

# DIRTY GREEN MARCH

WSRW REPORT – AUGUST 2013

**Morocco's controversial  
renewable energy  
projects in occupied  
Western Sahara**

*Morocco plans to expand its production  
of solar and wind energy. Those plans will  
carry a high cost for the people of occupied  
Western Sahara.*



**WSRW** WESTERN SAHARA  
RESOURCE WATCH

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Western Sahara Resource Watch (WSRW) is  
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WSRW is working in solidarity with the people of  
Western Sahara, researching and campaigning  
against Morocco's resource plundering of  
Western Sahara.

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<b>CDM</b>	<i>Clean Development Mechanism</i>
<b>DNV</b>	<i>Det Norske Veritas</i>
<b>EU</b>	<i>European Union</i>
<b>FDE</b>	<i>Fond de Developpement de l'Energie</i>
<b>GW</b>	<i>Gigawatts</i>
<b>MASEN</b>	<i>Moroccan Agency for Solar Energy</i>
<b>MSP</b>	<i>Mediterranean Solar Project</i>
<b>MW</b>	<i>Megawatts</i>
<b>ONE</b>	<i>Office National de l'Electricité</i>
<b>ONEE</b>	<i>Office National de l'Electricité et de l'Eau Potable</i>
<b>ONHYM</b>	<i>Office National des Hydrocarbures et des Mines</i>
<b>SIE</b>	<i>Société d'Investissement Energétiques</i>
<b>UfM</b>	<i>Union for the Mediterranean</i>
<b>UN</b>	<i>United Nations</i>
<b>USD</b>	<i>United States Dollar</i>

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## **Morocco, the occupying power in Western Sahara, is about to embark on large programmes for renewable energy.**

At a time of global dependency on fossil fuels, any government's green energy projects would normally be commendable. The handful of projects outlined in this report, however, are not.

Morocco does not produce oil and gas itself, and its government hungers for green energy. What better location for wind and sun installations than on the shores of occupied Western Sahara?

But Western Sahara remains a place of conflict. Half of the territory's original population have fled the country. Morocco invaded the former Spanish colony in late 1975, through its so-called 'Green March'. Although Spain purported to give up Western Sahara by an agreement with Morocco and Mauritania who were then in the process of annexing the territory – known as the *Madrid Accords* – Spain continues to have undiminished obligations to its former colony, in the same way that Portugal accepted and acted on its obligations for East Timor until that territory was released from Indonesian occupation in 1999.<sup>1</sup>

Ever since the invasion, the Moroccan government has used the land as it pleases, in violation of international law. Now, Morocco is connecting the territory it occupies to its own and Europe's energy grid.

The legal owner of the land, the Saharawi people, has not consented to the Moroccan plans.

These large upcoming projects will have severe consequences for the people of the territory. The energy produced will be used to further capitalise on the resources already being exploited in Western Sahara. And by exporting the energy to Morocco proper, the occupying power anchors its connection to the territory.

This report details how Morocco plans to build over 1000 MW (megawatts) of renewable energy plants in Western Sahara. As of today, the energy production from solar and wind sources in Western Sahara constitutes at most 5.5 percent of Morocco's total energy production from such sources. By 2020, the amount could be increased to an astonishing 26.4 percent.

# NEW DIMENSION IN THE EXPLOITATION

Morocco is the only country in North Africa without its own petroleum resources, and is also the largest energy importer in the region. To compensate, and to meet its increasing energy demands, Morocco now plans to build a number of wind and solar projects in the part of Western Sahara that it has occupied since 1975. This report outlines the controversial projects to come. Some of these projects are currently in the planning phase, or are already starting up, in the occupied territory.

More than 90% of Morocco's energy needs are imported into the country from abroad. Morocco and the territory of Western Sahara are thought to possess both oil and gas reserves. The Kingdom's national oil company, ONHYM, has signed exploration agreements with international energy companies to examine such potential. However, there are no indications that the areas currently being explored will contain the necessary reserves and be available any time soon to alleviate the state's dependency on imported energy.

Meanwhile, the country is facing ever increasing fossil fuel bills and electricity demands are expected to quadruple by 2030. The latest projections of the Moroccan government estimate an annual increase of 5% in energy needs, caused in part by the modernisation of agriculture, the transformation of its phosphate industry into a global hub, and the extension of highways, airports and port infrastructure.<sup>2</sup>

The country has therefore turned to implementing strategies for the promotion of renewable energy. In 2008, Morocco launched the National Renewable Energy and Energy Efficiency Plan, which aims to generate 42% of the country's domestic needs from renewable energy by 2020. This renewable energy cocktail will come from solar, wind and hydropower sources. The legal framework to produce, market and export renewable energy was enacted in 2009, and has come to be known as the renewable energy law.<sup>3</sup>

There are concrete plans to produce 4000 MW through solar and wind energy sources by 2020. Half of this amount will come from solar energy through the construction of five solar power plants - two of which are planned to be in Western Sahara. Wind energy will supply the remaining 2000 MW, with many turbine farms already built, under construction or planned for the nearby future - including in occupied Western Sahara. In recent years, most of Morocco's efforts have been devoted to the development of this wind energy potential.

The Moroccan government has set up an investment company to financially support its plans; the Energy Investment Corporation (SIE), which has a 1 billion Dirham capital (approximately 116.2 million USD; 71% from the state, 29% from the Hassan II Fund for Economical and Social Development<sup>4</sup>). Financial resources are also being mobilised under the Energy Development Fund (FDE), a financing institution that was created in 2009 and serves as a central pillar of the government's strategy to enhance energy security and pursue low-carbon growth. The FDE has received a 500 million USD donation from the Kingdom of Saudi Arabia, 300 million USD from the United Arab Emirates and a 200 million USD contribution from the Hassan II Fund for Economical and Social Development.<sup>5</sup>



*Half of the Saharawi people fled Western Sahara when the Moroccan government occupied their country. Now the Moroccan king's own energy company, NAREVA, will construct renewable energy projects in the occupied territory. The refugees have to install their own hand-made windmills for very limited and unreliable electrical power generation.*

## **WHAT'S THE PROBLEM?**

The Saharawi people have not consented to the projects in Western Sahara that are detailed in this report. It is a basic and widely understood requirement of international law that development in a Non-Self-Governing Territory such as Western Sahara cannot be undertaken unless there is consent from the people of the territory and the direction of benefits for them. That is particularly true of a territory under military occupation. A legal opinion issued by the UN Legal Office in 2002 specifically addressed these issues.<sup>6</sup>

## **SUCH PROJECTS:**

- lend a greater appearance of acceptability to Morocco's presence in Western Sahara. Construction for electrical power generation and distribution gives the appearance of legitimacy to the annexation of the territory in circumstances that continue to delay the Saharawi people's exercise of self-determination and undermine the UN peace process.
- involve large multinationals and governmental finance institutions in an already complex conflict dynamic through the construction of physical infrastructure inside occupied Western Sahara.
- have the result of securing or entrenching Morocco's presence in Western Sahara. While ensuring electrical power in an occupied territory is acceptable as a matter of international humanitarian law, the increased electrical capacity in the territory will allow additional Moroccan settlers to remain in Western Sahara. Troublingly, it appears that part of the electricity is intended for export to Morocco's national grid itself. In turn, Morocco becomes even more economically connected to, and dependant on, the territory it has occupied.
- contribute to Morocco's taking of natural resources from Western Sahara, in violation of international humanitarian law. Energy obtained through these wind farms would make more economically efficient such industries as the fish processing industry and phosphate mining and transport which operate in the territory of Western Sahara.
- will not derive benefits to the Saharawi people who live in refugee camps in a remote part of Algeria. The majority of this population does not have access to mains electrical power, with resulting problems of safety, food hygiene, education and limited social activities.

