

During the recent annual Conferences of Parties (COP) organized each year by the UNFCCC, IndyAct and Greenpeace have emerged among the leading NGOs in the field, active in Lebanon and the Arab world.

According to Julien Jreissati, campaigner for Greenpeace in the Arab world, the organization is planning to start a range of new activities focusing on renewable energy in the region in the next few months. Meanwhile, for IndyAct, work has never stopped. From Jordan, her home country, Safa' Al Jayoussi,<sup>1</sup> head of climate and energy campaigns at IndyAct, says that the organization, 'held a series of actions in order to raise momentum and awareness in Lebanon before COP21'.<sup>2</sup> IndyAct has conducted many activities over the years, and these became more intensive in the months leading up to the Paris summit. As Safa explains:

*'We started with involving the youth and other NGOs in building a coalition, high level advocacy and media campaigning. We also organized a people's climate march that gathered together the Lebanese community*

*in order to call on the stakeholders to take a stand during COP21. In the summit, we encouraged Lebanese activists who were part of the IndyAct delegation to raise the media profile and to advocate (for a strong deal on climate change).'*

The work did not come to an end after the adoption of the deal in Paris. Safa describes how, *'IndyAct is currently hosting Climate Action Network Arab World (CAN Arab World). We are now in the run toward COP22 in Morocco, training civil society and building partnerships in order to mobilize the public, because we don't want to lose the momentum after Paris.'*

## Lobbying for Policy Change

Safa' Al Jayoussi suggests that Lebanon did relatively well in the negotiations on climate change, despite the many difficulties it has experienced lately, 'In the middle of a political and environmental crisis, Lebanon submitted its INDC.' She claims that, 'This can be considered a success by itself. However, it is now time for the Lebanese government to look at their energy strategy, renewable energy targets, and see how they can take advantage of the INDCs review in 2018.'

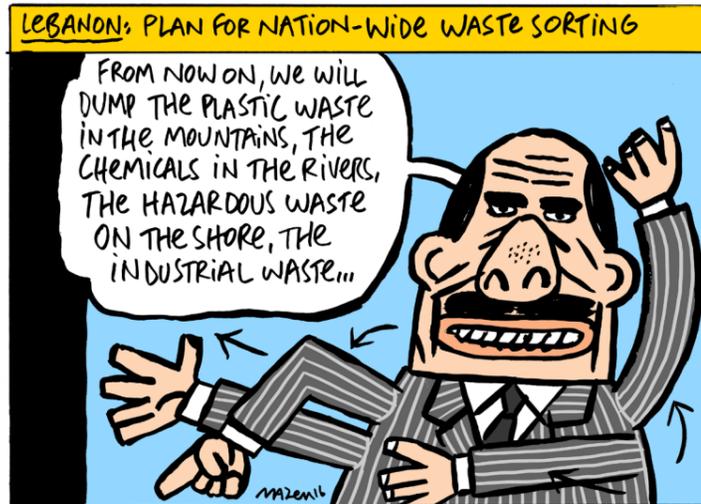
According to other activists, Lebanese civil society's approach should be radically modified in order to achieve more significant results. Habib Maalouf, head of the Lebanese Committee for the Environment and Development, also an experienced environmental journalist, who has attended nearly all of the climate summits since they started in 1994, pleads for a holistic understanding of the problem. He argues that, 'following worldwide trends is not enough, the real change will come with more efficient lobbying concerning policy change in Lebanon.'



Suzanne Baaklini has been a journalist in L'Orient-Le Jour, a Lebanese newspaper, since 1997. She specializes in environmental reporting and has covered issues relating to the privatization of public spaces, particularly projects on the Lebanese sea front and public gardens.

<sup>1</sup> This issue of Perspective includes a contribution by Safa' Al Jayoussi which explores some of the issues discussed here in more detail.

<sup>2</sup> All quoted speech is taken from original interviews conducted by the author.



He is in favor of long term action, the main objective of which would be to trigger policy changes in all the major fields generating GHG: transport, energy, and infrastructure and waste management (the latter constitutes 9% of GHG emissions in Lebanon according to figures published by the Ministry of Environment). He explains that,

*'With the support of the Heinrich Böll Foundation, we have conducted a dialogue between relevant authorities and civil society in order to improve the Lebanese position in the frame of international climate negotiations. This has been extremely useful, although Lebanon is still part of the developing countries group, a group which does not consider itself responsible historically for the actions that have led to climate change, this country has been promoting positions of principle which are not limited to asking for help and financial assistance. It has been asking for a broader action in combating climate change, for everybody's benefit.'*

He adds,

*'Sadly, this collaboration ended at this point: there should be more support and more funding for deeper and more lasting engagement, aiming at changing policies within the country. No awareness campaign will be useful, I believe, if policies are not straightened up at the governmental level.'*

Safa' Al Jayoussi agrees that there needs to be a broader and deeper approach to combating climate change. She insists that:

*'The solution to climate change is not only about planting trees, civil society is trying to make people aware that the solution is also economic. Through renewable energy and energy efficiency, we could be creating many sustainable jobs. Such an economic transition helps to increase the level of investment and*

*raise the gross domestic product (GDP) of the countries involved in such activities.'*

In March 2016, in light of the COP 21 agreement, Samir Skaff, founder and president of the Green Globe Association, co-organized a workshop on water and waste management, with Lebanese and French partners. He explains that:

*'Green Globe is involved in actions related to climate change, we have introduced the idea of a "bikeathon" in Zahleh then Beirut, which was later adopted by others. We work at promoting renewable energy and alternative transport, through workshops or other activities. We have established, for this purpose, a partnership with Notre-Dame University in Lebanon. However, we are continuously confronted with the same problem: programs related to raising awareness on climate change rarely catch the attention of donors, and universities as well.'*

He also points out that governmental policies do not take into consideration the fight against climate change, or even the anticipated impact of global warming on Lebanon, despite many warnings by NGOs:

*'To mention only one example, the governmental electricity plan, adopted in 2010, is simply catastrophic, he says. Renewable energy is only included in this text in vague expressions such as "we should be studying the feasibility of such projects!" Nothing concrete is said about it, and there is no room for civil participation. A few private companies have tried to suggest projects for producing electricity from renewable sources such as solar systems or wind energy. They have all been turned down.'*

Samir believes that introducing laws to facilitate 'two way' or 'net metering' (for example the ability to sell excess electricity generated by

solar installations) would be extremely useful. He believes that, 'civil society in Lebanon has the possibility to tackle such issues, but it needs funds and support'.

## A Climate Change Observatory

Samir recounts that, 'Green Globe has suggested that a climate change observatory be created in one of the universities, in order to compile, store and analyze all the data concerning climate change in Lebanon.' However, as he goes on to explain, 'we are convinced that this would be a fundamental institution, but no one has taken this suggestion seriously yet.'

Safa' Al Jayoussi also considers a lack of funding and support as a major obstacle to advocacy related to climate change, but links it to the broader crisis in the area:

*'Political instability is one of the main obstacles we encountered during our work in Lebanon. For example, when we were organizing the Climate March in Beirut prior to COP21, a major terrorist attack was conducted in one of the Lebanese capital's neighborhoods (one day before the Paris attacks in November). As for the lack of funds available for environmental campaigning and advocacy, it can be explained in the light of the Syrian refugee crisis. Almost all the donors are funding emergency projects in the region, which leaves little room for other concerns.'*

However, she remains optimistic for the future of climate change activism, at a pan Arabic level insisting,

*'Climate change is now on the radar of many Arab communities. As the head of climate and energy campaigns in the Arab region for IndyAct, I deal with many activists and groups in countries where you would never imagine people could care about such an issue, countries like Iraq, Libya and Syria.'*

She explains that,

*'There are many reasons why climate change is now getting more attention at a local community level. The impact of climate change in the region is more and more perceivable and difficult to handle. For example, the heat wave that hit Jordan, Egypt and Iraq, caused many fatalities, as well as the rise in sea level and the flooding in many areas in the region. For all these reasons, IndyAct remains involved in numerous local and international campaigns, in the line of the ones that were conducted on the way to COP21 in Paris. It is also hosting CAN Arab world, and the number of its members is constantly increasing: 70 in the Maghreb countries alone, many more in Gulf Cooperation Council (GCC) countries - and all are extremely involved in the cause!'*

In recent years, Lebanese civil society has been increasingly engaged on the international level. However, there is still a lot to do in order to fully involve Lebanese NGOs in all aspects of the fight against climate change: not just in influencing national policies and raising awareness, but also - because it will become inevitable in the future - tackling the consequences of global warming.

Since the government has consistently shown its incapacity to implement comprehensive solutions to environmental problems, it seems inevitable that civil society's role will prove crucial in the coming years. In this context, additional training and assistance will be necessary, but not sufficient. It is time for the NGOs and Universities engaged in the field, to coordinate their efforts in order to improve the efficacy of their advocacy, and their ability to fight climate change - and in a more global sense, to create a real movement for change.

# Environmental Activism in the Light of COP21

Safa' Al Jayoussi



Currently the Head of Climate & Energy Campaigns in Arab World for IndyACT. Founder & Executive Director for IndyACT in Jordan, with more than 8 years experience in the environmental field. Safa' has created & implemented major climate & energy campaigns in the region. She is also a green advocate, community worker and has been a Climate Change negotiations observer under the UNFCCC since 2009. She played a major role in COP21 in Paris by heading the IndyACT delegation and running an advocacy and media campaign which successfully lobbied the Arab League to sign the agreement.

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It was a critical turning point, and a dream come true for some in the movement, when the world celebrated the international climate agreement in Paris last year. One hundred and ninety seven countries signed the agreement and pledged to phase out Greenhouse Gases (GHG) and head toward a zero carbon future.

While some environmentalists have claimed that Paris will not solve the problem, it is clear that this is a turning point in the history of the fight over climate change. Even if it is not enough, the agreement gives us clear guidance and a way to move forward in our national efforts toward a future where climate change will be a thing of the past. The fact that so many countries whose economies are based on fossil fuels agreed to work towards ending the fossil fuel era is something that we should all be celebrating. Furthermore, that all the signatories agreed to be responsible, and accountable, for finding solutions is also worthy of celebration. It is fitting that the final Paris accord won widespread acclaim from the world's media and politicians

This deal has been 20 years in the making. The Kyoto Protocol adopted in 1997 only covered the emissions of developed countries. After a series of high-stakes and high-profile negotiations, the Paris Agreement has the support of the international community and forms a commitment to limit the global temperature rise to below two degrees Celsius above pre-industrial levels. Moreover, the final text of the Paris Agreement is based on the latest climate science, and clearly states that the world must reach zero GHG emissions by the second half of this century, and it is binding.

However the work is not yet over. Now is the time to be more ambitious, to insist that we move towards a zero emissions pathway, and achieve 100% renewable energy by 2050.

Each country arrived at the conference with its own pledges, the so-called Intended National Determined Contributions (INDCs) - they now have National Determined Contributions. These national targets, and strategies for reducing GHG emissions set the foundation for the success of the Paris Agreement. It is now the responsibility of each country to deliver these goals. However, the climate plans by independent countries are not enough, as the emissions curbs in the commitments only put the world on track for a 3°C rise in global temperatures by 2100.

Through the weeks of negotiations the politicians representing the Arab group, moved by short term profit, ignored their people's needs. However, in the final days, with pressure

from media and civil society, this began to change. Finally, the Arab Group stepped up and showed that it had heard the demands of civil society in the Middle East & North Africa (MENA) region. The work that The League of Independent Activists (IndyACT) and other groups have been doing over the past few years has been reflected in this new deal. The text recognizes our concern that the MENA region is one of the most vulnerable in the world to the impacts of climate change.

Countries in the region have been suffering from extreme heat, for example in Iran, temperatures exceeded 48°C for seven consecutive days in August last year.<sup>1</sup> Whereas extreme weather used to occur sporadically in the MENA region, these events have happened within mere weeks of each other and are a stark reminder of what life could be like if climate change takes hold, and if the region fails to take action. The 5<sup>th</sup> Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) presents substantial evidence that increasing GHG concentrations are responsible for much of Earth's warming in recent decades. This climate change will lead to even more extreme weather patterns. According to a new research report published in Nature in October 2015, not only will severe storms hit the region, but it will suffer heatwaves beyond the limit of human survival as the consequences of increasing concentrations of GHGs.<sup>2</sup>

Although some of the rich countries in the Gulf region think that putting a lot of effort and money in to reducing heat with air conditioning is a good solution, not only is this unsustainable and counterproductive - as the resources are currently still coming from fossil fuels, but it also does nothing to address the very serious economic and political consequences of unabated climate change. The World Bank's report 'Turn Down the Heat: Confronting the New Climate Normal',<sup>3</sup> published in November 2014 clearly demonstrates that increased temperatures in the MENA region will place already scarce water resources under intense pressure, with major consequences for human life and regional food security. The potential decline in agricultural productivity will have strong repercussions for economic growth



1 <http://english.alarabiya.net/en/variety/2015/08/01/Iranian-city-swelters-under-record-heat.html>  
 2 Future temperature in southwest Asia projected to exceed a threshold for human adaptability, <http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2833.html>  
 3 <http://www.worldbank.org/en/news/press-release/2014/11/24/climate-change-to-bring-more-heat-waves-and-water-shortages-in-the-middle-east-and-north-africa>

IndyACT is the leading Arab non-governmental organization working on climate change policy. It has engaged in the climate change negotiations since 2008. IndyACT has become a reference for Arab World climate policy to a number of international networks and organizations, such as Climate Action Network International.

www.indyact.org

and social stability. In Jordan, Egypt and Libya—crop yields could drop by up to 30% by 2050 if temperatures rise by 1.5 to 2°C. All capital cities in the region will face many more exceptionally hot days each year. The increase in temperatures will put severe pressure on natural resources and crops. This is likely to lead to increased migration which in turn may increase the risk of conflicts in a region that is already dealing with a mass migration crisis due to political instability in a number of countries. These predictions do not take into consideration rising sea-levels - another projected effect of global warming as polar ice caps melt. Rising sea levels could cause billions of US dollars-worth of damage to cities like Alexandria, Benghazi and Algiers, and to Egypt's Nile river basin.

In order to translate the success of the global deal in Paris into sustainable, green and low-carbon development requires a lot of hard work, harder than many activists in the Arab region realize. It is the role of mature, experienced, activists and environmentalists in the region to spread word about this global goal - not only through awareness and advocacy, but through mobilizing communities around the necessity of achieving this.

Regional leaders need to recognize the destabilizing effects of extreme weather and tackle it at source by agreeing on strong commitments to phase out GHG emissions, and invest in renewable energy such as solar power. This can be done by supporting the outcomes from the Paris climate negotiations

The Paris agreement is only the beginning. During COP22 in Morocco, in November 2016, Arab countries have a great opportunity to showcase their renewable energy investments, make the agreement stronger, build on the popular will of the Arab people, and work towards something they can be proud of!

During the last decade grassroots movements across the Arab region have started shaping and advocating political and social debates about climate change, led by IndyACT who founded Arab Youth Climate Change movement with other partners and recently launched the climate action network Arab World. "Arab World" is one of the first networks dedicated to climate change solutions and capacity building for civil society actors and activists in the region - but is this enough?

People need to step forward for their rights, and not only environmentalists. With everything happening in the region and all the political instability, climate change is not a priority for many - but we have to join the dots. If the instability in the region is largely because

of inequity, and lack of access to resources, the question then is: What will happen when essential resources become more and more scarce? To make these sorts of connections, and to link climate change to people's everyday lives, this is the responsibility of the activist movements.

The world is witnessing dynamic change in the global energy sector, with renewable energy becoming mainstream in many countries. The MENA region needs to embrace this clean energy innovation, and keep pace with the rest of the world by transitioning to a clean energy future. Currently in the MENA region fossil fuels are still the dominant energy supply for electricity, and fossil fuel subsidies play an important role in discouraging any real effort at investing in clean energy alternatives.

However, there have been some encouraging signs, in 2014, a record number of solar projects were awarded in the Middle East with a combined capacity of 294 Megawatt (MW), a four-fold increase over the previous seven years combined.<sup>4</sup> According to Greenpeace's Energy [R]evolution scenario, 2015, an 'energy transition' is well within reach. By 2050, in the 'basic' Energy [R]evolution scenario, 93% of the electricity produced in Middle East could be from renewable energy sources. In this scenario new renewables - mainly wind, Photovoltaics (Pv), Concentrated Solar Power (CSP) and geothermal energy - would contribute 86% of the total electricity generation. Already by 2020 the share of renewable electricity production would be 14% and 52% by 2030. Under a more advanced scenario, 100% electricity supply from renewable energy resources, or around 1,510 gigawatt (GW) installed generation capacity is possible by 2050.<sup>5</sup>

After COP21 and on the road to COP22 environmental activism should be scaled up. Countries like Morocco are leading with renewable energy, hosting the biggest CSP plant in the world, while in Jordan mosques and churches are acting as role models in adopting renewable energy. Clean technologies are getting cheaper and more innovative. The movements calling for a 100% Renewable energy future must increase their political advocacy, as the political will in the region is the key to solving climate change problem.

In this context we are witnessing the emergence of new coalitions like 'CAN Arab World.' These new coalitions are not only

hosting environmental groups but also a range of organisations including NGOs and CBOs who are working on human rights, access to resources, and technology innovation. These coalitions are now building towards COP22 by advocating to ensure that governments are held accountable for their obligations to scale up climate mitigation action until average temperature rise is brought well below 1.5°C, and the Arab region is protected from the impact climate change.

Climate change movements in the Arab region should adopt the following tactics in order to be successful:

*i) Delegate more to youth movements: Arab region environmental NGOs from the 80s and 90s are no longer attractive to the younger generation. The fight is now for the younger generation, but that does not necessarily mean that we should eliminate the older organizations and movements. However, they should engage and collaborate with younger NGOs. In some Arab countries the movement has traditionally been dominated by older men. This is no longer attractive, especially for young female activists - people no longer want to hear the same old speeches. It is also crucial that public figures relevant to the younger generation, are encouraged to champion campaigns and speak out on environmental issues.*

*ii) Engage and mobilize: In order to succeed we need to fight with the people, not for the people. A lonely environmental movement with no support from vulnerable communities, or other movements will not be successful. In order to succeed, not only must we mobilize for the cause, but the communities themselves must rise up and demand change. It can no longer be about giving one way lectures to students, it is about engaging them to fight with you.*

*iii) The changed climate fight: green activism is no longer about 'tree hugging', it is now about the real economy with more and more innovative technologies, and renewable energy prices getting cheaper and cheaper. The economy must now be central to our arguments not only with political figures but also with a general audience. The region is struggling with a lack of resources, unemployment, war, and high prices. Once our argument becomes relevant to them we will get heard. Creating jobs, lower governmental debt, creating a healthy atmosphere and smart cities are among today's arguments for a green future.*

*iv) Build Coalitions: building coalitions beyond the environmental sector is one of the key components of success inside a very dynamic political arena.*

IndyACT is now hosting CAN Arab World and supporting the Arab Youth Climate Movement (AYCM) with their expertise. These movements are now engaging in high level advocacy and building toward greater success in COP22. It is no longer about the UNFCCC process alone, it is about engaging civil society, with both public and private stakeholders, to adopt initiatives that will elevate climate change solutions before the 2020 deadline for the implementation of the Paris agreement, and before the NDC's review in 2018. With all this potential within our grasp, activists should be urging the regional governments to implement immediate remedial action by developing projects that cover peak energy demand, helping to get energy to people who lack access by investing in distributed off-grid projects, and supporting the growing employment opportunities in renewable energy.

