



THE REPUBLIC OF CROATIA

**MINISTRY OF ENVIRONMENTAL PROTECTION, PHYSICAL PLANNING
AND CONSTRUCTION**

**FIRST NATIONAL REPORT
ON THE IMPLEMENTATION OF THE
UN CONVENTION TO COMBAT DESERTIFICATION**

Implementation of the 3rd cycle of national reporting



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**MINISTRY OF ENVIRONMENTAL PROTECTION, PHYSICAL PLANNING AND
CONSTRUCTION**

Translator

Krunoslav Pavlović – LINGUA d.o.o. Osijek

Autori:

**Prof. dr. sc. Ferdo Bašić
Marija Vihovanec, dipl. ing. polj.**

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**The Ministry of Environmental Protection, Physical Planning and Construction
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First National Report.**

ACRONYMS

AFZ – Agricultural Faculty of the Zagreb University - Zagreb
Biopa – Non-governmental organization for organic-biological production
CCE – Croatian Chamber of Economy
CEA – Croatian Environment Agency
CFMC – Croatian Forest Management Company
CLC – Corine Land Cover
CMHS – Croatian Meteorological and Hydrological Service
CSSS – Croatian Society of Soil Science
CW – Croatian Waters - Croatian Water Resources Management
EIONET - European Environment Information and Observation Network
EIS – Environmental Information System
ESB – European Soil Bureau with the seat in Ispra – Italy
ESBN – European Soil Bureau Network
EU – European Union
GDDPCPS – Georeference Digital Database on Contaminated and Potentially Contaminated Sites
GEF – Global Environment Facility
HRK – Hrvatska kuna (Croatian currency)
IRENA – EU project - Indicator Reporting on the Integration of Environmental Concerns into Agricultural Policy
JRC – Joint Research Centre of the EU with the seat in Ispra - Italy
MAFWM – Ministry of Agriculture, Forestry and Water Management
MC – Ministry of Culture – Directorate for Nature Protection
MELE – Ministry of the Economy, Labour and Entrepreneurship
MEPPPC – Ministry of Environmental Protection, Physical Planning and Construction
MFAEI - Ministry of Foreign Affairs and European Integration
MJ- Ministry of Justice
MSES – Ministry of Science, Education and Sports
MSTTD - Ministry of the Sea, Tourism, Transport and Development
NAP- National Action Programme to Combat Desertification
NCB – National Coordinating Body - National Committee to Combat Desertification
NCSA – National Capacity Self-Assessment for Global Environmental Management
NEAP – National Environmental Action Plan
NFP – National focal point
NGOs – Non-governmental organizations and associations
N.N. – Narodne novine - the official gazette of the Republic of Croatia
N.N.I.C. – Narodne novine, International Contracts
NPILWM - National Project of Irrigation and Land and Water Management
NPRD – National Protection and Rescue Directorate
NSRD – National Strategy for Regional Development
RAP – Regional Action Programme

RH – Republic of Croatia

SGA – State Geodetic Administration

SINP – State Institute for Nature Protection

SPIs - scientific and professional institutions (e.g. AFZ, Agricultural Faculty, Institute for Soil, Faculty of Forestry etc.)

UNCBD – UN Convention on Biological Diversity

UNCCC – UN Framework Convention on Climate Change

UNCCD - UN Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

WCAA - Working Community Alps – Adria

WCDR – Working Community of the Danube Regions

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I SUMMARY

The participation of the Republic of Croatia in the United Nations Conference on Environment and Development held in Rio Janeiro in 1992 was one of the first international activities of Croatia as an independent country. The conference provided guidelines for the economic and comprehensive development of the 21st century on a global basis. Croatia also accepted the three so-called environmental Conventions within the framework of Agenda 21 and actively involved itself in their implementation in the field.

The Republic of Croatia is a central European and Mediterranean country with the coastline length of 5800 km, and due to its 1185 islands it is known as a „country with over 1000 islands“. There are three climate types on the Croatian territory - continental, mountain and maritime climate. All vegetation and prominent European soil types are also present on the Croatian territory. Therefore, Croatia represents a "natural collection – museum" of vegetation and soil and is called "Europe in a nutshell". On a geomorphologic basis there are three natural–geographic regions - Pannonian, Mountainous and Adriatic.

According to the 2001 census the population of Croatia is 4,437,460. The country is divided into 21 units of regional self-government: 20 counties and the City of Zagreb as a separate unit.

The Republic of Croatia signed the UN Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, in 1994, and the Croatian Parliament ratified it near the end of 2000. It came to force in January 2001 when the Republic of Croatia became the 169th Party to the Convention.

The Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC) is in charge of the implementation of the Convention.

Fragile drylands have not been singled out in Croatia so far, and consequently, the processes of land degradation which lead to desertification, have not been considered collectively. Moreover, they have not been defined as a factor which could seriously endanger the establishment/implementation of sustainable development in Croatia. At the same time various changes have been noticed. Having as a consequence land and vegetation degradation and bare karst expansion, they primarily refer to the occurrence of frequent drought and forest fires in the Adriatic region. The processes of land degradation have been identified and partly explored on the entire Croatian territory, out of which erosion caused by water and wind is the most evident in the Adriatic, and erosion caused by water in the Mountainous and Pannonian region. The expansion of tourism is highly increasing the pressure on the space, all natural resources and

infrastructure, and particularly the pressure on soil compaction in camping sites and the entire coastal area. It results in a declining condition of some plant species, their gradual compaction and degradation. Furthermore, on the entire Croatian territory a decrease in the content of humus and the index of biological diversity of soil has been identified in wood- and farmlands. That fact contributes to the processes of soil structure corruption, soil compaction and surface crust development. Those processes are often followed by erosion caused by water. It is clear that increased humus mineralization brings to increased emission of the greenhouse gas CO₂. The process of soil acidification is being intensified as well, particularly in farmlands in the Pannonian region. Soil salinization due to a frequent use of water for irrigation which contains a high amount of salt, can often be noticed in the Basin of Vrana and the Neretva Basin. Scattered soil contamination caused by emissions from industry and traffic has initiated various activities of governmental bodies and scientific institutions relating to the problem.

All those problems are the reason for the involvement of the Republic of Croatia in the two Annexes of the Convention: Annex IV Regional Implementation Annex for the Northern Mediterranean and Annex V Regional Implementation Annex for Central and Eastern Europe.

By its decision of November 7, 2002, the Croatian Government established the National Committee to Combat Desertification. There are 14 members of the Committee – representatives of competent Ministries, scientific institutions, NGOs and companies. The basic task of the Committee is the monitoring and participation in the preparation and implementation of a National Action Programme (NAP). The changes in the system of government implemented in the last couple of years are the reason for the recently initiated replacements and increase in number of the Committee members.

The preparation of the NAP started in 2003 but it was slowed down in 2005 because the Committee members were involved in the intensified process for the RH accession to the EU.

The principle of sustainable development has been widely accepted and integrated in practically all relevant plans and strategies of the Croatian economic development, environmental improvement and national plans for sectoral development. The amendments and adjustments are being implemented within the framework of the process of harmonization and accession to the EU.

Before the completion of the preparation of the NAP which will clearly define the measures, dates and participants of programmes and projects, the following activities for the purpose of the implementation of the Convention should be emphasized: National Project of Irrigation and Land and Water Management in the RH, capacity building for the prevention of forest fires, the organization and establishment of soil monitoring etc.

Although there is no source of finances for the implementation of the Convention in the RH, the previous immediate activities have been financed by the Ministry of Environmental Protection, Physical Planning and Construction, i.e. National Budget. On the other hand, the activities and projects indirectly related to the UNCCD are financed by the Fund for Regional Development, recently established Fund for Environmental Protection and Energy Efficiency etc. The financial means for the implementation of some international projects have been obtained and requested from GEF, WB and EU programmes and pre-accession funds.