# SOLAR FARM PLANS

The Moroccan Solar Plan was announced in November 2009, in the presence of the Moroccan King and US Secretary of State Hillary Clinton.<sup>7</sup> The project aims at achieving an installed capacity of 2 GW by 2020 on five sites. Two of them are located in occupied Western Sahara.

The two planned solar plants that will be constructed in Western Sahara will together provide 30% of the solar project's total power.

A specially assigned institution, the Moroccan Agency for Solar Energy (MASEN) was created to implement the Moroccan Solar Plan.<sup>8</sup> The King appointed the leader of the political group *Parti authenticité et modernité* as the president of the agency.<sup>9</sup>

Upon completion, the five solar power stations are estimated to have a total capacity of 2000 MW. The entire project, encompassing the five sites, is expected to provide 18% of Morocco's annual electricity production.<sup>10</sup>

## THE TWO PLANTS PROGRAMMED IN WESTERN SAHARA WILL BE:

The **Bojador** site is located 3 kilometres from the ocean and 4 kilometres north of the town, near the National Road to El Aaiún, over an area of 500 hectares. A solar thermal plant with a capacity of 100 MW will be erected on the site.<sup>11</sup>

The **Foum El Oued** site, which is also located close to the ocean, and just south of the capital El Aaiún. The 500 MW solar plant will be constructed with a surface area of 5,700 hectares. The plant will be connected to the grid providing electricity to Agadir and El Aaiún.<sup>12</sup>

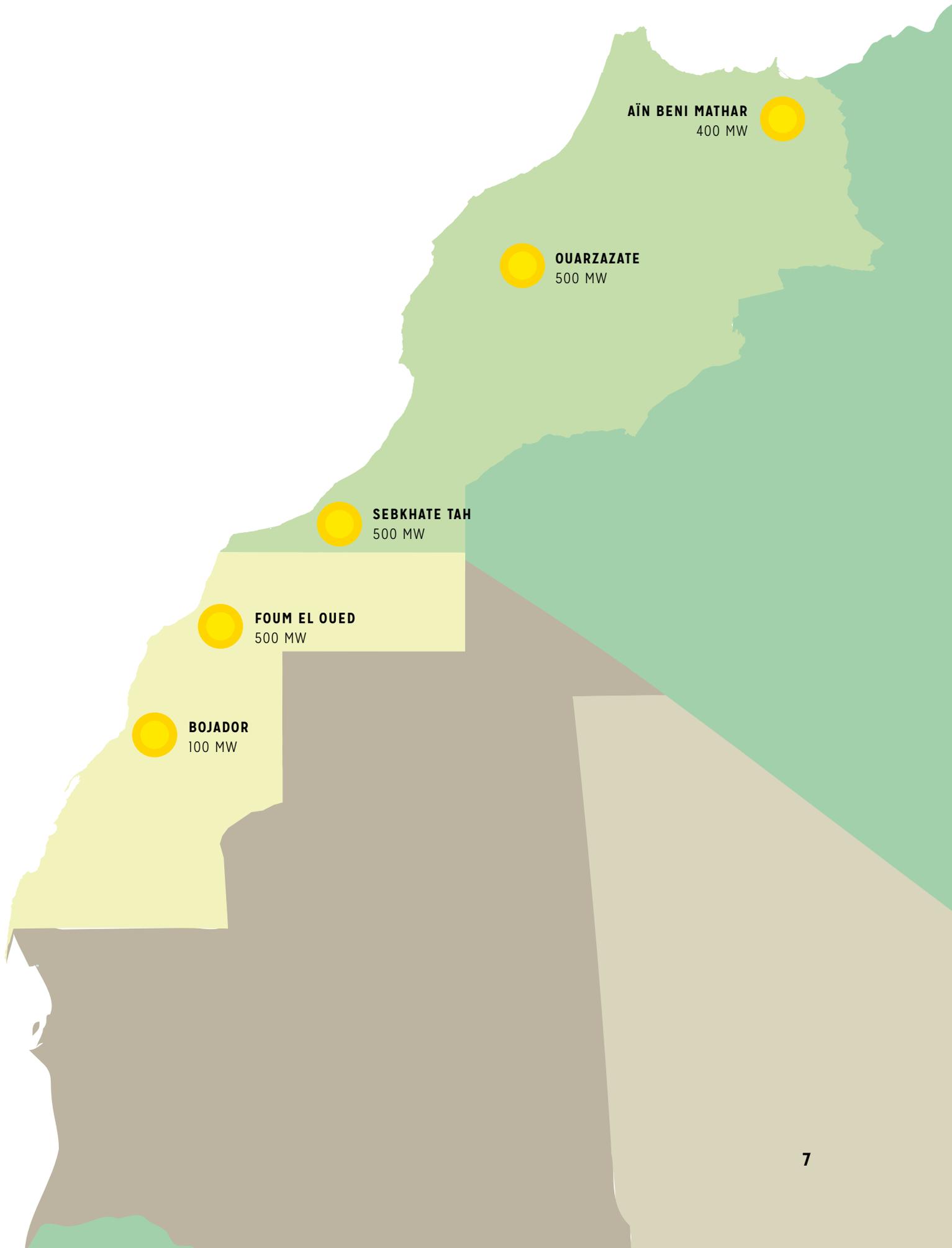
MASEN has not issued tenders for either project site yet. All plants will have to be commissioned by 2019.<sup>13</sup>

Yet another project, in Morocco proper, is located just north of the border to Western Sahara. The Sebkhate Tah project, located in the Tarfaya strip, envisions the construction of a 500 MW plant over a massive area measuring 360 km<sup>2</sup>, according to MASEN. The site is said to have the potential to be used as an energy compound, integrating a solar plant, a wind farm and a pumped water storage plant.<sup>14</sup>

The location of all three plants, close to the ocean, will allow for open circuit cooling through seawater intake, as in classic thermal plants.

The first solar installation as part of the Moroccan Solar Plan, in Ouarzazate<sup>15</sup>, central Morocco, is planned to be in service in 2015. Construction work started in May 2013, and the work is carried out by a consortium of firms, led by the Saudi based ACWA.<sup>16</sup>

*By the year 2020, the Moroccan government will have constructed five large solar energy farms, as part of their Moroccan Solar Plan. Two of them will be located in occupied Western Sahara.*



# WIND FARM PLANS

Taking into account the existing wind farms and those under development, the total capacity in Western Sahara in the context of Morocco's total capacity is relatively low: 55 MW out of 1007 MW, corresponding to about 5.5% of the total.<sup>17</sup>

However, if Morocco's plans for Western Sahara are to materialise, things will change dramatically. The relative importance of Western Sahara increases when looking at what the Moroccan government calls the "Complementary Wind Programme".<sup>18</sup>

This Programme will account for the remaining 1000 MW not yet covered by wind farms that are already in place or in progress. 400 MW or 40 % of that planned capacity is to be developed within the occupied area of Western Sahara.