<sup>4</sup> REN21 <http://www.iadb.org/intal/intalcdi/PE/2014/14403.pdf>

<sup>5</sup> Greenpeace International Energy [R]evolution, 2015, Teske et al, pp134-143. [www.greenpeace.org/energyrevolution](http://www.greenpeace.org/energyrevolution)

# Assessing Gender Concerns in Climate Change Projects in Arab Countries

Fidaa F. Haddad



As a Jordanian agricultural Engineer, Fidaa has been working for more than 19 years at the interface of natural resource management, economic and technical evaluation of projects, environmental and social impact assessment, and program and project management systems. She has extensive experience of working in international NGOs interacting with the civil society sectors. For the past five years, she has managed the Dryland and livelihoods program for West and North Africa in IUCN. Before joining IUCN she worked as a Field Coordinator For a regional project - 'Euro-Mediterranean Regional Programme for Local Water Management' called EMPWOERS, where she was responsible for facilitating the stakeholder processes at the district and governorates level. Fidaa is a gender specialist with extensive experience in using a number of different methodologies for the implementation of gender related programmes. She participated in the IUCN delegation to the UNFCCC and UNCCD Convention of Parties. She is the only Arabic women in the World Advocacy team on CC, gender, and adaptation. Fidaa holds a BSc in Agricultural Engineering from the Jordanian University for Science and Technology.

## Preamble

Various studies have shown that the Middle East and North Africa (MENA) region faces a multitude of threats to its biodiversity and natural ecosystems, as a result of habitat loss and the general land degradation processes associated with human expansion and economic growth.<sup>1</sup> The region is at a crossroads and must address an increasing number of pressing developmental and environmental challenges, all of which are taking their toll on the region's fragile ecosystems. To ensure sustainable development, collective efforts are needed to address human development, and ecosystem conservation, along with enhanced governance of the region's primary resources.

The Arab region's climate has already begun to change, often to the detriment of Arab society.<sup>2</sup> In the 2012 report from the World Bank 'Turn Down the Heat - Confronting the New Climate Normal',<sup>3</sup> the 'MENA' region is identified as a climate change 'hot spot.' This is because of its high vulnerability to the consequences of an average temperature increase of + 2°C by 2100, (on current projections the most optimistic scenario). Risks related to climate change such as decreased rainfall, increased drought, and rising sea levels will exacerbate the increasing human pressures the region is already facing.

The flagship report on adaptation to climate change in Arab countries launched in 2012 by the World Bank (WB) and League of Arab States indicated that in rural areas climate change is

forcing communities to rethink long-standing gender roles that have perpetuated gender inequality.<sup>4</sup> Climate change will threaten the basic pillars of development. Men and women possess unique vulnerabilities to the impact of climate change, based on their respective roles in society. In most countries in the region women will face the brunt of the impact of climate change. This is because they are often poorer than men; responsible for natural resources and household management; lack access to opportunities for improving and diversifying their livelihoods, and have low participation in decision-making.

Many climate change adaptation interventions and policies in the region have taken place without a proper understanding of how and why they were planned and how they needed to be implemented. Although most of the state interventions regarding adaptation and mitigation are legislated by the government in question, such interventions have often harmed rather than benefited human well-being, and had a negative effect on ecosystem resilience. In this context gender inequalities and perceptions of traditional roles affect not only women, but can also result in men facing specific vulnerabilities.<sup>5</sup>

This paper argues that climate forces are likely to raise gender specific issues in the region and explores how we can leverage the required political commitment to facilitate a holistic approach toward mainstreaming gender responsiveness to climate change actions in Arab countries.

- 1 State of Biodiversity in West Asia and North Africa. UNEP, 2010.
- 2 Overview and Technical Summary, Adaptation to a Changing Climate in the Arab Countries: A Case for Adaptation Governance and Leadership in Building Climate Resilience. License: Creative Commons Attribution CC BY 3.0
- 3 Ibid.

- 4 Ibid.
- 5 IUCN 2013

## Gender Indicators and Climate Change in the Arab Region

Research has shown that gender analysis is a tool that can aid our understanding of not only the specifically gendered elements of climate change, but a range of broader socioeconomic, cultural, and structural equality issues embedded in climate change strategies. To ensure an effective, gender responsive, strategy to climate change we need to determine the types of representation, the roles and responsibilities, rights, adaptive capacities, forms of resilience as well as the risks, and vulnerabilities, that pertain to women, to men, to girls, and boys at all levels.

slight improvement in gender equality across the region, the picture is not uniform, and some states appear to be moving backwards. However, what can be clearly attested is that all across the region women still face significant discrimination. Even as the highest-ranking economies in the region have made vast investments in increasing women's education over the last decade, most countries have had limited success in integrating women into the economy and decision-making processes, and as such are failing to reap the benefits of this investment.<sup>6</sup>

For example, many women in agriculture are still forced to do unpaid work, and the female labour force outside of the agricultural sector is very small, and often poorly paid. Very few women are able to attain the resources

### Gender Gap Index in MENA

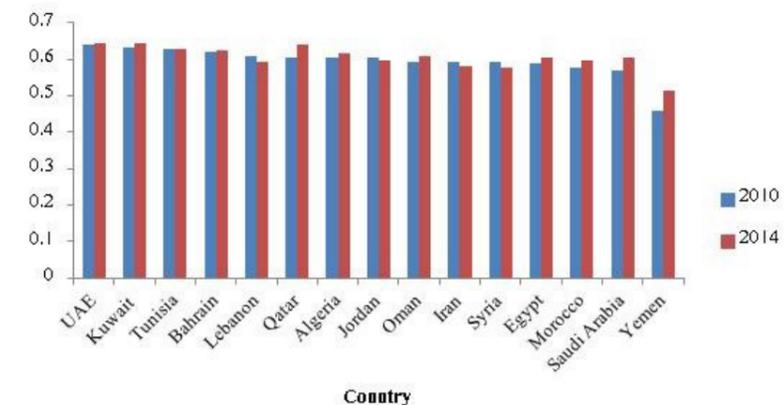


Figure 1 represents the gender gap index of the nations in the MENA region. Source: The Global Gender Gap Report 2014- World Economic Forum

In the MENA region there are gender specific indicators and general social indicators that acknowledge the disadvantages of women in this region compared to other parts of the world. In social, political, and economic terms, women lack access to resources that are more widely available for men. Figure 1 represents the gender gap index of the nations in the MENA region. The higher the score in the 'Gender Gap Index', the closer the country has come to closing the 'Gender Gap' - '1' would represent total equality and '0' absolute inequality.

As can be seen from the above figure, most of the countries in the region scored higher in the gender gap index in 2014 compared to 2010, indicating a slight improvement in gender equality between these years. However, Jordan, Lebanon, Syria, and Iran, achieved lower scores in 2014 than in 2010 indicating worsening gender equality in these states. Therefore, while the general picture is one of a

to become entrepreneurs. Moreover, in most countries female ownership of agricultural land is less than 10% with Qatar and Saudi Arabia having 0% of women owning agricultural land.<sup>7</sup>

Across the region women still have a literacy rate 15% lower than men. They have little voice in decision making; women's representation in Arab governments is only 9%, or half the global average. This is even the case in some Gulf countries where more women than men graduate from university. Women in the Arab world have low rates of political participation in all countries, except Tunisia, less than 20% of seats in parliament are held by females. The lack of women in parliament and ministerial

<sup>6</sup> The Global Gender Gap Report 2014- World Economic Forum

<sup>7</sup> FAO report on Gender and Land- related statistics <http://www.fao.org/gender-landrights-database/data-map/statistics/en/>

**Table (1) Some Countries Progress Toward Environmental Mandate and Gender Dimensions**

Country	Achievements
Algeria	<ul style="list-style-type: none"> <li>In 2000 created the Ministry of Land Management and Environment, which established the agencies, observatories, and centers to implement environmental policy.</li> <li>In 2000 a fund was created through the National Agency for Environmental Protection.</li> <li>In 2003, Algeria adopted a National Plan of Action and Adaptation to Climate Change (PNA-ACC), which was updated in 2013. This plan outlines both climate change mitigation and adaptation policy measures and not including gender or women.</li> </ul>
Egypt	<ul style="list-style-type: none"> <li>In 2012 Egypt was the second country to produce a Gender and Climate Change Strategy.</li> <li>In 2011 Produced National Strategy for Adaptation to climate change and disaster risk reduction.</li> </ul>
Syria	<ul style="list-style-type: none"> <li>In 2008 established an Environmental Information Management System (EIMS) at the Ministry of Local Administration and Environment and its subsidiary directorates.</li> <li>With support from United Nations Development Programme (UNDP) Syria, national authorities plan to designate environmental and sustainable development indicators and to establish a systematic way of monitoring progress towards them.<sup>1</sup></li> </ul>
Jordan	<ul style="list-style-type: none"> <li>In 2010 Jordan's gender and climate change plan of action was the first formal national strategy of its kind in the world. It was approved by the government and endorsed by the National Women's Committee, guiding the future policies and positions of all agencies addressing climate change.<sup>2</sup></li> <li>Includes gender in climate change policy 2013 and INDCs 2015.</li> </ul>
Lebanon	<ul style="list-style-type: none"> <li>In 2012 created a project focusing on adaptation measures in the agriculture sector, including a gender-focused update of the agricultural development strategy and the development of a gender-disaggregated information system (International Fund for Agricultural Development, 2012).<sup>3</sup></li> <li>Highlighted that women are less able to confront climate change in the UNFCCC Second National Communication SNC.</li> </ul>
Morocco	<ul style="list-style-type: none"> <li>In 2015 Includes gender in INDCs.</li> <li>Places a higher emphasis on rural women, which is the essence of the original CEDAW text's approach on sustainable development.<sup>4</sup></li> </ul>
Yemen	<ul style="list-style-type: none"> <li>Yemen's CEDAW report 2012 indicates that 87% of women's labor force goes to agriculture. In response to this the government sets up a General Department for Rural Women's Development, which has led many projects aiming to enhance women's participation.<sup>5</sup></li> <li>The same report highlights deep gender disparities as one of the main constraints in climate change adaptation in national communications.</li> </ul>

1- [http://www.droughtmanagement.info/literature/UNDP\\_making\\_progress\\_environmental\\_sustainability\\_2006.pdf](http://www.droughtmanagement.info/literature/UNDP_making_progress_environmental_sustainability_2006.pdf)

2- <http://unfccc.int/resource/docs/2013/tp/11.pdf>

3- <http://unfccc.int/resource/docs/2013/tp/11.pdf>

4- The Environment and Gender Index (EGI), IUCN, 2013 PILOT

5- The Environment and Gender Index (EGI), IUCN, 2013 PILOT

Source: The Environment and gender index (EGI), IUCN, 2013 Pilot

positions constitutes a barrier to involving more women in environmental issues because they are not able to sit at the decision making tables. Among the 18 countries studied in the IUCN Environmental Gender Index 2013 pilot, it was found that the MENA region had the lowest rate of female participation in international environmental conventions. Lebanon was the highest performer in the region, introducing into national policy the gender and environment mandates in the three Rio Conventions, and for the implementation of the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), whereas Yemen was presented as an example of one of the lowest performers.

Yemen represents an unfortunate reversal of a promising development in the region. Although considered one of the most gender-unequal countries in the world, Yemen had identified the importance of rising civic participation and inclusion with a special focus on women and youth in its country assistance strategy with the World Bank. With this as the guiding principle the mainstreaming of gender considerations throughout the country portfolio resulted. Unfortunately new developments in Yemen have reversed these efforts to advance women's rights and halted opportunities to increase the inclusion and participation of women in civic and economic life. Ultimately, effective adaptation to climate change can only be ensured if barriers to gender equity are removed and women are empowered to contribute to climate change actions. There is a real risk that such recent policy transformations, along with the numerous conflicts in the region will exacerbate the existing social, economic and environmental stresses, increasing the damaging effects of climate change, and reversing previous developmental and conservation achievements.

### Political Will Does Add Value for Gender Equality in Climate Change Actions for Arab Countries

In Arab countries a significant number of steps have been taken to address formal policies and informal practices which cause and perpetuate gender inequalities and increase vulnerability to climate change. Table 1 below shows some different Arab countries progress toward environmental mandates and the gender dimensions which, as well as promoting gender equality, are a substantial element in the 'Intended Nationally Determined Contributions'

(INDCs) under the new international climate change agreement.

With the increasing attention to the implementation of the international conventions on climate change and desertification, along with achieving the Aichi biodiversity targets in Arab countries, the region needs to ensure it has the needed capacity and guides to integrate a range of different indicators in a transparent and effective manner. This will play an important role in helping their communities to achieve sustainable livelihoods, poverty alleviation, environment protection, and conservation of the natural world. Lessons can be learned from Jordan, Egypt and Morocco on how to ensure country resilience and adaptive capacity for climate change, and in achieving the new Sustainable Development Goals (SDGs) with more equality and a holistic perspective.

### Jordan: Leading in Developing Gender and Climate Change Action Plans

It is clear that Jordan has taken significant steps in recent years: a number of economic and social policies along with new legislation have contributed to the improvement of the position of women in Jordan in all fields.

In 2010, Jordan became the first country in the Arab region to address the linkages between gender and climate change by creating the 'Program for Mainstreaming Gender in Climate Change Efforts in Jordan.'<sup>8</sup> Jordan's plan of action was approved by the Government and endorsed by the National Women's Committee. It will guide the future policies and positions of all agencies addressing climate change. The program's objective is, 'to ensure that national climate change efforts in Jordan mainstream gender considerations so that women and men can have access to participate in, contribute to, and hence optimally benefit from climate change initiatives, programs, policies and funds.'<sup>9</sup> The programme has had an impact on the National Women's Committee, enabling them to address climate change issues. The National Women's Strategy, launched in 2012, includes a section on 'women, environment, and climate change,' with the goal of Jordanian women being active and empowered to maintain

<sup>8</sup> The program was prepared with International Union for Conservation of Nature

<sup>9</sup> [https://cmsdata.iucn.org/downloads/programme\\_for\\_mainstreaming\\_gender\\_in\\_climate\\_change\\_efforts\\_in\\_jordan\\_1.pdf](https://cmsdata.iucn.org/downloads/programme_for_mainstreaming_gender_in_climate_change_efforts_in_jordan_1.pdf)

and develop natural resources. Building on the 2010 programme, as part of the enabling activities for the preparation of Jordan's third 'National Communication to the United Nations Framework Convention on Climate Change' (UNFCCC) in 2013, gender was expressed as a national priority in the context of climate change. Most recently, Jordan integrated gender as a major factor in its 'National Climate Change Policy of the Hashemite Kingdom of Jordan 2013-2020.' In 2015 Jordan integrated gender responsive actions into its INDCs.

However, although these achievements were significant, ensuring ongoing responsive action is a more complex task, with many overlapping and emerging factors such as the influx of Syrian refugees and scarcity of natural resources. Furthermore, the National Inter-ministerial Committee on Climate Change, the main body responsible for providing guidance on initiatives relating to climate change, has not been active in ensuring that projects and initiatives under its consideration are in line with the principles of ensuring gender inclusion. There is a need to enhance the partnership between the Jordanian National Commission for Women's Affairs and the National Inter-ministerial Committees on Climate Change to merge gender and climate change actions, through follow up, control, evaluation and development.

## Egypt: Political Fluctuations Threaten Gender Equality

The Egyptian Environmental Affairs Agency has established a women's unit in the ministry to improve the role of women, this is a key component of its environmental policy. In May 2011 the Egyptian Environmental Affairs Agency in cooperation with the International Union for Conservation of Nature (IUCN) produced a 'National Strategy for Mainstreaming Gender in Climate Change.' The aim of the strategy was to contribute to a deepening understanding of the value of incorporating gender in both the development and implementation of policies and measures relating to adaptation and mitigation. Along with this they also sought to demonstrate the potential contribution of a gender perspective to the sustainable development of the principal economic sectors in Egypt. As a result in December 2011 a national strategy for adaptation to climate change and disaster risk reduction emphasized

the role of women in adaptation actions.

Despite having such a strategy, recent political transformations have failed to safeguard the rights of women. This was especially evident when the National Council for Women refused the claim by Egypt's Muslim brotherhood that the UN declaration calling for an end to all violence would lead to the complete disintegration of society.<sup>10</sup>

Based on this transformation and despite the fact that the new reform is re-emphasizing the role of women and their rights, Egypt's Intended Nationally Determined Contributions (INDCs) do not include a single reference to gender or women. Therefore, to avoid the impact of recent political reforms, the adoption and strengthening of sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels should be ensured. This could be implemented through critical mechanisms for monitoring, funding and the enforcement of new policies. Moreover, national institutions working on developmental issues, peace and security should be trained to re-highlight the role of women and ensure gender equality.

## Morocco: Real Steps Toward Gender Equality in Climate Actions

Morocco has had several achievements in accordance with its international obligations in the field of human rights in general, and of women in particular. In 2006 a national strategy was developed for gender equality and equity. The strategy focuses on: civil rights, representation and participation in decision-making, social and economic rights, social activities and individuals, institutions and policies. One of the main priorities for the Ministry of Solidarity, Women, Family and Social Development is to ensure a collaborative approach to gender equality between ministerial departments, NGOs and other organizations. A 'Committee for Gender Cooperation' has also been established to ensure the monitoring of the gender responsive budgeting that publishes gender budget statements on a yearly basis.

The government of Morocco is making extensive political and strategic efforts to conserve their 'ecosystem services' taking into account climate change risks. Respect

<sup>10</sup> The Muslim Brotherhood special Report prepared by Clarion Project Research Fellow Elliot Friedland June 2015.

for human rights and gender balance are two pillars of Morocco's vision for its work on climate change. In 2015 Morocco launched its INDCs and has put in place a system to monitor and assess vulnerability and adaptation to climate change taking into account gender issues.

The Moroccan Ministry of Solidarity, Women, Family and Social Development incorporated with UN WOMEN to draft a new gender equality plan which will be used in the environmental and sustainable development sectors in the Kingdom. It is hoped that this step will further enhance the achievement of the country's vision in climate change actions.

Ahead of hosting the 22nd Conference of the Parties to the United Nations Framework Convention on Climate Change (COP22) the Moroccan government sent a message to COP 21's Gender Day emphasizing the positive contributions of women in the fight against climate change, as well as the key challenges and opportunities for their contributions in this area. Hosting COP 22 will ensure that Morocco continues to address gender equality and shows a positive case from Arab countries working toward gender responsive lessons in climate change actions.

## Recommendations

Based on the previous cases, it is important to understand what adaptation to climate change is and how it relates to people, communities, countries, and regions. It requires integrated, multidisciplinary, multi-sectorial planning, for developing, implementing, and evaluating strategies to understand the consequences of interventions. Only as such can it ensure that positive benefits are achieved and equally distributed. Beyond the old adage of adapting in ways that have 'no regrets' and that 'do no harm', while increasing capacity and building resilience, it is important to recognize the ways that these adaptation strategies can contribute to achieving greater goods, such as poverty reduction, equality, and sustainable development.<sup>11</sup>

<sup>11</sup> Lorena Aguilar, IUCN Global Gender Advisor.

For gender responsive actions to climate change, national capacities should be strengthened to improve public participation in the development and implementation of policies. Governments should integrate gender perspectives into policies and programs, including:

- Developing action plans with clear guidelines on the practical implantation of gender.
- Incorporating a gender perspective into program budgets.
- Incorporating a gender perspective in operational mechanisms for the new SDGs.
- Ensuring continuous awareness raising and training on gender issues for related staff.
- Involving women in environmental decision making at all levels.
- Promoting and investing in innovative areas of business in rural economies, particularly those that emphasize/improve opportunities for women.
- Recognizing that women as important agents of change; their unique knowledge is essential for adaptation measures and policies.