1. National focal point - NFP

Name of national focal point	MEPPPC – Ministry of Environmental Protection, Physical Planning and Construction Ms. Marija Vihovanec
Address and e-mail	Šetalište Kardinala Franje Šepera 12, 31000 Osijek The Republic of Croatia E- mail: marija.vihovanec@mzopu.hr

2. Status of the NAP

Date of validation	-
NAP review(s)	-
NAP has been integrated into the poverty reduction strategy (PRSP)	No
NAP has been integrated into the national development strateg	No
NAP implementation has started with or without the conclusions of partnership agreements	-
Expected NAP validation	2007
Final draft of a NAP exists:	No
Formulation of a NAP draft is underway	Yes
Basic guidelines for a NAP have been established	Yes
Process has only been initiated	-

3. Member of SRAP/RAP : no
4. Composition of the NCB

Name of institution		Government	NGO	Male/Female
1.	MEPPPC – Ministry of Environmental Protection, Physical Planning and Construction	+		M
2.	CMHS – Croatian Meteorological and Hydrological Service	+		M
3.	MEPPPC – Ministry of Environmental Protection, Physical Planning and Construction	+		F
4.	MAFWM –Ministry of Agriculture, Forestry and Water Management	+		F
5.	MSES – Ministry of Science, Education and Sports	+		M
6.	MFAEI - Ministry of Foreign Affairs and European Integration	+		F
7.	MELE – Ministry of the Economy, Labour and Entrepreneurship	+		M
8.	MSTTD - Ministry of the Sea, Tourism, Transport and Development	+		F
9.	CCE – Croatian Chamber of Economy	+		F
10.	CW – Croatian Waters - Croatian Water Resources Management	+		M
11.	CFMC – Croatian Forest Management Company	+		F
12.	CSSS – Croatian Society of Soil Science		+	M
13.	AFZ – Agricultural Faculty of the Zagreb University - Zagreb	+		M

5. Total number of NGOs accredited to the process: 4
6. Has a National Coordinating Committee on desertification been established: no
7. Total number of acts and laws passed relating to the UNCCD: 0

Name up to five most relevant acts and laws and/or regulations.

Title of the law	Date of adoption
1. Environmental Protection Act	October 27 1994, 1999
2. Nature Protection Act	May 20, 2005
3. Forests Act	November 17, 2005

4. Physical Planning Act	1994, amendments: 1998,1999 and 2000
5. Agricultural Land Act	July 11, 2001

8. The consultative process

List of consultative meetings on the UNCCD implementation:

Name of consultative meeting	Date/year	Donor countries involved	International organizations or agencies of the UN system involved
1. DESERTNET	September 2004, Italy		UNCCD
2. First Technical Workshop on Drought Preparedness in the Balkans	October 2004		UNCCD, WMO
3. GeoRange Science Meeting	March 2004., EC - JRC Ispra Italy		UNCCD
4. Second Technical Workshop on the Establishment of a Subregional Centre Relating to Drought	April 2006, Bulgaria		UNCCD, WMO
5. Round Table on Drought	October 1993		
6. Agriculture and Forestry on Karst – Croatian Academy of Sciences and Arts	Mai 2000		
7. Fourth and Ninth Professional Meeting on "Soil Protection " organized by the WC of the Danube Regions	December 1997, April 2002, Osijek		
8. Condition and Sustainable Development of Hydromelioration Systems in the RH	October 2003, Zagreb		
9. 3 rd Croatian Conference on Waters	Mai 2003, Osijek		
10. Round Table on the Condition and Perspective of Soil Protection in Croatia	March 2003, Opatija		
11. CSSS Congress – Soil Functions in the Environment	June 2006, Šibenik		

9. Name up to 10 projects directly or indirectly related to the UNCCD

Br.	Name of project	Project implemented within the framework of the NAP/SRAP/RAP?	Project implemented within the framework of	Time-frame	Partners involved	Overall budget
1.	National Capacity Self-Assessment for Global Environmental Management	no	GEF, NCSA	2003-2005	UNEP/ GEF- MEPPPC / CEA	236.000 USD
2.	CORINE Land Cover 2000 Croatia	no	EU LIFE	2002-2005	EU / MEPPPC / CEA	749.470 €
3.	Development of the Croatian Soil Monitoring Programme with a Pilot Project	no	EU LIFE	2006-2009	/ MEPPPC / CEA / MAFWM / SPI	800.000 €
4.	Georeference Digital Database on Contaminated and Potentially Contaminated Sites	no	NEAP	2005-2006	MEPPPC / CEA	75.000 Kn
5.	Karst Ecosystem Conservation - KEC	no	GEF	2002-2007	IBRD / MEPPPC / MC / SINP	8.300.000 USD
6.	Capacity Building for the Prevention of Forest Fires	no	FAO – TCP / CRO / 3001	2006-2007	MAFWM / MC / CFMC / NPRD	306.000 USD
7.	NPILWM - National Project of Irrigation and Land and Water Management in the RH	no	Croatian Government Programme	1 st phase – 2010 2 nd phase - 2020	CW	

8.	Adriatic Sea Environmental Master Plan (ASEMP) Module Croatia	no	UNESCO	2002 -	MEPPPC / Arcadis CM experts	660.000 €
9.	Programme for the Sustainable Development of Family Farms in Baranya	no	EU-CARDS	2005-2006	Biopa	127.180 €
10.	Permanent Soil Monitoring within the framework of the WC Alps-Adria	no	WC Alps-Adria	1985-2006	MAFWM / AFZ	150.000 Kn
11.	Systems of cadastre and land registers RPRCP	no	Croatian Government Programme	2003-2008	WB / EU / CG – SGA / MJ	
12.	Establishment of the NATURA 2000 in the RH	no	PHARE / CFCU	2005-2007	EEA / SINP	€ 2.5 M

II INTRODUCTION

The Republic of Croatia is a central European and Mediterranean country with the total area of 87,677 km²; out of which 56,610 km² belong to land. The Croatian coastline length is 5800 km, and due to its 1185 islands Croatia is known as a „country with over 1000 islands“. According to the 2001 census the population of Croatia is 4,437,460. The country is territorially divided into 21 units of regional self-government: 20 counties and the City of Zagreb.

Climate

There are three climate types on the Croatian territory - continental, mountain and maritime climate. The average annual air temperature ranges from 12⁰C to 17⁰C in the coastal area, in northern continental lowlands from 10⁰C to 12⁰C, while at altitudes over 400 m it is below 10⁰C.

The average annual precipitation ranges from 600 – 3500 mm. The aridest regions are outer islands along the eastern Adriatic coast where Palagruža represents an extreme example with the average annual precipitation of only 304 mm. Eastern lowlands in the Pannonian Plain are characterized by somewhat higher, but still relatively low average annual precipitation of less than 700 mm (Osijek - 650 mm), while the central mountainous regions are the most humid. The average annual precipitation in the north-western Croatia ranges from 900 to 1000 mm.

Natural – geographic features

On a geomorphologic basis there are three natural–geographic regions in the RH. The biggest, most populated and economically most important region is the Pannonian region which covers 54.4 % of the total area. It is a part of the Pannonian Plain having the river Drava for its northern, and the river Sava for its southern border. Both rivers are Danube tributaries and belong to the Danube Basin like the majority of Croatian regions. The Mountainous region takes up 14 % of the total area. It is an area of the crystal-clear rivers of exquisite karst beauty – the Kupa, the Mrežnica, the Dobra, the Korana and the Gacka. The Adriatic region comprises 31.6 % of the total area and is characterized by karst in which a special place is reserved for ecologically fragile karst fields and the magnificent crystal-clear rivers: the Mirna, the Zrmanja, the Krka and the Neretva.

Due to a great diversity of nature - geological-lithological composition, climate and vegetation, almost all vegetation and prominent European soil types can be identified on the Croatian territory. Therefore, Croatia represents a “natural collection – museum” of vegetation and soil and is called “Europe in a nutshell”. The total protected area equals 5,564 km², i.e. 9.83 % of the total land and 283 km² of sea.

Moreover, one of the Croatian features is a great diversity of ecosystems and habitats, from wetlands and swamps to mountains, Mediterranean forests, karst, coast, islands, sea, range- and plough-lands. Over 53 % of the total area is taken up by agricultural land, out of which 30 % is state-owned. Other agricultural land is owned by family farms which are mostly organized as small units.

