

DOES SUSTAINABILITY NEED INTERNATIONAL CO-OPERATION?

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Abstract

A unilateral commitment and a limited involvement of countries in addressing two current major issues involving the Mediterranean region, Climate Change and Migration, have been proven to be ineffective and hardly decisive. Despite Mr Trump's recent declarations on the excessive 'costs' of committing to Paris Agreement, the necessity of an international cooperative approach toward such global challenges seems incontestable.

Introduction

The intention of this intervention is to provide a perspective from the MEDENER association on the Energy Transition issues, highlighting how this approach can be useful and affordable to the two major global problems in the Mediterranean region: Climate Change and Migration.

Established in 1997 (April 11th) as an international non-profit organisation, MEDENER brings together 12 national energy agencies from both northern and southern shores of the Mediterranean, acting in the region for the Energy Transition.

The Energy Transition is here defined as a multipurpose approach which will contribute to realise energy security of supply, Climate change mitigation and adaptation, economic growth and job creation in the Region, which in turn will contribute to reduce migration flows. My role as President is to assist the member Agencies in enhancing the share of *renewable energy sources* (RES) in the regional energy mix as well as in promoting energy efficiency (EE) policies and measures, which represent the two main tools to realise the Energy Transition.

Firstly, we have at least two questions to address:

- 1) Why has the Trump's new presidency first act been the withdrawal of the United States from the Paris Agreement?
- 2) Is it possible to operate the energy transition in the Mediterranean region by acting bilaterally on the energy issue as self-consistent matter?

1. The withdrawal of the United States from the Paris Agreement

The Paris Agreement entered into force on 4 November 2016, thirty days after at least 55 Parties to the Convention have deposited their instruments of ratification, acceptance, approval or accession with the Depositary.

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In June 2017, Donald Trump¹² informed about his will to withdraw the USA from the Paris Agreement, declaring:

“As President, I can put no other consideration before the wellbeing of American citizens. The Paris Climate Accord is simply the latest example of Washington entering into an agreement that disadvantages the United States to the exclusive benefit of other countries, leaving American workers -- who I love -- and taxpayers to absorb the cost in terms of lost jobs, lower wages, shuttered factories, and vastly diminished economic production.

Thus, as of today, the United States will cease all implementation of the non-binding Paris Accord and the draconian financial and economic burdens the agreement imposes on our country. This includes ending the implementation of the nationally determined contribution and, very importantly, the Green Climate Fund, which is costing the United States a vast fortune.

Compliance with the terms of the Paris Accord and the onerous energy restrictions it has placed on the United States could cost America as much as 2.7 million lost jobs by 2025 according to the National Economic Research Associates.”

Nonetheless, if you look closely at the annual reports on Renewable Energy and Energy Efficiency prepared by many International Organizations active on these matters¹³, it can be seen that energy policies for Climate Change have produced good results for the USA in recent years.

Both energy efficiency and renewable energy sources are living a golden age, wherever in the world and, namely in the USA.

In electricity generation, momentum is with the greens. By the end of 2016, the top countries for total installed renewable electric capacity continued to be China, the United States, Brazil, Germany and Canada. China detects more than one-quarter of the world's renewable power capacity, approximately 564 GW, including about 305 GW of hydropower. Considering only non-hydro capacity, the top countries were China, the United States and Germany; they were followed by Japan, India and Italy, and by Spain and the United Kingdom.