# Our Local Agriculture between Extreme Heat Waves and the Art of Coping with Climate Change

George Kurzom

Temperature readings taken in Palestine, especially during the last three decades, indicate a clear trend of rising earth temperature.<sup>1</sup> Moreover, Palestine is located in the area subject to desertification, which according to Intergovernmental Panel for Climate Change (IPCC) will include North Africa and the countries in the Mediterranean basin, along with vast areas of Asia. The trend of the global climate is not in doubt, and our Arab region is no exception.<sup>2</sup>

## Is Global Warming Responsible for the 'Extreme' Weather in Palestine?

It is notable that the fertile eastern Arab region, which expands from Iraq (the basin of the Tigris and the Euphrates) to the coastal parts of the Levant (including Palestine), has in recent years suffered from a notable decline in rainfall. In Palestine, the winter of 2013-2014 was the driest in recorded climate history.<sup>3</sup> During

the period from the 15<sup>th</sup> December 2013 until the 9<sup>th</sup> of March 2014 Palestine saw more than eighty days with almost no rain, this was accompanied by successive and large increases in temperatures well beyond annual averages. During January, February, and the beginning of March the temperature rose several times by ten to thirteen degrees Celsius above the annual average.<sup>4</sup> Furthermore, the days between the 13<sup>th</sup> and the 20<sup>th</sup> of February of this year (2016) saw temperatures of nine to twelve degrees Celsius above annual averages.<sup>5</sup>

Despite the fact that the 1960s and the 1970s were also hot decades; one can say that the last twenty years have been the hottest since 1950. This is in keeping with global trends.<sup>6</sup>

However, we should be careful not to attribute every case of extreme weather to global warming. From our knowledge and experience of the Palestinian climate, we know that a sizable number of such extreme and serious weather events occurred earlier than any mention of global warming or global climate change - the highest recorded temperature in Palestine was in 1942.<sup>7</sup>

Yet, the overall conclusion is not changed: yes we have warmer weather, but we still need to prove that this corresponds to the frequency and intensity of extreme weather incidents. When we analyse the weather data since 1950, we do not find a clear increase in the frequency or the intensity of extreme weather incidents.

- 1 Kurzom, G. 'Aathaar Intihaakaat al-Ihtilaal al-Isra'eeli lil Bee'a wa al-Mawaared at-Tabee'iyya al-Falasteeniyya 'ala at-Taghayyor al-Manaakhi' [The Impact of the Israeli Occupation's Violations of the Environment and Palestinian Natural Resources on Climate Change]. In Afaaq al-Bee'a wa at-Tanmiya, [Prospects of Environment and Development] no. 16, July 2009 (in Arabic)
- 2 Kurzom, G. 'Mawjaat al-Haraara al-Mutatarrafa allati Darabat Mantiqatana Satatafaaqam ...' [Extreme Heat Waves that Hit Our Region Will Worsen]. In Afaaq al-Bee'a wa at-Tanmiya, no. 78, Oct 2015 (in Arabic)
- 3 Kurzom, G. 'Filasteen wa Sa'er al-Mantiqa al-'Arabiyya Satazdaadu Sukhoonatan wa Jaffaafan wa Tasahhuran fee thil Mashhad Geosiyaaasi Qaatem' [Palestine and the rest of the Arab Region will become Warmer and Drier and more Desertified under the Grim Geopolitical Scene]. Afaaq al-Bee'a wa at-Tanmiya, no. 73, April 2015 (in Arabic)

- 4 Ibid.
- 5 Personal observations of George Kurzom
- 6 Kurzom, G. 'Hal al-Ihtiraar al-'Alami Mas'oolun 'an at-Taghayyuraat al-Mutatarrafa fee Ahwaal at-Taqs al-Filasteeni?' [Is Global Warming Responsible for the Radical Changes in the Palestinian Weather Conditions?]. In Afaaq al-Bee'a wa at-Tanmiya, no. 80, December 2015 (in Arabic)
- 7 Ibid

Furthermore, climatic surveys of Palestine and the rest of the Levant indicate that the most severe weather occurred in the nineteenth century.<sup>8</sup> Later in January 1950, snow covered the coastal city of Jaffa, reaching a height of ten centimeters; this incident is still the heaviest case of snow ever recorded in Palestine.<sup>9</sup>

Despite the great advances in meteorological technologies, and innovative, advanced climate models, we still cannot predict future incidents of extreme weather. However, it is estimated that, in time, and by the end of this century, the probability of successive heat waves will be greatly increased. We are already witnessing the beginning of this trend, in length, intensity, and frequency of such dangerous heat waves. For example, August 2015 was the hottest August since records began.<sup>10</sup> This was followed by the hottest September ever recorded in Palestine.<sup>11</sup>

Human acts are not necessarily exclusively responsible for the severe climate fluctuations that we are suffering; as such not all extreme weather can be linked to human caused climate change. Most 'extreme' weather conditions are part of natural changes; although this is not in itself inconsistent with the fact that global temperatures are on the rise, and that humans have played a role in this global warming.

## The Suffering of Agriculture

In recent years, Palestinian agriculture has suffered great losses from frequent high heat waves. Expectations are that such losses will

- 8 Ibid
- 9 Ibid.
- 10 Ibid.
- 11 Ibid.

continue as temperatures hit record highs.<sup>12</sup> For example, watermelon is highly sensitive to heat, and some watermelon farmers in the Jordan Valley and Jenin have already abandoned their melon fields, while the crop that has survived the drought and the intense heat has been of poor quality.<sup>13</sup>

High temperatures also harm the pollination of fruit, as a result of the reduced mobility of the pollinating bees, hornets, and other insects. Damage has also been very evident in growth rates and the final quality of fruit,<sup>14</sup> as the ripening process suffers from changes in the normal maturation conditions. Drought and high temperatures clearly affect fruit trees, resulting in the early ripening of fruits, decreased sizes, and a shortened on-tree ripening time. Consequently, this has a major effect on marketing, especially as extreme weather conditions increase prices in both local and global markets. The quality and price of fruits and vegetables in our local markets are the main victims of climate change, along with livestock (poultry, sheep, and cows) which have been producing less eggs and milk, and of lower quality.

Winter fruits and vegetables also suffer from similar problems. In dry winters, fruit prices soar, especially for citrus and lettuce which cannot endure high temperatures, resulting in early blooming and bitter leaves.<sup>15</sup>

- 12 Kurzom, G. 2012 Taghayyur al-Manakhi fi al-Watan al-Arabi: Aaliyyaat ad-Diffa' wa al-Muwaajaha – al-Haala al-Falasteeniyya [Climate Change in the Arab Countries: Defense and Confrontation Mechanisms – The Palestinian Case]. Ramallah: Ma'an Development Center. [in Arabic] p.13
- 13 Lobell, D et al. 2010 Climate Change and Food Security. New York: Springer. p.63
- 14 Ibid
- 15 Kurzom, G. 2012



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## Current Palestinian Agricultural Policies and Approaches

Since the Israeli occupation of 1967, a big divergence in food production has occurred in Palestinian society (in the West Bank and in Gaza): from varied and self-sufficient food production patterns in rural Palestine, which are distinctive, and generate little waste, to economic and food dependency on Israel accompanied by high levels of waste that is neither reused nor recycled. As a result of the increasing number of Palestinians employed as salaried workers in Israel and other economies, and the accompanying abandonment of agricultural lands, Palestine has been transformed into a consumerist society - one that buys most of its commodities from Israel and abroad. As a result of all this, there has been little or no accumulation of local capital, capital which could have been reinvested in agricultural and industrial production.<sup>16</sup> From an environmental perspective, this has meant a great squandering of local capital and natural wealth, alongside an increased consumption of fossil fuels, and therefore a definite increase in carbon emissions.

The knowledge of traditional agricultural practices has been eroded among our youth. At the same time, chemical monoculture and high external inputs, as well as alien seeds (or hybrid seeds) which have replaced the local *baladi* seeds, has led to the destruction of the previous modes of production based on diversified and integrated farming. This has resulted in the disruption of the natural biological and ecological control mechanisms over pests and diseases, and lead to attacks from new and multi-plant pests that were unknown a few years ago. This has led in turn to the intensified use of agrochemicals in areas like Jenin, Tulkarem, the Jordan Valley, and Gaza,<sup>17</sup> where there is now an almost complete absence of successful natural, traditional methods of soil fertilization.

The huge increase in the use of nitrogenous chemical fertilizers, which contaminate groundwater and destroy the soil through the

depletion of organic matter, has also caused an increase in greenhouse gas emissions.<sup>18</sup> In addition to the fact that these fertilizers have contributed to the killing of what had remained of the microorganisms living in the desertified soil - organisms that are considered fundamental to the soil and pivotal to decomposition of the inner organic matter; the soil's ability to absorb water is receding, purging what is left of its fertility, and increasing its vulnerability to diseases.<sup>19</sup>

Decades ago, the traditional agricultural production patterns were diversified and integrated, which meant a beneficial relationship between the different elements of the agricultural production unit. It also meant minimal external inputs and minimal unused waste. In those good old days, countryside people would use crop remnants to feed animals, and use animal manure, made into compost, to fertilize their fields.<sup>20</sup> Furthermore, many farmers allowed shepherds to graze their cattle in the harvested fields, hence fertilizing the soil. Additionally, it was very common to practice crop rotation and symbiotic integration in the same plot of land, especially in lands directly surrounding the house. Another common practice was varying crop planting to accommodate for various local climates, different soil types, and crop species, in a coherent and integrated manner, thus significantly reducing the likelihood of loss, and also ensuring income and increasing food security for the farmers.<sup>21</sup> In addition, farms did not produce pollution, because all or at least most of the farm's waste products were recycled within the same farm.

Despite the scarcity of rain and the droughts, which we suffered in the past few years, there has so far been no serious change in climatic patterns in our region. Rather what has changed are the people, their lifestyles, and their modes of consumption; affecting the agricultural policies that are now being followed. For example, in recent years, there has been an almost annually repeated phenomenon of damage to some crops because of frost, even in agricultural greenhouses. However, if we inspect the nature of these crops we find that these are primarily summer crops that are being grown in winter, i.e. off-season.<sup>22</sup> Why, are so many of us are surprised when summer produce is damaged in winter? Why do cucumbers and tomatoes, artificially grown

16 Kurzom, G. 'al-Mutasaaqitat fee Filasteen lam Tataghayyar Taqreeban khilal as-Sanawaat at-Tis'een al-Akheera ...' [Precipitations in Palestine almost Unchanged over the Last Ninety Years]. In Afaaq al-Bee'a wa at-Tanmiya, no. 74, May 2015 (in Arabic)

17 Kurzom, G. 2015, as-Siyaada al-Wataniyya 'ala al-Githaa' [The National Food sovereignty]. Ramallah: Ma'an Development Center. p.33

18 Ibid: 45

19 Ibid: 48

20 Ibid: 48-49

21 Ibid: 49

22 Kurzom, G. 2012: 12



in winter, by using toxic nitrogenous fertilizers, get affected by frost while cauliflower, cabbage, and garlic don't (or if at all then to a much lesser degree)? The latter are protected by the nature's wisdom: a wrap of foliage for the cauliflower, multi-layer leaves for cabbages, and several peels for the garlic, to shield them against frost. The same applies to grains that can endure frost and extreme colds, such as lentils, wheat, and barley.<sup>23</sup>

We often hear that marketing is the biggest problem. This is not accurate, as the output surplus applies to only a few monocrops, while we suffer gross shortages in most of our varied agricultural needs, and so have to import these products from Israel or from abroad.<sup>24</sup> Don't we import most of our strategic crops such as wheat, grains, fodders and other foods? The problem then lies in what and how we plant. We grow strategic and fundamental crops in only limited quantities, while at the same time we grow a narrow selection of monocrops that are overloaded with agrochemicals, and in huge, unneeded quantities, especially given the low export assurances exacerbated by our lack of control of crossings and borders.<sup>25</sup>

## Looking Ahead

Up until now, and due to wrong-headed environmental and developmental priorities and strategies, no real action has been taken to address the negative effects of climate change at a Palestinian level. Of course one must take into account the context of budgetary constraints and a general chaos of powers.

### The continuing indifference of Palestinian

23 Ibid

24 Kurzom, G. 2015: 58-59

25 Ibid: 59

officials, and people more generally, to climate change, along with the effects of the Israeli occupation, will cost the Palestinian environment and the economy dearly. The economic consequences resulting from the absence of requisite preventive efforts, may well run into hundreds of millions of dollars by 2020.<sup>26</sup> The main underlying causes of these losses will be in the worsening of water resources due to increased Israeli looting, while we experience floods and various similar phenomena along the shores of Gaza, and the further deterioration of agricultural conditions.

## Farmers Coping with Climate Change

What can we do for Palestinian agriculture, on both individual and collective levels, to mitigate the effects of global warming and cope with climate change? We can summarize the most important environmental practices that contribute to the mitigation of global warming and/or to coping with and adapting to climate change, as follows:

**First:** focus on the cultivation, purchase, and consumption of *baladi* (local) and organic foods. It's worth noting that organic and *baladi* farming does not use nitrogen fertilizers that lead to high rates of methane in the atmosphere. It also does not use chemical pesticides that pollute the soil, groundwater, and the air, and which are harmful to public health.<sup>27</sup>

26 Kurzom, G. Afaaq al-Bee'a wa at-Tanmiya, no. 16

27 Kurzom, G. 'Fann Muwaajahat at-Taghayyur al-Manaakhi fee Zira'atina al-Mahalliyya' [The Art of Coping with Climate Change in Our Local Agriculture]. In Afaaq al-Bee'a wa at-Tanmiya, no. 53, April 2013 (in Arabic)

**Second:** maintain healthy and fertile soil of good conformation, since a fertile and balanced soil is the front line of defense in the face of soil's pests and diseases; healthy soil is the basis of strong and healthy produce. Moreover, it's necessary to use natural and organic fertilizers and manures, as well as compost, since these fertilizers enrich the soil with nutrients which are essential for plant growth, strongly decrease water consumption, and improve the quality and conformation of the soil. In addition, these fertilizers improve the aerial and hydro systems within the soil.<sup>28</sup> Furthermore, their contribution to the greenhouse effect is marginal.

It's also important to reuse, rather than burn, crop remnants and dry weeds, by adding them to compost piles or using them in fermenting *baladi* manure, especially dried grass and weeds. They can also be used to cover the soil surface around the crops, in what is known as biological mulch.<sup>29</sup>

**Third:** Use naturally flowing water as much as possible, much of which is currently lost in vain. This can be achieved by numerous wells, and erecting soil dams to harvest as much rainwater as possible. Such collected waters can be used for domestic or agricultural purposes, in addition to taking advantage of the water springs scattered around the West Bank. It's also necessary to encourage rain fed farming and to plant crops that do not need a lot of irrigation.<sup>30</sup> Furthermore, it's important to recycle wastewater for agricultural usage, in order to increase irrigation supplies and decrease environmental and groundwater pollution.

**Fourth:** focus on diversified farming which plays a pivotal role in pest control, as well as prolonging the production period as far as is possible. This means the availability of fresh produce in different seasons, and at the same time, the lessening of the economic risks of relying on one type of crop. Furthermore, it's common knowledge that the intensive monoculture system causes the proliferation and spread of pests that are often hard to control.<sup>31</sup> Companion planting, as well as mixed cropping, are considered a fundamental part of diversified and integrated farming. This technique helps in deterring and impeding pests, through cultivating a variety of different plants, trees, and vegetables together, in an integrated manner, so that they serve and reinforce each other in different ways, symbiotically, and without any competition

28 Ibid  
29 Ibid  
30 Ibid  
31 Ibid

between them. Some examples of companion planting are: tomatoes with mint which is an insect repellent; onions and garlic with potatoes and cabbage, since onions and garlic release materials that combat blast fungus which attacks potatoes, and *Ascochyta* fungus which attacks cabbage; beans with thyme or chamomile or mint or sage; and zucchini, squash, and pumpkin with corn.<sup>32</sup>

**Fifth:** pay due regard to tillage and its role in maintaining the soil. Because of our arid and semi-arid climate we can perform tillage twice a year: the first is a deep plowing in the autumn aimed at preparing the soil to receive the largest possible amounts of rainfall; while the second is surface plowing in the spring in order to eliminate weeds and retain soil moisture.<sup>33</sup>

**Sixth:** use *baladi* seeds,<sup>34</sup> since plants growing from hybrid or industrial seeds cause continued erosions of the soil fertility, and they need lots of water; whereas *baladi* seeds grow very well with *baladi* manure or compost, and they are resistant to pests and need little water. As such *baladi* seeds preserve the fertile and nutrient-rich soil structure.<sup>35</sup>

**Seventh:** encourage the cultivation of drought-tolerant plant varieties, especially those that can adapt to the local environment, and bear fruits early, before the beginning of the dry season with its negative effects on crops. Examples of crops that require little water are certain kinds of apricots, peaches, and various kinds of almonds.<sup>36</sup>

**Eighth:** some crops tolerate high temperatures, so in order to face the consecutive heat and drought waves, we have been encouraged to quickly develop new strains of wheat and barley that are more drought resistant. However, it's also important to work on encouraging the cultivation of traditional crops, or new ones that tolerate heat and require little care while accomplishing real economic, health and environmental benefits for farmers. In addition, such traditionally grown crops are in high demand whether locally or globally, and can be grown organically. Some examples are: cactus, carob, dates, sesame seeds, and medicinal and

32 Ibid  
33 Ibid

34 *Baladi* seeds are local non industrialized seeds that have grown and evolved within the local genetic context. They are an essential component in seasonal and rain-fed local Palestinian agriculture which is acclimatized to the local ecosystem. Their consumption of external inputs is low. They are characterized by greater resistance to diseases and pests than hybrid –industrialized seeds, and can be re-produced from the same seeds; and thus re-grown with each new season.

35 Kurzom, G. 2013  
36 Ibid

other kinds of herbs.<sup>37</sup>

**Ninth:** avoid the off-season artificial planting of crops. Only then we will stop witnessing the phenomenon of summer crops, grown in winter, and damaged by cold and frost.<sup>38</sup>

**Tenth:** it is necessary to possess knowledge that allows us to predict the potential effects of climate change in our region, and therefore get ready to cope with them. Agriculture will not suffer primarily because of this change itself, but because of the lack of appropriate readiness to cope with the change.<sup>39</sup> Farmers who know that there is a high probability of heat waves, should take precautions, and follow defensive strategies, producing (or buying) the kinds of crops that are drought-tolerant. Vegetables that are resistant to heat are extremely important, and the more resistant they are the more widely they can be grown in increasingly harsh climatic conditions.<sup>40</sup>

## Summary and Conclusion

The phenomenon of global warming will turn into a climate disaster if the concentration of carbon dioxide in the air continues to rise, as well as methane and nitric oxide, let alone the synthetic gases of Chlorofluorocarbon (CFCs). In recent decades, there has been a tremendous escalation of emissions caused by human industry and transportation, especially those emitted from burning fossil fuels, such as petroleum, coal, and natural gas.

Scientific estimates say that if the earth surface temperature rises more than two degrees Celsius, serious climatic changes will occur. Despite this, it's expected that by the end of this century the impact of the global

37 Ibid  
38 Ibid  
39 Ibid  
40 Ibid

warming will lead to a rise in temperature on the earth's surface of five degrees Celsius. This will result in massive evaporation of freshwater resources, and serious water shortages.<sup>41</sup> Furthermore, severe drought will spread widely, while in some regions inundations of tremendous amounts of rainwater will destroy agricultural processes.<sup>42</sup> We have been witnessing the beginnings of the effects of these phenomenon in our Arab region in recent years.

In Palestine the principal issue remains our immense use of externally produced products that raise the level of carbon monoxides and carbon dioxides, and increases the consumption of fossil fuels - which are totally controlled by the Israeli occupation. Therefore, reducing our dependency on external agricultural products through reusing and recycling, and effectively managing farm resources, equipment, and energy, will lead to better preservation and improvement in the quality of the environment and to the protection of our national resources.<sup>43</sup>

Currently, what is required from the relevant official, governmental, and civil stakeholders is to promptly develop a clear and systematic strategy to confront the climate crisis. It's also necessary for Palestinians to equip themselves with the necessary tools and procedures to enable the assessment and measurement of atmospheric and air pollution. This will enable Palestinians to develop plans, policies, and measures that are able to address air pollution, and mitigate the potential consequences of climate change.

*Translated from the Arabic by Carol Khoury*

41 Adger, W. N. et al. 2010, *Adapting to Climate Change*. UK: Cambridge University Press. pp. 42-52  
42 Ibid  
43 Kurzom, G. 2015: 67

# Moroccan Energy Policy: From One Dependence to Another

Ghassan Wail El Karmouni

Considered among the regional leaders in renewable energy, Morocco has taken on excessive debt while privatizing its nature. The question is whether these new renewable energy sources will lead to real sustainability or become a white elephant?

Morocco's climate objective is to achieve a 32% drop in greenhouse gas (GHG) emissions by 2030.<sup>1</sup> In 2010, Morocco was ranked 118th out of 176 countries in terms of GHG emissions with 69 million tonnes of CO<sub>2</sub>, equivalent to 1.77 metric tonnes of CO<sub>2</sub> per capita.<sup>2</sup> With a small economy of 110 billion USD Gross Domestic Product (GDP), and very low investment in the industrial sector, the country has chosen to focus primarily on renewable energy to lower its emissions.