The Complementary Wind Programme foresees in the construction of six wind farms, to be developed in two phases.<sup>19</sup>

The first phase is already in progress: the construction of the first of the six farms, a 150 MW plant in Taza, northern Morocco, by EDF Energies Nouvelles Maroc, French firm Alstom and Japanese firm Mitsui & Co.<sup>20</sup>

The second phase consists of the construction of the remaining five wind farms with a cumulative capacity of 850 MW, as well as the provision and maintenance of the equipment needed for the expansion to the 200 MW Koudia al Baida wind farm in Morocco.<sup>21</sup>

Two of the wind farms in the 850 MW project are located in occupied Western Sahara. In Bojador, a farm with a capacity of 100 MW will be built. In Tiskrad, near El Aaiún, a 300 MW wind farm is to be constructed.<sup>22</sup> This means that nearly half of the 850 MW capacity developed under the project, will be located inside that part of Western Sahara that is occupied by Morocco.

The 850 MW wind project will be structured under a "Build Own Operate Transfer" scheme (BOOT) and will be carried out within the framework of public-private partnerships, through which ONE, SIE and the Hassan II Fund will associate themselves with strategic partners in the wind energy industry and the electricity production sector. Morocco's ONE also notes that it has solicited financial backing from the African Development Bank, the European Investment Bank and the German KfW Bankengruppe.<sup>23</sup>

In early 2012, the Moroccan Agency for Electricity, ONE (Office National de l'Electricité) launched an international tender, inviting companies to express their interest in a bid to construct the five parks.

On 14 November 2012, ONE announced that 16 international companies had pre-qualified in a tender call for interested proponents.<sup>24</sup> These 16 companies are running to obtain the bid either by themselves or in consortiums. All of these companies were present at a pre-tender meeting in Casablanca on 1 March 2013 focusing on the technical, financial and legal characteristics of the project.<sup>25</sup>

#### **THE 16 COMPANIES ARE NOW GROUPED AS FOLLOWS:**

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Acciona Wind Power (Spain) / Acciona Energia (Spain) / Al Ajial Funds (Morocco)

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EDF Energies Nouvelles (France) / Mitsui & co (Japan) / Alstom (France)

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ACWA Power (Saudi Arabia) / Gamesa Eolica (Spain) / Gamesa Energia (Spain)

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NAREVA Holding (Morocco) / Taqa (United Arab Emirates) / Enel Green Power (Italy) / Siemens (Germany)

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International Power (Groupe GDF Suez) (UK) / Vestas (Denmark)

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General Electric (USA) (has withdrawn from the tender. See below).

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It is expected that ONE will select a candidate in late 2013.<sup>26</sup> A single winner will apparently build all of the five wind farms in the program.<sup>27</sup> The first of the five parks is scheduled to be commissioned towards the end of 2015.<sup>28</sup> As part of the preparations, ONE in April 2013 already carried out a tender for topographic and parcel studies in Tiskrad and Bojador.<sup>29</sup>

Western Sahara Resource Watch contacted all the 16 contending companies on 2-3 July 2013.<sup>30</sup>

Upon receiving the WSRW letter, General Electric replied that it would not take part in the tender. "After checking with our colleagues, we have determined that GE is not participating in the tender that is the subject of your email", stated the company.<sup>31</sup> Alstom and Vestas responded to the letter, but without replying to the questions from WSRW. The remaining companies did not respond.<sup>32</sup>

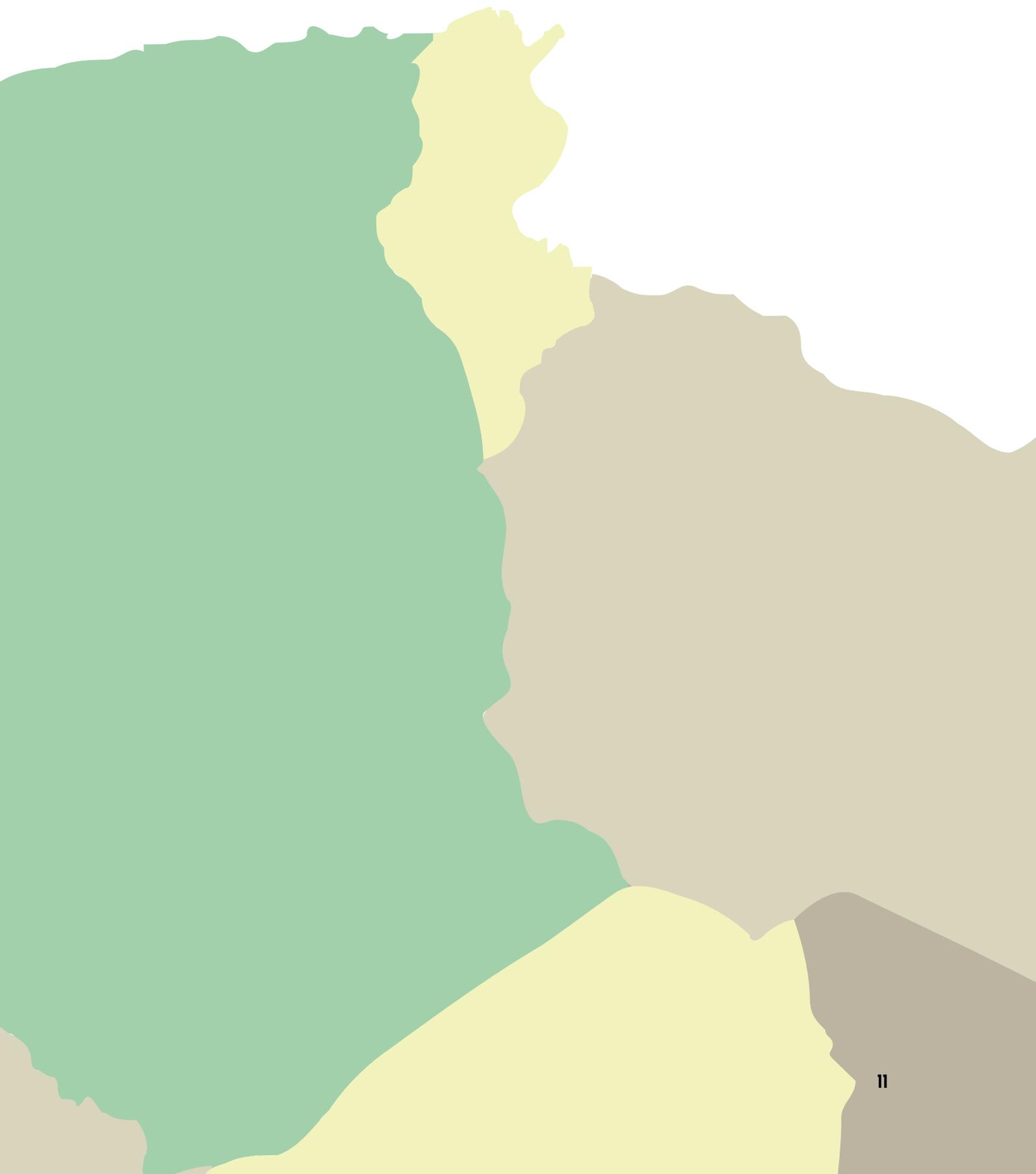
Overall, the Moroccan government has significant wind energy plans in Morocco and Western Sahara. Through the Moroccan Integrated Wind Energy Project<sup>33</sup>, Morocco aims to bring the installed capacity from wind energy from around 280 MW in 2010<sup>34</sup> to 2000 MW in 2020. The project is to span a period of 10 years, and is