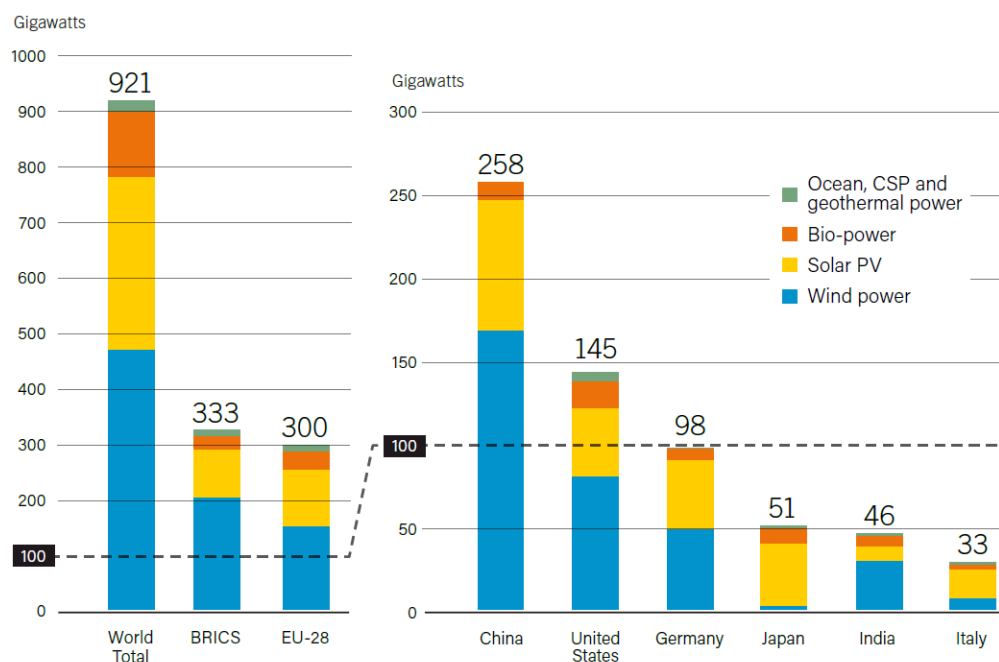
The ongoing growth and geographical expansion of renewable energy was driven by the continuing decline in prices for renewable energy technologies (in particular, for solar PV and wind power), by rising power demand in some countries and by targeted renewable energy support mechanisms.

In the United States, renewable energy accounted for over 15% of total electricity generation, up from 13.7% in 2015. Bio-power generation was down in 2016, while electricity generated by wind energy and solar PV increased substantially. More solar PV capacity was installed in the United States in 2016 than any other power source. Operation of the country's first offshore wind farm also began during last year (REN21, 2017).

¹² June, 01, 2017, The White House Office of the Press Secretary

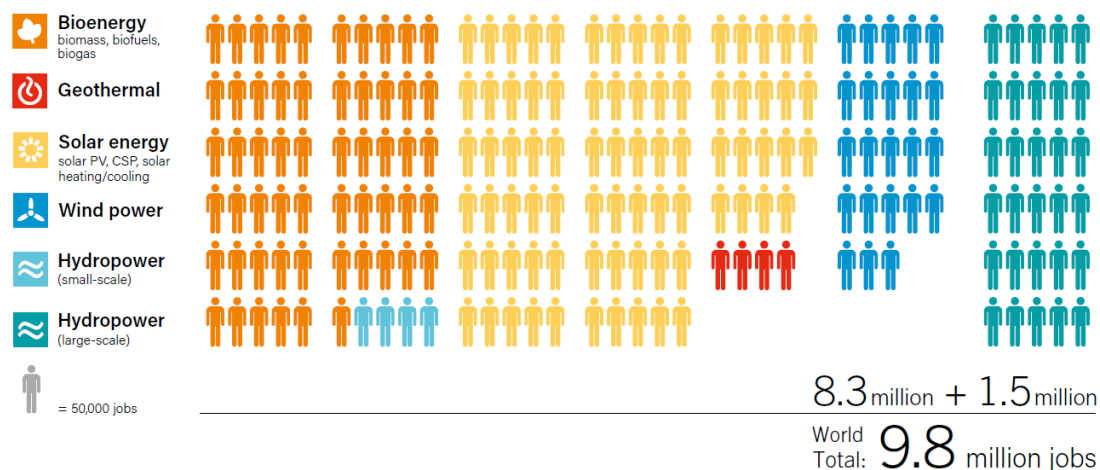
¹³ REN21 (2017) ; IEA (2016) ; IEA and IRENA (2017)

Figure 5. Renewable Power Capacities in World, BRICS, EU-28 and Top 6 Countries, 2016



With regard to the jobs in the renewable energy sector, according to the REN21 Report (2017), the sector employed 9.8 million people in 2016. Jobs in renewables, excluding large-scale hydropower, increased of about 2.8% to 8.3 million in 2016 with respect to 2015. The leading employers countries continued to be China, Brazil, the United States, India, Japan and Germany.