## Energy Dependence

Morocco is a country dependent on imported energy. According to the Department of Energy 95.5% of the energy consumed in Morocco is imported, whether in the form of coal, oil or electricity. To address this reality, since 2009, Morocco has embarked on a new national energy strategy with clear guidelines.<sup>3</sup> By participating in this process, Morocco aims to optimize the energy mix in the electricity sector, accelerate the development of energy from renewable sources; mainly, wind, solar

and hydroelectric; make energy efficiency a national priority, and promote foreign capital investment in oil and gas- ultimately leading to a further regional integration. To support this strategy in 2009 the country announced an ambitious program to diversify its energy mix, and aimed to use 42% renewable energy by 2020.<sup>4</sup> After King Mohammed VI's speech on 30 November 2015, during COP 21 in Paris, these ambitions were revised upwards. The country now aims to achieve 52% of its energy from renewable resources by 2030.

Dr. Abdelkader Amara, Minister of Energy, Mines, Water and Environment set out the vision as follows:

*'Between 2016 and 2030 Morocco will develop additional electricity generation capacities of more than 10 gigawatt (GW) from renewable sources including 4,560 megawatt (MW) from solar, 4,200 MW from wind turbines and 1,330 MW from hydroelectric. The total investment expected for the power projects from renewable sources will be US \$ 32 billion, representing real investment opportunities for the private sector.'*<sup>5</sup>

This ambition should, by 2030, have led to 19 times what has been achieved in the last 5 years through solar energy, and the equivalent of 6 times what was achieved in the same time through wind power.<sup>6</sup> It should be

noted that all programs are currently running behind schedule.<sup>7</sup>

By setting such an ambitious goal, the country is fully engaging with the international agenda in the fight against global warming. Indeed, by ratifying the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 and the Kyoto Protocol in 2002, and in making such important announcements, Morocco wants to position itself as a regional leader in the fight against climate change and the development of a green economy. It is certainly an ambitious project, but also a risky bet on the future, one that generates huge investment needs, needs that the country cannot afford to cover in view of the size of its economy and its overall level of debt: 81.4% of GDP in 2015.<sup>8</sup>

## Debts versus Climate

A lack of national financial resources is the major issue that Morocco faces in developing its green economy. Indeed, as Said Guemra an expert adviser in energy management with Gemtech Monitoring who has been following the field for almost 30 years-warns: 'In the absence of our own financial resources, it is the donors who dictate what to do.'<sup>9</sup> On the contrary, Mustapha Bakkoury, the CEO of the

Moroccan Agency for Solar Energy (MASEN),<sup>10</sup> argues for the project despite its cost, claiming that Morocco is investing in its future:

*'...to reckon that thinking about sustainable development is a luxury reserved to developed countries is tantamount to lacking in ambition, and it is in contradiction to the things we have already started to implement.'*<sup>11</sup> *But at what price is Morocco implementing its green choice?'*

In order to understand how Morocco is developing its green economy, an analysis of how MASEN works could be of great help. Karim Chraïbi, an expert in energy investment and renewable energy argues that, 'With MASEN, Morocco has set up a financial tool to pick international subsidies, grants, and concessional loans. Thus, the entire renewable energy program is run by a debt structuring tool.'<sup>12</sup>

Instead of creating a diversified public structure that would meet the need for security of energy supply, Morocco via MASEN has created a tool primarily orientated to financial issues. In the end, Morocco will incur debt by subscribing to international subsidies, grants, and concessional loans, in order to finance private developers who will produce and sell energy to the State. An energy that the State will then resell to consumers at subsidized prices (see Box 1). The green ambition in Morocco will be achievable thanks to a double subsidy



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1 <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Morocco/1/Maroc%20CPDN%20soumise%20a%CC%80%20la%20CCNUCC%20-%205%20juin%202015.pdf>  
2 <http://aujourd'hui.ma/actualite/classe-118eme-sur-176-pays-le-maroc-tres-petit-pollueur-119285>  
3 <https://www.iea.org/Textbase/npsu/maroc-2014sum.pdf>

4 Ibid.

5 Intervention of Dr. Abdelkader Amara, Minister of Energy, Mines, Water and Environment of Morocco at the Ministerial Meeting „Energy Partnership Moroccan-German“ on 04.19.2016.

6 Author's calculations from the speech by the Minister of Energy, Abdelkader Amara, available on the official website of the Ministry: <http://www.mem.gov.ma/SitePages/Default.aspx>. It is important to note the lack of documents related to the progress of various projects.

7 As an example the Ouarzazate complex was to be completed in 2015. Only the first phase (160 MW to 560 MW) was delivered in early 2016. As for the tender of 850MW wind, to be awarded in 2014, it was finally awarded in early 2016.

8 [http://www.hcp.ma/Synthese-Budget-Economique-Exploratoire-2015-presente-par-M-Ahmed-Lahlimi\\_a1419.html](http://www.hcp.ma/Synthese-Budget-Economique-Exploratoire-2015-presente-par-M-Ahmed-Lahlimi_a1419.html)

9 Interview with the author on 25/11/2015

10 On May 6th, Bakkoury announced in the press that from June 2016 MASEN will become the 'Moroccan Agency for Sustainable Energy'. [http://www.huffpostmaghreb.com/2016/05/06/energie-solaire-maroc\\_n\\_9855182.html?utm\\_hp\\_ref=maroc&ir=Maroc](http://www.huffpostmaghreb.com/2016/05/06/energie-solaire-maroc_n_9855182.html?utm_hp_ref=maroc&ir=Maroc)

11 Interview published in the magazine Economie et Entreprises in January 2014. <http://www.economie-entreprises.com/mustapha-bakkoury-president-du-directoire-de-masen/>

12 Interview with the author on 12/04/2016

(soft loans to the private sector plus subsidized electricity to consumers) and a privatization of profits.

This choice is very much the result of the royal will and it is possible through legal and financial packages (suggested mainly by the World Bank (WB) and the African Development Bank (ADB), and largely financed by the Kreditanstalt für Wiederaufbau -KfW), that help to compensate for the lack of state funding, and counteract the weak attractiveness of the renewable energy sector for private investors.<sup>13</sup>

However, Morocco's inability to finance its green economy prevents the country from deciding which kinds of green energy will be developed. As Said Guemra explains:

Whether in terms of technologies or financial arrangements, Morocco is being pushed into a testing phase, experienced but not chosen. The 'Noor complex' in Ouarzazate, for example, is unique. Under the leadership of the WB, to the benefit of multinationals, and at our expense, we are going to see the implementation on the same site of the three different technologies: Concentrated Solar Power (CSP), photovoltaic, and solar towers. It could be interesting for engineers working on the project, but what accrues to the country if we do not have the economic and industrial structures able to capitalize on this expertise?

This position is reiterated by Karim Chraïbi, for whom,

*'...it is the donors who have imposed the technological choices - because we had no choice! Today CSP technology and storage techniques are far exceeded by the opportunities of photovoltaics.'*

He warns that

*'... by locking small private initiatives out through a form of liberalization of the energy sector tailored to large power plants, it is essentially the big international operators who benefit from the development of renewable energy in Morocco.<sup>14</sup> Renewable energy must be a real economic sector creating jobs and value locally, if it is to develop. This is not the case today despite all the investment that has been made.'<sup>15</sup>*

It is strong lobbying from the financial and industrial sectors that determine both the technological choices made and how the

projects are financed. In turn this particular model of implementation of a 'green economy' seems to do more to confirm the dependency theory than guarantee that Morocco will be able to create a sustainable renewable energy sector.

## The Great Absence of Energy Efficiency

Alongside increased energy from renewables, Morocco's strategy objectives include increased energy efficiency, and Morocco wants to achieve 15% energy efficiency by 2030.<sup>16</sup> But as Said Guemra wryly observes,

*'Energy efficiency is not sufficiently valued in the national strategy, even if every kilowatt hour saved is 5 to 20 times cheaper than comparable reductions through renewable energy. But they are not very interested because there is nothing to inaugurate.'*

He goes on to explain:

*'We continue to launch studies to explore the potential of reducing the energy bill, so far there have been over 25, and this is updated every year... but then, where are the programs on the ground? Even the regulations put in place are inadequate. For example they insist on lowering the bill for heating and cooling in schools while many schools do not even have an electric connection or lack electrical equipment. These studies are entrusted to foreigners who make a 'copy and paste' of what is happening elsewhere. There is a real problem of technical support for the organizations that create the regulations.'*

For this expert it is a matter of political will and power between donors and the state. In this context he cites the project dealing with the energy efficiency of Moroccan mosques. This project was initiated in partnership with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and two public agencies, the Moroccan Agency for the Development of Renewable Energy and Energy Efficiency (ADEREE) and the Energy Investment Company (SIE). However, Said Guemra explains that,

*'According to the study to develop the project, the 15,000 mosques of Morocco consume 10 million Dirhams (1 million Euros) per year of electricity. I think the cost of generalization of the program is expected to cost 600 million*

<sup>13</sup> KfW to date has supported renewable energy projects in Morocco with almost EUR 1 billion.

Thanks to the Morocco-German energy partnership, this trend will increase until 2050.

<sup>14</sup> The law 13-09 that liberalized the energy sector in Morocco blocks the connection to the medium voltage grid thereby preventing small producers participating.

<sup>15</sup> Interview with the author on 12/04/2016

<sup>16</sup> "Renewable energies in Morocco" presentation document of the Ministry of Energy, Mines, Water and Environment at the "Workshop Mission Morocco" on German Chamber of Commerce and Industry in Morocco (AHK Casa), Casablanca, 20/11/2012.

*euros. An amount to be borrowed from donors.'*

An economic aberration for a country that does not even recycle its waste! It therefore seems that many public policies fit more with the agendas of donors than urgent public needs.

## The Diktat of the Market

Whether the program is in renewable energy or energy efficiency, the common point of these initiatives is the liberalization and the increased financialization of these sectors. Financing mechanisms (bilateral, multilateral funding and Climate Investment Funds) or the inclusion of renewable energy programs under the Clean Development Mechanism (CDM) or the formulas of Independent Power Production (IPP) used since 1997,<sup>17</sup> and their unsustainable environmental impacts (see box 2) all suggest that what drives energy policy is a privatization strategy of our natural heritage, and this is a real concern for the environment. The official communications about the solar program have put forward the possibility of exporting energy to Europe. Through these exports it would be possible to set up an equalization system that would decrease the cost (purchase energy in Europe in the summer, which is the peak period of Moroccan consumption, and sell in winter which is the peak period of European consumption).<sup>18</sup> Imitating European policy, the Moroccan Solar Plan aims to provide green

<sup>17</sup> This is the date of the first privatization of a coal power plant in the small town of Jorf Lasfar to UAE TAQA group. They now control nearly 40% of electricity generation in Morocco.  
<sup>18</sup> <http://www.economie-entreprises.com/mustapha-bakkourypresident-du-directoire-de-masen/>



energy for the countries of the European Union as part of their energy mix. But to do this, Morocco needs to strengthen its connections to the European grid in the hope that one day it will be able to export its surpluses including solar and wind power. An investment of 2 billion Euros would be needed to strengthen the connections with Europe and to strengthen existing lines.<sup>19</sup> Such an investment would open up new markets but also incur further debt for the State. Indeed, 'Nobody wants to pay the initial investment because it does not directly produce cash, and the long term horizon of 50 to 100 years is simply too risky, because it is very difficult to calculate the potential return over such a long period' claims Gauthier Dupont, Director of Clean Energy & Sustainability Services for Ernest & Young in the UAE.<sup>20</sup> He adds, 'there are not many private lines in the world because it is difficult to set a 'pass rate' since the network grid and the electricity itself selects the lines.'

For its ambition to be viable, the state will have to put its hand in its pocket in order to avoid increased debts. A situation that pushes Mr. Dupont to wonder: 'should the priority be to export green energy to Europe through all these interconnections or to convey quality electricity to every home [in Morocco]? For him there is still much to do to generalize the quality of electrification 'prior to pleasing the Europeans with green energy.'

<sup>19</sup> El Karmouni G. W. (2015). Electricity, Export to Europe will wait. *Economie et Entreprises*, April 2015.

<sup>20</sup> Ibid.

### Box 1 Risky assemblages

As an example of complex assemblages in the energy sector, the Ouarzazate thermo solar plant is a case in point. This multi-technology solar plant, capable of producing 580 MW by 2018, will need an investment between 2.5 to 3 billion Euros. To fund this project the Moroccan State is counting on the development of public / private partnerships (PPP) via a BOOT (Build, Own, Operate, Transfer) contract with a Saudi Arabian investor ACWA Power. The deal is simple: the state via MASEN borrows from international donors (the World Bank, the African Development Bank, KfW, the European Investment Bank, the French Development Agency, and others ...) 2.1 billion Euros, it pays this amount to ACWA Power, which sub-contracts construction to Spanish operators with turnkey contracts. Subsequently, ACWA Power operates the plant and sells the electricity generated to MASEN at 1.5 Dirham per kWh - for 25 years. MASEN then resells to the National Office for Water and electricity (ONEE) – for an average of around 1.2 Dirhams per kWh. The difference is supported by a grant funded through another loan from the World Bank. This kind of arrangement will most probably be generalized to other solar and wind projects.

### Box 2 Water stress

According to official statements, the central Ouarzazate will consume 2 million cubic meters per year. Equivalent to 50% of the water consumption of all inhabitants of Ouarzazate, the city it will illuminate. By opting for the technology of concentrated solar (CSP) the MASEN Project promotes the megaproject while at the same time neglecting the environmental realities of the region. The control unit is directly connected to a pipe from an adjacent dam for its cooling system. Now it happens that this region is arid with only 100 millimeters of precipitation per year and less than 30 mm in dry years.<sup>1</sup> Given the high probability of increased drought, related to global warming processes, this brings into question the sustainability or future viability of the plant. After Ouarzazate, there are 5 further solar stations planned in Morocco by 2030, all are planned in arid or semi-arid areas. A study by the World Resources Institute estimates that Morocco will suffer water shortages by 2040.<sup>2</sup> A frightening possibility which brings into question the viability of such policies.

1 Kouz K. and al. (2011), „Study of Environmental and Social Impact within the Framework of the Solar Project of Ouarzazate.“ MASEN, Rabat.

2 <http://www.wri.org/sites/default/files/aqueduct-water-stress-country-rankings-technical-note.pdf>

### To Conclude ...

According to the statements by the Minister of Energy, despite tripling the installed electricity production capacity, the planned 52% of the energy mix to be produced from renewables by 2030 will reduce energy dependence on imports by only 15%. Even with a 32% reduction in GHGs by 2030, Morocco will have little impact on global warming. Already a low polluter, contributing only 0.16% of global emissions,<sup>21</sup> the country does not represent a major stake in the global climate. Nonetheless, the proactive policy, pursued by the country who will host the COP22 climate negotiations in Marrakech in November 2016, is often described as a model for the region. But is this what Morocco really needs? The ultra (neo)liberal policy in the energy sector, described above, will condemn the country to paying off debts for the next 30 to 40 years, and has seen the privatization of key sectors such as energy and water. While its objective is to reduce energy dependence on foreign imports, the country is creating another dependence - on multinational energy companies and international financial institutions. With cascading financial and legal arrangements, heavy involvement from the monarchy, a high dependence on foreign donors, the threat of water shortages affecting the functionality of the solar plants, and in the absence of a public debate that would seek accountability around these policies, there is a real risk of creating 'energy white elephants'.

Translated from the French by Salah-Eddine Esquelli

21 <http://aujourd'hui.ma/actualite/classe-118eme-sur-176-pays-le-maroc-tres-petit-pollueur-119285>

## On the Perspective of Ruling Classes and the Elite in Morocco on Global Environmental Issues

Jawad Moustakbal

*The dominant neo-colonial thinking represents the biggest hardship that we face in this country. We were a colony controlled by the French state that left behind some traditions: achieving success and happiness in life is embodied in the attempt to live as in France, as the richest people of France do. The diffusion of this idea in the minds hinders and sets a limit to the changes that we want to make.*<sup>1</sup>

**Thomas Sankara (1949-1987)**

Morocco, as with the other non-oil producing countries of the Middle East and North Africa (MENA) region, is a symbol of climate injustice. While its own participation in world greenhouse gas emissions is largely insignificant with 1.74 metric tons *per capita* in 2011 (see Graph 1.1), Morocco (along with the rest of the MENA region) is among the most vulnerable regions in the world to the impacts of climate change, especially as concerns water resources and agriculture. In addition, most countries in the region, especially the poorest, such as Morocco, are the least capable of adapting to climate change, and its ongoing and expected impacts. This is due to the lack of democracy, economic and human development, along with widespread corruption and poverty that these countries are already suffering from. For Gilbert Achcar, 'of all the regions still referred to as the third world, the MENA region is the one facing

1. Gakunzinom, D. (1988) Oser Inventer L'avenir : La parole de Sankara (1983 - 1987). Atlanta : Pathfinder Press. p. 13

the most severe development crisis!<sup>2</sup>

This article argues that the Moroccan state does not have a real independent position on the global environmental crisis and climate change issues; thus, it has failed to develop its own strategy in the negotiation process of the United Nations Framework Convention on Climate Change (UNFCCC).

### Does the Moroccan Regime have a Real Independent Perspective on Global Environmental Issues?

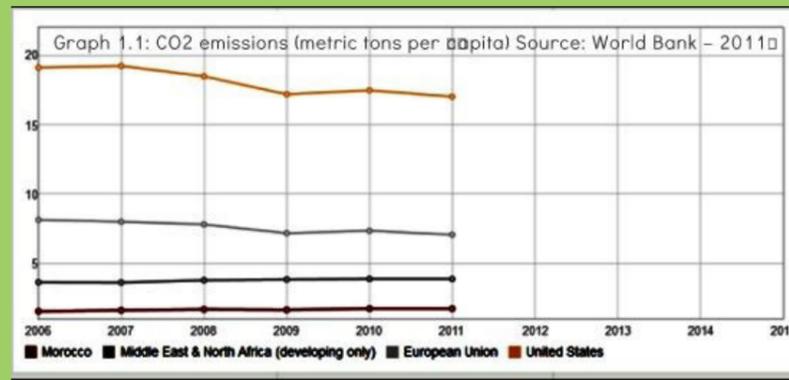
The Moroccan regime does not base its environmental policies on its position as a country which has been a victim of climate injustice. It has not joined in alliance with other countries of the South to claim its right to environmental justice, to claim its ecological debt – a historical ecological debt that northern countries and their big corporations owe to all poor southern countries. Instead of developing its own approach in collaboration with similar Southern countries, the Moroccan regime continues to adopt the same, or similar, positions to those advocated by the major world powers such as France and the USA - countries whose interests are often in conflict with Moroccan national interests.

Furthermore, the alignment of the Moroccan regime with the Gulf monarchies, especially Saudi Arabia, is even more confounding for the 'Moroccan negotiators' position in the climate negotiations - given the very conservative position of Saudi Arabia in these negotiations.

2. Achcar, G. (2013) The people want : A Radical Exploration of Arab Uprising. London: University of California Press. P.10



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Graph 1.1: CO2 emissions (metric tons per capita) Source: World Bank - 2011

Said Reem Al Mealla, Co-Founder of the Arab Youth Climate Movement, explained that before COP21 in Paris,

*'Arab civil society is pressuring the Arab countries to take a stronger collective position at the COP21 talks but it is difficult, especially for the oil producing states. Saudi Arabia is being very uncooperative and opaque at the moment. They have hired a PR team to handle all their communication and we are finding it very difficult to reach out to them.'*<sup>3</sup>

Even though Morocco has taken part in all the Conferences of Parties (COPs) since their launch in 1995, it is difficult to identify any autonomous strategy or a clear political position on behalf of the Moroccan negotiators. It is also difficult to identify Morocco's allies: Arab countries? African countries? The 'Group of 77'+ China?<sup>4</sup> Due to this lack of a clear vision, 'our' negotiators are lost among more than 20 negotiating pressure groups.

