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B. AGRICULTURE; DROUGHT; DESERTIFICATION; LAND AND RURAL DEVELOPMENT

For each of the five themes, you are invited to provide information on issues of importance to your country in relation to the list of topics given below (which have been drawn from the relevant intergovernmental decisions on sustainable development), highlighting in particular:

- **concrete actions taken and specific progress made in implementation**
- **lessons learned**
- **recent trends and emerging issues**
- **major constraints and challenges**

You are also invited to share any **case studies or good practices** in relation to these topics. Please provide such inputs directly at:

COMMON ISSUES:

Means of Implementation

- Education, training, awareness-raising and capacity-building
- Institutional capacity building
- National legal frameworks and administrative or other measures of relevance
- Participation of Major Groups, in particular women and local communities, in decision-making and implementation
- Mobilization of financial resources from all sources; provision of credit facilities; promotion of private investment; any innovative financing mechanisms
- Technology development, transfer and dissemination, including through extension services
- Application of indigenous knowledge and know-how
- Cooperative frameworks and partnerships

THEME-SPECIFIC ISSUES:

Agriculture (Government focal point(s): _____)

- Policies and programmes to achieve food security and sustainable agriculture
- Policies and programmes to enhance agricultural productivity and farmers' incomes
- Recent agrarian reform and other measures designed to secure equitable access to land resources by both genders
- Community-based and indigenous approaches to sustainable food production
- Programmes for environmentally-sound agricultural pest control
- Actions to improve water management in agriculture (e.g., more efficient use, improved irrigation); measures to make more efficient and effective use of energy and other essential inputs for sustainable agricultural production
- Measures to improve and develop infrastructure to enhance distribution to markets
- Completed bilateral, regional and multilateral agreements relating to liberalization of agricultural product markets, including under WTO's Doha round of trade negotiations
- Measures taken to diversify agricultural production systems, including development of new markets for value-added agricultural products
- Improved national early warning systems for monitoring food supply and demand and household access to food; weather insurance schemes for farmers.

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Agricultural reforms, policies and programmes aiming at enhancing the agricultural production and increasing the farmers' revenue

The adoption of the Strategy for National Agricultural Development in 1995 laid down the grounds for Croatian agricultural policies. The Strategy declared private family farms to be the backbone of the development of Croatian agriculture. The main determinants of this document were maintained in the Agriculture and Fisheries Strategy of the Republic of Croatia (Official Gazette, 89/02) adopted by the Croatian Parliament in July 2002. The Strategy underlines the importance of competitiveness of Croatian agriculture, especially in the efforts aiming to satisfy the demand for food products and includes the rural area in the Croatian agricultural goals, which is in line with the recent European Union objectives and policies. Particular emphasis is attributed to food safety and environmentally friendly agricultural production, a new and special management system based on sustainability and on numerous other opportunities that it offers.

Goals and guidelines of agricultural policies outlined in the Strategies are the answer to the growing need for improvement of the general situation in this sector. In order to face successfully all the challenges and difficulties arising from international integrations and this particularly refers to the commitments the Republic of Croatia has towards the World Trade Organisation and to the progress of the European Union Common Agricultural Policy, it was necessary to strengthen the agricultural policy by basing it on boosting competitiveness of the agricultural sector. Nevertheless, Croatia did not ignore the environment in which the agricultural production takes place. Thus, the attention for an overall sustainable development of the rural area was included among the imperatives of the present and of the future.

Taking into consideration the bond between the agriculture and other sectors of the economy, close cooperation with various public administration bodies, business subjects, expert services and, goes without saying, the agricultural producers is essential for a high quality implementation of Croatian agricultural goals envisaged by this Strategy.

The agricultural reform was launched in 1999 when incentives per hectare and payment per head of cattle were introduced replacing the quantity payments. These models were seen as an appropriate long-term, sustainable form of support to agriculture. The reform continued in 2001 with the adoption of relevant laws: the Agriculture Act (Official Gazette 66/01 and 83/02), the Law on Agricultural Land (Official Gazette 66/01, 87/02, 48/05, 90/05) and the Ecological Production of Agricultural and Food products Food (Official Gazette 12/01, 14/01).

The main law regulating the overall agricultural sector, which unified the existing legislation and the sectors that were not completely regulated yet, is the Agriculture Act. The Act sets out the goals and the measures of the agricultural policy, defines the beneficiaries, the institutional support and the policy makers in the field of agriculture, lays down the monitoring and reporting methods as well as the administrative and inspection supervision procedures.

The priorities of the agricultural policy are first and foremost, food safety, the promotion of an efficient production and marketing of agricultural products, ensuring an adequate living standard and securing a stable agricultural income, an appropriate and stable offer of food products meeting the demands of the consumers, especially referring to the prices and the quality of food as well as food safety, the protection of natural resources by promoting a sustainable, environmentally friendly agriculture and the preservation and development of rural areas and rural values.