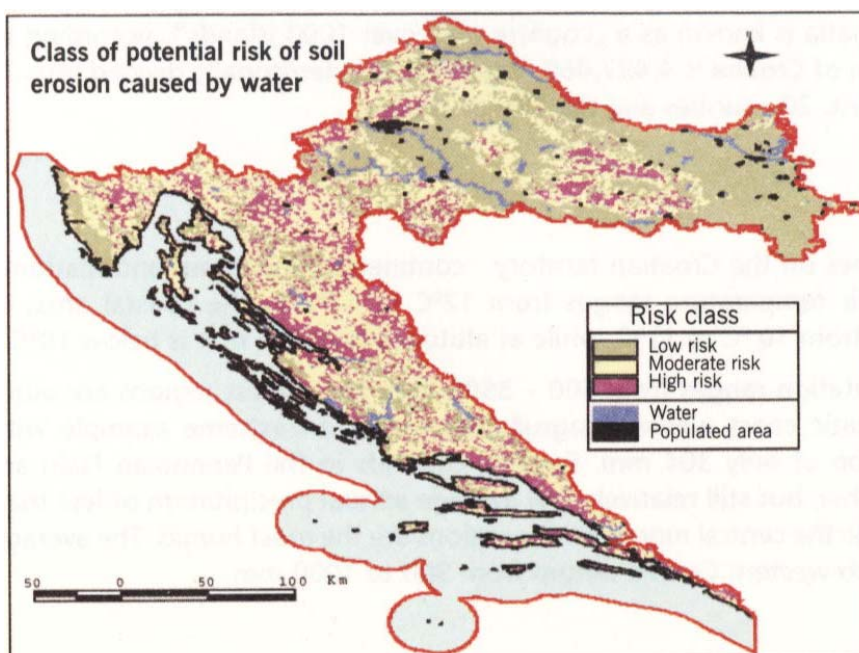
Forest and woodlands cover 43.5 % of the total territory, which categorizes Croatia into most densely European countries. As much as 81 % of forest is state-owned, and only 19 % is owned by private persons. The fact that as much as 95 % of forest is natural is the main feature of Croatian forests. The most precious conifer and broadleaf forests are located in mountainous and hilly regions, while the famous Slavonian oak predominately grows in lowlands of the Pannonian Plain. Special attention should be paid to the so-called protection forest since it has the function of soil protection from erosion, water, population, economic and other facilities.

Soil condition

Croatia has collected fairly decent, but incomprehensive data on soil condition and processes of land degradation which finally lead to desertification. A common pedologic map of Croatia (scale 1:50 000) has been prepared and it contains data on the spread and of land degradation and most relevant physical, chemical and biological soil features. Unfortunately, comprehensive data on the type and intensity of land degradation process are still to be collected.

Soil erosion is the most spread process of land degradation. According to the data from the NAP draft over 90% of soil surface is exposed to erosion caused by water and wind of various intensities.

Map 1: Potential risk of erosion caused by water; source: NAP – draft, 2005



From the standpoint of desertification danger, the current condition is not prosperous in the Adriatic – karst area where erosion on a broad area takes away soil from the geological surface. Forest fires which regularly occur in the period of summer drought, contribute to the process. On the areas affected by fire, soil erosion is more frequent than on agricultural land. For example, the area of central Istria is affected by erosion to a catastrophic extent due to its geological composition – flysh stratum of high erodibility. The amount of eroded soil material there reaches up to 100 - 200 t/ha/yr. The situation is similar in the Neretva Delta because water brings high amounts of sediments from Bosnia and Herzegovina.

The trend of a permanent decrease in humus content is practically evident in all soils. On cultivated agricultural land the main reason for the decrease is regular and intensive cultivation due to increasing crops that need such cultivation. The additional reason is an inadequate input of organic matter in soil. A decrease in humus content has been noticed in forest soils as well. On one hand, it must be the consequence of lumbering, and on the other, it could also be the consequence of climate change, which is to be affirmed or denied by a systematic reliable data collection on the occurrence.

Fortunately, soil salinization is not so widely spread. One part refers to salinization due to irrigation by water with a high amount of salt as a result of mixing with sea water, which is the case in the Basin of Vrana and Mirna and Neretva Delta since growing vegetables and mandarins is very popular there. The second way of soil salinization is the so-called "posolica" caused by the strong wind bora which takes drops of sea water and disperse them all around, especially on islands. Salinization and alkalization have been intensified even on some small areas of the eastern Slavonia (Tovarnik, Spačva) and Baranya.

Croatian soils are exposed to various types of contamination. The most frequent contaminants are heavy metals, then pesticide remains, petrochemicals and polycyclic aromatic hydrocarbons.

The Croatian territory is still partly mined. Mine suspected areas comprised about 1,200 km² in 2005 with the tendency of a constant decrease. The biggest mined areas are located in submountainous regions and in the eastern Croatia.

The data on drought indicate that drought in Croatia occurs every three to five years, and depending on intensity and duration it can reduce various agricultural crops by 20-80%. All the Croatian counties reported damage due to drought in 2000 and 2003, and the validated damage in agriculture exceeded 3,400,000,000 HRK.

Beside usual drought a change in the average monthly precipitation has been observed. According to those observations the monthly precipitation has been reduced in the period from September to November and increased in July and August. The change is especially evident in the Adriatic region.

Summer drought has become a reason for frequent forest fires. In the period from 1992 to 2004, 16,200 hectares of woodland and macchia were affected by fire each year with the tendency of a gradual increase. About 90% of the affected areas are located in the

karst (coastal) area which is ecologically one of the most fragile areas in Europe due to its shallow soil and its slow formation.

One of the consequences of economic development is also permanent soil loss or land degradation because of the expansion of urban areas, roads, airports, hydro-accumulation and other infrastructure facilities. In the period of the most intensive construction and economic development in the second half of the 20th century the daily land degradation was around 20 ha. Today less than 1 % of the total area lies under various facilities.

III STRATEGIES AND PRIORITIES ESTABLISHED WITHIN THE FRAMEWORK OF PLANS AND/OR POLICIES OF SUSTAINABLE DEVELOPMENT

The concept of sustainable development has been integrated and elaborated within the framework of all the policies and plans of the Republic of Croatia. Since becoming independent in 1991 the Republic of Croatia has been creating sectoral policies and legislation based on AGENDA 21. Moreover, the intensive harmonization of national legislation within the process of adjustment for the accession to the European Union, which is currently in progress, has brought the obligation of additional amendments and harmonization.

Respecting the central topic of the Convention, the most important strategies and plans, the indicators of a national policy which framework includes the key guidelines for the establishment and implementation of the measures of sustainable development, are the following:

1. Draft – Strategic framework for the development of Croatia 2006 -2013 –

The document of the Croatian Government which determines the main guidelines for the development of Croatia in the next seven years:

- achieving an intensive real GDP and employment growth, as well as a better standard of living in comparison with rich European regions;
- achieving higher competitiveness of national economy in comparison with developed European regions;
- reduction of regional inequalities within the country by creating better conditions for socio-economic development in least developed regions.

2. National Strategy for Regional Development (2006) NSRD – represents a framework for regional development management that is characterized by establishing a unique system and defining a clear strategic orientation. Previous, as well as future county **Regional Action Programmes (RAP)** are becoming integral parts of the NSRD within the programme of county development and beyond, and their integration in the National Development Plan should enable the formulation of a unified framework and stronger bonds between all levels in the planning and implementation of regional and rural development.

3. National Environmental Action Plan (NEAP) and National Strategy for Environmental Protection (2002)

– The Environmental Strategy is completely based on the principles of sustainable development and the document on the principles of the integration of the environmental protection policy in sectoral policies; partnership and shared responsibility; subsidiarity; changes in production patterns; the use of a larger number of instrument, mostly economic. The Strategy is outlined and structured to comprise all the complexity of environmental protection considering the Croatian diversity – climatically completely different regions (continental, mountainous and Mediterranean) and relating biological resources, numerous extremely fragile areas (karst, coastal area and islands), transboundary river basins and the economy in transition. The work on the Strategy was underway in the period of the RH preparations

for the process of becoming an associated member of the EU. Having the purpose of fulfilling Croatian obligations arising from the associated membership and completely taking the basic characteristics of Croatia into consideration, this document has been prepared in full accordance with the 5th EU Action Programme.