Figure 6. Jobs in Renewable Energy



Energy efficiency policies are the main driver of investment in energy efficiency, with innovations in technology and finance also playing important roles. Thus, despite lower oil prices in 2015 and much of 2016, households, businesses and governments continued to invest strongly in energy efficiency. As policies have expanded, so has investment in energy efficiency. The IEA estimates that global investment in energy efficiency was USD 221 billion in 2015, an increase of 6% from 2014 (IEA, 2016). Investment in efficiency was two-thirds greater than investment in conventional power generation in

2015. Investment growth was strongest in the buildings sector, at 9%, with the United States making up close to a quarter of all efficiency investment in the sector. China has emerged as the largest energy efficient vehicle market, with 41% of efficient vehicle investments worldwide.

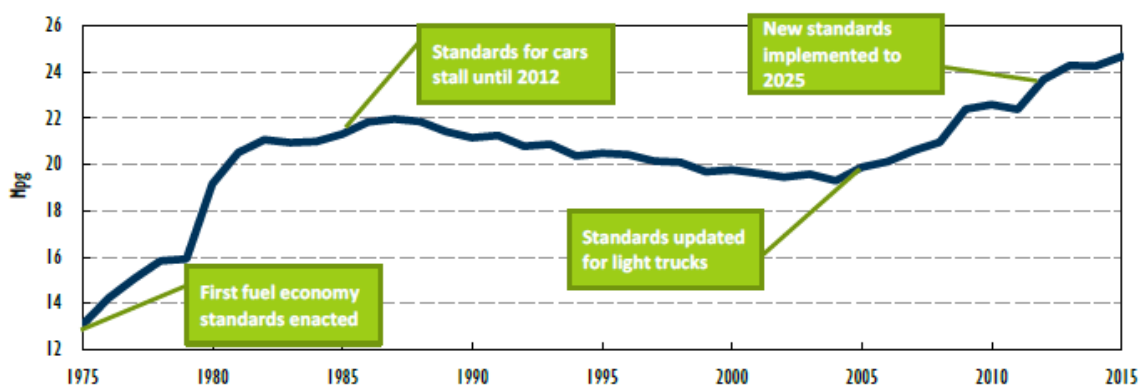
Referring to demand side, in 2016 the United States updated standards for commercial building conditioning including chillers, air conditioners, heat pumps and warm air furnaces. By 2023, new air conditioners will have to be approximately 30% more efficient than the 2010 standard. Cumulative savings from the standards over the next 30 years are estimated at 15,600 PJ (a 24% annual energy consumption savings compared with a reference case). The net present value of these savings is estimated at between USD 15 billion and USD 50 billion. The updated standards are estimated to reduce greenhouse gas (GHG) emissions by 77 Mt compared with the reference case .

In 2015, the US Environmental Protection Agency proposed new regulations under Phase 2 of its GHG emissions standards for heavy-duty vehicles (HDVs). The regulations, which will be implemented in 2018 and extend to 2027, will deliver between 0.5 mb/d and 1 mb/d in oil consumption savings between 2035 and 2050 – equivalent to 2.5-5% of current US daily oil consumption. Consumers would save up to USD 170 billion in fuel costs by 2050, and avoided fuel costs would pay back vehicle owners in only two years (ICCT, 2015).

Mandatory fuel economy standards now cover more than 74% of global vehicle sales and have gradually increased the fuel economy of the LDV (Light Duty Vehicle) fleet.

To evaluate the energy savings from vehicle fuel economy standards, a counter-factual scenario needs to be developed where standards are not implemented in order to estimate what the efficiency of the vehicle fleet would be in the absence of standards.

