

2011 Survey of resource efficiency policies in EEA member and cooperating countries

COUNTRY PROFILE:

Croatia



Country information on resource efficiency policies,
instruments, objectives, targets and indicators,
institutional setup and information needs

May 2011

This country profile is based on the information provided by Croatian Environment Agency in coordination with the Ministry of Environment Protection, Physical Planning and Construction. The information is current as of February 2011.

This country profile was prepared as part of the EEA-ETC/SCP 2011 survey of resource efficiency policies, which aims to collect, analyze and disseminate information about national experience in the development and implementation of resource efficiency policies in EEA member and collaborating countries. The work resulted in the following outcomes:

- **Short 'country profiles' (this document)** - self assessments prepared by countries, describing the current status of resource efficiency policies, including key strategies and action plans, policy objectives, instruments, targets and indicators used, institutional setup and information needs.
- **Summary report** - prepared by the EEA and ETC/SCP, the report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies information needs and knowledge gaps.
- A session on resource efficiency policies during the 2011 EIONET workshop to discuss further needs and to facilitate information sharing and experience exchange among EIONET members.

More information about resource efficiency policies, including an analytical report "Resource efficiency in Europe" and thirty one country profiles, can be found at:

<http://www.eea.europa.eu/resource-efficiency>

1. Resource use in Croatia – facts and figures

1.1 General Facts and figures about the country



Source:
<https://www.cia.gov/library/publications/the-world-factbook/index.html>

Population (projected inhabitants for 2010) [1]	4,425,747
➤ Percent of total EEA-32	0.75%
Surface area (km ²) [2]	56,594
➤ Percent of total EEA-32	1%
GDP at market prices – Purchasing Power Standard – Current Prices (Million Euro, 2009) [3]	66,464.9
➤ Percent of total EEA-32 (minus Liechtenstein)	0.5%
GDP per capita in Purchasing Power Standards (PPS) [4] EU27=100 (2008)	64
Urban population (rate of pop., 2009) [5]	57.5%
Main economic sectors and their share in total GDP (2009 est.) [2]	
Agriculture	6.8%
Industry	27.2%
Services (2010 est.)	66%
EU accession date [6]	Application 21.2.2003

Additional relevant background information on Croatia (and on 37 other EEA member and cooperating countries) can be found at the SOER2010 website:

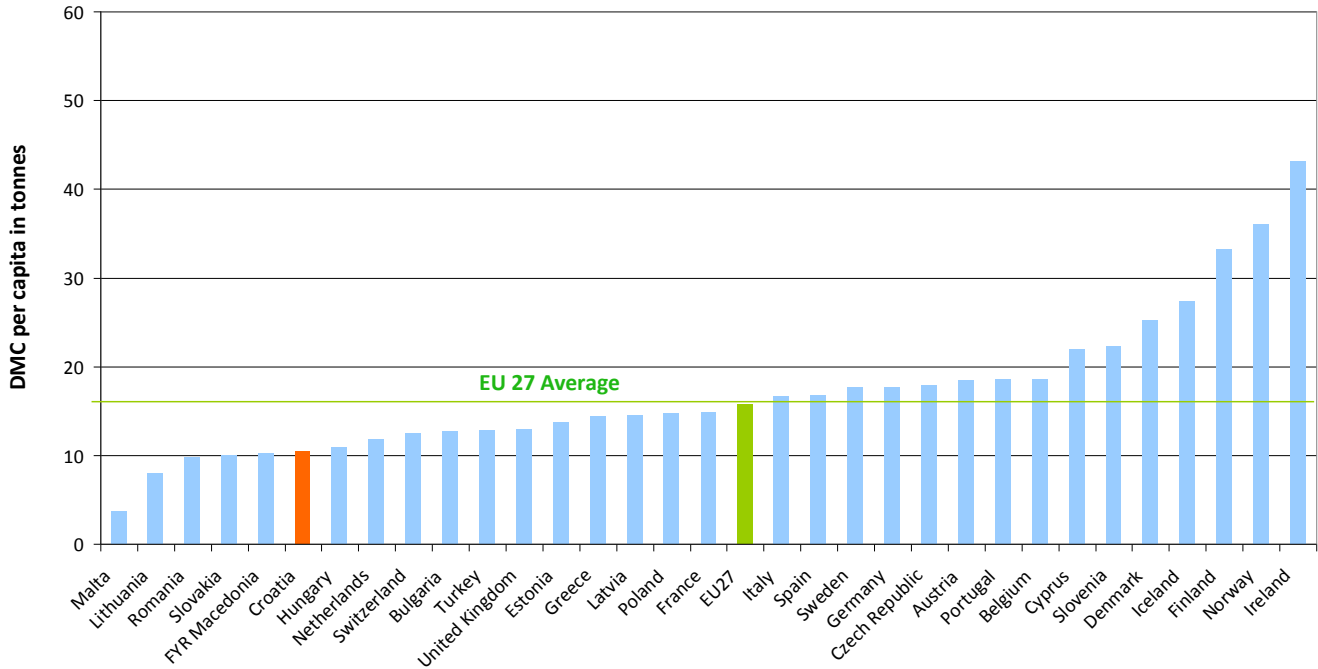
<http://www.eea.europa.eu/soer/countries/hr>

Factsheet on national waste policies for Croatia is available at:

http://scp.eionet.europa.eu/facts/factsheets_waste/2009_edition/factsheet?country=HR