All the partners (Ministries, institutions, scientists, NGOs, individuals) were involved (through a series of workshops) in the process of the Strategy preparation from the phase of defining the project to its completion. Since the Strategy has not been statistically prepared but exists as an open document or a process, all the partners can participate in monitoring, reviewing and amending all the proposed purposes and measures. The obligation of passing a National Action Programme for the implementation of the Convention is one of the measures defined in the National Environmental Action Plan.

4. Physical Planning Strategy (1997) is the basic document of physical planning and represents a basis for decision making considering interventions in the environment and physical planning of smaller units and plans at local levels. The key role in the planning volume of the stated units is given to physical planning at County levels through passing Physical Plans of the areas with special features with an emphasis on providing necessary, professional and scientific analyses and studies. The **Physical Planning Programme (1999)** was passed for the purpose of the implementation of the Strategy. It provided a basis for the organization, protection, use and purpose of space, the system of central places and the system of national infrastructure development and guidelines and measure for environmental protection and promotion.

5. Agriculture and Fishery Strategy (2002), Strategy for State-Owned Agricultural Land Management (2001), Rural Development Strategy (2003), Agriculture and Rural Zone Programme (2003) are the documents in which the established priorities of the agriculture policy are elaborated through the intensification of changes of the structural policies such as: agriculture policy, rural development, the growing of family farms, the diversification of activities on family farms, the development of manufacturing organizations etc. The measures of the agriculture policy primarily refer to: the allocation of the right to use and sell state-owned agricultural land; the promotion of agricultural land management and its protection from contaminants.

The other important documents which cover sustainable land management and drought mitigation, are the following: National Island Development Programme (1997), National Strategy and Action Plan for the Protection of Biological and Landscape Diversity (1997), Energetic Sector Development Strategy (2002), National Ecological Agriculture Strategy (2005 – 2010), National Forest Policy and Strategy (2003), National Water Protection Plan (1999) and Water Management Basis Draft.

Furthermore, Croatia is a Party and signatory country to numerous international contracts on environment, out of which the following are pointed out: Espoo Convention on Transboundary Environmental Impact Assessment, Convention on Transboundary Effects of Industrial Accidents, UN Framework Convention on Climate Change, UN Convention on Biological Diversity, Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, Convention on Long-Range Transboundary Air Pollution, Vienna Convention for the Protection of the Ozone Layer, Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, European Landscape Convention.

IV INSTITUTIONAL MEASURES TAKEN TO IMPLEMENT THE CONVENTION

The Croatian Parliament ratified the Convention at the session held on September 27, 2000. It came to force in January 2001 when the Republic of Croatia became the 169th Party to the Convention (N.N. I.C. 11/00 and 14/00). According to the Act on the Ratification of the Convention, the Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC) is in charge of the implementation of the Convention and it is simultaneously the central body of the state administration which performs administrative and professional tasks related to environmental protection. Apart from the MEPPPC, other bodies (MAFWM, MC, CHMS) of the state administration deal with environmental and implementation issues related to the Convention.

Beside the bodies of the state Administration, the following organizations are active in the area of environmental protection: CEA, Fund for Environmental Protection and Energy Efficiency, CW, CFMC, DNP, SINP, Institute for Soil etc.

Bearing in mind the necessity of a multisectoral and multidisciplinary approach to the implementation of the Convention, the Croatian Government passed the Decision on the Establishment of a National Committee to Combat Desertification on November 7, 2002. The task of the Committee is to prepare, coordinate and implement the activities established by the Convention with an emphasis on the participation in the preparation and implementation of the NAP. Members of the Committee are reputable scientists, representatives of Ministries, public companies and NGOs. Within the framework of the 2003 NCB, 5 Expert Working Groups have been in charge of 5 key thematic fields: climate, soil, water, forests and agricultural management systems.

The obligation of passing a NAP for the implementation of the Convention is defined in the NEAP. In 2003 the NCB started to work on the preparation of a project under the name „**National Action Programme to Mitigate the Effects of Drought and Combat Land Degradation**” The starting point of the document are the specific conditions defined for Northern Mediterranean and the countries of Central and Eastern Europe. The Republic of Croatia is, along with some neighbouring countries, a Party to the Convention that participates in the two Regional Implementation Annexes.

The framework content and ways of the NAP preparation were defined in the period from 2003 to 2005, and a Working Group for the coordination of the preparation of the NAP was established according to the recommendations of NCB and MEPPPC members. Over 30 experts from various scientific and professional organizations and NGOs were engaged in the preparation of a background for status analysis and recommendations.

During 2003 and 2004 the project “**National Capacity Self-Assessment for Global Environmental Management – NCSA**” GEF NCSA GF/2740-03 (GF/3010-03) was realized in Croatia with financial support of the UNEP/GEF for the purpose of capacity assessment for the implementation of the three UN Conventions - UNCCD, UNCBD and UNCCC.

The project results are related to the following: recognizing synergies between the areas, setting primary activities, defining the necessities of capacity development, the preparation of an Action Plan with short- , middle- and long-term goals with the use and

maintenance of existing and the development of new capacities. It was concluded that the primary thematic task of the Convention to Combat Desertification was the preparation and enactment of a NAP with clearly defined measures, priorities, financial indicators and dates. The following priorities were proposed:

- establishment of legislation for soil/land protection
- inventory of soil/land condition
- preparation and enactment of the plans and programmes for additional irrigation, sustainable use of soil and water, condition monitoring and changes in relevant environmental components
- efficiency increase to prevent and combat fires
- support and introduction of environmentally acceptable interventions in agriculture and forestry
- strengthening of public awareness on land degradation and drought problems

V PARTICIPATORY PROCESS IN SUPPORT OF THE PREPARATION AND IMPLEMENTATION OF ACTION PROGRAMMES, PARTICULARLY PROCESSES INVOLVING CIVIL SOCIETY, NON-GOVERNMENTAL ORGANIZATIONS AND COMMUNITY-BASED ORGANIZATIONS

Public participation in the procedure of preparation, elaboration and enactment of a document is a modern and generally accepted procedure. Bearing in mind that desertification is not a "key restraining factor" of the Croatian development, it could be said that the participation of the representatives of NGOs, local communities and other interested participants is mostly evident through the activities within the framework of specific and/or individual target subjects such as the effects of drought in agriculture, development plans, irrigation projects, forest fires etc.

Consequently, the process has already been realized partially within the process of the NAP preparation, and it should be pointed out that the representatives of some NGOs took part in collecting and preparing basic components for the preparation of the NAP.

VI CONSULTATIVE PROCESS IN SUPPORT OF THE PREPARATION AND IMPLEMENTATION OF NATIONAL ACTION PROGRAMMES AND PARTNERSHIP AGREEMENTS WITH DEVELOPED COUNTRY PARTIES

Before the ratification of the UNCCD, Croatian scientists had timely noticed and identified disturbances in natural and anthropogenic terrestrial and semiterrestrial ecosystems which had resulted in deterioration of the forests of Gorski Kotar due to acidification immission and common oak withering in the Sava Basin and their connection with the processes of natural resources degradation, primarily land and water degradation. When preparing the Common Pedologic Map of Croatia (scale 1:50 000) the following data on land degradation were collected: data on erosion, anthropogenic compaction, a decrease in humus content, acidification, contamination and a permanent conversion of use. Acting in the era of the former Yugoslavia as one of the regions within the framework of the Regional Working Community Alps-Adria, Croatia was one of the founders of the Working Group for Soil Protection and has initiated numerous activities during its 20-year involvement, among which the organization of Soil Monitoring or the so-called Boden-Dauerbeobachtung Flächen (BDF) is the most important. One of the sessions of the Working Group was held in Zagreb. Moreover, Croatia has had an important role in the activities of the Working Group for Soil Protection within the framework of the Working Community of the Danube Regions, and it has been the host of the sessions twice.