Figure 3.12 Average fuel economy of passenger vehicles sold in the United States

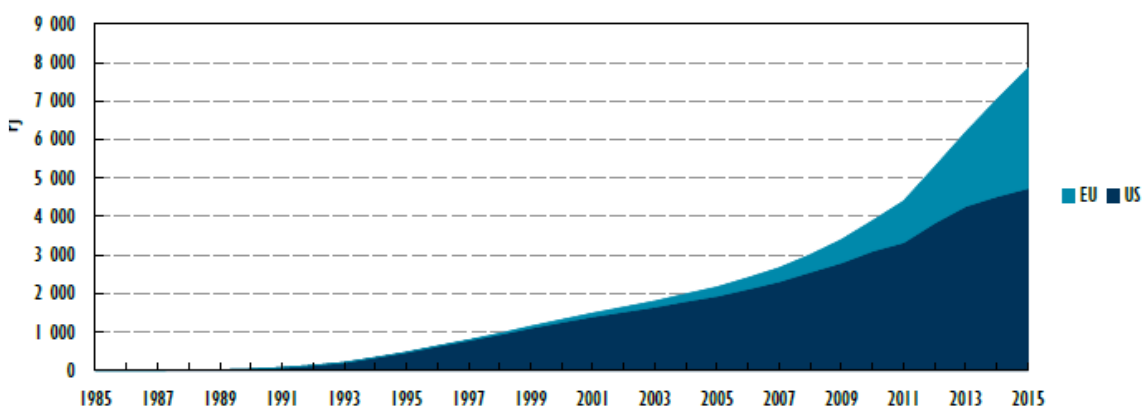


Notes: Mpg = miles per gallon. Context boxes were added to this figure by the IEA. Vehicle fuel economy presented in this chart is the average of all cars and trucks sold based on their adjusted combined fuel economy value. This value combines the fuel economy of city and highway driving in order to adjust vehicle efficiencies to real-world duty cycles.
 Source: United States Environmental Protection Agency (2015). 2015 FE Trends Report. Appendix D: Fuel Economy Data Stratified by Vehicle Type. Office of Transportation and Air Quality. Retrieved from: www3.epa.gov/fueleconomy/fetrends/1975-2015/420r15016-appendix-d.xlsx

The number of electric vehicles, which reached 1 million in 2015, last year reached 2 million. Countries like France and firms like Volvo are looking ahead to the demise of the internal combustion engine (*The Economist*, 2017).

With regard to Energy savings from appliances and product standards the United States and the European Union are two of the largest consumer product markets in the world and energy savings from standards and labels have proven to be sizeable. In the United States, more than 65 product types are regulated. In 2015, standards in the two regions combined saved 4.7 exajoule (EJ), or 57% of US and EU appliance energy use. This represented USD 63 billion in avoided energy expenditure, approximately 15% of total expenditure on energy in buildings. By 2030, cumulative energy expenditure savings associated with energy efficiency standards are estimated at USD 2 trillion, reflecting a demand reduction in excess of one year of US energy consumption. In the European Union, policies enacted between the 1990s and 2015 (Ecodesign and energy labelling) resulted in 3.1 EJ of primary energy savings in 2015, representing 4.5% of EU primary energy demand. Cumulative primary energy savings since 1990 are 13 EJ (Figure 3.14).

Figure 3.14 Energy savings from appliance standards in the United States and the European Union



Source: REN21 - 2017

Finally, what is the reason for a negative evaluation of the Paris Accord, when all the indicators and data of the last few years show, without any doubt, that RES and EE are keeping all their promises?

Climate Change is an inconvenient truth for nationalism; it is a problem that cannot be solved at national level. It requires collective action among states and all actors in society at all levels. And it calls for a global governance. So, if the policy you want to implement is to go back in the direction of the State-Nation, you must first deny any cross cutting and complex problem and, consequently, any attempt for a global approach to governance. Of course, proposing simplistic and short-sighted solutions to complex long-term problems is a dangerous populist attitude, but often, populism and nationalism run together.

That is, in my humble opinion, the rationale for the withdrawal of USA from the Paris Accord. Mrs May's battle cry of "No deal is better than a bad deal" has already been abandoned, after the election defeat (Giles Merritt, Friends of Europe); this could also happen for Mr. Trump.

2. Is it possible to operate the energy transition in the Mediterranean region by acting bilaterally on the energy issue as self-consistent matter?