As such, the Moroccan participation in these negotiations is no more than symbolic. This is how a Moroccan negotiator, who took part in the COP negotiations over many years and who declined to be identified, describes his experience,

*'Climate change involves a great number of*

3 Pari, T. Here's why Saudi Arabia is highly unpopular at Paris climate conference. [Online] Updated: December 10, 2015 4:53 pm. Available: <http://indianexpress.com/article/blogs/heres-why-saudi-arabia-is-highly-unpopular-at-paris-climate-conference/> [28 May 2016]

4 'The Group of 77 is the largest intergovernmental organization of developing countries in the United Nations, which provides the means for the countries of the South to articulate and promote their collective economic interests and enhance their joint negotiating capacity on all major international economic issues within the United Nations system, and promote South-South cooperation for development.' For more details visit : <http://www.g77.org>

*meetings and a lot of travel. .... One can't help but question the usefulness of such meetings. Even when a deal is reached, like in Kyoto in 1997, the agreement has never been fully applied and the objectives never totally attained.'*<sup>5</sup>

Additionally he claims that,

*'... these meetings are becoming a real waste of time and energy. From my experience, I know that nothing happens before the very last minute of the two weeks of negotiations. I know that there will be disappointing decisions, made in hidden rooms between a few delegates from important countries and announced very early the next morning.'*

On the other hand and given the absence of a clear vision and the failure of our representatives to participate and act independently, the role of Morocco in holding such international conferences becomes limited to logistics; that is, a 'party planner' who is in charge of preparing the ceremony venue, decorating it, providing the band and catering to the guests....

## "Moroccan Green Capitalism"

The fact that the Moroccan ruling classes have no clear autonomous standpoint on the climate crisis does not prevent them from looking for new opportunities to accumulate additional profit in the name of protecting the environment.

Most companies involved in green development projects, domestic as well as

5 This statement was written by the negotiator in a text presentation of his personal experience in these negotiations to benefit students from a US university in 2014.

foreign, have historically been responsible for the pollution of many local ecosystems.

One example of such an actor is the *Société Nationale d'Investissement (SNI)* holding company, whose largest shareholder is the Moroccan royal family. It is branded today as a leader in sustainable development in Morocco, especially in wind energy. However, not only has its sugar producing company *Cosumar* been involved in pollution disasters but its mining branch *Managem* in its 'Imider' silver mine, located in the south of Morocco, has seen the contamination of aquifers and there is still an ongoing conflict with the local population over water resources.<sup>6</sup>

The participation of some of the dominant classes in today's 'green' projects is no more than a continuation of the operations of 'legitimized' robbery, in which they have been involved since Morocco's formal 'independence'. As Frantz Fanon (1961) wrote in *The Wretched of the Earth*:

*'When decolonization occurs in regions where the liberation struggle has not yet made its impact sufficiently felt, here are the same smart alecks, the sly, shrewd intellectuals whose behavior and ways of thinking, picked up from their rubbing shoulders with the colonialist bourgeoisie, have remained intact. Spoiled children of yesterday's colonialism and today's governing powers, they oversee the looting of the few national resources. [...] They insist on the nationalization of business transactions, i.e., reserving contracts and business deals for nationals. Their doctrine is to proclaim the absolute need for nationalizing the theft of the nation.'*<sup>7</sup>

In our local context, this amounts to the 'Moroccanization' of the robbery of Moroccan resources.

## Anti-Pastoral Discourse

The ruling classes in Morocco inherited a colonial environmental discourse that systematically presented traditional ways of using land and forests, particularly for cattle breeding, as not only ineffective but even destructive for the environment. This discourse was first used by the French colonialists in Algeria with the

6 Bouhmouh, N & Bailey, K.D. A Moroccan village's long fight for water rights For four years, residents of Imider have held a sit-in against a mine they say is ruining their livelihoods. [Online]. Available: <http://www.aljazeera.com/news/2015/12/moroccan-village-long-fight-water-rights-151205121358666.html> [28 May 2016]

7 Fanon, F. (2004) 'On violence'. In : *The wretched of the earth*. New York: Grove Press. P. 47

aim of dispossessing local people of land and resources, and changing existing forms of land tenure in the nineteenth and early twentieth centuries. As Davis (2006) explains,

*'[This narrative] was utilized widely to help appropriate collective lands, a classic instance of enclosing the commons so emblematic of the changing social relations with nature during that period of classical liberalism and the rise of the global economy. The current use of this neocolonialist narrative by the Moroccan monarchy and international financial actors has facilitated a contemporary enclosing of the commons; ...the utilization of this narrative has also cast Moroccan pastoralists and subsistence farmers as double eco-outlaws.... The narrative was also used to change and rewrite numerous laws and policies over the course of the colonial period. In the process, the traditional uses of the forest and other lands by the Algerians were systematically criminalized and the majority of the indigenous population was marginalized and impoverished. The same environmental narrative was carried to Tunisia in 1881 and to Morocco in 1912, with much the same effect.'*<sup>8</sup>

These same discourses have been promoted during recent decades by international financial institutions such as the World Bank and the International Monetary fund (IMF), and also United States Agency for International Development (USAID) who,

*'... has been utilizing the narrative to encourage reforms in rangeland management for 30 years. Invoking Garret Hardin's liberal 'tragedy of the commons' thesis, which claims that all common land will necessarily be overexploited and thus should be privatized, USAID has strongly recommended that in Morocco 'the collective pastures must first be enclosed' (Gow et al. 1985b, 1). USAID claims that enclosing the collective pastures is necessary due to severe degradation, although it admits that 'there are no reliable data on the degree of present degradation' (Gow et al. 1985a, 11; 1985b). Despite this disturbing lack of data demonstrating overgrazing and land degradation, USAID has been advising Morocco to privatize rangeland since the 1960s.'*<sup>9</sup>

Unfortunately, this narrative is still used today in circles that profess to be progressive. At the same time, in the academic world, the question of political ecology is almost entirely

8 Davis, D.K. (2006). Neoliberalism, environmentalism, and agricultural restructuring in Morocco. *The Geographical Journal*, 172(2), p.93.

9 Ibid, p.94.

absent from Moroccan universities. Moreover, academic publishing-not limited to the field of the environment-remains very low in Moroccan universities. 'In 2009, the number of Moroccan scientific publications did not exceed 3,100, far behind South Africa, Egypt, Tunisia, Saudi Arabia and Algeria.'<sup>10</sup>

## What does Moroccan Civil Society have to Say about Environmental Issues?

If the rulers and the dominant classes are incapable of developing an independent, alternative perspective on the problem of climate change and the global environmental crisis, then the question that arises is: Is there another actor within the country that can come up with that alternative perspective, and more precisely, is 'civil society' capable of doing so?

Recently, Morocco has witnessed the emergence of thousands of so-called civil society associations focused on environmental issues. The quantity and activities of these associations are expected to increase as Morocco prepares to hold COP22. The result is the expansion of 'mercenaries' taking hold of the subject of environmental protection to benefit from and receive subsidies. Furthermore, the state is working hard to keep them away from major environmental issues considered politically sensitive, and to limit their spaces of intervention to merely collecting garbage and planting trees, as seen in the campaign of 'Boudif' concerned with cleaning beaches.<sup>11</sup>

In addition, some environmental organizations are tasked with compensating for the State's negligence in various arenas, and its failure to provide basic infrastructure such as supplying water to villages, building roads, or helping local residents organize themselves into cooperatives to produce and distribute local products.

Beyond a lack of knowledge about global environmental issues, a number of activists consider debate about such topics to be an intellectual luxury, given the poverty and lack of democracy that currently exist in Morocco.

<sup>10</sup> Hicham, H. Recherche scientifique : des cerveaux mais des moyens dérisoires. *Lavieeco* newspaper [online]. Available: <http://lavieeco.com/news/societe/recherche-scientifique-des-cerveaux-mais-des-moyens-derisoires-18544.html> [28 May 2016]

<sup>11</sup> A campaign organized each year by 'Mohammed VI Foundation for Environmental Protection' chaired by the Royal princess. See: <http://www.fm6e.org>

This group takes a 'practical' perspective which can be summed up as follows: We have to strive to establish democracy and claim political and economic rights first. When these conditions are fulfilled, we can talk about striving for the environment's protection and discussing the climate crisis. This was obvious in the protests of the February 20<sup>th</sup> Movement, which did not include any clear demands on the issue of the environment, except for some slogans related to the distribution of natural wealth.

## A Hopeful Path: Towards an Eco-Socialist Development Model

In 2009, I attended the World Social Forum (WSF) in Belem, the capital and largest city of the state of Para in northern Brazil at the gateway to the Amazon River. The Belem Forum was one of the most successful WSFs thanks to the direct involvement of Brazilians, with more than 140,000 participants, especially indigenous peoples.<sup>12</sup> This year, the WSF has focused, primarily on the global environmental crisis, considering it to be one side of the 'systemic crisis' and 'crisis of civilization' that the world faces today.

I witnessed and I was impressed by how social and environmental NGOs drew their strength from their people and tried to develop alternatives based on their own histories and traditions, without importing readymade solutions from the West. Inspired by this, I believe that a fundamental challenge facing sincere activists and NGOs in the MENA region is; how do we build a real environmental and social justice movement, connected to the international movement, but not reproducing the same neo-colonial relationship with the Western powers that our governments still maintain?

If the path to building a genuine environmental justice movement in Morocco will be long and rough, it is also a path that has today become both unavoidable and necessary.

The first step towards building such a large movement is to thoroughly comprehend the errors that current interventions generate in environmental systems. This can be done by providing critical analyses from an

<sup>12</sup> Conway, J. Belém 2009: Indigenizing the Global at the World Social Forum [Online]. Available: [http://www.openspaceforum.net/wiki/tiki-read\\_article.php?articleId=776](http://www.openspaceforum.net/wiki/tiki-read_article.php?articleId=776) [28 May 2016]

environmental justice perspective of the strategic economic plans currently ongoing in Morocco; and also by offering practical alternatives with the aim of building a progressive developmental model, i.e. an eco-socialist model.

The most important point to be stressed here is the structural contrast between the country's limited natural resources and the strategic choices adopted by Morocco's rulers. Most of the plans implemented in this area, such as the *Azur Plan* for Tourism, the *Moroccan Green Plan* for agriculture and the *Halieutis Plan* for fisheries not only deny the people access to the limited natural resources that Morocco possesses, but reinforce their depletion by encouraging their overexploitation. The already existing and potential further consequences of these plans on the country's natural resources, combined with the neo-liberal economic approach and structural adjustment plans that have been in place for decades, added to the present and expected future impacts of climate change, lead to this impending 'catastrophic convergence,'<sup>13</sup> and constitute a real environmental threat to human and non-human nature in Morocco.

The second challenge in building a large environmental justice movement is to foster connections and solidarities among the real victims of global and local environment injustice who are fighting everyday all over Morocco to protect their rights and their territories.

To cite some examples:

In Ouarzazate/Imider, local communities have been fighting since 2011 against a mining

<sup>13</sup> Parenti, C. (2012) *Tropic of Chaos: Climate Change and the New Geography of Violence*. New York: Nation Books, p.7.

company's overexploitation and pollution of their water, as well as for their historic rights and sovereignty over their own resources;

In Bensmim, villagers led a spectacular struggle that lasted for over 10 years to defend their water rights against a bottling company owned by a multinational corporation backed by central authorities;

In Mohamedia, local inhabitants stood up against a powerful private real estate lobby that wanted to 'enclose' and destroy their beaches, beaches already altered by local industries especially by a breakwater wall for *la Samir* Refinery. We must remember that this same refinery, the only one in Morocco that was privatized in the nineties, went bankrupt in early 2016 under its new private owners.

In Saadia, a coalition of local NGOs led by a local agronomic engineer revealed the catastrophic impact of an unwise touristic mega-project that was harming the coastal ecosystem and excluded and marginalized local communities.

In Agadir/Ait melloul, small NGOs led by former members of the Moroccan unemployed graduates organization succeeded in stopping a very harmful and polluting plant involved in recycling used cooking oil.

These struggles are, for me, a source of hope. A hope that we can construct a large and effective grass roots environmental justice movement in Morocco. A movement acting not only for real protection of local ecosystems but also for real and total sovereignty for citizens and local communities over their natural resources, and their legitimate right to decide on the appropriate uses of water, lands, forests, sea and sun.

# Tiznit Flooded!

## Governance and Climate Change Issues

Soraya EL Kahlaoui



Soraya is currently a doctoral candidate in sociology at L'École des hautes études en sciences sociale (EHESS) in Paris. Her research analyzes the reclaiming of public space and the forms it has taken in Morocco since 2011. More specifically, her research consists of a political analysis of the practices of space appropriation and other forms of resistance led by inhabitants fighting for occupation rights. In parallel to her research she is an activist for the right to space (including the right to resources, land, and housing). It is in this activist context that she met the outcast inhabitants of Guich L'Oudaya, an area of informal housing in the Moroccan capital city of Rabat. Since March 2013, she has worked to raise awareness of the plight of these residents with both militant groups, and the media.

In November 2014, Morocco was hit by severe floods which devastated part of the south of the country. Several thousand houses, the majority of which were built of mud, collapsed leaving residents homeless in the icy winter cold. Whole villages found themselves cut off for several weeks. Although initially powerless to do anything, all eyes in Morocco were turned toward the villagers, lost in the midst of the ruins, and their cries for help. Powerlessness subsequently gave way to mobilisation, particularly through the social networks where a collection of donations was organised by the “*twittoma*” ie the Twitter users’ community in Morocco, which succeeded in collecting more than 700,000 dirhams.<sup>1</sup> There were also ‘solidarity caravans’, appeals for donations, many videos shared on the social networks, and a national mourning campaign on *facebook*.... The ‘citizens’ alert’ had indeed been sounded! However, this only highlighted the inability of the Moroccan public authorities to manage the humanitarian crisis brought about by a climate crisis.

### Climate and Territory

The floods in November 2014 exposed the weaknesses in the systems of territorial governance and crisis management in Morocco. They should be treated as an initial warning which we must heed if we are to forestall the

1 Campaign launched on twitter under the hashtag #100dhpouraider which succeeded in raising 302688 dirhams in direct donations on the part of surfers; company donations account for the remainder. The sum was transferred in full to the Food bank. Source: [http://www.huffpostmaghreb.com/2014/12/09/inondation-campagne-dirha\\_n\\_6294146.html](http://www.huffpostmaghreb.com/2014/12/09/inondation-campagne-dirha_n_6294146.html)

risks related to climatic change in the future.<sup>2</sup> For it is certain that climate change will create new challenges for Morocco, along with other countries of the Global South: higher temperatures, changes in rainfall, depletion of resources, and an increase in extreme events. Climate change has a wide range of socioeconomic repercussions which render territories with precarious infrastructures particularly vulnerable. This vulnerability is all the more marked in Morocco, because like many countries of the Global South it has relatively recently embarked upon a rapid programme of urbanisation often pursued to the detriment of a sound development policy.<sup>3</sup> Towns and cities have been built hastily, often at the whim of property developers, and have been filled by an often unassimilated rural exodus, all in a race towards a seemingly endless ‘modernisation.’

Faced with such unsound territorial development, any extreme environmental event is likely to call for a response which is beyond the capabilities of the local populations and even the management capacities of the municipalities. However, as the Moroccan meteorologist Fatima Driouech asserts, the primary consequence of climate disruption is an increase in extreme events,<sup>4</sup> and climate science is categorical on the matter: more

2 Hulme M. & Barrow E.M. (1999). Impacts of human-included climate change and natural variability. *Nature*. 397, pp. 688-69.

3 According to the figures provided by the High Commission for Planning, the urbanisation rate in Morocco amounts to 60.5% in 2016, whereas it was only 29.2 % in 1960.

4 Driouech F. (2010). Distribution des précipitations hivernales sur le Maroc dans le cadre d'un changement climatique: descente d'échelles et incertitudes [Distribution of winter precipitations over Morocco within the context of climatic change: downscaling and uncertainties]. PhD. Toulouse.

extreme events are going to happen! Morocco must be prepared for more droughts and more floods.

Faced with the complexity of the challenges created by climate change, there is need for a public policy response based on integrated governance. A paradigm shift in perception of the territory is essential if we are to create resilient territories, equipped to prevent and manage the risks related to climatic change. In this context, this article outlines the main conclusions emerging from the study ‘Agglomération de Tiznit: les défis de la gouvernance urbaine face au risque climatique’ [Agglomeration of Tiznit: challenges of urban governance in the face of climatic change]<sup>5</sup> conducted by the team *Des Toits pour le Sud* [Roofs for the South], a citizens’ initiative created in December 2014 with the aim of identifying the urban management shortcomings causing the floods.

The *Toits pour le Sud* team were initially inspired by the need to determine the origin of the damage caused by the floods and by a wish to shed a multidisciplinary light on the urban question in order to be able to suggest innovative alternatives. For these reasons the *Toits pour le Sud* team, formed of engineers, architects and a sociologist, were committed to turning the survey work into a collaborative effort involving students from various institutions. With a desire to promote participation, the *Toits pour le Sud* team favoured a local approach which would allow a more detailed and integrated understanding of the various overlapping issues of territorial governance.

### Tiznit and Agloo: Thinking on a Territorial Scale

The town of Tiznit and its seaside resort Agloo, located around fifteen kilometres away, were selected as the survey site because of the interconnectedness of the issues involved at these two sites: heritage, a high rate of renewal of the urban fabric, and urbanisation of rural housing.

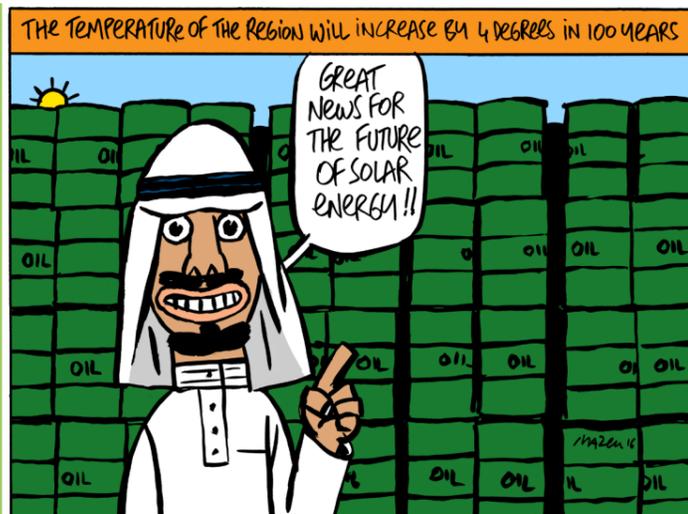
Comparison of these two sites, urban and semi-rural, fulfils the desire to embed analysis of a given area in its wider environment. Indeed, placing the findings on a territorial scale allows for the contextualisation of data obtained from local surveys within those conducted as part of larger and more systemic analyses. This method

5 Report available online at the website of the foundation Heinrich Böll Stiftung Rabat. <http://ma.boell.org/fr/2016/06/14/des-toits-pour-le-sud>

makes it possible to take into account notions of justice and spatial equity in order to conceive better regional equalisation. For although all of the south of Morocco was also affected by the torrential rains in November 2014, it became clear that the disparity in resources and management abilities among municipalities left some territories powerless while others were more able to mitigate the worst effects. Consequently, the floods of November 2014 contributed to deepening the spatial inequity between neighbouring territories, as is the case every time a crisis occurs.

Several levels of disparity may be observed on the scale of the Tiznit agglomeration. In the town of Tiznit, the most vulnerable districts were the first to be affected by the floods. Despite the fact that the floods were severe and their effects widespread, partly destroying the town’s infrastructures (bridges, roads, the sewage network), only those living in the ancient medina, one of the most impoverished areas of the town, experienced major damage to their homes. The municipality recorded the destruction of around 850 homes by the floods along with 6500 persons in distress. During the floods, the municipality of Tiznit issued a warning and constructed improvised sandbag dams to hold back the water. Civil society and residents were mobilised, but the scarce means available to the municipality made it impossible to avoid a catastrophe. The ancient medina was encircled by the waters, a part of the historic wall, although recently restored, collapsed and a number of streets experienced rising floodwaters reaching up to 1m 20. The stricken inhabitants were housed in public institutions, disused or requisitioned for the occasion. Ad hoc bearing of costs by the municipality was granted, but sustainable rehousing solutions have been slow to arrive.