1.2 Facts and figures on resource efficiency for Croatia

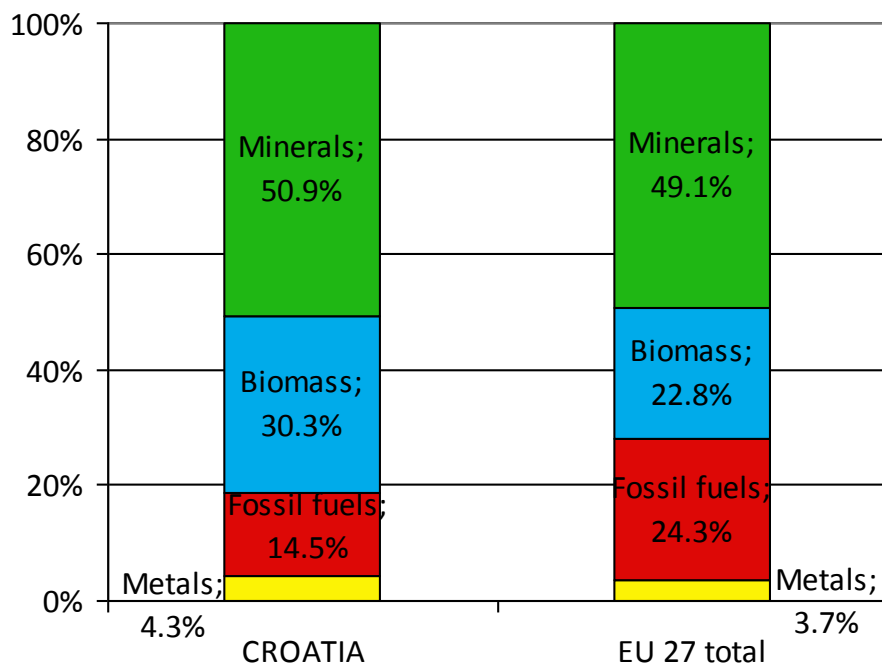
Use of resources per capita 2000 [tonnes DMC/capita]



Source: Eurostat, OECD, Total Economy Database and Steinberger et al, 2010. [7]

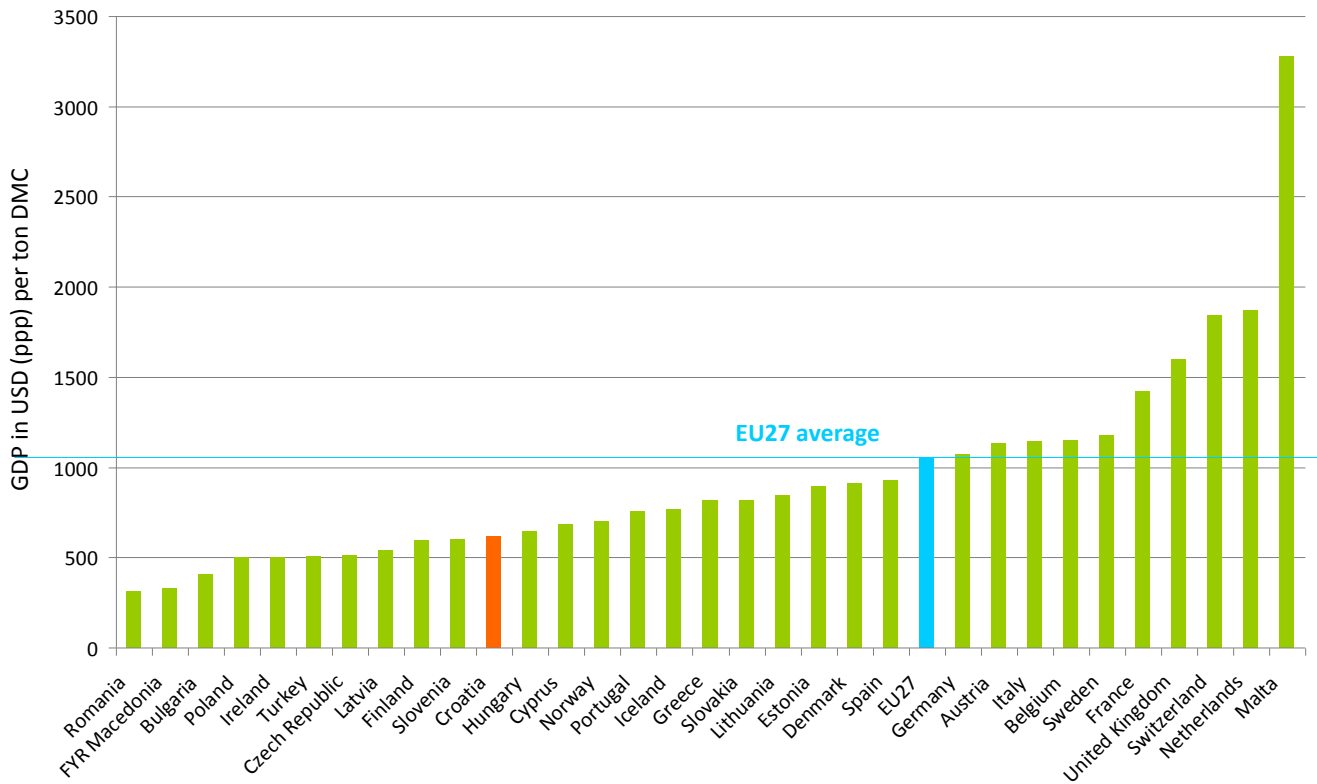
The data for Use of Resources per Capita used in this profile is from 2000. As such it is not directly comparable with other country profiles.