said to require a total investment of 31.5 billion dirham (around 3.7 billion USD).<sup>35</sup> Half of the envisioned potential is within reach through the sites that are currently under development in Haouma, Jbel Khalladi, Akhfenir, Tarfaya and El Aaiún (sometimes referred to as Bab el Oued Laayoune).

Taking into account the realised, in-progress and complementary projects, the part that Western Sahara will play in such plans is revealed as important. For a planned capacity of 2000 MW by 2020, the share from Western Sahara will increase from 5.5 % of Morocco's total capacity today, to 22.5% in 2020.



*One wind farm is at present operational in Western Sahara. One is currently being built, while two large farms are planned. The latter two are part of the so-called Complementary Wind Programme, which foresees in the construction of 6 wind farms with a total capacity of 1000 MW across Morocco/Western Sahara.*



# SIEMENS ON OCCUPIED LAND

In addition to the wind turbine farms already installed and the ones relating to the Complementary Wind Energy Programme, Morocco is today in the process of constructing five plants. The five farms have a combined capacity of 720 MW and one of them is located in occupied Western Sahara.

There, NAREVA Holding, a Moroccan industrial and financial group controlled by the King of Morocco,<sup>36</sup> has contracted Siemens to supply turbines and engineering consulting support for the 50 MW Foum El Oued site near El Aaiún.<sup>37</sup> Siemens is to deliver, install and commission 22 SWT-2.3-101 type wind turbines.<sup>38</sup> Components for these mills were observed being delivered in El Aaiún harbour in March 2013 (photo). Siemens has furthermore been awarded with a five year service contract.<sup>39</sup> The farm is expected to be operational in the second half of 2013.<sup>40</sup> Siemens has been confronted with the operations, but has decided to carry on with the construction.

NAREVA Holding had originally requested carbon credits from the UN Clean Development Mechanism (CDM) for the project.<sup>41</sup> However, the certifying company DNV (Det Norske Veritas) turned down the proposal before it came to the CDM for any approval. DNV had contracted to check whether the project was eligible. A DNV spokesperson stated that the firm originally believed that the wind park was to be built in southern Morocco, but after a while began to suspect that this was not the case.

“When we visited the project, it became clear that our suspicions were justified. It was therefore fairly simple on our part. In January we disclosed that we would be negative to the project”, the spokesperson told the media.<sup>42</sup>

“When a customer is informed of this, they can choose whether to continue with the negative recommendation or cancel the project. In this case they chose to cancel, as most do,” the DNV spokesman explained.

The thumbing down of CDM support did not stop Siemens and Nareva. They will now carry out the project without such sustenance.



*Images of windmill components taken at El Aaiún harbour in March 2013, carrying the logos of Siemens and of NAREVA's subsidiary, EEM.*



# LOST LAND ACCESS

*Moulmoumnin Salek Abdesamad, a Saharawi living in Morocco, just north of the border to Western Sahara, lost access to grazing land without prior notice from the government.*

Just north of the border with Western Sahara, in the so-called Tarfaya strip, the ongoing construction of a wind farm park illustrates the problems associated with unclear ownership over land.

Moulmoumnin Salek Abdesamad is a 68 year old Saharawi woman whose parents died in Moroccan jails. When her father died, she inherited his right to use plots of land at Tarfaya – which is inside Morocco proper – an entitlement supported by legal documents from the Moroccan administration. Moulmoumnin needed the land for pasture for her grazing goats. Without prior notification, she could one day no longer access the land she uses, now showing to contain large holes in the ground enclosed by high fences. The Moroccan construction company Somagec was laying the groundwork for what will become the 300 MW Tarfaya wind park, said to become the biggest wind park in Africa. The park is being developed



by NAREVA Holding in partnership with GDF Suez, united in the joint-venture Tarfaya Energy Company (TAREC).<sup>44</sup> The wind turbine equipment is supplied by Siemens.

Moulmoumnin says her right of usage was trampled upon by this sudden turn of events. Due to her incessant protests, she was arrested by the Moroccan police on 29 March 2013, and released after hours of questioning. Moulmoumnin told WSRW that the police had informed her that there was no sense in opposing “the King’s project”. Nevertheless, she was referred to the King’s prosecutor, who declined jurisdiction to put her on trial. Moulmoumnin continues her protest.

In Western Sahara, these issues are even more complex, as the Moroccan government moves to use land that has long been declared as occupied by the UN General Assembly, the lead agency responsible for ensuring the successful decolonization of the former Spanish Sahara.

# CEMENTING OCCUPATION

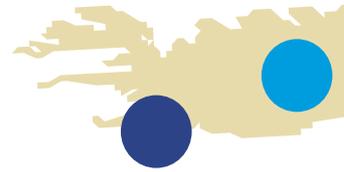
There is today already one wind farm fully operational in Western Sahara: the CIMAR wind farm, with a capacity of 5 MW, located north east of El Aaiún. The CIMAR wind farm belongs to Ciments du Maroc, a subsidiary of Italian cement company Italcementi, and is installed at the heart of its grinding facility Indusaha in El Aaiún. The plant was inaugurated in October 2011, in the presence of the company’s CEO. The wind farm was dubbed ‘Driss Cherrak’, after the former director of Ciments du Maroc. Its purpose is to



provide the grinding facility with electricity. It required an investment of 100 million Dirham (approximately 11.6 million USD) and took 7 months to complete.

The park practically makes the facility self-sufficient in terms of energy: it covers about 80% of the necessary MW. The capacity can be raised to 10 MW. Overproduction will be ceded to ONE, by operation of a partnership agreement.<sup>45</sup> The turbines have been installed by Spanish company Gamesa.<sup>46</sup>

# PLUGGING INTO THE EU GRID



***“Our reference projects will not be located in the Western Sahara. When looking for project sites, Desertec Industrial Initiative will also take political, ecological or cultural issues into consideration”***

Desertec Spokesperson to The Guardian, 23 April 2010.