Moreover, although the municipality of Tiznit, the provincial capital, may consider itself to have successfully managed the crisis for its own population, it was unable however to provide help to the residents of the village of Agloo, situated only around ten kilometres away. The North of the village was among the areas most severely affected by the floods; around a hundred houses, alongside the bed of the *Oued*, were swept away by the waters, leaving the families homeless. The Sidi Ouagag *zaouia*, which is among the oldest *zaouias* in Morocco, also suffered major material damage, not only to its foundations, which were severely undermined by the waters, but above all to its archives, which were flooded, carrying away many historical works. The floods also resulted in complete destruction of the university



campus adjoining the *zaouia*, which also served as a place of spiritual learning.

Left to fend for themselves, the residents of Agloo were required to improvise as crisis managers: inventing management systems, adopting safety measures and organising collection and distribution of the donations to the affected families. Although the civil society of Agloo was able to take over from the authorities with courage and inventiveness, it is no replacement for state action. Today, more than a year after the floods, the North of the village of Agloo has still not been rebuilt. No safety measures have been adopted, and the houses risk collapsing along the village roads. The inhabitants themselves have reconnected the electricity supply. The afflicted families still do not have any housing. The north of the village is more reminiscent of a battlefield than of a place to live.

The Agloo site received several visits from ministerial delegations, and is often held up as an example of a catastrophe. However the rehousing plan put forward by civil society in Agloo on the basis of a diagnosis of the damage has been in vain. The plan involved requisitioning communal land in order to build an area of community accommodation that could be progressively enlarged.

Left abandoned, with no point of engagement in the municipality, Tiznit has not allowed the civil society of Agloo the opportunity to put into effect its recommendations. Reflection at the territorial level would have made it possible to assist this deprived municipality through a system of equalisation and exchanges of expertise.

Hence, the example of Agloo illustrates the absurdity of a narrow conception of the territory and points a finger at the shortcomings of the decentralisation process implemented

by the State. A decentralisation that passes responsibility to the level of the municipalities without providing them with the means to conduct the necessary work. Deprived of human means and material resources, how can small municipalities not only forestall the risks associated with climatic change but also cope in the case of a crisis?

## Governance without Government

In the landscape of Moroccan towns, Tiznit is known for its participatory dynamism. Furthermore the municipality is often held up as an example in terms of sustainable development. During the floods of November 2014 however, the town was not spared damage. Mr Abdellatif Ouemou, the Chairman of the municipality of Tiznit at that time, admits that this was a risk management problem. For Ouemou, the matter is clear: the municipalities do not have the means of managing alone in the event of natural catastrophes.

Coordination on a territorial level with the State decentralised bodies is often difficult. In spite of the endeavours towards decentralisation embarked on in Morocco since the 90s and updated by the 2011 constitution, the urban restructuring projects have been slow to be implemented. The multiplication of stakeholders, fragmentation of responsibilities, overlapping of competences and lack of communication among institutions impede decision-making processes. This is demonstrated by the plan to protect Tiznit against floods passed in 2010 and yet still to be given concrete form in 2015. Although the plan was primarily intended to bring the town's sewage network up to standard,

implementation of this project would also have made it possible to avoid the flooding of November 2014.

There has been both a lack of coordination for risk prevention, and also for crisis management. One aspect to be particularly deplored is that there is no warning mechanism for the population in the event of a natural catastrophe. In Morocco, once the alert is issued by the Meteorological Department, a special bulletin is dispatched to the Ministry of the Interior, which is subsequently entrusted with relaying information to the municipalities involved so that they can take the necessary measures. Now, since the municipalities do not have uniform crisis management abilities, the deprived municipalities are left to fend for themselves, without their being provided with any communication tools. This was particularly the case in Agloo, where residents talk of having been taken by surprise. Nowadays however, owing to the new technologies such as mobile telephones, it would be simple to set up direct early warnings systems that would alert the populations via the telecommunications operators.

Yet the half-hearted decentralisation process is being conducted without a clear political vision, as the State fails to conceive the mechanisms for empowerment of the communities and populations. Rather, it discharges itself of responsibility, while retaining the reflexes and prerogatives of a centralised system. The creation of an imbroglio of rules and procedures has complicated the appointment of officials. The decision-making

mechanisms resemble spider webs, woven so as to be inextricable. One should mention as ultimate proof the uncontrolled urban development that is increasing in each town without any adequate and suitable solution being adopted by the State. In Agloo, the houses that collapsed were built with the authorisation of the municipality -conferred by the regional urban development agency - in a flood-prone area where building is normally prohibited.<sup>6</sup> Likewise, in Tiznit, the majority of the houses of the ancient medina were put up with no regard for building rules, to the applause of the corrupt local authorities.<sup>7</sup>

So what can be said? That the poor are responsible for their own deaths because they have no other means than to accept living in bad conditions? 'Serves them right', some say; the poor need to be aware of the risks they incur. Fine! But what is the State doing?

Conceiving territory at a State level cannot be reduced to equating autonomy with resourcefulness on the part of the local populations. We need to confront the public authorities with their failure to effectively manage populations and territories. The state must continue to think, and take responsibility at a territorial level, if it cannot do this, what does it have left? This is a question that we will someday need to have the courage to put on the table, if we are to do justice to the fine principle of 'governance' with which public declarations are adorned each time they mention spatial planning. 'Good governance', why not? Who is governing though?

*Translated from the French by Chakib Rais*

<sup>6</sup> Information taken from the field survey conducted in July – August 2015. Refer to the report 'Agglomération de Tiznit: les défis de la gouvernance urbaine face au risque climatique' [Agglomeration of Tiznit: challenges of urban governance in the face of the climatic risk] posted on the website of the foundation Heinrich Böll Stiftung Rabat.

<sup>7</sup> As Lahcen Boumeheidi, the chairman of the commission responsible for planning the budget and the economic affairs of the town of Tiznit affirms: 'The problems of informal housing involve several levels of responsibility. First of all, there is the responsibility of certain elected representatives who, for the sake of electioneering interests, encourage this phenomenon. These practices can only be curtailed in stages. We in Tiznit have managed to halt illegal building operations on the outskirts, but they still continue in the ancient medina. Why? For two reasons: firstly, there is no continuous control and secondly, there is failure on the part of the local authorities when it comes to monitoring the implementation plans'. Excerpt from the interviews of the survey conducted in Tiznit in July 2015.

# Bitter Tales from the Crescent

## Conflict, Pollution, and Climate Challenges for War-Torn Syria

Wim Zwijnenburg

“In a few decades, the relationship between the environment, resources and conflict may seem almost as obvious as the connection we see today between human rights, democracy and peace.”

–Wangari Maathai, Kenyan environmental and political activist.

“The effects from damage done to the environment and natural resources during times of war and armed conflict continue far beyond the period of conflict itself. Such effects are passed on to future generations and may extend beyond the borders of the country impacted. Armed conflict has the potential to reverse years of development and destroy livelihoods.”

– UNEP, *International Day for Preventing the Exploitation of the Environment by War and Armed Conflict, 2015*

### Introduction

Dealing with both climate change impacts and conflict related pollution will pose serious challenges to humanitarian responses and socio-economic reconstruction in Syria as soon as the guns fall silent. Against this backdrop this article will explore a number of key issues: the link between environmental change, conflict and natural resources from the perspectives of the scientific community and humanitarian practitioners; the role of these interrelated phenomenon in Syria; and the stepping stones that can be implemented in a post-conflict Syria in order to minimize civilian harm and limit environmental damage.

Although this exploration will be necessarily limited and preliminary - as it is hard to predict how the political constellation and governance structures of the country will look at the end of the conflict - it is worth perusing, in order to engage with a number pressing issues that are likely to arise, and to contemplate the lessons that can be learned from previous conflicts. This may enable us to meaningfully prepare for the time when reconstruction efforts must take place and to mitigate the inevitable humanitarian and environmental harm that will have been done.

Since the outbreak of the uprising against Assad in 2011, violent repression of largely peaceful protest has led the country into a bloody conflict, turning cities into rubble and leaving a trail of destruction and chaos. Not only has the conflict led to huge direct humanitarian costs, killings hundreds of thousands of civilians, and wounding many more, the long-term environment impact will inevitably echo into the future. While there are a plethora of reasons why this revolution escalated into an all-out civil war, environmental factors

have likely contributed to the growing social unrest. Data shows that the severe drought that has hit Syria over the last decade could have been one of the risk multipliers prior to the outbreak of the conflict. The drought led to increased desertification in rural areas, leading to increasingly rapid urbanisation processes as people moved away from the countryside, and rising bread prices due to failed harvests and water scarcity. Moreover, weak environmental governance due to mismanagement prior to the conflict, combined with rapid industrialization, population growth and the intensification of agriculture lead to a further deterioration of the situation. This negatively affected both public health and economic productivity.<sup>1</sup> Yet with the conflict still raging, and creating more environmental damage, what will this legacy of degradation and pollution entail for Syria's future, and opportunities for building peace? What role can the international community and civil society play in rebuilding a sustainable future for Syria?

### Background

With the growth of industrialization and urbanisation, the wars and conflicts fought in the last century have increasingly resulted in long-term environmental hotspots and subsequent public health threats. They have caused wide scale destruction to natural resources, increased pollution and led to the collapse of government capacities to

regulate industrial production processes. Regrettably, the link between conflicts and their environmental footprint has been shunned in the wider debate over conflict impacts. Only the most 'photogenic' impacts such as the oil fires in Kuwait and Iraq could count on press coverage or immediate responses from governments and international agencies. The environment has traditionally been viewed as a 'soft' side of conflict impacts and therefore not considered, in some cases understandably, as a priority in humanitarian relief and reconstruction efforts.

Historic examples of conflict pollution related health problems are abundant. From the mothers and children in Vietnam affected by toxic dioxin after the US use of Agent Orange to the burning oil wells in Kuwait and Iraq in 1991. Environmental related health problems are often overlooked in conflict settings and war-torn societies, as their effects are not always acute and may take time to become fully manifest. Many Iraqi families are still concerned about how the war will impact on their health, their concern is well founded as the level of pollution related cancers and birth-defects in Iraq are above pre-conflict levels. These are caused by a range of conflict related factors including burn pits near populated areas releasing toxic fumes that affect soldiers and civilians alike,<sup>2</sup> past attacks on industrial sites creating local soil and water pollution, or the use of depleted uranium munitions.<sup>3</sup>

<sup>2</sup> Walker, L. (2016) US military burn pits built on chemical weapons facilities tied to soldiers' illness. The Guardian. Accessed at <http://www.theguardian.com/us-news/2016/feb/16/us-military-burn-pits-chemical-weapons-cancer-illness-iraq-afghanistan-veterans>

<sup>3</sup> Weir, D. (2016) 'The Most Toxic War' in History' -25 Years Later. Sustainable Security. Accessed at <http://sustainablesecurity.org/2016/01/29/the-most-toxic-war-in-history-25-years-later/>

<sup>1</sup> European Commission: Delegation Damascus (2009) Country Environmental Profile for the Syrian Arab Republic. Max Kasperek & Marwan Dimashki. Agreco Consortium. Final Report. Brussels. Accessed at: [http://eeas.europa.eu/delegations/syria/documents/content/eu\\_syria/cep\\_syria\\_en.pdf](http://eeas.europa.eu/delegations/syria/documents/content/eu_syria/cep_syria_en.pdf)



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A less visible, yet important aspect of environmental destruction is the enormous financial and economic pressure it puts on a country's rebuilding process. Iraq is a notable example in the Middle East, as its industrial sector, including critical infrastructure, was heavily targeted in both the 1991 and 2003 wars. According to the Iraqi Ministry of Environment and the United Nations Environment Programme (UNEP) joint strategy published in 2013, rebuilding a sound environmental control system has taken years and there is still work in progress to address numerous environmental concerns.<sup>4</sup> Similar problems have occurred in Lebanon and Gaza, where the clean-up of conflict related pollution was put on the backburner due to limited government capacity, expertise, and other competing priorities. According to critics, structural adjustment programs and neo-liberal reconstruction efforts resulted in the rebuilding of heavy industrial sites, which aimed to boost the economy, but lead to worsening environmental degradation and over exploitation of natural resources.<sup>5</sup> These shortcomings in past reconstruction efforts raise the question of whether there should be a larger role for the environment built into response mechanisms to ensure that these toxic legacies are addressed and dealt with in a timelier manner.

However, over the last twenty years, the United Nations Environment Programme (UNEP) has stepped up their work on post-conflict environmental assessments (PCEAs) in war-torn regions and countries such as the Balkans, Iraq, Afghanistan, South Sudan, Ukraine and Sierra Leone.<sup>6</sup> Their work has highlighted the magnitude of the environmental impacts of conflict, and the pressures it puts on governments in their socio-economic reconstruction efforts due to limited financial capacities and lack of relevant expertise. Moreover, their work underlined the important link between conflict related environmental damage and public health problems. Along with conducting PCEAs the focus of UNEP's work, was to assess the link between conflict

4 Zwijnenburg, W. (2015) Iraq's Continuing Struggle with Conflict Pollution. Insight in Conflict. Accessed at <http://www.insightonconflict.org/2015/03/iraqs-continuing-struggle-conflict-pollution/>

5 Conca, K. & Wallace, J. (2012) Environment and Peacebuilding in war-torn societies: Lessons from the UN Environment Programme's experience with post-conflict assessment. In: *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding*, ed. D.Jensen and S.Longergan. London: Earthscan.

6 UNEP Disasters and Conflict Publications. Accessed at <http://www.unep.org/disastersand-conflicts/Publications/tabid/54718/Default.aspx>



over natural resources and peace-building activities, this was undertaken in cooperation with environmental law experts, academics and non-governmental organisations.<sup>7</sup> They identified natural resources as one of the main conflict drivers in 18 conflicts since 1978.<sup>8</sup> The outcome of the various research reports published by UNEP have underlined the importance of taking into account the environmental dimensions of conflicts themselves and post-conflict reconstruction efforts, as they are central to both constructive peace-building efforts and the removal of potential future drivers of conflict.<sup>9</sup>

### Climate Change, Natural Resources and Conflict in Syria

There is a growing body of literature that highlights the impact of climate change as a driver of conflicts.<sup>10</sup> Though the jury is still out on what the dynamics are between climate change, environmental changes and the increase of conflicts,<sup>11</sup> it is possible that droughts and sub sequential degradation of agricultural lands, water shortages and an increase in urbanization could be 'threat multipliers' that fuel existing political and societal tensions.

Before the war, Syria was hit by likely the

7 Environmental peacebuilding integrates natural resource management in conflict prevention, mitigation, resolution, and recovery to build resilience in communities affected by conflict. This initiative is a collaborative effort of the Environmental Law Institute, the United Nations Environment Programme, McGill University and the University of Tokyo. See <http://www.environmentalpeacebuilding.org>

8 UNEP (2009) From Conflict to Peacebuilding – the Role of Natural Resources and the Environment. Accessed at [http://www.unep.org/pdf/pcdmb\\_policy\\_01.pdf](http://www.unep.org/pdf/pcdmb_policy_01.pdf)

9 Conca, K. & Wallace, J. (2012) Environment and Peacebuilding in war-torn societies: Lessons from the UN Environment Programme's experience with post-conflict assessment. In: *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding*, ed. D.Jensen and S.Longergan. London: Earthscan.

10 Hsiang, S., Burke, M., & Edward, M. (2013). Quantifying the Influence of Climate on Human Conflict. *Science*, 10.1126/science.1235367. Accessed at <http://emiguel.econ.berkeley.edu/research/quantifying-the-influence-of-climate-on-human-conflict>

11 Westervelt, A. (2015) Does climate change really cause conflict? *The Guardian*. Accessed at <http://www.theguardian.com/vital-signs/2015/mar/09/climate-change-conflict-syria-global-warming>; Garson, P. (20-15) Climate change and conflict: it's complicated. *IRIN News*. Accessed at <http://www.irinnews.org/analysis/2015/10/20>

worst drought in 900 years.<sup>12</sup> Over 1.5 million people moved to the cities as the environmental conditions in agricultural areas worsened due to natural water scarcity and desertification. These conditions were exasperated by weak governance, due to corruption and institutional incompetence, resulting in the Syrian state's failure to live up to international environmental standards. The situation in Syria was already bleak prior to the conflict with the country facing numerous environmental problems. Air pollution in urban areas had increased due to significant industrial emissions, an old transportation fleet and low fuel quality; agricultural lands were negatively affected by agrochemicals, soil erosion and overgrazing by livestock along with heavy pollution from industrial sources; drinking water was polluted due to weak waste management systems, and limited investment had led to a failure to adequately tackle the problem. Although in theory the Syrian government had an adequate institutional set up in place, it was often unable to attract the highly qualified experts needed to cope with these growing environmental problems.<sup>13</sup> Syria was a middle income country with a functioning government, nevertheless, the undemocratic nature of the governance system resulted in terrible mismanagement of the country's growing environmental challenges, thereby failing to fulfil the needs of their own people. In sum, the environmental prospects for Syria before the conflict were bleak and the country already had an urgent need to address a range of problems related to pollution and its dire impact on public health. These existing conditions did not bode well for the country's future.

## Conflict Related Environmental Damage

When the Assad regime started to use heavy weapons to repress the initially peaceful revolution, their change of tactics soon began to bear a toll beyond the direct humanitarian consequences. As noted in the introduction, it

12 Stokes, E. (2016) The Drought That Preceded Syria's Civil War Was Likely the Worst in 900 Years. VICE News. Accessed at <https://news.vice.com/article/the-drought-that-preceded-syrias-civil-war-was-likely-the-worst-in-900-years>  
13 European Commission: Delegation Damascus (2009). Country Environmental Profile for the Syrian Arab Republic. Max Kasperek & Marwan Dimashki. Agreco consortium. Final Report. Brussels. Accessed at: [http://eeas.europa.eu/delegations/syria/documents/content/eu\\_syria/cep\\_syria\\_en.pdf](http://eeas.europa.eu/delegations/syria/documents/content/eu_syria/cep_syria_en.pdf)

did not take long for the conflict to exacerbate existing environmental problems and cause the existing governance structures to collapse. Cities such as Homs, Hama, Deir az Zor, Aleppo and the suburbs of Damascus were faced with piles of household, medical and industrial waste. In the last two years the United Nations Development Programme (UNDP) has set up a number of emergency response waste collection systems.<sup>14</sup> However, despite this many towns and cities still lack the functional capacity to adequately collect and store a range of waste products - this has been identified as a priority area for UN response programs.<sup>15</sup>

The targeting of industrial areas such as cement factories and industrial zones in and around Aleppo, oil refineries and pipelines near Homs, and the oil rich province of Deir az Zor by all the warring parties has created intensified pollution hotspots. These are likely to have been worsened when the US led anti-Islamic State Coalition and Russian air strikes targeted key oil installations in Eastern Syria.<sup>16</sup> Initially, the US stated that environmental and long term socio-economic concerns deterred them from a full out attack on Islamic State.<sup>17</sup> Their position changed in 2015 when Coalition forces started targeting refineries and oil transports, meanwhile the Russian Air Force have not held back at all, and have carpet bombed large oil storage sites and separation plants.

