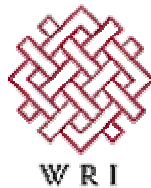


# ASSESSING GOOD PRACTICES IN POLICIES AND MEASURES TO MITIGATE CLIMATE CHANGE IN CENTRAL AND EASTERN EUROPE

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**Abstract:** *A comprehensive set of criteria for assessing good practices in policies and measures has been empirically applied by 6 countries in Central and Eastern Europe through a project led by WRI and the REC. The application suggests both methodological and substantive conclusions, which support decisions on implementing and monitoring climate change mitigation policies and measures.*

## **A. Introduction**

In 1998 the Regional Environmental Center for Central and Eastern Europe (REC) and the World Resources Institute (WRI) formed a partnership to address climate policy issues in Central and Eastern Europe (CEE). The primary goal of this partnership is to help CEE countries with economies in transition (EITs) 1) to find economic development paths that are less intensive of greenhouse gas emissions and 2) to create policy and institutional environments to support effective implementation of the UN Framework Convention on Climate Change and the Kyoto Protocol.

The WRI-REC partnership works with non-governmental organizations (NGOs) and governments in selected CEE countries on climate-related issues such as complying with reporting requirements and building institutional infrastructure to participate in market-based mechanisms, such as joint implementation. This year we have focused on evaluating policies and measures to mitigate climate change.

Under the Convention, industrialized countries and EITs in Annex I<sup>i</sup> have agreed to adopt national policies and take corresponding measures to mitigate climate change in their countries.<sup>ii</sup> Such policies and measures should help Annex I countries achieve the quantifiable emission reductions or limitations they have assumed under the Kyoto Protocol and the goals of the Convention.<sup>iii</sup> The Protocol and the Convention suggest that national climate change mitigation policies and measures (PAM) should include enhancement of energy efficiency and carbon sinks, promotion of renewable forms of energy and sustainable agriculture, and relevant sectoral reforms.<sup>iv</sup> In its recent report the IPCC defines a rather different set of actions under the PAMs, including emissions,

carbon or energy taxes, tradable and non-tradable permits, subsidies, voluntary agreements, technology and performance standards, product bans, and direct government spending such as investments in R&D.

The Convention and the Protocol do not define “good” or “best” practices in policies and measures. Participants at the G8 Environmental Futures Forum 2000, who discussed G8 experience in PAM, defined best practices as the optimal of the most progressive initiatives among countries’ domestic measures to mitigate climate change.<sup>v</sup>

WRI, REC, and NGOs from Bulgaria, the Czech Republic, Hungary, Poland, Romania, and Slovenia collaborated in designing and applying criteria for assessing good practices in climate mitigation policies and measures. A full menu of (six) criteria and associated factors for their measurement (see **Table 1** below) were initially designed at a workshop of the eight organizations involved, held in August 2000. Each of the national NGOs empirically applied the criteria to one or two climate change mitigation policies, measures or projects that it selected. At a meeting convened in September 2001, government officials and businesses from CEE countries discussed and reviewed the criteria, and findings.

**Table 1: Menu of Criteria and Factors Used in National Case Studies**

Criterion	Factors Used for Assessment
Environmental outcomes	<ul style="list-style-type: none"> <li>(i) GHG emissions reduced / potentially reduced. (Where specific data had not been collected, energy savings were used as a proxy);</li> <li>(ii) Reduction of other pollutants (e.g., NO<sub>x</sub>, SO<sub>2</sub>, particulates).</li> </ul>
Economic/social outcomes	<ul style="list-style-type: none"> <li>(i) Pay-back period (measured by the ratio between project costs and saving from reduced energy cost)</li> <li>(ii) Cost sharing (measured by ratio between private-public, local-regional-state budgets);</li> <li>(iii) Cost-effectiveness of CO<sub>2</sub> emissions savings;</li> <li>(iv) Job creation (measured by the number of new jobs);</li> <li>(v) Social benefits (measured by costs reduced for consumers, disadvantaged groups, or local administrations).</li> </ul>
Technical outcomes	<ul style="list-style-type: none"> <li>(i) Use of innovative projects/technologies compared to average in country;</li> <li>(ii) Use of renewable energy sources.</li> </ul>
Institution building potential	<ul style="list-style-type: none"> <li>(i) Development of institutional infrastructure to support good practices (e.g., new departments, positions, networks);</li> <li>(ii) Consolidation of new financing arrangements.</li> </ul>
Project sustainability	<ul style="list-style-type: none"> <li>(i) Institutionalization;</li> <li>(ii) Financial sustainability.</li> </ul>
Dissemination/replication potential	<ul style="list-style-type: none"> <li>(i) Information availability;</li> <li>(ii) Number of similar projects initiated in country;</li> </ul> <p>Conditions available for replication (incentives, policies, financing).</p>

Source: Meeting of CEE NGOs, Government and Business Representatives, WRI-REC Capacity for Climate Protection in CEE Project, September 2001.