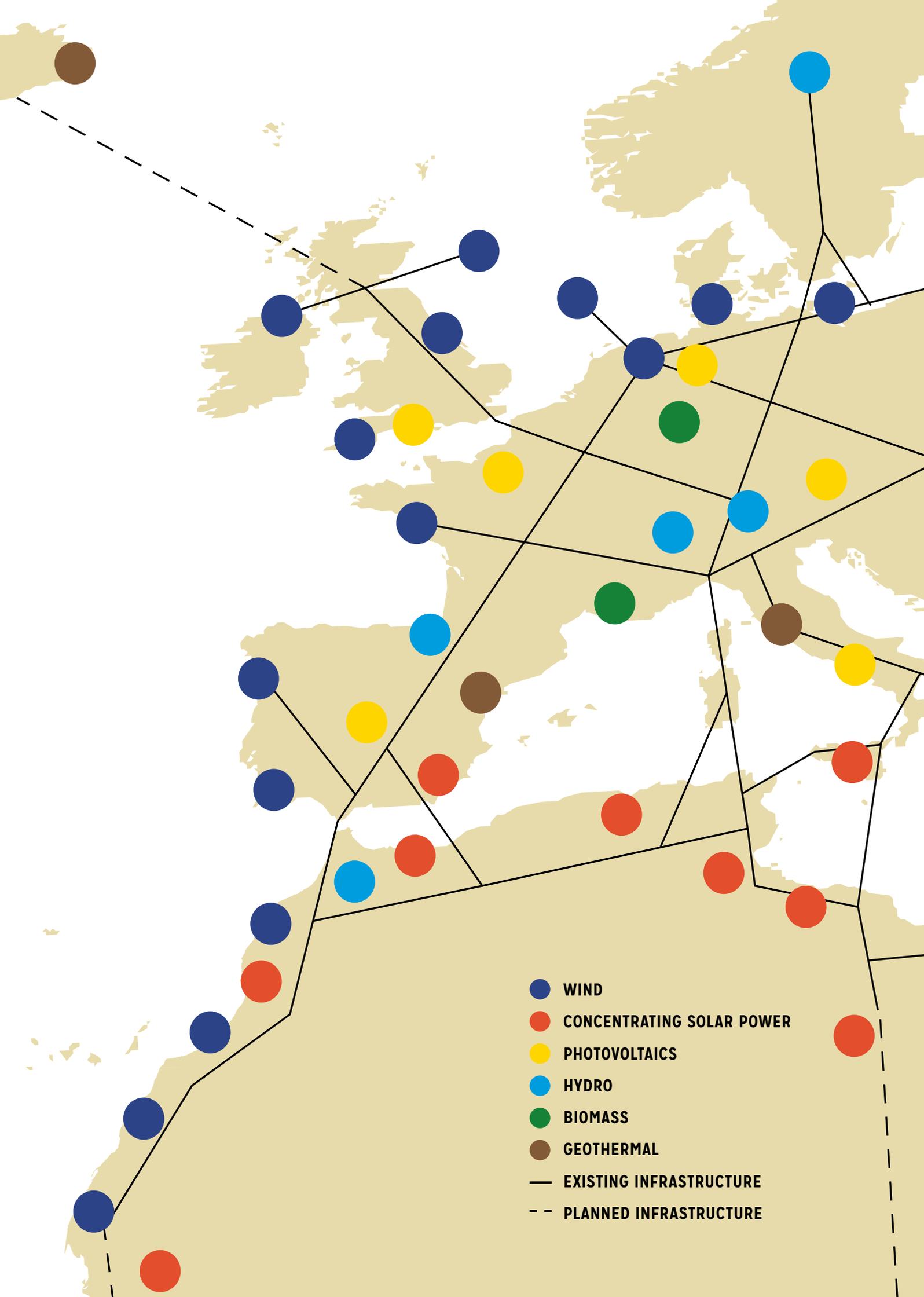
As a net energy importer, the European Union presents a potential market for Morocco’s renewable energy production. Geographic proximity adds to the mix. Furthermore, the imports would allow the EU to achieve its ambitious greenhouse gas targets, stating that 20% of overall EU energy consumption should come from renewable energy by 2020. The Renewable Energy Directive makes it possible for the 28 EU member states to cooperate with third countries in renewable energy projects, and to import electricity from green projects from these countries.<sup>47</sup>

Energy projects are also a key area in the Euro-Mediterranean partnership through the Union for the Mediterranean (UfM). The Mediterranean Solar Project (MSP) was launched in July 2008 as a priority project of the UfM. It aims at developing 20 GW of new renewable energy production capacities and achieving energy savings around the Mediterranean by 2020.<sup>48</sup> The Moroccan Solar Plan is seen as a key project for developing the MSP.<sup>49</sup> A draft MSP Master Plan is up for political endorsement at the UfM Energy Ministerial meeting in December 2013.<sup>50</sup>

Considered to be part of the MSP described above, is the MedGrid Initiative, a private commercial project that aims to set up a trans-Mediterranean super-grid of high voltage direct current cables, capable of exporting 5 GW of energy from North Africa, Middle East to Europe by 2020. The MedGrid project focuses on three possible corridors, including the existing Morocco-Spain submarine cable.

Another private industry initiative designed to support the development of solar and wind renewable energy projects in the Middle East and North Africa is the Desertec Industrial Initiative. It had aimed to supply Europe with green energy to the equivalent of 20% of its energy needs by 2050, though that prospect is looking uncertain due to recent internal turbulence.<sup>51</sup> Nevertheless, spokespersons of the Initiative maintain that the plans to channel energy generated in the Sahara desert to Europe remain unchanged, even if a specific timeframe is no longer mentioned.

Desertec’s webpage section devoted to the EU-MENA region (Middle Eastern and North African), indicates the interest area of the project. Western Sahara is clearly included, given that icons representing both solar and wind farms are depicted in areas corresponding to the territory. When confronted with the matter in 2010, Desertec confirmed that its pilot project would not be located in Western Sahara for “reputational reasons”.<sup>52</sup> Desertec has not provided clarity on the locations of subsequent project sites. The map is still on the Desertec webpage.



- WIND
- CONCENTRATING SOLAR POWER
- PHOTOVOLTAICS
- HYDRO
- BIOMASS
- GEOTHERMAL
- EXISTING INFRASTRUCTURE
- - PLANNED INFRASTRUCTURE

A woman with dark hair, wearing a yellow and white checkered headscarf, is holding a white sign. She has a serious expression. The sign has the text 'PLEASE STOP THE CDM' written in black, hand-drawn capital letters. The background is a plain, light-colored wall.

PLEASE  
STOP THE  
CDM

*Saharawi refugees are not happy that the UN's Clean Development Mechanism refuses to automatically reject applications for projects on the territory they were driven away from by the Moroccan government. The UN facilitates the negotiations that ought to lead to a solution to the conflict.*

# UNITED NATIONS ORGANISATION OFF TRACK

The UN's Clean Development Mechanism (CDM) has received a handful of requests from companies for financial support for green energy projects in occupied Western Sahara. Currently, CDM has one controversial application on its table: a solar project for the Moroccan fish industry. The applicant turned to CDM in frustration that "it is nearly impossible to find a foreign investor for that kind of project, especially in this area of Morocco (keyword: Western Sahara-conflict)". The applicant underlined that the project "received the blessing" of the king of Morocco – whose predecessor King Hassan II occupied the territory in 1975.<sup>53</sup>

Two more "green projects", one for the CIMAR cement windmills, and another for phosphate production, could be on their way through the same pipeline, according to CDM Morocco.<sup>54</sup>

If any of these projects were to receive funding through CDM, that would be in marked contrast to the stated position of other UN institutions such as the UN Development Programme (UNDP) on matters concerning Western Sahara. However, by an apparent coincidence, the UNDP is a key partner of CDM in Morocco.