Attacks on industrial infrastructures, including oil facilities, have been commonplace in armed conflict: retreating Iraqi forces set fire to close to 700 Kuwaiti oil wells during the 1991 Gulf War;<sup>18</sup> NATO forces targeted oil refineries

14 UNDP (2015) Emergency employment yields a healthier environment for Syrians. Accessed at <http://www.undp.org/content/undp/en/home/our-work/ourstories/emergency-employment-yields-a-healthier-environment-in-syrians.html>

15 UNDP (2016) UNDP outlines 2016 plans for Syria crisis response. Accessed <http://www.undp.org/content/undp/en/home/presscenter/pressreleases/2016/01/29/undp-outlines-2016-plans-for-syria-crisis-response/>

16 Zwijnenburg, W. & Waleij, A. (2016) Fire and Oil: The Collateral Environmental Damage of Airstrikes on ISIS Oil Facilities. Accessed at <http://www.newsecuritybeat.org/2016/01/fire-oil-collateral-damage-airstrikes-isis-oil-facilities/>

17 Richardson, B. (2015) Ex-CIA chief: Fear for environment stays US hand on ISIS oil Wells. The Hill. Accessed at <http://thehill.com/blogs/blog-briefing-room/261283-ex-cia-chief-fear-for-environment-stays-us-hand-on-isis-oil-wells>

18 See NASA's overview on the Kuwait oil fires: Smoke from a distant fire. Accessed at <http://earthobservatory.nasa.gov/Features/ShuttleRetrospective/page8.php>

Attack on Oil Tanker in Syria

Source: [https://www.youtube.com/watch?v=\\_h9\\_sCQiiJQ](https://www.youtube.com/watch?v=_h9_sCQiiJQ)



and oil depots in Pančevo<sup>19</sup> and the Novi Sad oil refinery<sup>20</sup> in Serbia during the Balkan war in 1999; Israel struck storage tanks for a thermal power station in Lebanon in 2006,<sup>21</sup> and Russian forces have bombed oil wells in Chechnya.<sup>22</sup> In all of those cases, military strikes caused air and soil contamination that added to existing legacies of pollution, making the post-conflict road to recovery and stability even longer.

Along with this direct targeting of the oil sector in Syria, the destruction of professional refineries and lack of oversight has led to an increase in civilian operated, make-shift, oil refineries in eastern Syria. The absence of any meaningful regulatory system puts civilians at great risk of exposure to hazardous substances, and disturbing reports coming out of the area note an increase in health problems and local environmental contamination.<sup>23</sup> Not only could these practices result in acute and chronic health problems and environmental degradation,

19 New York Times (1999) <http://www.nytimes.com/1999/07/14/world/serbian-town-bombed-by-nato-fears-effects-of-toxic-chemicals.html?pagewanted=all>

20 UNEP (1999) Complementary measures to assess the environmental impacts of the conflicts to the Danube. UNEP/UNCHS Balkans Task Force Danube Mission Report. Accessed at <http://www.grid.unep.ch/btf/missions/august/danube.pdf>

21 UNEP (2007) Lebanon: Post-Conflict Environmental Assessment. Accessed at <http://www.unep.org/disastersandconflicts/CountryOperations/UNEPsPastActivities/Lebanon/tabid/54624/Default.aspx>

22 Ingwold, C. (2002) Chechnya Conflict and Environmental Implications. ICE Case Studies Number 93, June, 2002. Accessed at <http://www1.american.edu/iced/ice/chechnya.htm>

23 Hamlo, K. (2016) Syria's war impacts environment. The Arab Weekly. Accessed at <http://www.thearabweekly.com/?id=3880>; VICE (2014) Black-Gold Blues: The Hazards and Horrors of the Makeshift Oil Industry in Rebel Held Syria. Accessed at <http://www.vice.com/video/syria-syrian-oil>

the destruction of industrial sites and natural resources could also have a profound impact on any future economic recovery, as Syria's economy was largely built on gas and oil production and a strong pharmaceutical and biotechnology sector. Those sectors are now laid to waste. If the impact of conflict and related environmental damage on Iraq, the Balkans and Lebanon can provide a guide to the future, then Syria will face an enormous challenge in dealing with the toxic legacy of the war. This will be a challenge not only for Syria itself, but also for neighbouring countries, where millions of refugees already put severe demands on the local environment and pose numerous challenges for these countries to deal with.<sup>24</sup>

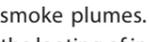
In October 2015, the Dutch peace organisation PAX published its desktop study Amidst the debris,<sup>25</sup> which outlined the impact of the conflict in Syria on public health and the environment. The study identified four main areas of concern. Firstly, the collapse of environmental governance has resulted in huge waste management problems, for example household waste is piling up in the streets, leading to outbreaks of communicable diseases and waste dumps are further polluting soil and water resources. Secondly, with over 40% of all cities being heavily damaged, millions of tons of rubble are piling up. Some of

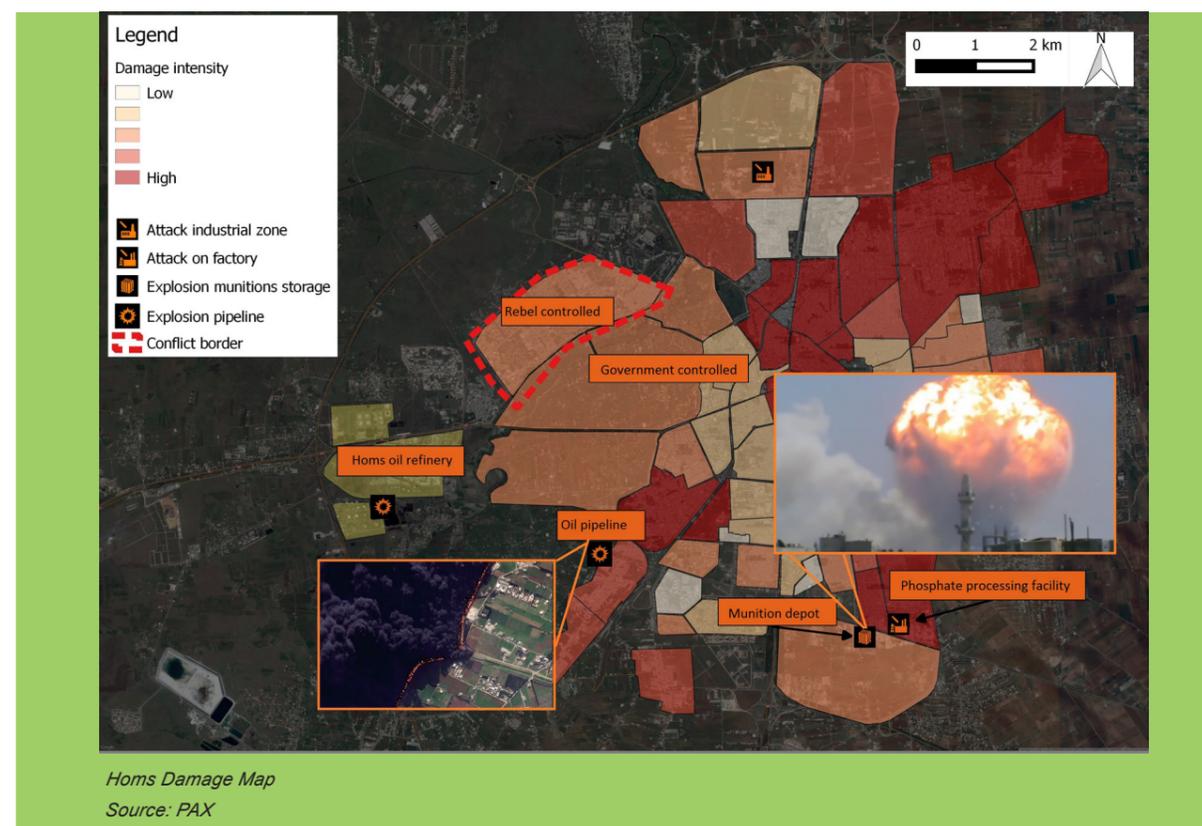
24 See for example: Ministry of Environment (2014) Lebanon Environmental Assessment of the Syrian Conflict & Priority Interventions. September 2014. Accessed at <http://www.undp.org/content/dam/lebanon/docs/Energy%20and%20Environment/Publications/EASC-WEB.pdf>

25 PAX (2015) Amidst the debris: Environmental impact of conflict in Syria could be disastrous. Accessed at <http://www.paxforpeace.nl/stay-informed/news/amidst-the-debris-environmental-impact-of-conflict-in-syria-could-be-disastrous>

this rubble contains not only a mix of hazardous substances such as asbestos, heavy metals and industrial waste products, but also unexploded ordnance (UXOs), and as such poses a significant health risk to civilians and workers. Thirdly, following attacks on industrial sites, critical (energy) infrastructure and oil facilities are likely to have left a toxic footprint behind, due to the release of hazardous substances such as PCBs, oil products and pesticides - these directly impact public health and poison the environment through contaminating ground and surface waters and agricultural sites. Lastly, the intense use of a range of weapons has led to accumulations of munitions and military scrap around the country which could lead to localized pollution and exposure risks for civilians - many munitions contain toxic chemicals such as heavy metals and other carcinogenic materials.

## How Do Environmental Hazards Impact Public Health? A Case study

The short and long-term public health consequences of conflict related environmental pollution are not always directly visible, and therefore often underreported. Not all effects are photogenic, especially when it is about pollution of waterways, soil or the arid, dusty environment people in the region often live and work in. Acute health effects are visible when civilians come in contact with hazardous substances, for example children working in one of the hundreds of make-shift oil refineries on the outskirts of Deir az Zor (photo VICE), or when heavy industrial sites are hit and those first on the scene can be exposed to toxic materials. Chronic environmental and health risk will develop over time when civilians are exposed to a frequent doses of toxic substances, such as heavy metals or pesticides in drinking water, inhalation of asbestos, carcinogenic explosive residues and other airborne hazardous materials from conflict rubble, and hazardous materials in military scrap metal such as PCBs. Most notable are cities like Homs and Aleppo which have witnessed the destruction of over 50% of their residential areas. In Homs, a large munitions storage site exploded in 2013, resulting in widespread contamination by explosive residues and heavy metals. Rebel groups have also targeted oil pipelines and the Homs oil refinery, causing massive fires and toxic smoke plumes.  Additionally, the looting of industrial sites has put civilians at



risk of being exposed to hazardous chemicals and other toxic materials, and waste products stored and processed at these sites, as was the case in Iraq after 2003.<sup>26</sup>

Apart from the risk of communicable diseases that arise in the absence of a waste collection system,<sup>27</sup> large stretches of land have become contaminated as they are used as unregulated dump sites for household, medical and industrial waste. These toxic waste products seep into the ground water causing long-term risks to drinking water supplies, cattle or agriculture. The impact of this environmental footprint has not been limited to Syria, with the huge numbers of refugees in neighbouring countries already having a severe impact on local water resources in neighbouring countries.<sup>28</sup>

In past conflicts, there have also been concerns among civilians over the potential health risks of hazardous substances released into their environments, as was demonstrated by the UNEP post-conflict environmental assessment in Lebanon, Gaza and Iraq. As

26 UNEP (2005) Assessment of Environmental "Hotspots" in Iraq. Accessed at [http://postconflict.unep.ch/publications/Iraq\\_ESA.pdf](http://postconflict.unep.ch/publications/Iraq_ESA.pdf)

27 IRIN News (2013) Clearing rubbish in Syria: A life-saving - and life-threatening - job. Accessed at <http://www.irinnews.org/feature/2013/07/02/clearing-rubbish-syria-life-saving-and-life-threatening-job>

28 See footnote 25

these pollutants are often invisible, they add an additional degree of uncertainty to the psychosocial impact of the conflict.

Widespread pollution scattered with environmental hotspots will pose a serious problem for public health and a serious obstacle to socio economic development in post-conflict Syria. Hence, timely identification, monitoring and mapping of sites of concern should be undertaken to alleviate the work that will be needed by those in charge of rebuilding the country, if they are to minimize the risk to the civilian population and the environment they live in.

## Anticipating Environmental Consequences

To address concerns over the public health effects of these toxic remnants of war on both the local population and aid workers, swift identification and monitoring mechanisms should be put in place. Traditionally, the UNEP would undertake PCEAs if requested by the relevant government, and if financial donor support was provided. This however immediately underlines the limitations of their work, as in some cases it was long after the conflict had ended that these surveys were conducted, and in limited scale due to scarce financial resources. Furthermore, there was

no guarantee that their recommendations would be implemented. Therefore, there is an urgent need to start identifying and monitoring potential areas of interest where environmental hotspots may occur, as this information is crucial for local authorities, first responders, aid organisations and local communities in the event of acute risks to health and long-term environmental damage.

Despite the difficulties and limitations of accessing conflict areas due to security concerns, there are a number of opportunities through which data can be remotely collected. The UN's operational satellite applications programme UNOSAT provides frequent damage assessment<sup>29</sup> of cities and specific sites which provides a clear overview of the scale of destruction and the affected areas. Social media is also a rich source of information that helps to identify potential targets which may leave a particularly toxic footprint such attacks on power plants or cement factories.<sup>30</sup>

Learning from the environmental impact of past conflicts can inform the design of faster and more efficient response mechanisms for affected states and humanitarian organisations. Several approaches are already being explored by environmental experts and UN organisations. This includes the UNEP/OCHA Joint Environmental Unit's work to mainstream the environment in humanitarian action<sup>31</sup> and their provision of a help-desk where organisations in need of expertise can seek technical support and information. A rich set of tools and procedures for environmental assessment and recovery already exist, though these approaches are all too often fragmented or ill-coordinated.<sup>32</sup> Establishing a structured set of tools, clear responsibilities, financial resources and a coordinating system could help to minimise civilian harm from environmental risks, provide a fast and efficient response

29 UNOSAT Syria <http://www.unitar.org/unosat/maps/SYR>

30 Zwijnenburg, W. (2015) Online Identification of Conflict Related Environmental Damage. Accessed at <https://www.bellingcat.com/resources/how-tos/2015/12/17/online-identification-of-conflict-related-environmental-damage-a-beginners-guide/>

31 Joint UNEP/OCHA Environment Unit (2014) Environment and Humanitarian Action. Increasing Effectiveness, Sustainability and Accountability. Accessed at <https://www.humanitarianresponse.info/topics/environment/document/eha-study-web-version-11>

32 Wilson Centre (2014) Environmental Dimensions of Sustainable Recovery: Learning From Post-Conflict & Disaster Response- Accessed at <https://www.wilsoncenter.org/event/environmental-dimensions-sustainable-recovery-learning-post-conflict-disaster-response>



Attack on the Mhardeh Power Plant in Syria  
Source: <https://www.youtube.com/watch?v=nOy9qwlMqM>

mechanism for environmental damage and ensure that the environment is fully integrated into recovery plans. Above all, there is a need for recognition by states and the wider international community that environmental security issues, whether from climate change or conflict related environmental pollution, are key in conflict prevention and post-conflict reconstruction efforts. Such a recognition would bolster the need to increase environmental expertise and related funding opportunities in rebuilding previously war-torn societies.

## Environment and Economy in Post-Conflict Settings

With peace talks underway in Geneva, timely considerations of how environmental recovery can best be integrated into the rebuilding of Syria is a key factor in any hope of a sustainable future. It is estimated that the conflict has cost Syria US \$1.2 trillion.<sup>33</sup> More than half of all residential areas have been destroyed, while the industrial sector and critical infrastructure have both been severely damaged. The private and industrial sectors and other relevant actors from the Syrian business community are key stakeholders in the recovery process as they possess a wealth of knowledge of existing industries that could help identify priority areas for intervention.<sup>34</sup> They will also be crucial partners in any efforts to 'build back better and

<sup>33</sup> World Vision (2016) The Cost of Conflict for Children. Five Years of the Syrian Crises. Accessed at <http://www.wvi.org/syriacostofconflict>

<sup>34</sup> Syrian Economic Forum (2016) Syrian business-people Map – "Part II". Accessed at <http://www.syrianef.org/En/2016/02/syrian-businesspeople-map-part-ii/>

greener' - promoting more environmentally sustainable solutions after the conflict has ended.<sup>35</sup>

Discussion in various UN forums such as the World Humanitarian Summit, taking place in May 2016 in Istanbul, and the UN Environmental Assembly on Sustainable Development Goals (SDGs) in May 2016 in Nairobi, could provide useful guidance in this regard. The impact of the conflict and rebuilding priorities touches upon almost each of the SDGs set for 2020.<sup>36</sup> The reconstruction of war-torn Syria could provide a unique opportunity to limit the environmental footprints, both of the pre-existing pollution problems and conflict related environmental damage. This could be achieved by implementing novel approaches to post-conflict recovery mechanisms that include the environment as a key component in the recovery. This would entail an inclusive, participatory process involving civil society actors, local authorities, environmental experts and international organisations to ensure a comprehensive approach - and to rebuild a Syria with new hope and opportunity for all.

<sup>35</sup> Ironically, one unintended 'tragic positive' side-effect of the war has been a sharp decrease in air pollution in the Middle East as less fossil fuels were burned. See Howard, E. (2015) Middle East conflict 'drastically altered' air pollution levels in region – study. The Guardian. Accessed at <http://www.theguardian.com/environment/2015/aug/21/middle-east-conflict-decrease-air-pollution-levels-iraq-baghdad-egypt-syria-study>

<sup>36</sup> Weir, D. (2016) Armed conflict, environmental protection and the Sustainable Development Goals – Accessed at <http://newint.org/blog/2016/02/01/environmental-protection-and-the-sustainable-development-goals/>

# Winou El Petrol? - Where is the Oil?

## A Debate on Transparency of Natural Resource Extraction in Tunisia

Interview with Fedia Gasmi (FG), Expert, Tunisian Institute for Democracy & Development

Interviewed by: Simon Ilse (SI), Program Coordinator, hbs Tunis

In Tunisia, considerable parts of civil society engaged in environmental degradation and pollution are focused on the governance of natural resource extraction. The debate around "Winou El Petrol" is an important mirror of their struggle.

### SI: What was 'Winou El Petrol'?

FG: Originally, it was an initiative to bring NGOs in the resource-rich regions together to advocate for their right to benefit from their natural resources. It is striking that the resource-rich regions in Tunisia are the last on the list when it comes to development indicators. If you look at the IRD, the regional development indicator,<sup>1</sup> you'll find Medhila ranking 243 and Southern Tatouine 197 out of 264 Delegations. That's why Winou El Petrol<sup>2</sup> was an initiative to push the Tunisian government to live up to international standards on transparency and good governance of extractive industries (EI). This refers primarily to oil and the mines, especially phosphate. And we're talking about companies that have an important share of our economy. Oil and Gas represented 6.2% and Phosphate 0.5% of our GDP in 2012.

### SI: So how exactly did the initiative Winou El Petrol begin?

FG: An international NGO called the 'Natural Resource Governance Institute' received funding from the UK to push for greater accountability in state-owned enterprises, and disclosure of information related to the oil sector. Then, six NGOs from different regions became part of the initiative and a network called La coalition tunisienne de gouvernance des mines et du petrol emerged. Local NGOs were trained to increase their capacities and better understand international standards, it focused specifically on the EITI (Extractive Industries Transparency Initiative), the international transparency index. After the training in February 2015, NGOs started implementing their programmes on the ground. They held workshops in the regions and tried to transfer the knowledge they received to local citizens. Even some parliamentarians were involved and present at meetings. In Tataouine more than 20 NGOs participated and signed a petition. This is how they started to collect citizens signatures. We are talking about 10,000 signatures between March and May 2015.

<sup>1</sup> The indicator of regional development (IRD) is calculated at the level of the regions (governorates) and delegations (municipal districts) on the basis of statistical data produced by the National Institute of Statistics (INS). The indicator is the average of 18 variables.

<sup>2</sup> 'Winou El Petrol' literally translates to 'Where is the oil?'



Fedia Gasmi has over twelve years of experience in Tunisian and MENA civil society organizations. She has overseen networks of local organizations for international NGOs such as the Anna Lindh Foundation, Freedom House, Network of Democrats in the Arab world (NDAW), and Natural Resource Governance Institute. Currently, she is working as a consultant to the Tunisian parliament (ARP).



**SI:** So during the trainings, local NGOs asked people to sign a petition for more transparency?

FG: The petition was about Tunisia joining the EITI and its benefits for the citizens. The question was, and still is: Why can't a small amount of the money gained from natural resources be reinvested in the regions they are extracted from? The idea was not only to get signatures, but to deposit the signatures at parliament and give a copy to the energy and anti-corruption committees. The goal was to push for a hearing at the Ministry of Industry and Energy to explain why Tunisia stopped the process of joining the transparency initiative. In 2012, there was an expressed intention by the prime minister to join, so we used that as an argument. There was a campaign on Facebook. Some websites were created to promote the cause of EITI, one was called EITI.tn, launched by a Tunisian NGO. There were also a lot of parliamentarians from the South interested in the topic, mainly from the finance, energy and mining committees as well as the anti-corruption committee. So for the first time the Minister of Industry and Energy Zakaria Hamad was publicly quizzed in June 2015 on the question of access to information and government accountability for transparency over natural resources.