Breakdown of DMC by type of materials (2000)



Source: Eurostat and Steinberger et al, 2010. [8]

Material productivity 2000 [USD ppp/ton DMC]



Source: Eurostat, Total Economy Database, The Conference Board and Steinberger et al, 2010. [9]

The data for Material Productivity used in this profile is from 2000. As such it is not directly comparable with other country profiles.

2. Evolution and main drivers for the development of resource efficiency policies

The natural environment is the largest economic and social capital of Croatia and one of key elements of economic development. Therefore, soon upon its constitution Croatian Parliament adopted [Declaration on Environmental Protection](#) in the Republic of Croatia [19]. Following that the state has started organizing, adopting acts, strategies and plans and introducing measures for environment protection. National resource efficiency strategy or any specific action plans for resource efficiency have not yet been developed, but the concept of an efficient and sustainable management of nature resources is presented in all national environmental legislation, from the first [Environment protection act](#) [10], where the preservation of the quality of living and inanimate nature and the rational use of nature and its resources were the main priorities, to current [Strategy for sustainable development](#) [11].

Development of the Environment Protection Action Plan, which arises from the Sustainable Development Strategy [11] and hence replaces the old [Environmental Strategy](#) [29] and [National Environmental Action Plan](#) [30], is also currently under way. The new Action Plan is primarily concerned with the protection of environmental components (air, water, soil, sea, etc.) and efficient management of sectoral pressures (transport, energetics, industry, tourism, etc.). The Action plan for Environment Protection will come into force by the end of the year.

Some of the basic goals and measures stated in the Action plan are:

- Encouragement of energy efficient housing;
- Reduction of fossil fuel consumption of fossil fuels in power stations by using waste and / or landfill biogas
- Encouragement of innovative projects that promote cleaner production, eco-efficiency, minimize energy consumption, natural resources, emissions, waste generation and overall environmental impact, etc.

Growth of economy and industrial production in Croatia is connected with increase in energy consumption and development of infrastructure is associated with expansion of transport and tourism. This puts increasing demands on environmental structure in Croatia, particularly for high quality and reliable environmental services, such as water supply and the disposal of waste water, the management of solid waste, maintaining a clean air environment, clean sea and preserving the natural habitat. Over the past years, the environmental protection system in the Republic of Croatia has been continuously improved and numerous strategies and action plans were adopted. However, considerable investments into the environmental infrastructure are still needed in order to reach adequate level of environmental services and standards and be fully in line with the *EU acquis*.

On the other hand, Croatia is a party to the UN Framework Convention on Climate Change and an Annex B country of the Kyoto Protocol so it has the obligation to reduce its GHG emissions by 5% compared to 1990. With this goal a number of activities were carried out: harmonization of national legislation with EU directives, setting up the national emission trading system, implementation of many projects aimed at reducing GHG emissions, as well as reduction of the consumption of substances that deplete the ozone layer. So far the most concrete steps for GHG



reductions are taken in the energy sector which accounts for around 56% of total GHG emissions in Croatia. A number of secondary acts, aiming at increase in energy efficiency and use of renewable energy sources and efficient cogenerations, have been adopted, which should indirectly result in mitigation of the environmental impact of the Energy sector and also in increase of efficiency in energy resources exploration. The [Energy Strategy](#) [12] is a baseline document which defines energy policy and sets the targets and measures for the reduction of GHG emissions.

3. Overall Policy Approach for Resource Efficiency

Croatia has no specific national resource efficiency strategy or specific action plan for resource efficiency, but it should be emphasized that the concept of an efficient and sustainable management of natural resources is presented in national environmental legislation and elaborated in a number of specific sectoral strategies, as follows:

The **Strategy for Sustainable Development** of the Republic of Croatia [11], which was adopted by the Croatian Parliament in February 2009, contains the basic principles and criteria for determining goals and priorities that will ensure sustainable development of the country. The Strategy makes reference to several, for resource use/ resource efficiency important, key areas:

- Environment and natural resources;
- Promoting sustainable production and consumption;
- Ensuring energy independence and increasing in energy efficiency

One of the main principles identified in Sustainable Development strategy is renewal (for example, by reuse or recycling) of natural resources. More information is available in a provisional translation of the Strategy:

http://www.mzopu.hr/doc/Strategy_for_Sustainable_Development.pdf

Some of the major objectives for Croatia according to the Strategy are:

- nature protection, which implies the conservation of biological and landscape diversity and protection of natural values;
- sustainable economic development that would have as little impact as possible on nature degradation and waste production;
- quality and stable energy supply with necessary reduction of negative impacts on the environment and society – this implies increasing the share of energy production from renewable energy sources and implementation of energy efficiency measures in all sectors;
- promotion of cleaner fuels and more sustainable transport technologies;
- sustainable management of the Adriatic sea, coast and islands and conservation of marine ecosystems.

The Strategy objectives will be implemented through several action plans that will be developed in the near future.

For example, the **Action plan for sustainable consumption and production** is currently being prepared by the Ministry of environmental protection, physical planning and construction ([MEPPPC](#)) in a wide consultation with governmental bodies and business and civil sector and it is expected that it will be adopted in the first half of 2011. The plan represents a framework for the development and implementation of programs and measures for sustainable consumption and production in the five-year period. Measures foreseen in the SCP Action Plan cover also the issue of sustainable management of natural resources, for example:

- to develop a sustainability criteria for production of biofuels;
- to adopt a regulation on the management of protected areas of nature by which would the application of organic farming be the only permitted method of agricultural management in these areas;

- to strengthen national eco-labelling scheme; development of criteria's for products and services that have high environmental impact;
- to prepare a plan of remediation of touristic sites;
- to introduce financial measures that will stimulate consumption and reduce environmental emissions from industry sector;
- to promote the environment management systems in industry sector in order to reduce resource consumption and emissions in the environment;
- to encourage the reduction of resource consumption and emissions in the environment by using the Green Public Procurement.

