

# GEMUN 2018

## Environment Commission (EnvCom)

### Topic 1: Measures to promote the use of renewable sources of energy in order to reduce pollution, enforced by national governments.

Research Report by Giorgio Caridà and Pietro Veca, Main Chairs of EnvCom

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#### I. DEFINITION OF KEY TERMS

**Renewable sources of energy:** Energy that is generated from natural processes that are continuously replenished. This includes sunlight, geothermal heat, wind, tides, water, and various forms of biomass. This energy cannot be exhausted and is constantly renewed.

**Pollution:** The contamination of the environment by introduction of contaminants that can cause damage to environment and harm or discomfort to humans or other living species.

#### II. INTRODUCTION

Renewable energy plays a fundamental role in reducing greenhouse gas emissions. When renewable energy sources are used, the demand for fossil fuels is reduced. Unlike fossil fuels, non-biomass renewable sources of energy (hydropower, geothermal, wind, and solar) do not directly emit greenhouse gases.

In general, renewable energy is more expensive to produce and to use than fossil fuel energy. Favourable renewable resources are often located in remote areas, and it can be expensive to

build power lines from the renewable energy sources to the cities that need the electricity. In addition, renewable sources are not always available. They cause little or almost no pollution.

Environmental pollution is one the greatest challenges that the world is facing today. It began since industrial revolution, increasing day by day and causing irreparable damage to Mother Earth.

The major types of environmental pollution are air pollution, water pollution, noise pollution, thermal pollution, soil pollution and light pollution.

We can effortlessly notice the abnormal behaviour of the seasons – the cycle developing clogs in its wheels; and the worried experts fear the disturbed balance in the biosphere has assumed such serious proportion that, quite soon, our world may be uninhabitable like Hiroshima of 1945. But it is heartening to find the entire world aware of the menace, with just some of the more developed countries which have already taken some measures to meet it. If we fail to restore the ecological balance right now, it would be too late tomorrow.

### **III. BACKGROUND INFORMATION**

The recent sharp increases in the prices of oil, natural gas, uranium and coal underline the importance for all countries to focus on development of alternative energy resources. For developing countries, these price increases can have ruinous economic consequences; for many countries already plagued by poverty this means a choice between fuel and food, health care, education and other essentials. Renewable energy resources need priority because of: the overwhelming scientific evidence that anthropological emissions of greenhouse gases from carbon combustion threaten catastrophic results from rapid climate change; the severe health and environmental consequences from fossil fuel combustion being experienced in every major developing country city; and the high cost, environmental damages and security threats of nuclear power. Yet, in both developed and developing countries, renewable resources, while they are the most rapidly growing energy resource, still have not reached anywhere near their technical and economic potential. Indeed, world-wide, the share of renewable resources accounts for only about 3% of total global energy supply.

There are a host of economic, social and legal barriers that account for the failure of renewable resources to reach their potential. Those barriers can be overcome. They have been overcome successfully in many jurisdictions. There are successful examples in many developing countries. Legislation can remove these barriers, get the price signals right, and encourage successful utilization of renewable resources anywhere. Renewable resources hold great promise for meeting the energy and development needs of all countries throughout the world, but particularly for developing countries, where, in many areas, commitment has not been made to fossil fuel dominance, and where rural areas may be served more economically than with traditional resources – such as kerosene and diesel fuel.

#### **IV. MAJOR COUNTRIES INVOLVED**

A report from the European Environmental Agency, (Europe's onshore and offshore wind energy potential) confirms that wind energy alone would generate sufficient energy for Europe without any problems, its output for 2020, is 3 times greater than the foreseen demand, this amount will increase to 7 times by 2030. Reducing greenhouse gases and abandoning the dependency on petroleum use is therefore an achievable reality. There are some countries in the World which are closer than other to achieve this particular goal.

Sweden, for example, is developing while using limited coal, which is also more affordable, beneficial for the environment and for the consumer. So much so, that is has been commended by the IEA (International Energy Agency) for its energy policy. By 2010, the country already produced more energy from biomass than from petroleum. Another example is Latvia, where the most viable and common renewable energy is wind power, especially in regions with high wind speeds, which include the Baltic coast and western coast of the Gulf of Riga, its northern portion. Also Finland is involved in the topic. The EU has set its reductions for greenhouse gas emissions, caused by burning fossil fuels such as petroleum, carbon and peat; and produce sufficient renewable energy to cover 38% of overall energy consumption by the year 2020. In 2012, it was already at 34.3%. Austria is another example of economic development based on renewable energy. In 2012, its percentage was 32.1%, nearing the 34% for 2020 set by the EU. A small example of the country's philosophy on renewable energies, knowing that energy from biomass has more than three years operating in this country with a 90% efficiency.

#### **V. UN INVOLVEMENT**

The global nature of energy challenges requires that local renewable energy resources be appropriately managed and used. As such, the Programme promotes the building of capacities, stimulates the sharing of scientific knowledge and best practices, promotes the development of energy policies, supports pilot initiatives and provides technical assistance, when necessary.

The Programme's capacity building activities are implemented under the Global Renewable Energy Education and Training (GREET) Programme. Particular emphasis is made on building a sustainable energy base in Africa to address the energy needs in this region. Furthermore, in its contribution UNESCO's Intersectoral Platform on Climate Change, the Programme promotes the use of renewable energy sources and energy efficiency technologies and practices as a major tool to help respond to the challenges of climate change mitigation and adaptation.

Enhancing national capacities and knowledge base focuses on institutional and human capacity-building, advocacy and information. Training activities target different levels of concerned audiences (e.g. engineers, researchers, technicians, operators, entrepreneurs, project managers, decision/policy-makers, end-users, etc...) as well as the various renewable energy forms.

Sharing of scientific knowledge and best practices involves the direct exchange of scientific knowledge and information as well as networking to provide access to data, knowledge and best practices.

Promoting energy policies, with a view of translating them into national development plan, involves the development of national/regional action plans and strategies. It also includes the promotion of partnerships and exchanges of best practices through regional expert/decision-maker meetings, including at the ministerial level, and the development of information tools and materials addressing energy policy-making.

Support provided to pilot initiatives serves as a catalyst to projects which can then leverage additional funding. Special emphasis is made on applications that impact local development such as the solar electrification of public facilities in rural areas of developing countries. Technical assistance ranges from support provided to enhance local capacities to advisory services and assistance provided to national institutions and/or regional entities in developing renewable energy initiatives.

## **VI. USEFUL LINKS**

<https://www.un.org/esa/desa/climatechange/renewableenergy.html>

<http://www.unfoundation.org/what-we-do/campaigns-andinitiatives/sustainable-energy-for-all/>

<http://www.unfoundation.org/what-we-do/issues/energy-and-climate/>

<https://www.cnbc.com/2017/04/19/10-european-countries-that-are-goingbig-on-renewable-energy.html#slide=1>

<https://www.ecowatch.com/5-countries-leading-the-way-toward-100renewable-energy-1881999459.html>

<https://it.businessinsider.com/most-least-toxic-countries-pollutionenvironment-2017-2/?r=US&IR=T>