The UNDP expressly stated that it does not intend to support programmes south of the internationally recognised border between Morocco and the territory the kingdom annexed in 1975. All of UNDP's agreements with the Moroccan government "explicitly state that the projects' activities are restricted to particular localities north of the UN line". The UNDP's programmes

"are limited to the internationally recognised borders of Morocco".<sup>55</sup> CDM has, on the other hand, written to WSRW that it does not intend to reject *a priori* all applications located in Western Sahara.<sup>56</sup>

The proliferation of the carbon market, with bilateral and regional carbon credit schemes emerging around the globe, carries the risk that projects in occupied Western Sahara could potentially apply for credits with different mechanisms other than CDM, all employing different standards. The debate on the extent to which these new mechanisms must follow a common, international framework of rules, for example under the UNFCCC, is ongoing.

# RECOMMENDATIONS

## **TO THE COMPANIES CURRENTLY ENGAGED IN, OR PLANNING TO BECOME ENGAGED IN, RENEWABLE ENERGY PROJECTS IN WESTERN SAHARA:**

To immediately terminate the projects and cancel further plans. No energy project in Western Sahara, no matter how green, should take place in the occupied part of that territory. Such activity would contribute to entrench the Moroccan occupation and further hamper UN led efforts to reach a solution to the political stalemate. Moreover, the Saharawi people - who are the original sole inhabitants of Western Sahara - have been clear in saying that they do not consent to such development while under occupation.

## **TO THE GOVERNMENT OF MOROCCO:**

To refrain from undertaking any economic activities in the territory, including renewable energy projects, without the express consent of the Saharawi people. A referendum on self-determination that contains independence as an option, allowing the Saharawi people to express their views on the future status of the territory and its resources, must be immediately arranged.

## **TO THE UNITED NATIONS:**

The categorisation and treatment of Western Sahara as a Non-Self Governing Territory without a legal administration in place requires that the UN, in all its divisions, employs a consistent approach vis-à-vis the territory. Consequently, and specifically related to the matters addressed in this report, WSRW recommends the CDM/UNFCCC unequivocally state that applications for obtaining carbon credits for solar or wind projects located in Western Sahara will not be considered while the final status of the territory remains subject of the UN led self-determination process. Equally, WSRW calls upon the UN Global Compact to delist all companies that are actively involved in energy generating projects in occupied Western Sahara for failing to comply with the minimum standards on Corporate Social Responsibility, the promotion of human rights, seeking of consent from local stakeholders and answering to civil society requests.

## **TO ACTORS IN THE CARBON MARKETS:**

To carbon credit mechanisms/schemes to unequivocally state that applications for obtaining carbon credits for solar or wind projects located in Western Sahara will not be considered while the self-determination of the Saharawi people remains stalled. WSRW calls on audit companies commissioned to verify, validate and certify projects seeking to obtain carbon credits, to negatively appraise projects located in the occupied territory of Western Sahara. WSRW calls on all carbon actors not to purchase carbon credits from projects in the occupied territory of Western Sahara.

**TO GOVERNMENTS:**

To ensure appropriate, timely advice is available to individuals and corporations proposing to do business in or otherwise support development activities in Western Sahara that, as a Non-Self-Governing Territory, presents specific limits on resource and development activities, noting the requirement of international law that the original inhabitants of the territory, the Saharawi people, must be consulted about such activities, and their prior consent obtained.

**TO THE GOVERNMENT OF SPAIN:**

To assume its obligations as the legal administering power of Western Sahara by ensuring that the exploitation of natural resources in the territory is consistent with obligations under international law, including that all development activities are the result of or ensure the Saharawi people's right of self-determination, and that such activities are carried out with a clear consent of the Saharawi people and obvious benefit to them, as the sole original inhabitants of Western Sahara.

**TO THE EUROPEAN UNION:**

To ensure that its aspiration to import energy from North Africa does not override its overarching obligations under international law to not recognise Morocco's occupation of Western Sahara and to also take positive steps to ensure the realisation of the Saharawi people's right to self-determination. Accordingly, it should guarantee that no European Union development assistance is directly or indirectly available for the planning and installation of renewable energy projects in occupied Western Sahara. To further ensure that the territory of Western Sahara remains outside the ambit of the present and any pending EU-Morocco trade liberalisation (free trade) agreements, including for the supply and support of wind and solar energy projects, and the return to Europe of any electrical power thereby generated.

**TO THE UNION FOR THE MEDITERRANEAN (UFM):**

To ensure that the Mediterranean Solar Plan will not extend to occupied Western Sahara. All UfM member states have a positive obligation in international law to both undertake steps to end Morocco's occupation of the territory and to ensure that the Saharawi people can realize their internationally recognised right to self-determination.

**TO FINANCIAL INSTITUTIONS:**

To not provide financial support or funding to projects planned to be located in Western Sahara.

**TO PROPONENTS OF RENEWABLE ENERGY:**

To unequivocally defend a principle that clean, green energy should be produced by clean methods – legally, technically and morally. The Moroccan plans mentioned in this report undermine the credibility of such global efforts.

# NOTES

<sup>1</sup> Letter from UN Legal Counsel to the Security Council, 29.01.2002, [www.arso.org/Olaeng.pdf](http://www.arso.org/Olaeng.pdf)

<sup>2</sup> Ministry of Energy, Mines, Water and Environment (Kingdom of Morocco), January 2013, "La nouvelle stratégie énergétique nationale: bilan d'étape", p. 20 <http://www.mem.gov.ma/publucations/STRATEGIE%20EN%202012.pdf>

<sup>3</sup> Law 13-09 (2009) was promulgated by Dahir No. 1-10-16.

<sup>4</sup> The Hassan II Fund for Economic and Social Development grants financial assistance for investment projects in several strategic sectors with high added value.

<sup>5</sup> Moroccan Investment Development Agency (Kingdom of Morocco), <http://www.invest.gov.ma/?id=67&lang=en&RefCat=3&Ref=146>

<sup>6</sup> Letter from UN Legal Counsel to the Security Council, 29.01.2002, [www.arso.org/Olaeng.pdf](http://www.arso.org/Olaeng.pdf)

<sup>7</sup> Also referred to as "Moroccan Solar Project".