Additionally, the **Action plan on Adriatic Sea, coast and islands** is currently being prepared in consultation with all the relevant governmental bodies and business and civil sector coordinated by MEPPPC. Since the Adriatic Sea and coast are considered a resource of strategic importance for sustainable development of Croatia, resource efficiency is going to be a very important part of it. Croatia signed the Protocol on integrated management of coastal zones to the Barcelona convention and the implementation of this Protocol will be of high importance for the efficient resource management of the coastal zones and the sea.

The **Action plan** for implementation of the activities planned in [the Economic recovery program \(2010\)](#) [13], includes the development of measures that should restore the Croatian economy on a path of sustainable growth and deadlines for their implementation. Few measures include the environment preservation and encouraging the use of renewable energy and energy efficiency - for example:

- the MEPPPC, the Ministry of Economy, Labour and Entrepreneurship and the Ministry of finance should prepare an Action plan for the development and implementation of green technologies,
- the Ministry for the regional development, forestry and water management and Croatian Forests ltd. (Hrvatske šume d.o.o.) should organize the development of criteria for tendering and tendering for the sale of firewood and wood chips for production of heat and/or electricity.

The [Regional Development Strategy of Croatia 2011-2013](#) [14] is a basic strategic document for future long-term development of Croatia. The main objective of the Strategy, which was built on the principle of partnership, is a more balanced development of the country and reduction of socio-economic disparities. One of the strategic objectives for all Croatian regions is sustainable management of cultural property and natural resources in order to enhance the competitiveness of the region and sustainable management of environment and energy.

4. Strategies or action plans to improve resource efficiency for individual economic sectors, products or product groups

Sector-specific strategies and action plans:

1. The [National Waste Management Strategy](#) [15] assesses the situation, identifies the problems and obstacles and establishes the framework for waste reduction and sustainable waste management.
2. The Waste Management Strategy is being implemented through a [National Waste Management Implementation Plan 2007-2015](#) [16] which serves as a framework document for waste management plans of the counties and for elaboration of individual projects that fit into the county/regional integrated waste management system. The concept of the Plan is based on the waste management hierarchy which gives priority to waste prevention, recycling, reuse and other types of recovery.
3. The [Water Management Strategy](#) [17] is a fundamental national long-term strategic water management document. It establishes a unified water management policy and an integral and coordinated approach to improving the water system in line with international commitments. It also defines strategic goals, establishes current and future needs and services, and identifies how they might be met through management plans for the 4 river basins in the country.
4. The [Air Quality Protection and Improvement Plan](#) [18] for 2008-2011, adopted in 2008, is an enforcement document which sets up fundamental objectives of air quality protection/improvement and long-term measures for their accomplishment.
5. The [Strategy and Action Plan for the Protection of Biological and Landscape Diversity](#) [19] for 2008 - 2018 focuses on conservation of biological and landscape diversity, harmonization of legislation with the relevant EU directives and regulations, meeting the obligations resulting from the international agreements, establishment of nature protection IT system with the database connected to the national IT system and improvement of institutional and extra-institutional aspects of education on biological diversity and the public participation in decision-making procedures.
6. The **Energy Strategy** [12], adopted in 2009, has a purpose to define the development of Croatian energy sector by 2020 while acknowledging accession process and adoption of the EU *acquis* thus ultimately building sustainable energy system that satisfies 3 basic objectives: security of energy supply, competitiveness of energy sector and economy and environmental protection and sustainable energy sector development. The Strategy follows the EU targets and priorities of common energy and climate change mitigation strategy.
7. An Action plan that will underpin the Energy Strategy should be adopted by the end of 2011.
8. The [National forest policy and strategy](#) [20] aims at increasing the contribution to the national economy by sustainable management, use and comprehensive protection of forest resources and biodiversity, by applying research results, compliance with international norms and resolutions, and by taking into consideration the rights of local communities.

9. The [Strategy for the development of Industrial processing of wood and paper](#) [26] recognizes that the ecosystem management should become one of the priority activities for each branch of this sector and by that it primarily relates to the implementation of measures such as introduction of the statutory basis for organizing the collection of waste paper (incentives) or introduction of the ECO label.
10. The main purpose of the [Strategy for agriculture and fisheries](#) [27] is to determine the dynamics of the realization of the objectives defined by the [Law on Agriculture](#) [28]. A few of those objectives refer to sustainable management and efficient use of national resources, for example: conservation of natural resources and promotion of sustainable agriculture, protection of rural areas and preservation of the traditional rural values, promotion of the efficient production in agriculture in order to achieve competitiveness in domestic and world markets, etc.

5. Individual types of resources identified as priority for national or sector-specific resource efficiency policies

The **Strategy for Sustainable Development** (2009), in the part related to the environmental protection, nature conservation and natural resource, defines the main objectives for the protection of:

- forests, agriculture lands;
- air, land, water;
- the Adriatic sea, coast and islands.

It also encourages the sustainable production and consumption principles, promotes rational energy management, implementation of energy efficiency measures and increase in renewable energy consumption.