Its first and turning activity in this field was the accession to the UNCCC in 1996, which finally resulted in signing the Kyoto Protocol and activities to combat desertification. The First National Report of the RH on the implementation of the UNCCC presents the first, precious data on natural resources condition under the influence of climate change. The Croatian Academy of Sciences and Arts organized a reputable scientific meeting under the name "Agriculture and Forestry – Adaptability to Climate Change" in 1998, and in 2000 it devoted a special meeting to the problem of agriculture promotion with a special emphasis on degradation processes leading to desertification.

From the organization of the "Round Table on Drought" in 1993 to the 10th Congress of the CSSS in 2006 which was held under the name "Soil Functions in the Environment", the cooperation and support of all the participants relating to the Convention subjects have constantly been present. A special significance is to be paid to the involvement of non-governmental sector in the process of the NAP preparation within the framework of the NCSA GEF CROATIA projects where NGOs are involved as a group of a special interest for the implementation of the programme.

The activities of the Working Group for the preparation of the NAP are to be mentioned related to the procedure of the preparation and elaboration of the NAP. The Working Group was founded in 2004 by a decision of the MEPPPC, and during 2004 and 2005 it held several consultative workshops relating to the preparation of a background which is going to be included in the final NAP draft.

At regional levels the most important were the activities on the process of common cooperation to efficiently combat drought and land degradation. The long-lasting

procedure followed by numerous workshops, expert harmonization and two regional UNCCD and WMO workshops, has resulted in adoption of a "Project Proposal on the Establishment of a Drought Management Centre for South-Eastern Europe (DMCSEE) in the context of the UNCCD and WMO."

VII MEASURES TAKEN OR PLANNED WITHIN THE FRAMEWORK OF NATIONAL ACTION PROGRAMMES

In the last year the process of harmonization of the National legislation with the legislation of the EU has put the obligation of amendments of various measures for natural resources conservation, promotion of their sustainable use and the improvement of the economy in the hands of the National legislation and politics. The process is especially evident in agriculture and rural development through the additional integration of measures such as the enactment of the Rules on Good Agricultural Practice, measures for additional support of ecological and traditional production in agriculture, ecotourism etc. For example, in the promotion of ecological agriculture Croatia was the organizer of the International Workshop on the Introduction of Organic Agriculture in Selected Danube Countries and the Baltic States held in Grožnjan in 1996, which adopted a programme document under the name „Groznian declaration“.

Within the framework of changes in agriculture policy, it is necessary to single out the launched reform of the cadastre and land registry system. The arrangement of the cadastre and land registry is a comprehensive project of the Croatian Government initiated for the establishment of an efficient land registry and cadastre system. The implementation of the project which is intended to stimulate the growing and increasing of agricultural land in the possession of family farms, started in the beginning of 2003.

According to the Forest Policy and Strategy one of the primary measures is the introduction of Government support for the measures of fire precautions and civil protection. The Croatian Government has implemented the Programme for the Rehabilitation of Wood- and Farmlands on Islands and Coastal Area. Significant means have been provided from the National Budget and budgets of units of regional and local self-government for the purpose of the modernization of fire escape routes and fire-prevention partitions.

The Croatian Government initiated the "National Project of Irrigation and Land and Water Management" by its decision from the year 2004. The project is intended to organize irrigation and the growing of agricultural land.

Replacements in agricultural production structure connected with the introduction of new profitable crops, should enable the prerequisites for the application of new methods in the irrigation technology, which, on the other hand, should result in efficient use of natural resources and finally in rural development. According to the NPILWM the irrigated area shall be expanded from current 7,200 ha to at least 30,000 ha within the next four years. A team of Croatian experts assisted by international consultants is in charge of the implementation of the project.

Furthermore, within the framework of the project "National Capacity Self-Assessment for Global Environmental Management" (Project GEF NCSA GF/2740-03 GF3010-03) the following priorities and measures for the implementation of the convention have been proposed:

- necessity of an inventory of soil and land condition
- establishing legislation for soil/land protection
- formulating a strategy for sustainable soil and land management
- implementing the information soil and land system
- preparing plans and programmes for additional irrigation
- sustainable use of soil and water
- drought programme, condition monitoring and changes in relevant environmental components
- increasing efficiency to prevent and combat fires
- promoting and introducing environmentally acceptable technologies in agriculture and forestry
- strengthening of public awareness on real land degradation and negative drought effects

Considering the complexity of activities and measures necessary to implement the projects stated hereinabove, a list of priorities, competent persons and participants has been proposed.

VIII FINANCIAL ALLOCATIONS FROM NATIONAL BUDGETS IN SUPPORT OF IMPLEMENTATION AS WELL AS FINANCIAL ASSISTANCE AND TECHNICAL COOPERATION INCLUDING THEIR INFLOWS

The Republic of Croatia has not established a special fund for financing projects and other activities related to the implementation of the Convention to Combat Desertification. All the previous activities directly connected with the implementation of the Convention, meetings, consultations and promotion, have been financed by the Ministry of Environmental Protection, Physical Planning and Construction, i.e. National Budget. The necessary finances especially refer to the expenditures of the NCB, Working Group for a NAP preparation, engagement of experts in the preparation and elaboration of the NAP basis.

Some activities and bigger projects which are being implemented and/or prepared and are indirectly involved in the implementation of the Convention, such as Irrigation Project, Forest Fires Prevention, Karst Ecosystem Protection, Soil Monitoring Establishment, are and/or will be financed by several other sources. They are mostly financed through some international funds and/or EU pre-accession financial instruments and means from the National Budget and/or means from local and regional budgets or by ultimate users themselves.

The means of the Fund for Regional Development, Fund for Environmental Protection and Energy Efficiency and the means arisen from the conversion of use of agricultural land into other purposes are available for target activities.

IX REVIEW OF BENCHMARKS AND INDICATORS UTILIZED TO MEASURE PROGRESS AND AN ASSESSMENT THEREOF

For the time being, the establishment of a basic list of soil and land indicators is underway. Previously used indicators will be united in a single list and harmonized with the list of the European Environment Agency and the IRENA. The procedure is under the jurisdiction of the CEA and will become a part of the EIS.

EIS is developed at the national level and contains information systems of particular thematic areas like air, waste, soil, biological diversity, and subareas like air quality, waste dump cadastre etc, while at the international level it comprises the EIONET (European Environment Information and Observation Network) and other potential networks like EMERALD, Natura 2000, Environment Watch. It uses the harmonized methodology of calculation based on the national list of indicators (DSPIR), and tools and covers like Corine Land Cover (CLC).

The preparation of the list with indicators is one of the priorities of a new session of the NCB.

Within the framework of the GEF NCSA projects the following has been proposed:
Review of benchmarks and indicators of the implantation progress of the UNCCD.

Benchmark area	Measures and indicators of the implementation progress
1. NAP adoption	NAP is underway
2. Establishment of the elements of implementation structure	Nominated NFP, established National Committee to Combat Desertification NCB and Expert Working Groups within the NCB, and nominated Working Group for the preparation of a NAP
3. Strengthening of political and common public support	Preparation of a NAP underway, financial means provided
4. Harmonization of regulations	National Programme for the accession to the EU initiated in 2004
5. Strengthening of research administrative-professional capacities	Increased number of target projects and subjects, material-technical conditions ensured
6. Education	Professional and scientific articles

X NEWLY INTRODUCED INDICATORS

During the preparation of the NAP some recommendations for the development and establishment of new indicators were already taken into consideration and used in accordance with the Decision 10/COP.5. A complete list will be worked out within the frame of the NAP, and it will include available and newly recommended indicators.

Finally, there is a clear political support for the cooperation at regional levels relating to the establishment and framework of a new DMCSEE in the context of the UNCCD and WMO mandates, which will contribute to the preparation of a broader and unified list of indicators.

IX. Country profile : **The Republic of Croatia**

This country profile for the UNCCD has been provided by the Ministry of Environmental Protection, Physical Planning and Construction

Date: July 17, 2006.

Mailing address: 31000 Osijek

Telephone: +385/31/201-210 Telefax: +385/31/201-212 E-mail:

marija.vihovanec@mzopu.hr

Biophysical indicators relating to desertification and drought

1. Climate

1.1. Index of aridity

The index of aridity is the ratio P/PET; P=precipitation, PET=potential evapotranspiration. Egleman's method has been used for the calculation of potential evapotranspiration (Pandžić, 1985).