MASEN, 02.II.2009, "SM le Roi préside la cérémonie de présentation du projet marocain de l'énergie solaire", <http://www.masen.org.ma/index.php?id=42#/>

<sup>8</sup> Moroccan Law 57-09 on the creation of MASEN

<sup>9</sup> La Vie Eco, 30.12.2009, "Le Roi nomme Mustapha Bakkoury président du directoire de l'Agence marocaine de l'énergie solaire", <http://www.lavieeco.com/actualite/le-roi-nomme-mustapha-bakkoury-president-du-directoire-de-l-agence-marocaine-de-l-energie-solaire-3231.html>

<sup>10</sup> European Parliament Library, May 2013, "Solar energy development in Morocco", [http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130515/LDM\\_BRI%282013%29130515\\_REVI\\_EN.pdf](http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130515/LDM_BRI%282013%29130515_REVI_EN.pdf)

<sup>11</sup> MASEN, Site de Boujdour, [http://www.masen.org.ma/index.php?id=46&lang=fr#/\\_](http://www.masen.org.ma/index.php?id=46&lang=fr#/)

<sup>12</sup> MASEN, Site de Foum al Ouad, [http://www.masen.org.ma/index.php?id=45&lang=fr#/\\_](http://www.masen.org.ma/index.php?id=45&lang=fr#/)

<sup>13</sup> ONE Presentation, p. 20 <http://fr.slideshare.net/Extenda/proyectos-de-energias-renovables-en-marruecos>

<sup>14</sup> MASEN, Site de Sebkhah Tah, [http://www.masen.org.ma/index.php?id=47&lang=fr#/\\_](http://www.masen.org.ma/index.php?id=47&lang=fr#/)

<sup>15</sup> 19 international companies and/or consortiums had submitted their candidacy for the development of the first phase of the Ouarzazate program. These are (in alphabetical order): 1. Abeinsa

Ingeniería y Construcción Industrial, Abengoa Solar, Mitsui and Abu Dhabi National Energy Company (Taqa); 2. Cromasolar International Energy Group SL; 3. Delta Holding, Energy Consulting Group and SOCOIN; 4. ENEL p.A and ACS Servicios Comunicaciones y Energía SL; 5. Entrepouse Contracting, IWB, Solar Euromed - Novatec Biosol, Cegelec Maroc and GE O&G; 6. Forclum - Groupe Eiffage, STEG International Services, Brightsource Energy, CNIM, Caisse des Dépôts et Consignations, Alstom Power, Alstom Maroc, Nur Energie, SGTM and Brookstone Partners; 7. Infra Invest; 8. International Company for Water and Power (ACWA Power International), Aries Ingeniería y Sistemas SA and TSK Electrónica y Electricidad SA; 9. International Power, NAREVA Holding, Marubeni Corporation and Siemens Project Ventures GmbH; 10. JGC Corporation; 11. Korea Midland Power Company Ltd., Daewoo Engineering Company and Asea Brown Boveri SA; 12. Litwin SA, Groupe S.E.E.M., M+W Group, Ynna Holding and Sytelco; 13. Lockheed Martin, CBI, Colenergie, Zavala Mosco and Electria; 14. Mitsubishi Corporation et Auto Hall; 15. Orascom Construction Industries, Solar Millenium AG and Evonik Steag GmbH; 16. Shenzhen Xintian Solar Technology Co Ltd; 17. SNC-Lavalin Inc.; 18. SolarReserve and Veolia Environnement Maroc; Torresol Energy Investments and Sener Ingeniería Sistemas. MASEN considered the following companies as pre-qualified; 1. Abeinsa ICI, Abengoa Solar, Mitsui and Abu Dhabi NEC; 2. Enel Green Energy and ACS SCE; 3. ACWA, Aries IS and TSK EE, Orascom CI, Solar Millenium and Evonik Steag.

<sup>16</sup> Solar Server, 22.II.2012, "Concentrating solar power in Morocco: ACWA, MASEN sign PPA for 160 MW Ouarzazate CSP Plant", <http://www.solarserver.com/solar-magazine/solar-news/current/2012/kw47/concentrating-solar-power-in-morocco-acwa-masen-sign-ppa-for-160-mw-ouarzazate-csp-plant.html>

<sup>17</sup> This calculation includes the Lafarge and CIMAR wind farms; though they primarily produce energy for the factory sites where they are located, excess is sold to Morocco's National Electricity Agency ONE.

<sup>18</sup> ONE Presentation, pp. 15-16. <http://fr.slideshare.net/Extenda/proyectos-de-energias-renovables-en-marruecos>

<sup>19</sup> Ibid, p. 15.

<sup>20</sup> L'Economiste, 17.04.2012, "Parc éolien de Taza: Le consortium

EDF EN-Mitsui décroche le projet”, <http://www.leconomiste.com/article/893431-parc-olien-de-tazale-consortium-edf-en-mitsui-d-croche-le-projet>

The first talks of wind farms in Western Sahara emerged around 2008. Then, there were talks of establishing a wind farm of 240 MW in El Aaiún and 200 MW wind farm in Fom El Oued up and running by 2012.

(See e.g. Oxford Business Group, “The Report: Morocco 2009”, p. 158. Or Renewable Energy Development Center Morocco, January 2008, “Renewable energy & energy efficiency in Morocco: situation & prospects”. Or Renewable Energy Development Center Morocco, “Country Study Morocco”. Presentation at the Wind Energy & Development Dialogue Terna Expert Dialogue, Berlin on 19.09.2008.) This information was available on the website of the Moroccan Ministry of Energy in 2008, but recently updated information no longer mentions these two planned projects.

(Moroccan Ministry of Energy, Mines, Water and Environment, [http://www.mem.gov.ma/revue\\_presse/questpdf/energies-renouvelables.pdf](http://www.mem.gov.ma/revue_presse/questpdf/energies-renouvelables.pdf)) It is not clear whether these plans are still being considered or whether they have been revised to fit in with the currently programmed projects: the 50 MW farm in Fom El Oued that is being developed by NAREVA and Siemens, and the 300 MW wind farm in Tiskrad (El Aaiún) that is part of the 850 MW project. These projects may very well be based on the plans that were designed with a 2012 implementation horizon.

<sup>21</sup> Office Nationale de l'Electricité (Kingdom of Morocco), January 2012, “Avis de pré-qualification internationale. Invitation internationale à l'expression d'intérêt en vue de la préqualification des entreprises N° SP 40 311”.

<sup>22</sup> ONE, Integrated Wind Energy Generation Program, 28.06.2010, <http://www.one.org.ma/fr/doc/en.pdf>

<sup>23</sup> Office Nationale de l'Electricité (Kingdom of Morocco), January 2012, “Avis de pré-qualification internationale. Invitation internationale à l'expression d'intérêt en vue de la préqualification des entreprises N° SP 40 311”.

<sup>24</sup> Office Nationale de l'Electricité (Kingdom of Morocco), Résultat de la pré-qualification N° SP 40 311

<sup>25</sup> Office Nationale de l'Electricité (Kingdom of Morocco), 06.03.2013, “Rencontre Pré-Appel d'Offres du Projet Eolien Intégré 850 MW”.

<sup>26</sup> ONE Presentation, p. 18. <http://fr.slideshare.net/Extenda/proyectos-de-energias-renovables-en-marruecos>

<sup>27</sup> Africa Intelligence, 04.04.2013, “ONEE on the move in Western Sahara”.