6. Strategic objectives, targets and indicators on resource efficiency

Examples of strategic objectives:

- Implementation of sustainable agricultural production in the sense of using agricultural land in accordance with the principles of sustainable soil management [11];
- Use of forests and forest lands in accordance with the principles of sustainable forests management [11];
- Reduce harmful emissions into the main environmental components to the smallest extent possible and particularly provide protection against pollution of groundwater i.e. freshwater reserves [11];
- In planning economic activities and especially exploitation projects, rational use of non-renewable natural resources and sustainable use of renewable natural resources must be ensured [11];
- Prevent the loss of terrestrial biodiversity. [11];
- Sustainable management of fish resources [11];

- Avoidance of generation and reduction of waste quantities at source and quantities of waste to be disposed, with simultaneous increase of material and energy recovery from waste [15];
- Ensuring availability of sufficient quantities of good quality drinking water for supply of the population [17];
- Achieving and maintaining good status of water in order to protect aquatic and water-dependent ecosystems[17];
- Gradual reduction of air pollution aiming at protection of human health, environment and material assets [18];
- Conserve biological and landscape diversity as a basic value and potential for the further development [19];
- Ensure integral nature protection via the cooperation with other sectors [19];

Examples of targets:

- Reduce the loss of marine and coastal biodiversity and increase the number of protected areas [11];
- Demine all mine infested areas as soon as possible [11];
- Preserve water quality and prevent pollution, including wastewater treatment, improve the national level of coverage by the public water supply (increase the supply rate to 85-90%), improve the level of wastewater treatment and sewage network availability, increase the quality of the flood protection system, take account of renewability of resources and increase protection of sensitive aquatic and water-dependent ecosystems as well as marine and coastal ecosystem [11];
- By 2010 reduce quantities of finally landfilled waste as well as generated hazardous waste by approx. 20% in comparison to 2000. [11];
- Increase the share of arable land from the present 1,092,000 ha to 1,800,000 ha, by using uncultivated land that presently amounts to 947,000 ha [11];
- By 2013 increase the share of areas used for ecological production (including pastures and forests) to at least 5% and support the development of the market for ecological products [11];
- 20% of renewable energy sources in final energy consumption up to 2020 [12];
- 20% decrease in greenhouse gas emissions (in comparison to 1990) up to 2020 [12];
- 10% of bio fuels in the total consumption of petrol and diesel fuel up to 2020 [12];
- through implementation of the energy efficiency measures reducing direct energy consumption by 9% in the period of 2008 – 2016 (compared to the average consumption in the period 2001 - 2005) [12];

Examples of indicators [11]:

- Conversion of land/soil,
- Water consumption by sector,
- Exploitation index of renewable water resources,
- Domestic material consumption,
- Total quantity of generated waste ,
- Quantity of recycled waste and quantity of landfilled waste,
- Area under organic farming in the total agricultural production,
- Annual energy consumption per capita,

- Share of renewable energy sources in energy consumption,
- Share of biofuels in total fuel consumption of transport,
- Catch of fish and other marine organisms.

7. The institutional setup for the development and implementation of resource efficiency policies

At the operational level, the [Ministry of Environmental Protection, Physical Planning and Construction](#) (MEPPPC) is responsible for administrative and other tasks related to general environmental protection policy and achieving the conditions for sustainable development. However, some parts of the environment protection are responsibility of other ministries: the Ministry of Culture, [Ministry of Agriculture, Fisheries and Rural Development](#), Ministry of Regional Development, Forestry and Water Management, [Ministry of the Sea, Transport and Infrastructure](#), Ministry of Tourism, [Ministry of Health and Social Welfare](#), Ministry of the Economy, Labour and Entrepreneurship, Sports.

For example:

- The **air quality monitoring and air pollution prevention**, and **protection of marine environment** activities on national level in Croatia is under the responsibility of the MEPPPC which cooperate with other state bodies and institutes involved in air quality monitoring activities, health and nature protection, monitoring of meteorological conditions and monitoring of marine waters and sea bathing water quality.
- **Water management** in Croatia is under the responsibility of the [Ministry of Regional Development, Forestry and Water Management](#) and the implementing public institution – [Croatian Waters](#) (Hrvatske vode).
- The MEPPPC is responsible for the development and implementation of the **waste management** policy at the national level. Institutional responsibilities are divided across vertical sectors – the State is responsible for managing hazardous waste and waste incineration. Counties, including the City of Zagreb, are responsible for managing all other types of waste, excluding municipal waste which is under the jurisdiction of local level government (municipalities and towns). Regional and local level implements public policies in its own domain according the waste management plans for a respective level.
- Institutions responsible for **nature protection** on national level are the [Ministry of Culture](#) (MoC), the [State Institute for Nature Protection](#), public institutions for management of national and nature parks, and on regional level county public institutions for management of other protected areas, as well as county administration offices. In the MoC the two directorates are directly responsible for nature protection issues - Nature Protection Directorate (NPD) and Directorate for Nature Protection Inspection (DNPI).
- The [Ministry of Economy, Labour and Entrepreneurship](#) (MELE) is a line ministry responsible for overall economic relations, including **energy and mining sector**. The MELE conducts active policy of employment and administrative and other work concerning industry, shipbuilding, energy, mining, crafts, cooperatives, small and medium entrepreneurship, trade, trade politics, national production protection politics, economic cooperation with foreign countries.

An important role in the development and implementation of the environment protection and resource efficiency policies also belongs to the [Sustainable Development and Environmental Protection Council](#) which was established by the Croatian government for the purpose of achieving coordinated and harmonised economic development in the context of environmental protection and ensuring conditions for sustainable development, as well as for the continuity of professional and scientific basis for regulation of certain issues in the field of environmental protection and sustainable development.