Table 1.1. Thornthwait's ratio of precipitation and potential evapotranspiration (P/PET)

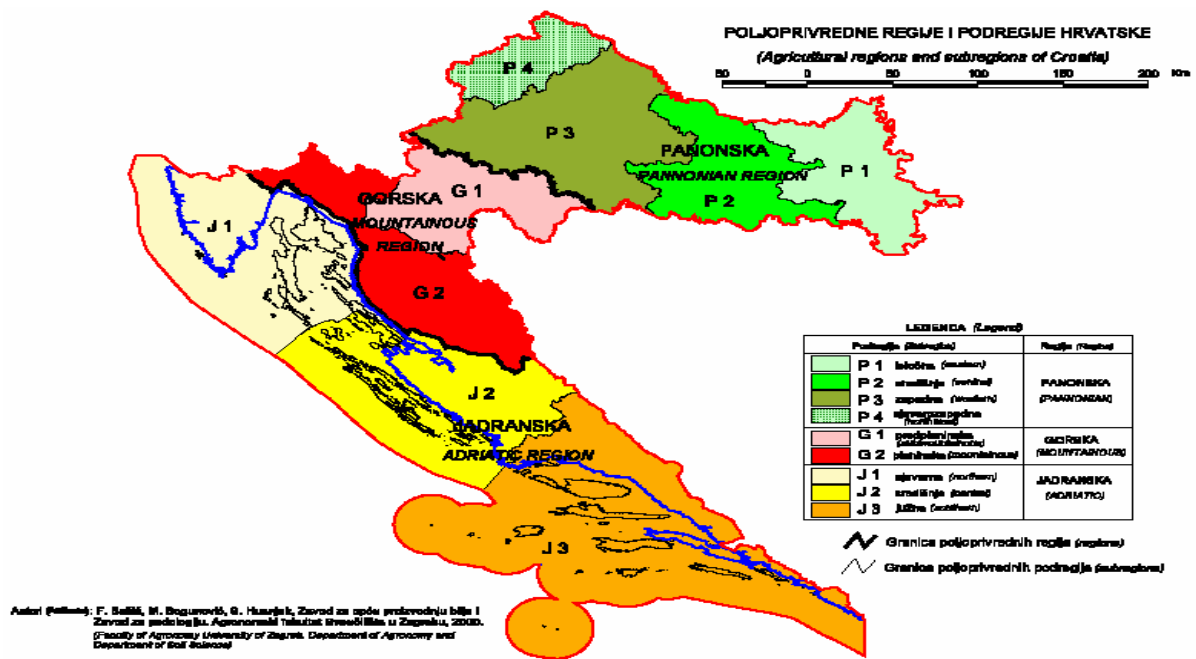
THORNTHWAIT'S RATIO P/PET 1961-1990. i 1971-2000.															
STATION	REGION	YEAR	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	mean
OSIJEK	P1	61-90	4.70	2.50	1.50	1.00	0.69	0.81	0.52	0.51	0.58	0.89	2.71	4.33	0.93
		71-00	3.73	2.00	1.24	0.93	0.64	0.71	0.49	0.50	0.63	1.22	2.95	3.77	0.88
DONJI MIHOLJAC	P1	61-90	4.15	2.15	1.35	0.87	0.60	0.60	0.44	0.49	0.49	0.77	2.33	3.87	0.80
		71-00	3.43	1.76	1.13	0.86	0.58	0.60	0.42	0.46	0.52	1.07	2.64	3.80	0.78
ZAGREB MAKSIMIR	P3	61-90	3.83	2.33	1.81	1.23	1.00	0.99	0.71	0.92	1.14	1.77	3.68	4.14	1.30
		71-00	3.07	1.95	1.56	1.09	0.87	0.89	0.62	0.81	1.19	2.08	3.64	4.00	1.20
SENJ	J1	61-90	1.47	1.29	1.03	0.82	0.57	0.37	0.22	0.36	0.55	0.89	1.85	1.74	0.67
		71-00	1.15	1.12	0.91	0.80	0.52	0.40	0.18	0.28	0.67	1.04	1.88	1.82	0.65
SPLIT MARJAN	J3	61-90	1.32	1.00	0.89	0.57	0.32	0.21	0.09	0.17	0.28	0.54	1.15	1.43	0.44
		71-00	1.14	0.87	0.73	0.54	0.34	0.19	0.08	0.15	0.32	0.57	1.10	1.28	0.41
HVAR	J3	61-90	1.40	1.07	1.00	0.56	0.30	0.21	0.11	0.19	0.33	0.64	0.97	1.42	0.48
		71-00	1.19	0.92	0.89	0.57	0.34	0.18	0.11	0.19	0.36	0.63	1.12	1.30	0.47
DUBROVNIK	J3	61-90	2.10	1.83	1.44	0.97	0.50	0.34	0.16	0.35	0.51	0.98	1.64	1.92	0.67
		71-00	1.51	1.44	1.21	0.97	0.51	0.23	0.12	0.31	0.46	0.88	1.53	1.67	0.67

1.2. i 1.3. Normal rainfall and rainfall standard deviation

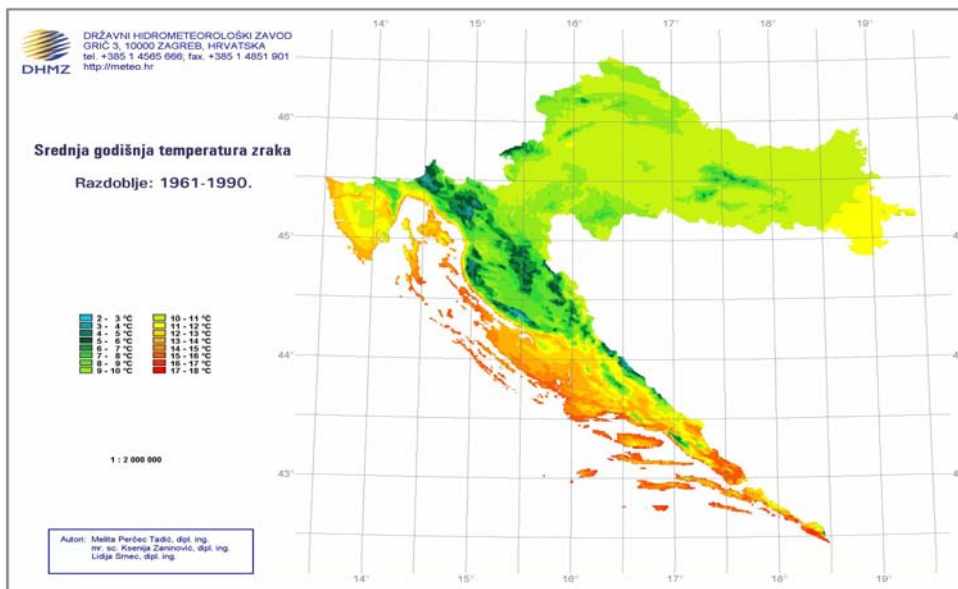
Table 1.2. Average monthly and average annual rainfall (mm) for the periods 1961-1990 and 1971-2000 and sd - standard deviation (mm) from the period 1971-2000.