The authors of the case studies and the participants at the two meetings agreed that we

can only talk of good practices rather than best, since there is insufficient information to compare different sets of practices. A good practice produces positive outcomes when assessed against the above criteria.

## **B. Evaluating Policies and Measures in Central and Eastern Europe**

The Convention and the Protocol stipulate that climate change mitigation policies and measures should conform to three principles: first, they should reduce GHG emissions and thus contribute to the Convention's overall goals<sup>vi</sup>; second, they should promote sustainable development; and third, they should correspond to national circumstances. The criteria and assessment factors are designed to help promote these principles (*See Table 1.*). This section briefly explores the criteria and their respective factors in the context of the six CEE countries included in this project.

i. **Environmental Benefits.** The factors used to assess the “environmental outcomes” criterion are reductions in GHG emissions and reductions of other pollutants, such as particulates, SO<sub>2</sub>, and NO<sub>x</sub>. This criterion captures diverse positive environmental outcomes from reducing climate change risks (and complying with treaty obligations) to improving regional and local air quality.

ii. **Economic and Social Benefits.** Economic and outcomes are measured by two different clusters of factors: those assessing the specific economics of the measures or projects, per se and those assessing the subsequent impacts on economic life (e.g., jobs and costs for consumers). The first cluster includes such factors as project pay-back period and CO<sub>2</sub> reduction costs, which will determine whether climate change mitigation measures are cost effective, while the second cluster looks at socially and politically relevant issues such as job creation and reduction of costs for consumers.

iii. **Technical Benefits.** Technical benefits are designed to measure whether climate change mitigation leads, in the implementing country, to technological innovation overall and in the energy sector specifically.

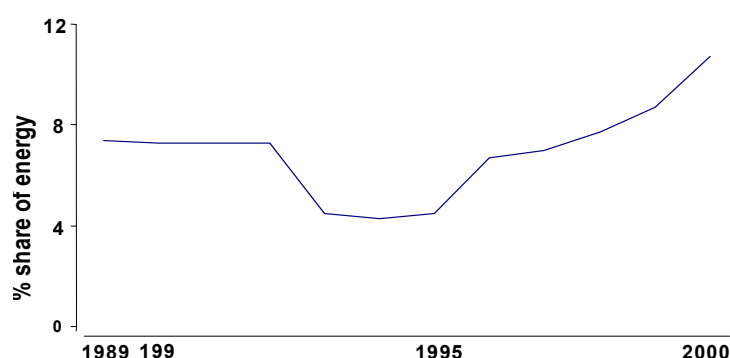
iv. **Additional Evaluation Criteria.** The final three criteria—institution building potential, project sustainability, and replication potential—are designed to indicate whether and, if so, how well climate change mitigation measures and projects can be sustained and repeated nationally and beyond. Some assessment factors are quantifiable, such as number of staff, institutional networks for implementing similar measures, and number of similar projects. Others are more difficult or even impossible to quantify, such as conditions for replication or consolidation of new financing arrangements.

The criteria are designed to ensure that PAMs both meet the goals of the Climate Convention and support national priorities of the CEE countries. For instance, measures that produce multiple environmental benefits will support the efforts of the CEE countries aspiring to join the European Union, to meet the EU strict environmental requirements and thus reduce overall investment needs for environmental improvement. Moreover, the public in each CEE country is more likely to provide political support to GHG mitigation measures if they also improve regional and local air pollution, which are much more visible and immediate than those of global climate change.

The economic and social outcomes of climate change mitigation measures are also critical for CEE. Most of these countries have not yet returned to their 1989 or 1990 GDP levels, and their economies are still recovering as the transition has decimated the

living standards for most of their populations. For instance, national communications to the UNFCCC Secretariat from three countries (the Czech Republic, Bulgaria and Poland) illustrate that significant political and social risks have delayed the anticipated phasing out of subsidies and liberalizing energy prices. A main reason for this delay is the heavy burden that energy costs have (and continue to impose) on socially disadvantaged groups in some countries.<sup>vii</sup> **Figure 1** shows how in Bulgaria energy costs, as a proportion of household expenditures, have risen rapidly over the past five years. To incorporate these political and social risks, one factor measures cost reductions for consumers.

**Figure 1: Bulgaria: Relative share of energy costs to total household expenditures.**



Source: EnEffect, *Bulgaria Power Sector Reform*, Sophia, 2001.

### C. Summary of CEE Studies

The criteria were applied to selected policies, measures and projects in six CEE countries.

In Bulgaria a case study applied the criteria to assess municipal and residential energy efficiency measures. It demonstrates that small scale measures at the municipal level have a high potential to reduce GHG emissions and that local governments have a significant interest in climate change mitigation efforts as well as a critical role in making them happen. A case study in the Czech Republic applied the criteria to government-planned mitigation measures in the transport sector. It suggests that not all planned measures will reduce GHG emissions from transport and that priorities for developing the transport sector need to be reviewed.

