

# Environmental impacts and benefits of renewable energy



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# CEE Bankwatch Network

CEE Bankwatch is a network of environmental organisations from 12 countries in CEE.

We are monitoring the activities of the European Investment Bank (EIB) and the European Bank for Reconstruction and development (EBRD), and the EU Structural and Cohesion Funds in our countries.

CEE Bankwatch has advocated for 15 years for increased public financing for energy efficiency and renewable energy.

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  - Wind power
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# EU policy objectives

- Renewable energy Directive 2009/28/EC

but also

- “Birds Directive” 2009/147/EC
- “Habitats Directive” 92/43/EEC
- Bern Convention (for non EU states)
- Water Framework Directive 2000/60/EC
- EIA Directive

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# Renewable energy: benefits

## **On global level:**

- Tackling climate change.

## **On national level:**

- Lower dependency on energy imports.

## **On local level:**

- Clean and healthy environment;
- Self-reliance on local resources;
- Creation of “green” jobs.

# Renewable energy: concerns



- Env. impacts are site and project specific;
- Cumulative vs. single project impacts;
- Social and environmental concerns need equal consideration as economic and technical aspects.

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# Environmental impacts of wind power

- Birds safety during migration, wintering and feeding;
- Habitat destruction;
- Decline in biodiversity.

caused clashes with Natura2000 objectives in Bulgaria



# Environmental impacts of solar PV



- Requires land, eg. agricultural land that can be used for food production;
- May require water for washing the panels;
- Environmental and health and safety risks in manufacturing.

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# Environmental impacts of hydropower (1)

## Large HPPs

- Disruption of natural water flow of rivers;
- Destruction of natural habitats;
- Decline of biodiversity;
- Change of water quality;
- Change in micro climate;
- GHG emissions/ methane.

# Environmental impacts of hydropower (2)

## Small HPPs

- Disruption of natural water flow of rivers;
- Destruction of natural habitats;
- Cumulative effect (eg. change in micro climate).

In Bulgaria in the last 5 years 840 permits were issued.

# Environmental impacts of biomass production for energy

- Requires land, eg. agricultural land, thus competing with food production needs;
- May require water for irrigation;
- Use of fertilizers and pesticides, and soil and water pollution;
- Monocultures and GMO threats;
- May increase deforestation.

Thus recent sustainability criteria for EU MS.

# Conclusions (1)

**RES potentials in SEE region are abundant and development in the sector needs to be promoted, yet to avoid conflict with environmental objectives:**

- **Location** is crucial, eg. not in N2000 areas.
- **Strategic planning** - strategic sectoral, spatial planning and SEA - are crucial for avoiding clashes with food production needs, water management objectives, prospects for development of tourism etc.

# Conclusions (2)

- **Scale is of essence** – scaling up for attracting financing and reaching targets, but the smaller scale is more sustainable and less harming for the environment (eg. solar heating needs more promotion on local level).
- **Diverse mix** of renewable energy to avoid over-dependence and overexploitation of a single renewable source.
- **Energy Efficiency** hand in hand with RES to curb rising demand and to lower bills

# Thank you

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<http://bankwatch.org>

**Images from <http://bluelink.net> and <http://forthenature.org>:  
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