



The Role of Renewable Energy in the Carpathian Region

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CONTENTS

- I. UNIDO in Brief
- II. Europe and NIS Programme
- III. Ongoing and planned RE and EE projects in the region
- IV. UNIDO Energy and Climate Change Programme
- V. Regional Workshop on Renewable Energy for the Carpathian Countries – pilot case
- VI. Renewable Energy and Energy Efficiency for Sustainable Development of the Carpathian Region – prospects for cooperation



I. UNIDO in Brief

UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability;

UNIDO has 173 Member States (as of December 2009);

Member States meet every two years at the General Conference, UNIDO's supreme governing body, which determines the guiding principles and policies, approves the budget and work programme of UNIDO and appoints the Director-General.



Thematic priorities of UNIDO

Within the UN system, UNIDO has the lead role on industrial development; it is the only specialized agency promoting the creation of wealth and tackling poverty alleviation through industry/manufacturing

The Organization focuses on three inter-related thematic priorities:

- Poverty Reduction through Productive Activities
- Trade Capacity-Building
- Energy and Environment

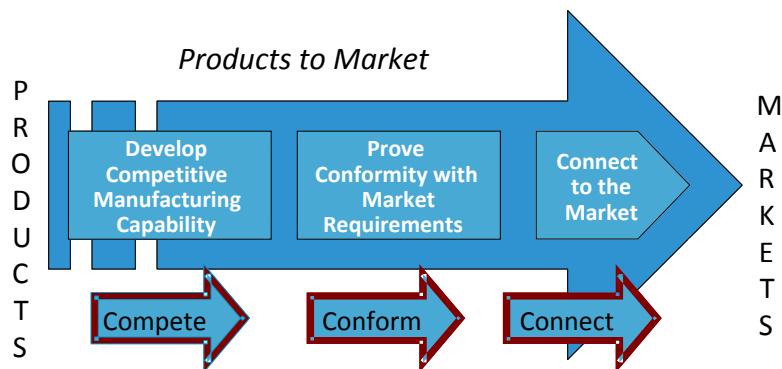


Poverty Reduction Through Productive Activities

- **Key approach:**
Empowerment of the poor through productive activities/income generation
- **Programmes:**
 - SME cluster development
 - Local-market agro-based industries
 - Post-harvest processing
 - Rural development
 - Women in development
 - Rural energy combined with productive activities
 - Linking small with large companies (CSR)



Trade Capacity-Building



... by upgrading supply capacities and standards infrastructures



Environment and Energy

Key approach:

- Prevent the production of industrial wastes;
- Manage any waste that is created in an environmentally sound manner;
- De-link the intensity of energy use from economic growth;
- Reduce the environmental impact of energy use;
- Provide energy for the promotion of productive activities.



Environment Programmes:

- **Montreal Protocol** to protect the ozone layer
- **Stockholm Convention** on POPs and international waters
- **Cleaner Production** through 34 NCPCs (with UNEP)

Energy Programmes:

- **Industrial Energy Efficiency** (also carbon emissions)
- **Renewable Energy for Productive Uses and Industrial Applications** (for SMEs)



Context: megatrends





Four core functions of UNIDO

- **Analysis and policy advice:** UNIDO helps developing countries meet evolving development requirements and global challenges
- **Global forum:** UNIDO generates/disseminates knowledge and provides a platform for cooperation, dialogue and partnerships
- **Normative functions:** UNIDO supports the development of global standards, e.g. in sustainability, green energy or energy efficiency
- **Technical cooperation:** UNIDO designs/implements specialized, tailor-made programmes and projects to support its clients

The core functions are complementary and mutually supportive: UNIDO's analytical work helps define priorities; experience gained in the technical cooperation is shared with policy makers; and fed back into the project cycle.



II. EUROPE AND NIS PROGRAMME

Core functions :

- Identify, develop and programme TC projects in response to the country's needs;
- Initiate and implement UNIDO global forum activities;
- Formulate country programmes for TC and global forum activities;
- Mobilize funds for TC activities from the donors in the region;
- Provide initial screening of the TC project concepts;
- Provide policy guidance and support to UNIDO Field Offices;
- Provide "clearing house" services to the Permanent Missions to UNIDO;
- Increase visibility of UNIDO;

Europe & NIS Programme covers 31 country.





III. Ongoing and planned RE and EE projects in the region:

- Improving Energy Efficiency and Promoting Renewable Energy in the Agro-food and Other SMEs in **Ukraine** (GEF; Budget: USD 5,231,000)
- Reducing Greenhouse Gas Emissions through Improved Energy Efficiency in the Industrial Sector in **Moldova** (GEF; Budget: USD 960,000)
- Improving Energy Efficiency in Industry in **Turkey** (GEF; Planned Budget: USD 2,693,002)
- Market Transformation Programme on Energy Efficiency in GHG-Intensive Industries in **Russia** (GEF; Planned Budget: USD 8,078,625)



IV. UNIDO Energy and Climate Change Programme

Thematic areas

- **Energy Efficiency**
 - Energy Management Systems and Standards
 - Industrial systems (motors, steam, compressed air, pumps)
 - SMEs
 - Energy and CO2 benchmarking
 - Sector or process specific technologies
- **Renewable Energy**
 - Access to electricity for productive use
 - Biomass for transportation fuels
 - Renewables for industrial applications
- **Advanced Energy and Carbon Technology**
 - Carbon free energy carriers: hydrogen (ICHET)
 - CO2 capture and storage for industrial applications



UNIDO Energy and Climate Change Programme

Services

- Policy and regulatory advice and development support
- Capacity building for institutions, EE service providers and industrial enterprises
- Support to demonstration, deployment and transfer of technologies
- Pilot projects
- Global forum and knowledge sharing activities