The Hungarian case study applies the criteria to an energy efficiency credit line. It demonstrates that government spending is not as effective in reducing GHG emissions as macroeconomic reform designed to improve overall economic efficiency. Earmarked soft financing, however, complements macroeconomic reform by achieving emissions reductions and efficiency primarily by the public municipal sector whose response to microeconomic reform is slower. In Poland, a case study applied the criteria at two levels: climate mitigation policies defined by the government in the Polish National Communication, and small and medium renewable projects to implement the Polish government objective of increasing the share of renewables. It shows that the price of reducing a ton of GHG emissions differs dramatically, is relatively high, and that

renewables are not currently competitive to conventional sources of energy. Soft financing, fixed obligations to purchase renewables and conditions designed to improve competitiveness first in the renewables sector, will increase their share and improve their competitiveness vis-a-vis traditional sources of energy.

In Romania, the criteria are applied to two CHP district heating plants—one is a small-scale, public-private partnership; and the other is large-scale, government-owned facility. The study demonstrates that the myriad benefits (e.g., in environmental, economic, social, institutional terms) stemming from the small-scale CHP project may be a “good practices” candidate and that the large scale CHP project failed to generate sufficient evidence to draw any substantive conclusions. In Slovenia, CO<sub>2</sub> tax exemptions, the CO<sub>2</sub> tax level as compared to other taxes and the uncertainty created by the electricity and energy markets requirements for EU accession undermined the potential positive impact of the CO<sub>2</sub> tax on decisions for new CHP installations.

#### **D. Methodological Findings**

The application of the criteria to selected policies and measures in the six CEE countries suggests a number of general methodological findings:

- Quantitative data about individual projects is relatively easy to find and to calculate, though inconsistent measurement methodologies may narrow how the data can be applied. For instance, although every study includes data for CO<sub>2</sub> emissions reductions, only the Bulgarian and Polish studies also provide data about reductions of other pollutants, such as SO<sub>2</sub>, NO<sub>x</sub>, and particulates. As a result, this information allows conclusions to be drawn about additional environmental benefits from energy efficiency and renewables. Some quantitative data, however, are not available or difficult to estimate. These include data to measure such factors for instance as job creation or cost reduction for disadvantaged groups.
- Qualitative factors for criteria measurement are much more difficult to apply. In the CEE context, nonetheless, such qualitative criteria and factors such as institutional development, institutionalization and conditions for replication often determine whether climate change mitigation measures will be implemented on a large scale. For instance, in Bulgaria a single demonstration project—accompanied by a significant investment in information dissemination, capacity building and networking—has strengthened some institutions and laid the groundwork to replicate the energy efficiency project in residential buildings in at least 25 towns. Qualitative information however is not always readily available or is more difficult to assess.
- The criteria can be applied to specific projects and initiatives with relative ease, rather than to macro-economic policies. The six case studies are a first attempt to empirically apply the criteria and at this stage no effort has been made to compare the pros and cons of different projects and measures. When applied consistently, however, the criteria can reveal the pros and cons of one project type versus another. Such information is critical for sound decisions on climate change mitigation activities.
- Though in most case studies the criteria are applied to specific projects, their findings support conclusions about the macroeconomic policies, which support or obstruct project implementation or scaling up.

The criteria and the factors for assessing PAMs were designed to meet the three principles defined by the Convention for policies and measures: reducing GHG emissions, promoting sustainable development and corresponding to national circumstances. In this sense, the criteria were developed from a CEE perspective, and even only from the perspective of those CEE countries that aspire to join the European Union. Many of these criteria, however, might be relevant to other countries as well. For instance reduction of costs for consumers, job creation or project financial sustainability are likely to be important considerations for any country considering climate change mitigation policies and measures.

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<sup>i</sup> Annex I includes the following countries: Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, EU, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States (Source: <http://www.unfccc.int>)

<sup>ii</sup> UNFCCC, Art. 4 Commitments, 2 a).

<sup>iii</sup> Annex B in “Report of the Conference of the Parties on its Third Session, held at Kyoto from 1 to 11 December 1997” FCCC/CP/1997/7/Add.1

<sup>iv</sup> Kyoto Protocol, Art. 2

<sup>v</sup> Main Conclusions of the G8 Environmental Futures Forum 2000 on Domestic Best Practices Addressing Climate Change in G8 Countries, Held in Japan in February 2000. Global Environmental Department, Environmental Agency of Japan.

<sup>vi</sup> UNFCCC, Article 4; Kyoto Protocol, Article 2.

<sup>vii</sup> Center for Energy Efficiency. *Bulgaria Power Sector Reform*, Sofia, December 2000.