**SI:** How did the campaign develop after the petition?

FG: The initiative spread to other governates, because people there could sympathize with the cause. The petition had good citizen outreach. We also trained journalists to cover the campaign and activities. But unfortunately the campaign ended strangely.

Rumors started about the campaign being about hidden petrol reserves in Tunisia, and some journalists picked up on this. So things got out of hand, and the question of good resource governance took a back seat. In the end, there was a counter campaign trying to discredit the original one by saying that it was merely made up of troublemakers

interested in finding more oil, not in transparency. Other rumors were that the campaign caused companies to stop investing due to demands for more transparency or because of protests emerging from the initiative. The accusations were mostly coming from companies or individuals who were afraid of information regarding corruption.

**SI:** What exactly are the accusations of corruption in public companies?

FG: They are mostly related to employment and employment selection criteria, for example that the people hired are not qualified and do not fit the criteria but get the job because of their contacts. Another issue is the question of phosphate transportation. After the revolution, phosphate transportation was switched from train to trucks. Transportation by truck is five times more costly than by train, because the train is public property. So there are a lot of questionmarks as to how they selected the transportation companies and who offers these services. Recently, someone even built a wall across the railway to prevent the transportation being switched back to the trains!

There are also issues related to so called governmental special funds. There is a fund that receives contributions from the main phosphate company in Gafsa to invest in job creation. But there are a lot of legitimate questions as to how these funds are used. Sometimes the government is not only not able to find solutions, but is creating new problems. For example, they founded special companies, a kind of a civil service for people to work in gardening, parks and public spaces. However, these initiatives have no effects. Most of the employees stay at home and are paid at the end of the month. So part of the problem is related to this virtual, fictive employment. Unfortunately the government is duplicating the problem by creating the same thing in Tataouine where there is oil and 51% youth unemployment. Now there is a special fund that the oil companies contribute to and together with the public oil company (ETAP) they want to invest in Tataouine. However, they haven't started yet, they're still assessing how to contribute to regional development in Tataouine. Other problems are linked to resource extraction, for example the techniques used, their environmental effects, or land ownership of the extraction sites and their surroundings.

**SI:** During the peak of the Winou El Petrol campaign, the president Beji Caid Essebsi was on television in a school and declared that, 'A lot of Tunisians are currently asking winou el petrol so I respond to them that our children are our oil.'

FG: It's a political statement and a diplomatic way to respond to the campaign by saying that the real wealth in Tunisia is the education and future of its youth. However, the question of transparency is primordial. Part of our GDP is lost due to governance issues and we are regressing on the transparency indicator.<sup>3</sup> We are losing opportunities for our development due to governance inefficiencies.

**SI:** Thanks a lot Fedia.

FG: You're so welcome.

<sup>3</sup> <http://www.resourcegovernance.org/our-work/country/tunisia>.

# The Wind of Change Hitting the Arab Region?

Wael Hmaidan



Wael Hmaidan has been active in the CAN –International network since 2008, and its director since 2012. Wael is a social entrepreneur and founder of IndyACT, an organization started in Lebanon in 2007, which in less than five years spread all across the Arab World, and has now established a European and international presence. Wael's work in this field began as the Greenpeace campaigner for the Arab World, and he now has more than 20 years of experience in NGO management and environmental campaigning. Wael's primary focus is climate change.

Many doubted that it would be possible to achieve a strong, successful, agreement at the United Nations Framework Convention on Climate Change (UNFCCC) 21<sup>st</sup> Conference of Parties (COP21) in Paris in 2015. Nevertheless, COP21 ended with celebrations of what is considered a strong conclusion to the three year negotiation process. The Paris Agreement has the potential to transform our economy from one based on fossil fuels to one based on renewable energy. The Guardian newspaper has described it as the beginning of the end for the fossil fuel era.<sup>1</sup> One of the reasons why it was possible to achieve such a successful outcome in Paris was the determination to achieve an agreement, even if it required some compromise. More than 150 Heads of States attended COP21, making it the largest gathering of government leaders in history. However, the heads of states from the key Gulf countries: Saudi Arabia, Qatar, the United Arab Emirates, Kuwait, and Oman did not attend the Summit. Even when it came to the signing ceremony of the Paris Agreement, which took place in New York four months after the agreement had been hammered out, the Arabian Gulf countries were among the few countries in the world that did not participate.

Judging from this lack of high-level political engagement, one could assume that the oil-rich Arab countries are still not in favor of strong climate action. However, the picture is more complicated than that. All countries have shifted their positions in the climate negotiations over the past two to three years. These shifts have included the Arab oil-producing countries, led by Saudi Arabia, who had been considered 'difficult parties,' and accused of obstructing

<sup>1</sup> <http://www.theguardian.com/environment/2015/dec/12/paris-climate-deal-200-nations-sign-fossil-fuel-era>

the negotiations. This change happened after the recent appointment of several new climate negotiators to the Saudi climate team, including the head of the delegation. This meant the replacement of Dr. Mohamed Al Sabban who had headed the Saudi team since the start of the international climate process in the late 1980s. Dr. Al Sabban had built a reputation for himself, not only for trying his best to hinder any progress in the negotiation process, but also for being an open climate change denialist.

Since the departure of Dr. Al Sabban the Saudi delegation has become less obstructionist, favoring a more diplomatic approach over the straightforward rejection of ideas. They have also become more open to talking to civil society, and during COP21 the head of the Saudi delegation provided representatives of civil society with daily opportunities for discussion. On concrete issues, Saudi Arabia is ready for a long-term goal of net emission neutrality. They fought hard against changing the 2°C target to 1.5°C, but even on this issue, they accepted the compromise language in the Paris Agreement.<sup>2</sup> For the first time, they pledged concrete climate action to the international community, and they did not use the issue of 'adverse impacts of response measures' as a poison pill, which is a strategy that they had regularly used in the past.<sup>3</sup>

It is not clear why Saudi Arabia has made these changes to their positions on climate change. Have the Kingdom's leaders had a sudden realization of the impending impact of climate change? Whatever the reasons, Saudi Ministers have been making substantially more

<sup>2</sup> The final text of the agreement sets the goal of: "...Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C..."

progressive and refreshing statements on these issues over the past few years. Such statements include the prediction by Ali al-Naimi, the Kingdom's oil minister that Saudi Arabia will phase out fossil fuel use by the middle of the century. Also, Saudi Arabia plans to sell a stake of around 5% in the state-owned oil company, Aramco, as early as 2017. It seems that the Kingdom recognizes that the age of oil is coming to an end and that it is in its best interest to benefit as much as possible from the existing situation. Keeping the price of oil low is another indication that the Kingdom is trying to get rid of its reserves as fast as possible by pushing other competitors out.

Another possible reason for the Kingdom's change in position is the 'blame game' that usually takes place in the international climate negotiations. China was blamed for the failure of the climate summit that took place in Copenhagen in 2009, and the Chinese government suffered politically because of this. Since then no government has wanted to be labeled as the one responsible for the collapse of the next round of climate talks. Saudi Arabia has received a lot of negative press during the past few years, which may have acted as source of pressure, and as a potential threat

<sup>3</sup> 'Adverse impacts of response measures to climate change' is an agenda item in the climate negotiations, which aims at addressing any negative impacts resulting from actions on climate change. Under this agenda item, Saudi Arabia requested compensation for any reduction in its oil trading as a result of greater climate action. This was not acceptable to many other countries, who found it unreasonable to compensate Saudi Arabia, since the Saudis have amassed enormous wealth as a result of oil, which has contributed so much to climate change. As a result Saudi Arabia would refuse to continue negotiations under any other agenda items, until the 'adverse impacts of response measures' issue moved forward.

if a new climate agreement was not reached in Paris. At each COP in the past, Saudi Arabia received several 'fossil awards,' these are daily trophies given by civil society organisations to the worst performing countries in the climate negotiations. The negative press these 'awards' generated may have encouraged the Saudi government to rethink its strategy, and replace Dr. Al-Sabban - who was very direct in his obstructionist approach, with someone more diplomatic and willing to engage in constructive dialogue.

Whatever the reason, what Saudi Arabia does or says on climate change policy is important for the Arab region. Saudi Arabia heads the climate discussions in the League of Arab States, and its position has long been the dominant Arab one. In the early days of the international climate negotiations, Saudi Arabia had strong support from other countries in the Arabian Gulf, who gave climate change little political importance, and deferred to the Saudi position. This has changed in the past three to five years, as several Arab countries have started to slowly move away from the Saudi position. This could be another reason why the Saudis have changed their strategy.

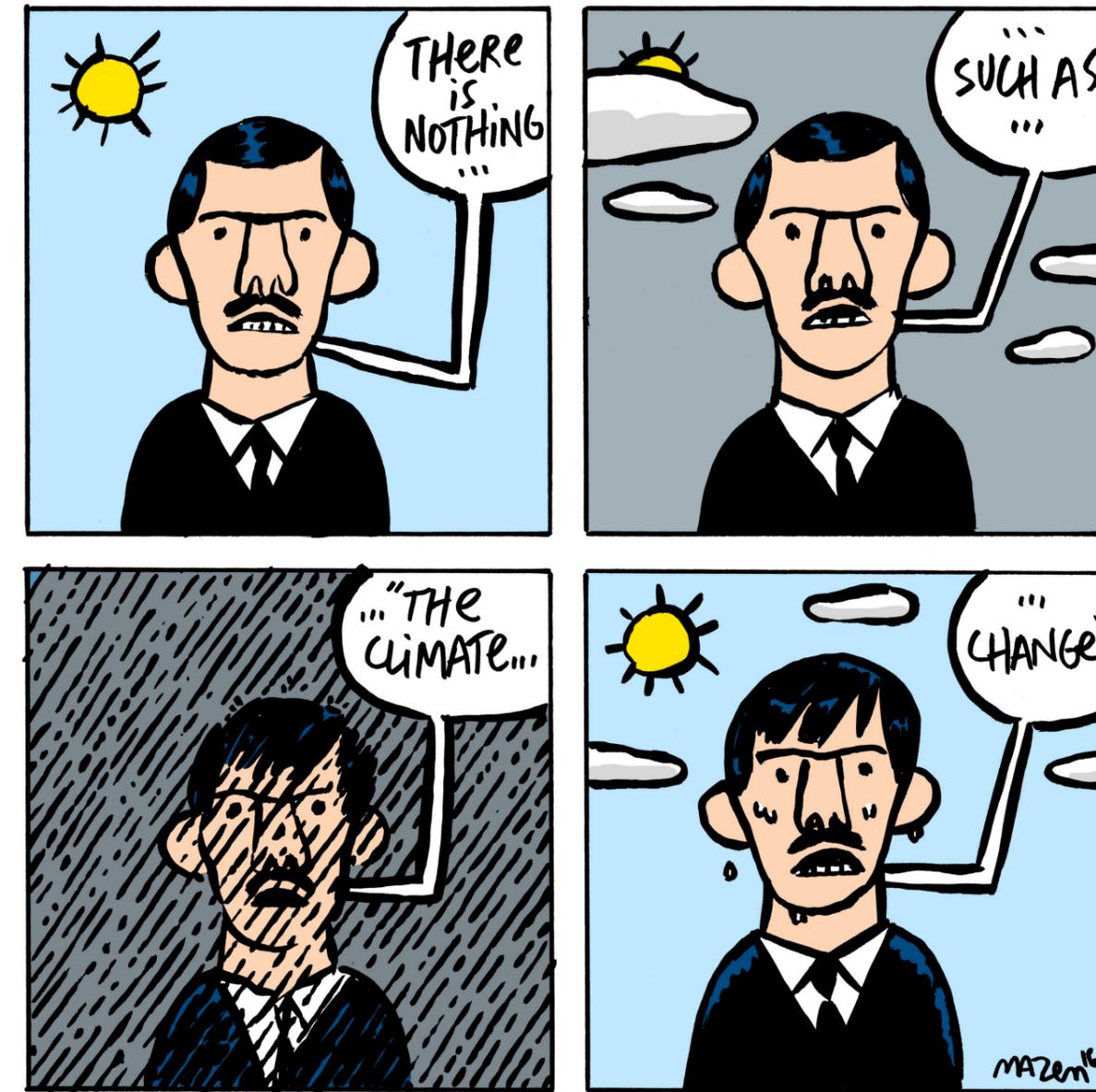
Due to the political attention brought by the international climate change negotiations, Arab countries have started to understand the importance of climate change; not only in terms of the effects of climate change on the region, but also because of the economic opportunities climate change could bring. The United Arab Emirates (UAE) has become a world leader in the development of renewable energy, creating Masdar, a renewable energy technology research city, started in 2006, which now houses the International Renewable Energy Agency. Every year, UAE organizes the World Future Energy Summit, where top experts and world

leaders discuss how to shift the global economy away from fossil fuels and towards alternative sources.

Qatar won an intense struggle with South Korea to host COP16 in 2012. Under Qatar's leadership the outcome of COP16 provided a strong infrastructure for the Paris Agreement three years later. During COP16, Qatar also succeeds in convincing the key gulf countries (Saudi Arabia, Kuwait, UAE, Oman, and Bahrain) to pledge to submit concrete climate action plans in the future, and to do so in the context of economic diversification away from fossil fuels. This COP also created unprecedented awareness about climate change across the Arab world, leading to the establishment of various initiatives in the region, including civil society campaigns.

Progressive interest in climate change has not only happened in the Gulf region; Lebanon and Morocco, have both stepped up their negotiation capacity, and played a stronger role in the recent negotiations. Morocco will be the host of the next COP, COP22 in Marrakesh at the end of this year. Lebanon, with UAE, joined the 'Cartagena Dialogue,' which is a group of countries from around the world pushing for stronger action on climate change from everyone. On 17 April 2015, a group of countries known as 'Friends of Fossil Fuel Subsidy Reform' launched a Communiqué which calls on the international community to increase efforts to phase out subsidies to fossil fuels. Morocco joined the communiqué, and along with the group is currently engaging governments around the world in an attempt to build momentum around fossil fuel subsidy reform. Morocco also jointly organized, with the European Commission, and with the support of the United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP), a forum to take stock of the Intended Nationally Determined Contributions (INDCs), the pledged climate actions, from all the countries participating in COP21. This forum was considered a key event in the lead up to COP21 in Paris.

The clearest departure from the Saudi Arabian climate position was when Morocco confronted Saudi Arabia over plans to phase down hydrofluorocarbons (HFCs) powerful greenhouse gases, during the negotiations under the Montreal Protocol in 2015. Saudi Arabia had earlier been able to secure a position from the League of Arab States that would make all Arab countries oppose a phase down of HFCs under the Montreal Protocol. Shortly afterwards, Morocco worked with the African Union and secured a position in favor of phasing down of



HFCs under the Montreal Protocol. This means that the African Arab countries have signed up to two contradictory positions under two regional bodies.

In 2015, most Arab countries submitted their INDCs, including the oil-rich Gulf countries. The INDCs from Saudi Arabia, Kuwait, Qatar, and UAE were framed in the context of economic diversification away from fossil fuels, as promised during COP16 in Qatar. Having these countries commit to diversify their economies away from fossil fuels is arguably more important than their committing to a direct reduction in the greenhouse gases responsible for climate change. Relying less on fossil fuels as their main economic base sends a signal that they are getting ready for a post-fossil fuel world, and that they are accepting stronger global action on climate change. This is crucial, as it signals that the region understands that oil will have to be phased out in the future. However, we have to be careful not to overstate the case, or celebrate prematurely, as these announcements need to be considered alongside Saudi Arabia's reaction to the fossil fuel divestment campaign, which has resulted in trillions US Dollars being shifted away from fossil fuels. Here, Ali al-Naimi, Saudi Arabia's Minister of Petroleum & Mineral Resources, opposed the divestment campaign, stating that the oil industry has been portrayed as the 'Dark Side,' but that it is actually a force for good.

Nonetheless, the INDCs committed to by Saudi Arabia and other Arab countries still mark a significant step, and provide a strong signal to investors that even Saudi Arabia is slowly moving away from a fossil fuel economy in favor of renewable energy. Moreover, renewable energy projects are mushrooming across the region. Morocco is receiving bids to build an 850 megawatt (MW) wind energy farm at an average cost of 30 US Dollars per megawatt-hour (MWh), a record low, and making it cheaper than the average cost of any other source of energy. Morocco also set a 52% renewable energy target by 2030, despite the fact that all of its energy came from fossil fuels ten years ago. The UAE has committed to a 24% renewable energy mix by 2021, and the list continues.

As already mentioned, Morocco will be hosting the UNFCCC COP22 in Marrakesh in November 2016. It is expected that this COP will bring further attention to the issue of climate change in the region, with the hope that it will inspire stronger climate action, which is desperately needed. At the moment, there is no joint Arab initiative that could demonstrate Arab leadership during the upcoming COP. The

most recent declaration by the Organization of Islamic Countries (OIC) on climate change did not include anything new - a missed opportunity in light of the situation and the hope of building momentum towards an inspiring COP in Morocco.

The Paris Agreement calls on all countries to strive to keep the global temperature increase to below 1.5°C, while achieving net zero emissions within the second half of the century. According to the International Panel on Climate Change (IPCC) the best chance for achieving these Paris targets will require the complete phase out of emissions from the energy sector by the mid-century. This can be translated into the need to work towards 100% renewable energy by 2050. The Paris Agreement calls on all countries to formulate low-emissions development strategies that would outline the trajectory of each country towards these long-term targets.

Despite the changes in climate policy in the Arab world, the countries of the region have still not fully absorbed the implications of the Paris Agreement for their economies. Many Arab countries are still looking at fossil fuels as a key economic sector in the future: Lebanon is planning to exploit their newly discovered offshore oil and gas reserves; Egypt has, absurdly, started investing in coal power plants, adding

to the cost of its imports. It seems that the countries of the region have two opposing opinions on the matter. This discrepancy is most probably due to disconnection between Ministries, especially between those responsible for economic development, and those responsible for climate change and foreign policy.

COP22 in Morocco will be a big test for the Arab region, especially as regards the interpretation of the Paris Agreement. Morocco as the next host of the COP is expected to push for the most ambitious interpretation of the agreement. However, this is something that many Arab countries will oppose. Qatar, in COP16 in 2012, was able to gather the support of the other Arab countries, but at that time, the shape of the agreement was not signaling the beginning of the end of the fossil fuel era, and a move towards 100% renewable energy. It will be hard for Morocco to make the oil-rich Arab countries swallow this bitter pill. Not doing so will jeopardize the integrity of the Paris Agreement, and cause Morocco to lose face in front of the international community. The Arab region is sending mixed messages on climate change, yet this is in itself further proof that the region is slowly changing, and slowly embracing a more ambitious response to climate change.

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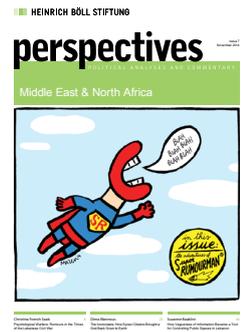
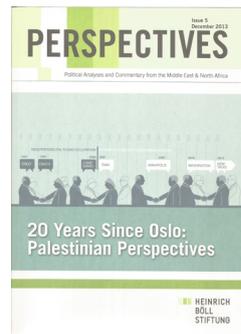
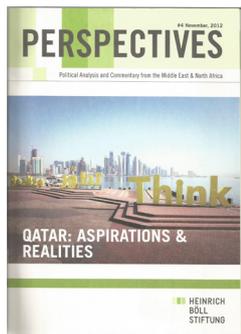
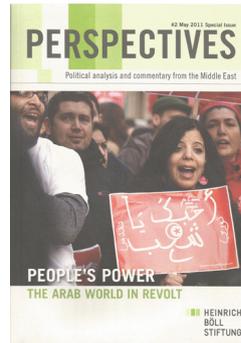
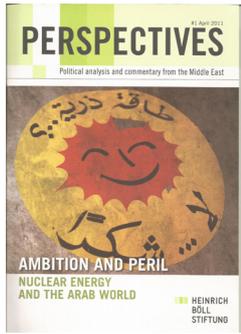
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