<sup>28</sup> ONE Presentation, p. 18. <http://fr.slideshare.net/Extenda/proyectos-de-energias-renovables-en-marruecos>

<sup>29</sup> Appel d'offre SP 377478

<sup>30</sup> WSRW, 03.07.2013, “16 companies prequalified to construct wind farms in Western Sahara”, <http://www.wsrw.org/a105x2614>

<sup>31</sup> WSRW, 03.07.2013, “General Electric pulls out of contentious tender”, <http://www.wsrw.org/a105x2615>

<sup>32</sup> WSRW.org, 06.08.2013, Wind energy companies silent on controversial plans, <http://www.wsrw.org/a105x2634>

<sup>33</sup> Ministry of Energy, Mines, Water and Environment (Kingdom of Morocco), 28.06.2010, Press Release: “Integrated Moroccan Wind Energy Project”, [http://www.mem.gov.ma/revue\\_presse/CP\\_PDF/Communique%20presse%20Tanger%20Anglais280610.pdf](http://www.mem.gov.ma/revue_presse/CP_PDF/Communique%20presse%20Tanger%20Anglais280610.pdf) The project is generally abbreviated as IWPP.

<sup>34</sup> Currently, there are five wind farms up and running in Morocco and Western Sahara, with a total capacity of 287 MW. Three of those farms – Lafarge, A. Torres and CIMAR – are privately owned. The other currently operational wind farms are located in Morocco proper; a 60 MW plant in Essaouira, with turbines delivered by Spanish firm Gamesa. The 32 MW Lafarge wind park is located on the Tetouan premises of cement firm the Lafarge Group, and was the first project in Morocco to be approved by the UNFCCC. The 140 MW farm in Tanger, dubbed ‘Dhar Saadane’, constructed by the ONE-Gamesa partnership, was inaugurated by the King of Morocco on 28 June 2010. The 50 MW A. Torres farm is owned by THEOLIA Group, which views the plant as part of its Koudia al Baida project that it wishes to expand with a 300 MW wind farm. To this purpose, THEOLIA signed an agreement with ONE on 31 May 2011, for the joint development and construction of that farm; 100 MW on the existing A. Torres site, replacing the existing turbines (repowering), and the addition of a complementary capacity of 200 MW on nearby sites. The turbines for the 120 MW Jbel Khalladi site will be delivered by Danish Vestas.

<sup>35</sup> Moroccan Investment Development Agency (Kingdom of Morocco), <http://www.invest.gov.ma/?Id=67&lang=en&RefCat=3&Ref=146>.

- <sup>36</sup> Graciet, C. & Laurent, E., March 2012, "Le Roi Prédateur", Editions du Seuil, p. 171
- <sup>37</sup> Siemens, Press Release: 30.01.2012, "Siemens secures first wind turbine orders in Africa", <http://www.siemens.com/press/en/pressrelease/?press=en/pressrelease/2012/energy/wind-power/ewp201201025.htm>
- <sup>38</sup> L'Economiste, 01.02.2012, "Nareva opte pour les éoliennes de Siemens", <http://www.leconomiste.com/article/890879-nareva-opte-pour-les-oliennes-de-siemens>
- <sup>39</sup> Siemens, 30.01.2012, Press Release: "Siemens secures first wind turbine orders in Africa", <http://www.siemens.com/press/en/pressrelease/?press=en/pressrelease/2012/energy/wind-power/ewp201201025.htm>
- <sup>40</sup> Ibid.
- <sup>41</sup> The Clean Development Mechanism (CDM) was established under the Kyoto protocol to promote clean development in developing countries. Through CDM, companies may receive emission credits for projects involving renewable energy in developing countries. These credits can subsequently be sold. To be approved, the project must first be evaluated by a company accredited by CDM.
- <sup>42</sup> WSRW, 23.07.2012, "Moroccan King's windfarm project on occupied land gets thumbs down", <http://www.wsrw.org/a214x2359>
- <sup>43</sup> GDF Suez, 07.02.2013, Press Release: "GDF Suez va construire et exploiter le plus grand parc éolien d'Afrique", <http://www.gdfsuez.com/actualites/communiqués-de-presse/gdf-suez-va-construire-et-exploiter-le-plus-grand-parc-eolien-dafrique/>
- <sup>44</sup> GDF Suez and NAREVA, Press Release: "Maroc - GDF SUEZ et NAREVA Holding annoncent le démarrage de la construction d'un parc éolien de 300 MW situé à Tarfaya".
- <sup>45</sup> Ciments du Maroc, 21.10.2011, "Cimar News: Ciments du Maroc inaugure son premier parc éolien à Laâyoune", <http://www.cimentsdumaroc.com/NR/rdonlyres/CC9A75C5-C95F-4968-80C6-555B51CC71A6/23117/InaugurationParc%C3%A9olienLa%C3%A2youne.pdf>
- <sup>46</sup> Ciments du Maroc, Press Release: "Ciments du Maroc inaugure son premier parc éolien à Laayoune", [http://www.cimentsdumaroc.com/NR/rdonlyres/48C68181-5BAA-468B-BF92-9818DD971922/23121/CP\\_InaugurationParc%C3%A9olienLa%C3%A2youneVFI.pdf](http://www.cimentsdumaroc.com/NR/rdonlyres/48C68181-5BAA-468B-BF92-9818DD971922/23121/CP_InaugurationParc%C3%A9olienLa%C3%A2youneVFI.pdf)
- <sup>47</sup> Renewable Energy Directive (2009/28/EC), article 9.
- <sup>48</sup> European Parliament Library, May 2013, "Solar energy development in Morocco", [http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130515/LDM\\_BRI%282013%29130515\\_REVI\\_EN.pdf](http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130515/LDM_BRI%282013%29130515_REVI_EN.pdf)
- <sup>49</sup> Escribano-Frances, G. & San Martin Gonzalez, E., 2012, "Morocco, the European energy policy and the Mediterranean Solar Plan" in European Energy Policy: an environmental approach, p. 198.
- <sup>50</sup> Union for the Mediterranean, 22.02.2013, "Mediterranean Solar Plan: Joint Committee of National Experts discusses draft of the Master Plan", <http://ufmsecretariat.org/mediterranean-solar-plan-joint-committee-of-national-experts-discusses-draft-of-the-master-plan/>
- <sup>51</sup> After several episodes of both investors and business partners abandoning ship, and a much anticipated declaration of intent between the Moroccan government and several European governments ending up not being signed in 2012, it has now come to a split between Desertec Foundation and the Desertec Industrial Initiative (Dii).
- <sup>52</sup> The Guardian, 23.04.2010, "Solar Giant Desertec to avoid Western Sahara", <http://www.guardian.co.uk/sustainable-business/desertec-western-sahara>
- <sup>53</sup> WSRW, 16.07.2012, "Morocco preparing more applications for UN funding", <http://www.wsrw.org/a214x2352>
- <sup>54</sup> Ibid.
- <sup>55</sup> WSRW, 10.11.2010, "No UNDP projects in Western Sahara", <http://www.wsrw.org/a159x1662>
- <sup>56</sup> WSRW, 12.04.2013, "CDM refuses early denials of Sahara projects", <http://www.wsrw.org/a105x2565>



***“The Court’s conclusion is that the materials and information presented to it do not establish any tie of territorial sovereignty between the territory of Western Sahara and the Kingdom of Morocco or the Mauritanian entity. Thus the Court has not found legal ties of such a nature as might affect the application of General Assembly resolution 1514 (XV) in the decolonization of Western Sahara and, in particular, of the principle of self-determination through the free and genuine expression of the will of the peoples of the Territory.”***

International Court of Justice, 16 Oct 1975