Climate change and migration are among the most pressing policy issues of our time. However, the international community has been slow to recognize the many ways in which the two phenomena are interrelated.

The 2016 “New York Declaration for Refugees and Migrants” (UN, 2016) recognizes the environment as a driver of migration and proposes several policy options in addressing how the environment, climate change and disasters can affect human movements at large-scale.

The preliminary results of the “*Migration, environment and climate change: Evidence for policy*” (MECLEP) project, founded by the European Union and implemented by the International Organization for Migration finds that **migration can be a positive adaptation strategy**.

At the end of 2014, during the seminar “Changing Migration Patterns and Migration Governance in the Mediterranean Region” in Rome (IAI, 2015), Daniela Huber pointed out that migration in the Mediterranean lacks a coherent international governance mechanism, while Sarah Wolf noticed that two main problems for the EU action in migration matters are, on the one hand, the limits of EU competence and, on the other, the European Neighbourhood Policy bilateral approach that is clearly unfit to address a complex and regional phenomenon such as migration.

Concerning energy, which remains the most relevant motor drive for Climate Change, already more than 30 years ago Hans H. Landsberg and his colleagues of the Resources for the Future (Washington) have clearly explained the reasons against the Energy Independency of State Nation, in their “Energy Today and Tomorrow: Living with Uncertainty” (Darmsdadter, 1983). Namely, the above-mentioned authors pointed out that even if the USA were able to produce all the energy they need in their country, this full energy independency would not be sufficient to isolate their country from external events.

At least for four different reasons:

- 1) A huge interruption of hydrocarbons production in the Middle East, or where ever in the World, could oblige the USA to share their indigenous production with their allies.
- 2) Many enterprises and banks in the USA are implicated as buyers, financing institutions or suppliers in all transactions linked to the energy outside the USA.
- 3) The USA is trying to avoid that energy constraints become terrible obstacles to the economic progress of the developing countries.
- 4) Being one of the most important exporters of nuclear energy technologies, plants and materials, the USA is deeply concerned that civil nuclear programmes of other countries do not implicate any enhanced nuclear proliferation.

Of course this list is not exhaustive and we could add other reasons in order to sustain our thesis.

Since then, a vast literature on the subject has developed almost anywhere in the world, and the aptitude for energy independence has been abandoned.

3. Conclusions and recommendations.

To sum up, we have to face two relevant global problems within the Mediterranean Region: at first Climate Change and Migration as the second, although often they can interfere each other.

We consider also that Energy Transition could be a powerful multipurpose political approach which can fit both the two global problems, using RES and EE as bottom up instruments to ensure energy security of supply, climate change mitigation and adaptation, economic growth and job creation in the Region, at same time contributing to reduce the migration flows.

I am glad to say there is a consensus in the EU institutions in considering the Renewable Energy Sources and Energy Efficiency a priority, once more in a broader, global approach.

We need to establish partnership policies with countries on the southern shore of the Mediterranean and Africa that involve these countries in concrete projects. Certainly, direct financial aid to governments in these countries is to be avoided. Likewise, claiming that our best practices in the sector should be adopted *sic and simpliciter* by the countries benefiting from the co-operation, is an attitude we cannot follow any more. Our approach should not retrace step by step the same path followed in Europe from the nationalization of the energy system to its liberalization. Bearing in mind the availability of new technologies of information and communication as well as the relevant improvement in the electronics components and systems, we have now some affordable alternatives to design and implement electrical and energy systems for the better integration of renewable energy in the energy mix trough a large number of producers/consumers spread in the territory, namely in medium and big cities.

This approach emphasises once again, the need for the three Union for Mediterranean (UfM) thematic Platforms (Natural gas, regional electricity market and RES & EE¹⁴) to work together in close collaboration, in order to enable cost-effective technological solutions within an adequate legislative and regulatory framework. The sustainable approach to energy policy is the key for the success of our society dealing with two relevant global problems, Climate Change and Migration.

Looking backwards, what is lost must be lost; looking ahead, a global governance is necessary to deal whit these two relevant issues at world level.

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