Also, there are numerous agencies and centers that, through their work activities, encourage the strengthening of environmental protection and efficient use of resources.

For example:

- The **Croatian environment agency (CEA)** has the obligation to analyze and interpret the collected environmental data and provide, to the state administration, the Government and the Parliament, the information necessary for efficient implementation of the environmental policy. In addition to these basic tasks, the Agency is active on a much wider scale as it takes a pro-active part in planning and development of new environmental protection forms and follow-up of the environmental action plans and projects. It harmonizes and co-ordinates the data flows and plans all parts of national environment information system (CEIS):
 1. defining the need for measurement of individual parameters (indicators),
 2. method definition/review,
 3. measurement planning – frequency, institutions, financing, and the like,
 4. setting up the measurement and data processing QA/QC System,
 5. information system levels of data submittal and exchange,
 6. legal background for data accessibility definition.

The Agency uses the data from the CEIS for production of the State of the Environment Report of the Republic of Croatia and other various reports by individual topics (by themes, regions, indicator impacts, etc.).

- The **Croatian Chamber of Economy (CCE)** is an independent professional and business organization of all legal entities engaged in business which represents economic interests before economic policy makers by means of written materials, opinions on the respective measures or bills, active participation in Government or ministry sessions, either as a member or upon invitation, mandatory position statements for parliamentary committees - primarily on economic, budgetary, financial, labour and social policy issues. The CCE also prepares materials on topical economic issues and refers them to relevant departments as joint proposals of the business community. The CCE also commissions studies, thus harnessing the professional and scientific communities for the benefit of the economy.
- The **Croatian Business Council for Sustainable Development (HR BCSD)** has 40 members, representatives of the Croatian economy, who, through HR BCSD, participate in the promotion of sustainable development in economy and represent the economy in sustainable development. The goals of members and institutions are:
 - acting within the framework of sustainability,
 - supporting the orientation towards sustainable development in economic, political, legal and social life,

- encouraging changes that will facilitate the transition to sustainable development in Croatia,
- representing the economy in issues related to sustainable development in Croatia and internationally.
- The **Croatian center for cleaner production (HCCP)**
- The **Center for Technological Transfer (CTT)** - established by the Faculty of Mechanical Engineering and Naval Architecture with the following goals:
 - Improvement of technological processes in the Republic of Croatia primarily for the needs of areas of Mechanical Engineering and Naval Architecture,
 - Linking science and technology with economy,
 - Launch of innovative projects aimed at sustainable development,
 - Lifelong education for experts in the industrial sector with the aim of successful technology transfer process and increasing the competitiveness of domestic industry.
- The **National Competitiveness Council (NCC)** - an independent advisory body comprised of 23 members and four key interest groups (the business sector, government, trade unions, and the academic community) with the goal of creating dialogue, partnership and consensus on programs and policies that are critical to the sustainable growth and development of the country. One of the NCC roles is recommending and creating guidelines for development policies. They are also the authors of the *55 Policy Recommendations for Raising Croatia's Competitiveness*. The proposed Policy Recommendations are not a list of measures that the Government of the Republic of Croatia should implement by itself, but a set of proposals and guidelines for activities that the Council is submitting to the broadest possible public and to the Government for consideration. The work of the NCC is not yet oriented to sustainability and resource efficiency. At this moment the NCC is preparing the charter of the development of the Republic of Croatia until 2025 which should coincide with the Government's economic recovery program and thus will probably be sign by the Government.

8. Selected policy instruments or initiatives on resource efficiency presented in more detail

Economic instruments

There are a number of economic instruments aiming at environment protection and at the same time being of importance from the resource efficiency aspect:

- charges levied on polluters of the environment - The charge for emissions of carbon dioxide (CO₂), sulfur oxides expressed as sulfur dioxide (SO₂) and nitrogen oxides expressed as nitrogen dioxide (NO₂), which are paid by subjects who owned or used a single source of CO₂, SO₂ and NO₂ emissions;
- the charge levied on environmental users - The charge for buildings subjected to implementation of the procedure for environmental impact assessment. Liable to pay are all owners or trustees of such buildings;
- charges levied for burdening the environment with waste - The charge for municipal waste or non-hazardous technological (industrial) waste deposited in landfills and the charge on hazardous waste;

- special environmental charge levied on motor vehicles - The charge paid by subjects who own or are authorized to drive motor vehicles at the registration and verification of the technical soundness of the vehicles;
- fees on production / import of products which after the expiration of their lifetime become one of the "problematic" special categories of waste (packaging, oils, batteries, accumulators, EE equipment, vehicles, tires);
- fees for water use and protection;
- fees for the use of beneficial functions of forests.

Some of above mentioned fees paid by the taxpayers - subjects to payment for environmental protection and energy efficiency - are collected by the **The Environmental protection and energy efficiency Fund (EPEEF)**.

The EPEEF, from its founding in 2003, performs financing, preparation, implementation and development of programs, projects and related activities in the field of conservation, sustainable use, protection and improvement of environment and in the field of energy efficiency and renewable energy use.

This implies that one part of the funds raised through taxes is used to achieve the goals of improving air quality, soil, water, sea, mitigation of climate change and ozone layer protection through financing the projects that have as their purpose the development of systems for measuring air quality and emissions, the construction of filters for purifying emissions into the environment, reconstruction of existing plants to reduce harmful emissions, the transition from solid fuels to gaseous fuels, improving the existing boilers and construction of eco heating plants. Certain funds have been invested in projects of biological and landscape diversity in order to fulfil Croatia's obligations in its EU accession process.

