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Steps in setting-up of two centers for marine renewables within a Romanian-Bulgarian cross-border cooperation

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ABSTRACT

It is well known the fact that marine renewables are able to provide clean, low carbon energy, in the context in which experts seek methods to find solution for decreasing the actual dependence on fossil fuel, in a sustainable way.

Lately, Black Sea is seen as a potential candidate to marine renewables applications. This new position should be exploited by Romania and Bulgaria, states which have to apply European Union strategies related to the task of expanding the energy portfolio, by using marine renewables.

In this respect, Constanta Maritime University (CMU) and Nicola Vaptsarov Naval Academy (NVNA), which are already partners in different other projects, intent to establish two centers for marine renewables, within a cross-border cooperation, one in each country.

The two centers will work in order to find the most effective ways in which different actors ? with interests in marine renewables, can be engaged and brought together to encourage fruitful collaboration that provides sustainable grow of the cross-border area.

In this respect, in the paper are described steps to be done in order to sett-up the centers, being revealed also the benefits of joining the centers membership, for different types of entities.

1. Introduction

Global crisis is going hand in hand with the need to achieve the goal of reducing greenhouse emissions resulted from the combustion of fossil fuels. In this framework, governments all over the world are showing interest in implementing renewable energy strategies and technologies; an important part of such a development is oriented towards maritime applications. Water covers more than 70% of the globe surface making the population density and anthropic activity increase in the costal zones.

But the uses of marine and coastal zones, such as fishing, tourism, shipping, military activities, sea mining, etc should not make us fail from the marine and coastal environment well-being concept. This is why it is registered a major interest in generating an important part of the energy need from marine renewable energy sources (Pomeroy et al, 2013).

Today, marine renewable energy sector is showing its attractivity, being seen a fast development of its trade aspect (Joslin et al, 2014).

This situation is a benefit for coastline countries, due to exploiting opportunities of renewable energy sources such as tides, currents, waves or offshore wind (Gill, 2005).

This paper deals with the need of the development of two marine renewable energy centers, in order to follow the international trend which is related to strengthen the development of marine renewable energy technologies through cooperation in the field of research, education and outreach.

Due to the fact that marine energy systems work under specific conditions, specialists face important engineering and environmental challenges: predictability, manufacturability, survability, installability, affordability, reliability (Mueller et al, 2010).

The two centers will contribute to a responsible development of marine renewable energy use in the cross-border area, by having in view the stated challenges.

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2. Premises for centers setting up.

Romania and Bulgaria have direct access to the Black Sea, which is a direct source of energy; by the accession of these two countries to the European Union, the interest for the potential of this sea is higher since there it is the need to support EU ideas and strategies (Papatulica, 2015).

Although during the last decades scientists around the world have intensively studied the available energy potential of seas, there is a certain lack of studies for the Black Sea (Galabov, 2013). Despite of this, it is registered an increase of the foreign companies interest on renewables in this part of Europe, due to actual legal framework (Nicolae et al, 2013).

The establishment of the Romanian and Bulgarian marine renewable energy centers, within a cross-border cooperation between two marine higher education institution, Constanta Maritime University (from Romania) and Nicola Vaptsarov Naval Academy (from Bulgaria), was seen as the way of effective solving of the issue related to the cooperation between different bodies, located in the cross-border area, having an interest in the development of the marine renewables use.

The main goal of the two centers is to ensure best conditions for a wise growth of exploiting marine renewables, based on an intensive expertise exchange between the collaborative partners. The centers will be governed by a coalition of institutions who may work together in different fields, such as practice, policy or resources in order to improve outcomes for the cross-border community. Due to the regional, national and international recognition, the two centers will be set-up in Constanta Maritime University and in Nicola Vaptsarov Naval Academy.

Constanta Maritime University (CMU) is an institution providing higher maritime education and training and research activities; its academic community is based on teaching staff, auxiliary teaching staff, students and technical and administrative employees.

CMU has two faculties: Navigation and Naval Transport and Electromechanics, within the last one being functional the specialization called Engineering and Environment Protection in Industry (since 2005).

Nicola Vaptsarov Naval Academy (NVNA) is the oldest Bulgarian technical educational institution, in the present time being known as an institution dealing with education, training and research specific for domains such as national security and defense, maritime business and maritime technologies. Future professionals may choose between Navigational Faculty or Engineering Faculty. .

3. Actions to be done for the setting-up of the centers.

The first step is to establish a core management system of the centers, which will include representatives from the two universities and their traditional partners in the field of marine renewables.

New partners might be identified due to an aware raising campaign, intended to reach the communities and bodies whom will benefit from the centers working.

In order to identify the main actors having various interests in marine renewables, it is needed an inventory of companies, institutions dealing with education and research, NGOs and authorities located in the cross-border area.

The final form of the inventory will be able to provide a list of potential members of the centers coalition. The main advantage of the diversity is bringing together specialists from a wide range of activities, able to cover a large list of topics concerned.

The following action to be taken is to elaborate a research study dealing with the identification of opportunities offered by marine renewables, adapted to the cross-border region. The study should be a complex one, by having in view best practices in this field, achieved specially in EU.

Both the inventory and the research study, should be done in the two countries, by specialists identified and coordinated by representatives from the two institutions having the role of initiator of the centers.