Rainfall (mm) 1961-1990. i 1971-2000.															
STATION	REGION	YEAR	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	PA
OSIJEK	P1	61-90	46.9	40.2	44.8	53.8	58.5	88.0	64.8	58.5	44.8	41.3	57.3	51.6	650.4
		71-00	41.3	35.4	40.5	51.0	59.2	82.0	65.4	61.9	51.0	55.9	61.7	48.9	654.2
		sd	26.6	21.7	22.3	20.7	35.3	38.5	48.7	32.4	36.5	41.6	34.4	30.7	129.1
DONJI MIHOLJAC	P1	61-90	53.8	43.2	49.7	58.1	64.1	82.3	71.5	71.6	49.3	44.1	63.3	58.2	709.2
		71-00	48.1	37.3	44.2	56.6	63.4	84.8	69.8	71.1	52.8	58.3	66.1	57.3	709.9
		sd	31.2	21.9	16.0	25.9	38.7	40.6	49.2	35.1	35.1	40.3	36.9	35.7	142.9
ZAGREB MAKSIMIR	P3	61-90	46.4	42.0	55.8	63.6	78.7	100.1	83.4	94.6	79.3	69.2	81.2	58.0	852.2
		71-00	43.2	38.9	52.6	59.3	72.6	95.3	77.4	92.3	85.8	82.9	80.1	59.6	840.1
		sd	32.1	22.1	22.3	26.1	42.2	36.2	38.1	56.8	44.8	53.5	46.3	33.9	128.0
SENJ	J1	61-90	84.9	83.8	88.6	99.0	100.8	89.2	68.1	106.9	118.6	129.4	171.9	112.9	1254.1
		71-00	68.5	76.0	82.3	94.9	94.9	97.8	56.7	84.4	143.2	145.5	166.6	120.0	1230.8
		sd	48.3	45.7	46.3	37.8	67.9	47.9	32.0	52.0	89.2	114.3	89.8	83.3	226.3
SPLIT MARJAN	J3	61-90	82.8	68.5	75.3	65.5	56.6	50.9	28.3	50.2	60.6	78.7	108.4	99.6	825.3
		71-00	73.7	61.2	63.4	61.9	61.6	47.3	25.5	44.8	68.9	82.1	101.7	90.8	782.8
		sd	48.2	41.1	43.4	27.0	43.3	32.0	26.7	45.4	49.8	50.6	55.1	59.3	159.0
HVAR	J3	61-90	79.5	64.4	71.3	52.9	41.3	38.7	24.8	42.3	59.4	81.1	83.9	90.8	730.4
		71-00	68.4	55.7	62.7	54.1	46.7	34.4	26.4	45.2	63.7	79.3	94.0	83.2	713.7
		sd	54.2	44.4	51.6	29.0	37.9	24.6	34.4	43.2	44.7	49.4	57.5	56.4	163.5
DUBROVNIK	J3	61-90	129.9	117.3	108.1	91.8	65.9	61.1	35.7	78.7	92.7	131.8	151.3	135.5	1199.8
		71-00	98.3	97.9	93.1	91.4	70.1	44.0	28.3	72.5	86.1	120.1	142.3	119.8	1064.0
		sd	67.0	72.7	57.3	45.7	53.3	41.5	31.1	59.2	60.3	72.8	74.1	58.2	226.4

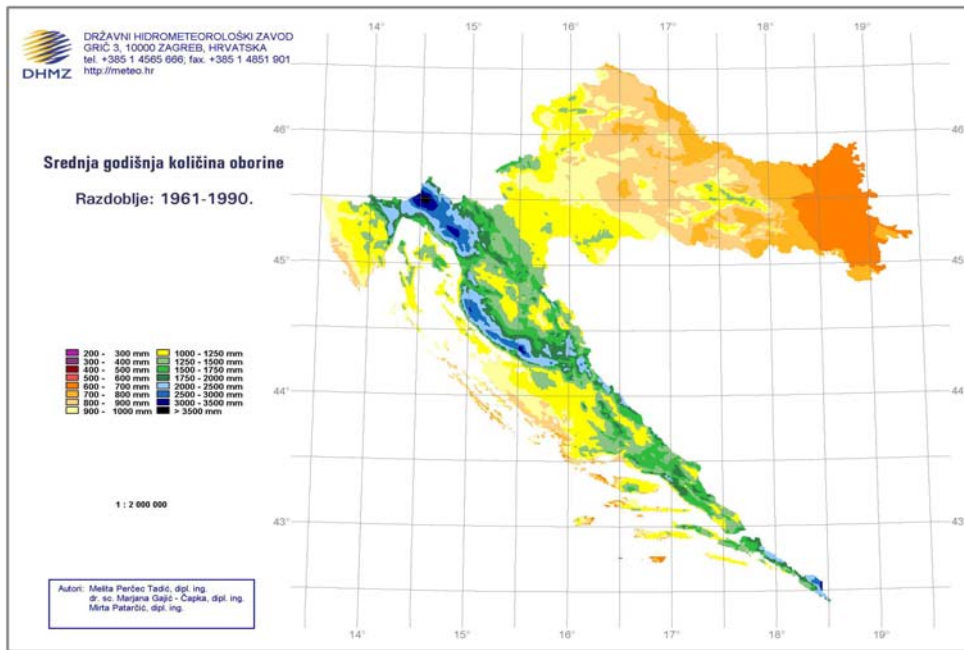
Map 2 Agricultural regions of Croatia; source: NAP- draft, 2005.



Map 3: Average annual air temperature 1961- 1990; Source: NAP- draft, 2005.

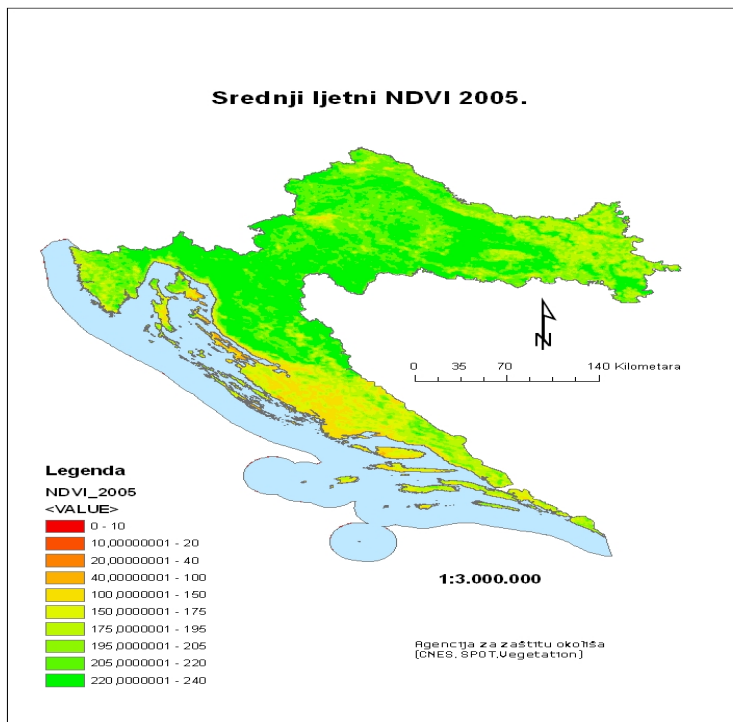


Map 4: Average annual precipitation 1961 -1990; Source: NAP - draft, 2005.



2. Vegetation and land use

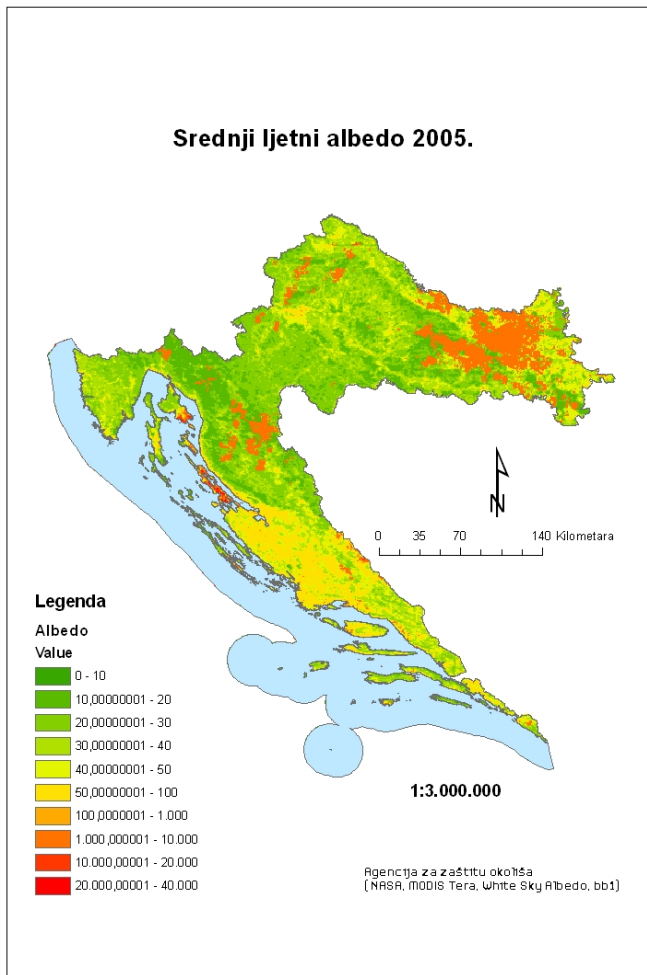
2.1. Average summer NDVI (Normalized difference vegetation index) 2005.