The second part of the fund is invested in energy efficiency projects which include the implementation of national energy programs and energy audits, promotion of renewable energy sources and sustainable building, promotion of educational, research and development studies and programs, promotion of cleaner transportation technologies and information campaigns like "Promoting energy efficiency in Croatia", "Energy Management in Cities and Counties" and governmental "Program for energy efficiency in buildings owned by the state - Bring your house in order" developed in collaboration with the UNDP Croatia [23].

On the other side, all legal persons engaged in economic activity have to pay a quarterly *fee*, in the amount of 0,0525% of total revenues, *to use the beneficial functions of forests*, which is collected by the national company for forests management – [Croatian Forests](#) Ltd (Hrvatske šume). The collected money is used for financing activities required for biological regeneration, forest protection, management of the forest on karst, rehabilitation and reconstruction of stands affected by drying and other disasters, construction of forest roads, clearance of forest areas and other work necessary for preservation and promotion of beneficial functions of forests, the Seed Producers activities, conservation of gene pool and raising the clonal seed orchards, scientific papers in the field of forestry and costs of production, renewal and revision of management programs of the forest owners. Croatia is one of the first countries which introduced, under the Article 63, Paragraph 2 of [the Forestry Act](#) [21], such economic measure that enables sustainable management of national forests.

Energy audits and energy certification of buildings

As part of the implementation of strategies to increase energy efficiency and reduce CO₂ emissions, i.e. implementation of European Directive 2002/91/EC, the Croatian government adopted the Ordinance on Energy certification of buildings [24].

Building energy audit means a documented procedure carried out in order to determine the energy performance of the building and the degree of compliance of that performance with the requirements set by special regulations; it contains a proposal of measures for the cost-effective improvement of the energy performance of the building and is carried out by an authorised person. Energy certification of buildings means the set of actions and procedures carried out for the purpose of issuing the energy certificate - a document showing the energy performance of the building that has the prescribed contents and layout pursuant to this Ordinance and is issued by an authorised person. The MEPPPC is in charge of issuing the authorization to experts or companies that perform energy audits and energy certification [25].

Measures of cleaner production

One of the main strategies for the promotion of environmental protection is “cleaner production” (CP) which, according to UNEP, is defined as *“the continuous application of an integrated preventive environmental strategy applied to processes, products and services to increase overall efficiency and reduce risks to humans and the environment.”* Cleaner Production implies more efficient use of raw materials and energy and reduction of emissions of pollutants and waste.

The Croatian Cleaner Production Centre ([CRO-CPC](#)) develops and implements the CP projects through which the basic objectives of cleaner production, such as: more efficient use of raw materials and energy, saving water and energy and reducing the emissions of pollutants and waste at source, are achieved with an estimation of financial savings of around 85 million HRK per year. Also, 220 experts have so far been trained for the implementation of the CP and environmental management systems.

Eco-innovation

The Croatian Chamber of Economy coordinates the work of the Enterprise Europe Network ([EEN](#)) in Croatia and it is involved in the implementation of the Network’s activities within the Programme for Competitiveness and Innovation EU 2007-2013 ([CIP](#)). Within the CIP program there is a competition for eco-innovation in which the potential project applications from Croatian companies are entering into competition with the projects from the entire European Union.

9. Topics of interest and information needs for follow up work

- Overview of EU policies on resource efficiency, especially policies for soil/land/marine environment protection/preservation;
- Good practice examples;
- Exchange of information on indicators, methods for measuring and monitoring of the resource efficiency;
- Strengthening science – policy interface because scientific information is a prerequisite for building good and tailor-made policies.

10. References

10.1 Country facts

[1] Eurostat, 2011 [demo_pjan]

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=en

[2] CIA World Factbook (2009 est.)

<https://www.cia.gov/library/publications/the-world-factbook/index.html>

[3] Eurostat, 2011 [nama_gdp_c]

<http://appsso.eurostat.ec.europa.eu/nui/show.do>

[4] Eurostat 2011 [tsieb010]

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsieb010&plugin=0>

[5] World Bank, Migration and Remittances Factbook 2011

<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:21352016~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html>

[6] European Commission 2008

http://europa.eu/abc/12lessons/key_dates/index_en.htm visited December 15, 2008

[7] Eurostat, OECD, Total Economy Database and Steinberger et al., 2010

DMC data from Eurostat Database, Material Flow Accounts, and OECD, Population data from Eurostat Database, Population, and The Conference Board — Total Economy Database, September 2010. www.conference-board.org/data/economydatabase/

DMC data for Croatia: Steinberger, J., F. Krausmann, N. Eisenmenger, 2010. The global patterns of materials use: a socioeconomic and geophysical analysis. *Ecological Economics* 69(5), 1148-1158.

[8] Eurostat and Steinberger et al., 2010

Material flow accounts, env_ac_mfa, uploaded June 2010

DMC data for Croatia: Steinberger, J., F. Krausmann, N. Eisenmenger, 2010. The global patterns of materials use: a socioeconomic and geophysical analysis. *Ecological Economics* 69(5), 1148-1158.

[9] Eurostat, Total Economy Database, The Conference Board and Steinberger et al, 2010

GDP data from The Conference Board — Total Economy Database, September 2010, www.conference-board.org/data/economydatabase/; DMC data from Eurostat Database on Environmental Accounts, and OECD.