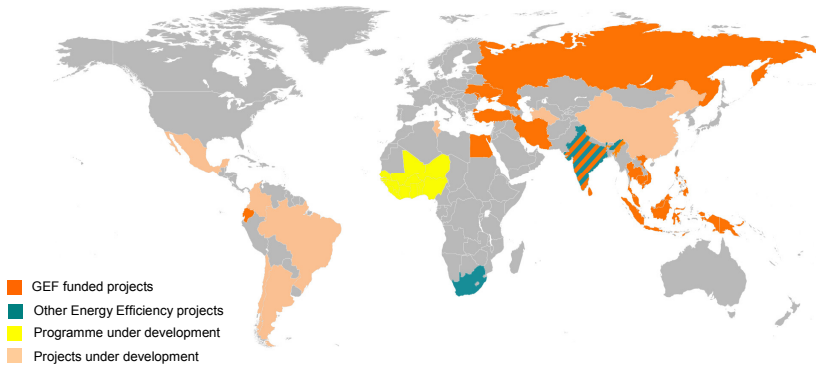


UNIDO GEF Funded Energy Portfolio – An overview

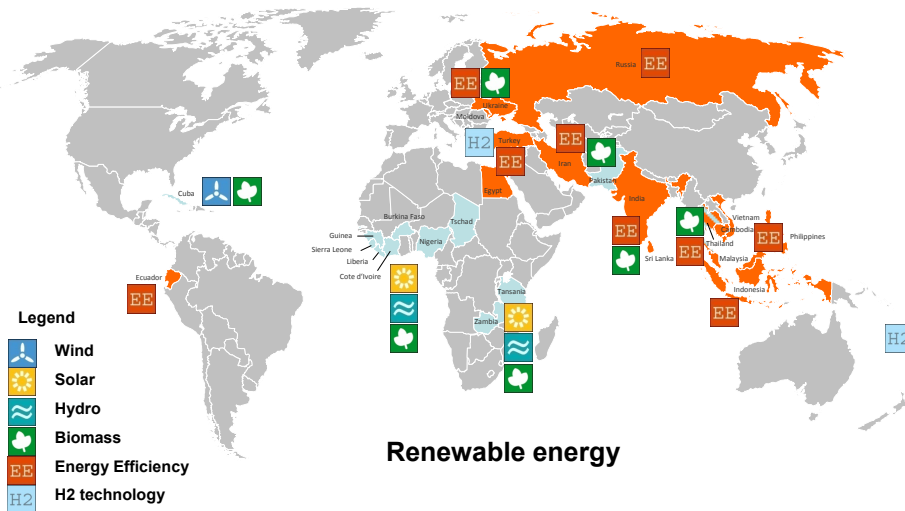
	Number of Projects	GEF Funds (Mio US\$)	Co-Funding (Mio US\$)	Total Projects Funding (Mio US\$)
Renewable Energy	14	28.3	79.8	108.1
Industrial Energy Efficiency	13	48.1	456.7	504.8
Technology transfer	4	9.3	26.4	35.7
EE and RE in Industry	2	12.3	38.7	51.0
Global	2	2.0	4.7	6.7
TOTAL	35	100.0	606.3	706.3



UNIDO Energy and Climate Change Portfolio



UNIDO Climate Change portfolio – An overview





V. Regional Workshop on Renewable Energy for the Carpathian Countries

The workshop was organized as a collaborative initiative between UNIDO, UNEP Vienna ISCC and the Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention),
Lviv, Ukraine 6-7 May 2008



Main achievements:

- Participation of more than 60 stakeholders from the Carpathian countries and result-oriented discussions on RE policy and financing options for the region;
- Review of the country "action plans" including policy and financing options for successful introduction of RE in the region;
- Good example of the fruitful cooperation between UNIDO, UNEP and the Carpathian Convention.



Outputs

- Preparation of the technical paper on renewable energy policies and financial instruments in the EU and non- EU member countries of the Carpathian Convention (*UNIDO publication "Renewable Energy in the Carpathian region, 2010"*);
- Identification of a regional cooperation programme to promote renewable energy development;
- Promotion of a regional level partnerships/network of institutions and agencies involved in RE to strengthen regional cooperation in the field of RE





Renewable Energy in the Carpathian Region



- Carpathian region: seven countries, EU and non-EU members: the Czech Republic, Hungary, Poland, Romania, Serbia, Slovakia and Ukraine;
- Close cross-border cooperation together with the greater awareness of possibilities for the utilization of RE sources, will enhance the economic prosperity of the region and support its sustainable development;
- Carpathian region has a great potential for renewable resources, especially biomass (from forestry waste and residues), but also wind and hydroenergy;
- However, the development of RE sources is at present limited by both the lack of proper policy and financial constrains;
- Potential for development of regional, i.e. cross-border RE systems, considering the comparative advantages of the Carpathian countries.



VI. RE for Sustainable Development of the Carpathian Region – Prospects for Cooperation

Possible areas of cooperation:

Identification of socio-economic, technical and environmental comparative advantages of different types of RE

Analysis of comparative advantages of different types of RE with a focus on socio-economic, technical and environmental aspects, taking into account regional settings of e.g. value chain ownership, income generation and together with regional impacts of different policy instruments like governmental incentives.

Regional markets, partnerships and best practices for transfer and application of renewable energy technologies and policies

- Comprehensive collection of best practices and regional showcases
- Promotion of regional partnerships for RE scaling-up for power generation and industrial application implementation
- Support to the development of regional RE market in the Carpathian region



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Thank you!

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