- 2.2. Vegetation cover (% of total vegetation index) 94.72% (CLC 2000)
 2.3. Land use (percent of total land)

Source	CLC 1990	CLC 2000
Land use	1990-1999	2000-2005
Arable crop land	35.01 % (1981042 ha)	34.78 % (1968014 ha)
Irrigated	0.17 % (9398 ha)	0.17 % (9398 ha)
Rainfed	43.27 % (1971644 ha)	43.21 % (1967016 ha)
Pasture	8.43 % (477139 ha)	8.60 % (486872 ha)
Forest and woodland	50.98 % (2885027 ha)	50.98 % (2884776 ha)
Other land	5.58 % (315808 ha)	5.64 % (319354 ha)

2.4. Average **summer surface albedo 2005.**



3. Water resources

- 3.1. Fresh water availability: $111.66 \cdot 10^6$ (million m³)/annum
 3.2. Fresh water resources per capita: 25.163 m³/annum/per capita
 (in the period from 1961 to 1990)
 3.3. Agricultural water use (million m³): = 359,252,000 (for the year 2002)

298,778,000	Fish-farming
39,744,000	Cattle breeding
<u>20,730,000</u>	<u>Irrigation</u>
359,252,000	Total

- 3.4. Industrial water use (million m³) (for the year 2002) : 672,913,000

4. Energy

Consumption

- 4.1. Energy use per capita (kg oil equivalent).
 • Total energy consumption per capita in Croatia in 2003 equalled 2,128 kg oil equivalent
 • Total energy consumption per capita in Croatia in 2004 equalled 2,216 kg oil equivalent

- 4.2. Agricultural energy use per hectare (millions of BTU)

Year	PJ	mil BTU	Agricultural land (ha)	mil.BTU/ha
2004.* ¹	9.95	9,430,610,000,000.00	2,695,000	3.50
2004.* ²	9.95	9,430,610,000,000.00	1,110,000	8.50
2004.* ³	9.95	9,430,610,000,000.00	1,061,000	8.89

*¹ Total agricultural land

*² Total plough-lands and gardens

*³ Total crops

Production

- 4.3. Energy from renewables excluding combustible renewables and waste **

Methods	2003	2004
IEA	4.76%	6.78%
Eurostat	4.97%	6.88%

** renewables: water power, wind energy , geothermal energy.

Renewables - Consumption by sector

- 4.4. Industry (% of total renewable consumption)
 4.5. Residential (% of total renewable consumption)
 4.6. Agriculture (% of total renewable consumption)

<u>Renewables - Consumption by sector</u>	2003		2004	
	IEA	Eurostat	IEA	Eurostat
4.4. Industry	44.15%	43.89%	37.78%	37.47%
4.5. Housing	10.29%	100.72%	85.53%	84.83%
4.6. Agriculture	0.67%	0.67%	0.55%	0.55%

*** Energy from renewables excluding combustible renewables: water power, wind energy, geothermal energy, combustible renewables and waste(IEA), Biomass (Eurostat)

5. Types of land degradation

Type of degradation	1990-1999		2000-2005	
	million ha	% percent of total area	million ha	% perfect of total
High real risk of erosion caused by water; agricultural land			0.75	13.25
High real risk of erosion caused by water; woodlands			0.75	13.25
Salinization			0.11	2.00
Acidification				
-total			1.6	28.27
- extreme geogenic			0.04	0.70
- combined pedogenic/geogenic			0.31	5.48
- combined pedogenic/anthropogenic			1.35	23.85
Mined and mine suspected areas			0.12	2.12

6. Rehabilitation

Lands under rehabilitation	1990-1999	2000-2005
Rehabilitation of degraded crop land (km ²)	Unknown	Unknown
Rehabilitation of degraded rangeland (km ²)	Unknown	Unknown
Rehabilitation of degraded forest (km ²)	Unknown	Unknown

Socio-economic indicators related to desertification and drought

7. People and economy

7.1. Population (total)= 4,248,100 according to the 2001 census.

- Population: urban (percent of total)
 - (urban population) = 72.19 % (2001)
- Population: rural (percent of total)
 - (rural population) = 27.84 % (2001)

7.2. Population growth (% annual)= - 2.1 % (2004 god)

- 7.3. Life expectancy (years) = 71/72 years for men, i. e., 78/79 year for women (2004)
- 7.4. Infant mortality rate (per 1000 life births) = 6.3 %
- 7.5. GDP (current USD) = 34.3 milliards (2004)
- 7.6. GNI per capita (current USD) = 6, 590 (2004)
- 7.7. National poverty rate (% population) -
- 7.8. Crop production (metric tons) – (2003) = 5,011,671Mt; 3,724,444Mt (agriculture), 822,163Mt (clover, lucerne, meadows and rangelands), 131,737Mt (apples, plums, olives, cherries, peaches, pears), 333,327 Mt (grapes).
- 7.9 Livestock production (metric tons) – (2004); data slaughterhouse; 129,413 Mt (beef 28,982Mt, veal 3,432Mt, pigs 52,545Mt, piglets 832Mt, lamb 480Mt, horses 58Mt, chicken 42.575Mt)

8. Human development

- 8.1. Primary education completion rate (% age group) = 23.7%; out of which = 21.8% male, 19.5% female (2001)
- 8.2. Number of women in rural development (total number)
- 8.3. Unemployment (% of total) 13.8% (2004)
- 8.4. Youth unemployment rate (age 15-24) I half-year 2004= 32.9%; II half-year 2004= 33.8%
- 8.5. Illiteracy total (% age 15 and above) = 4.4 % (2001)
- 8.6. Illiteracy male (% age 15 and above =2.9 % (2001)
- 8.7. Illiteracy female (% age 15 and above) =1.2 % (2001)

9. Science and technology

- 9.1. Number of scientific institutions engaged in desertification-related work (total number)

10. Data sources:

1. MEPPPC, National Action Programme to Mitigate the Effects of Drought and Combat Land Degradation in the RH, TP CLIMATE, draft, 2004.
 - 2.1., 2.4. Croatian Environment Agency
 - 2.2.; 2.3. Croatian Environment Agency, Corine Land Cover database
 - 3.1., 3.2. Water management basis- Water Management Strategy, (Croatian Waters)/ draft, 2006.
 - 3.3., Croatian Environment Agency Agricultural Environmental Indicators RH, 2005.
 - 3.4. State Directorate for Statistics, Statistic Chronicle, 2004.
 - 4.1. Ministry of the Economy, Labour and Entrepreneurship, Institute for Energy Hrvoje Požar
 - 4.2. State Directorate for Statistics, Statistic Information, 2005.
 - 4.3. Ministry of the Economy, Labour and Entrepreneurship, Institute for Energy Hrvoje Požar
 - 4.4. Ministry of the Economy, Labour and Entrepreneurship, Institute for Energy Hrvoje Požar
 - 4.5. Ministry of the Economy, Labour and Entrepreneurship, Institute for Energy Hrvoje Požar
 - 4.6. Ministry of the Economy, Labour and Entrepreneurship, Institute for Energy Hrvoje Požar
(4.1. – 4.6. elaboration Croatian Environment Agency)
5. MEPPPC National Action Programme to Mitigate the Effects of Drought and Combat Land Degradation, RH, TP Soil, draft, 2004., elaboration Croatian Environment Agency
 - 7.1. Census 2001, Statistic Chronicle, 2004.
 - 7.3., 7.5., 8.3., 8.4. Statistic Chronicle, 2004.
 - 7.4. - 7.9. Statistic Information 2005.
 - 8.1. Census 2001.
 - 8.5. – 8.7. Census 2001.