DMC data for Croatia: Steinberger, J., F. Krausmann, N. Eisenmenger, 2010. The global patterns of materials use: a socioeconomic and geophysical analysis. *Ecological Economics* 69(5), 1148-1158.

10.2 Resource Efficiency Policy References

- [10] Environment protection act of the Republic of Croatia, [OG 82/94](http://narodne-novine.nn.hr/clanci/sluzbeni/1994_11_82_1390.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/1994_11_82_1390.html
- [11] Strategy for sustainable development of the Republic of Croatia, [OG 30/2009](http://narodne-novine.nn.hr/clanci/sluzbeni/2009_03_30_658.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2009_03_30_658.html
- [12] The Energy Strategy
http://narodne-novine.nn.hr/clanci/sluzbeni/2009_10_130_3192.html
- [13] Action plan for implementation of the activities planned in the Economic recovery program
http://www.vlada.hr/en/naslovnica/novosti_i_najave/2010/travanj/predsjednica_vlade_predstavlja_program_gospodarskog_oporavka
- [14] Regional Development Strategy of Croatia 2011-2013
http://www.mrrsvg.hr/UserDocsImages/STRATEGIJA_REGIONALNOG_RAZVOJA.pdf
- [15] National Waste Management Strategy, [OG 130/05](http://narodne-novine.nn.hr/clanci/sluzbeni/2005_11_130_2398.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2005_11_130_2398.html
- [16] National Waste Management Implementation Plan 2007-2015, [OG 85/07, 126/10](http://narodne-novine.nn.hr/clanci/sluzbeni/2007_08_85_2652.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2007_08_85_2652.html
http://narodne-novine.nn.hr/clanci/sluzbeni/2010_11_126_3261.html
- [17] Water Management Strategy, [OG 91/08](http://narodne-novine.nn.hr/clanci/sluzbeni/2008_08_91_2900.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2008_08_91_2900.html
- [18] Air Quality Protection and Improvement Plan , [OG 61/08](http://narodne-novine.nn.hr/clanci/sluzbeni/2008_05_61_2094.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2008_05_61_2094.html
- [19] Strategy and Action Plan for the Protection of Biological and Landscape Diversity, [OG 143/08](http://narodne-novine.nn.hr/clanci/sluzbeni/378092.html)
<http://narodne-novine.nn.hr/clanci/sluzbeni/378092.html>
- [20] National forest policy and strategy, [OG 120/03](http://narodne-novine.nn.hr/clanci/sluzbeni/2003_07_120_1663.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2003_07_120_1663.html
- [21] Forestry Act, [OG 140/05](http://narodne-novine.nn.hr/clanci/sluzbeni/2005_11_140_2642.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2005_11_140_2642.html
- [22] Declaration on Environmental Protection in the Republic of Croatia, [OG 34/92](http://narodne-novine.nn.hr/clanci/sluzbeni/1992_06_34_865.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/1992_06_34_865.html
- [23] Program for energy efficiency in buildings owned by the state - Bring your house in order,
http://www.energetska-efikasnost.undp.hr/index.php?option=com_content&view=article&id=376&Itemid=490
- [24] Ordinance on Energy certification of buildings, [OG 36/2010,](http://narodne-novine.nn.hr/clanci/sluzbeni/2010_03_36_930.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2010_03_36_930.html
- [25] Ordinance on conditions and criteria for persons who perform energy audits and energy certification of buildings, [OG 113/08 and OG 89/09](http://narodne-novine.nn.hr/clanci/sluzbeni/2008_10_113_3293.html)
http://narodne-novine.nn.hr/clanci/sluzbeni/2008_10_113_3293.html
http://narodne-novine.nn.hr/clanci/sluzbeni/2009_07_89_2250.html

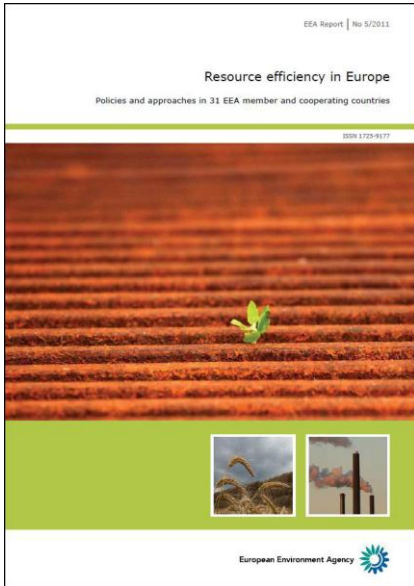
[26] Strategy for the development of Industrial processing of wood and paper, OG 114/24
http://narodne-novine.nn.hr/clanci/sluzbeni/2004_08_114_2187.html

[27] Strategy for agriculture and fisheries, OG 89/02
<http://narodne-novine.nn.hr/clanci/sluzbeni/309230.html>

[28] Law on Agriculture, OG 149/09
http://narodne-novine.nn.hr/clanci/sluzbeni/2009_12_149_3636.html

[29] Environmental Strategy, OG 46/02
http://narodne-novine.nn.hr/clanci/sluzbeni/2002_04_46_924.html

[30] National Environmental Action Plan OG 46/02
http://narodne-novine.nn.hr/clanci/sluzbeni/2002_04_46_925.html



Resource efficiency in Europe

Policies and approaches in 31 EEA member and cooperating countries

Further information about resource efficiency policies, including the analytical report and thirty-one detailed country profiles, are available on the EEA website:

<http://www.eea.europa.eu/resource-efficiency>

Selected examples of resource efficiency policies, instruments or targets presented in the thirty one detailed country profiles