The core management system will nominate the most skilled specialist in charge with the development of the final forms of the inventory and of the research study.

The next action is the setting-up of the two centers, located in CMU and NVNA.

In order to achieve this milestone, specialists with different experience, such as energy efficiency, marine engineering, renewables, biology, sociology, identified by core management system, will elaborate the strategy of the centers, which will be approved by the core team ? in its final form.

The resulted strategy will be circulated to the main actors identified through the inventory, together with the marine RES development recommendatory paper ? a document containing the main aspects from the research study on opportunities in the area and best practices in marine renewables.

In the same time, will be launched the proposal to be part in the coalition of marine renewable centers, by rising the awareness on the cross-border feature of the collaboration.

The core team will nominate two responsible for the centers, one in each country.

The first main task of the responsible is to collect and to evaluate the answers to the call for joint, from the potential members.

At the end of this process, a common meeting is possible, aiming bringing together the definitive members of the centers coalition. The core team will decide the country hosting the common meeting and the duration of the meeting.

During the common meeting, the participants will work in order to elaborate an immediate action plan. For the efficient development of the action plan of the two centers for marine renewables, the participants might be divided in professional working groups, such as:

- companies and associations;
- education and research institutions;
- NGOs;
- public authorities.

Each working group should be encouraged to express its own position on how the centers may play an active role in:

- a more efficient exploitation of research results gained within universities and research centers and know-how transfer;
- identifying most suitable national and European programs for financing;
- expansion of the membership and consolidating the partnership.

At the end of the common meeting should be adopted the common action plan, with the consideration of the needs of all the members.

4. 4. Expected benefits.

The centers for marine renewables setted up within Romanian-Bulgarian cross-border cooperation will contribute to:

- improve the way for presenting ideas or concepts or projects belonging to the institutions joining the centers,
- direct and in due time information of all the members regarding latest marine renewables issues through the web site of the centers and through periodical direct meetings,
- easier access to the new technologies and new market specific for marine renewables, due to the diversity of the members,
- gaining additional skills for all the members,
- improving the organization,
- identifying new partners and potential customers in the proximity of the organization or in the cross-border area.

It is possible to identify specific advantages for each institution willing to join the centers, according to their profile. Thus:

- for companies and associations:
  - wider cooperation for the achievement of new economic advantages,
  - better cooperation in technology acquisition and production,
  - intensified flux of information and technology transfer,
  - marketing improvement,
  - easier access to European or national funds,
  - cost savings.
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  - intensified flux of information and technology transfer,
  - marketing improvement,
  - easier access to European or national funds,
  - cost savings.
- for education and research institutions:
  - better adaptation of curricula to the economic realities,
  - stimulation of research and innovation,
  - up-grading of existing laboratories,
  - Strengthening of cooperation in now-how transfer.
- for NGOs:
  - stretching of customer database,
  - opportuning for developing of new services,
  - competitive advantages.
- for public authorities:
  - better support of the economic and social development of the region, unemployment decrease,
  - higher promotion of their region at national or cross-border level,
  - contribution to the development of the infrastructure.

Conclusions

The two centers for marine renewables ? which might be setted-up within a cross-border cooperation, between Romania and Bulgaria, aim to be the promotor of the concept of better and wiser exploitation of marine renewables, taking into account the interests of all the parties involved in this construction. The diversity of the profile of institutions able to join this concept allows the achievement of desideratum such as: better and wiser exploitation of marine renewables ? as a source of self-development, through common activities, utilization of region?s human resources and skills, contribution to the sustainable growth of the region, access to projects initiated by different entities, in order to take advantage of the opportunities identified.

References

Galabov, V., (2013). On the wave energy potential of the Bulgarian Black Sea Coast, *Proc. of 13th International Multidisciplinary Scientific Geo Conference SGEM 2013*, 16-22 June 2013, Albena, Bulgaria, available: http://arxiv.org/ftp/arxiv/papers/1304/1304.7806.pdf, 8 pp

Gill, B.A. (2005). Offshore renewable energy: ecological implications of generating electricity in the coastal zone, *Journal of Applied Ecology*, 42, pp 605-615

Joslin, J., Polagye, B., Stewart, A., (2014). Development of an adaptable monitoring package for marine renewable energy, *Proc. of 5th International Conference on Ocean Energy*, November 4-6, Halifax, pp 1-10

Mueller, M., Jeffrey, H., Wallace, R., Von Jouanne, A., (2010). Centers for marine renewable energy in Europe and North America, *Oceanography*, Vol 23 (2), pp 42-52

Nicolae, Fl., Cotorcea, Al., Ristea, M., Marasescu, D., (2013). Solutions for marine renewable energy use along the Romanian Black Sea Coast, *TERMOTEHNICA* 1/2013, pp 72-75

Papatulica, M., (2015), Black Sea area at the crossroad of the biggest global energy players interests. The impact on Romania, *Procedia Economics and Finance* 22, pp 470-478

Pomeroy, C., Conway, F., Hall-Arber, M., (2013). Human dimensions perspective on the impacts of coastal zone marine renewable energy, *Water Resources IMPACT*, Vol 15 (No 6),pp 14-16