The agricultural policy measures are designed to accomplish the agricultural policy goals and are divided as follows:

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a) market and price policy measures (prescribed prices, financial incentives and restitutions, domestic market interventions, measures for increasing sale and consumption, measures for balancing the offer and trade measures). For certain groups of agricultural products, the Government of the Republic of Croatia may decree market orders which will regulate the mentioned products market applying relevant market and price policy measures.

b) structural policy measures are subsidies used to boost the economic efficiency of agricultural production in order to secure a stable income and an adequate living standard to the farmers in rural areas, as well as a harmonious development of agricultural regions and rural areas. These measures include subsidies to areas which have greater difficulties in agricultural management, in the development of an environmentally friendly agriculture and the preservation of biodiversity, investments in farms, in the professional training for working in agriculture, encouraging young people to engage in agriculture and allowing early retirement to farmers, regional development of agriculture and other supplementary activities on the farms.

c) land policy measures include granting the right of use and sale of the agricultural land owned by the state, improving the management of agricultural land and providing protection to agricultural land from pollution.

The importance of the Law on Agricultural Land lies in the fact that the decision regarding sale or lease of agricultural land owned by the state lies upon the units of local self-government (municipalities and towns). They will adopt a decision on the grounds of the Programme of Management of state-owned agricultural land in the Republic of Croatia and in line with the principles and the guidelines of the Strategy of Management of state-owned agricultural land in the Republic of Croatia. The Strategy sets out the goals and the measures designed to improve the current, unsatisfactory situation not only in the management of state-owned agricultural land but also in the overall management of agricultural land in the Republic of Croatia, which particularly refers to the protection of agricultural land. The consolidation of private family land is also one of the key factors.

Law on ecologic production of agriculture and food products provided a legal framework for the organisation of the market and the production of ecological products.

State aid scheme is implemented on the grounds of the Act on State Aid in Agriculture, Fishery and Forestry (Official Gazette, 87/02, 117/03, 82/04, 12/05, 85/06, 141/06) through two main components of the agricultural policy: market and price policy oriented and structural measures. Next to the market and price oriented (1) production stimulation model, models of structural measures include: (2) income aid model (aid to non-commercial farms regardless of the type and quantity of production), (3) capital investments model (support to investments in commercial farms in agriculture) and (4) rural development model (national aid measures in rural areas).

(1) production stimulation model comprehends direct subsidies to production aiming to increase the income of the commercial farms (family farms, cooperatives, small businesses or firms) in order to boost the competitiveness of farm production. This model's goal is to stimulate crop farming, perennial crops plantation, livestock farming and livestock products. For areas characterized by difficult farming conditions, the amount of incentives saw an increase of 35 % and it is destined to vine and orchards planting and, partly, for livestock breeding. The amounts that are higher than conventional production are intended to stimulate the ecological production.

(2) income aid model is a subsidy not related to production and intended for small, un-competitive private family farms where the members of the family are mostly elderly persons who are still active. The intention of this scheme is to provide for elderly persons and to assure an adequate living standard

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to the members of the farm creating the preconditions for gradual reduction of their activities in agriculture.

There are two groups of beneficiaries of the income aid and their common characteristic is that those beneficiaries who meet the established criteria may obtain a fixed amount of aid regardless of the type of production on the farm. Once the farms or the farmers satisfy the required conditions for obtaining the income aid, their farm acquires the status of a non-commercial farm and such farms and farmers cannot apply for production subsidies or investment subsidies.

(3) capital investments model is a structural measure designed to bring together the farmers and business banks with the objective of increasing the productivity and competitiveness of the commercial farms.

The commercial farms may obtain the right to investment subsidies by obtaining the grants from the State budget. MAFWM participates in the financing of investments for which the financial institution granted to the commercial family farm a credit to be used in agriculture, fishery and forestry. The share of investment support may amount up to 25% of the total amount of the credit used, however not exceeding the 20% of the total value of the investment.

(4) rural development model: the goal is to preserve and enhance the development of rural areas and rural values as well as certain traditional features of Croatian agriculture. The model of rural development contains three programmes: (1) the development of rural areas, (2) preservation of autochthonous breeds and (3) and marketing preparation of the products. The Programme of development of rural areas is intended to co-finance the development projects of the regional and local self-government units related to the sustainable rural development. The basic way of functioning of this model is to bring together the funds from the state budget and the funds available from regional and local budgets, the user's funds and other available sources of financing (foreign donations, technical assistance and similar). The objective of the Programme for preservation of original and protected breeds is to preserve the autochthonous Croatian breeds in rural areas. The goal of the Marketing preparation of the products programme is to increase the sale of agricultural products on foreign and national markets through a number of marketing activities, and this will affect directly the overall development of rural areas these products originate from.

The Farm Registry is used for the requirements of the implementation of the State subsidies in Agriculture, Fishery and Forestry Act, or of the paperwork related to obtaining incentives per hectare, and it includes several elements of IACS (Integrated Administration and Control System). The user submits the application for incentives per hectare to the State administration office. The offices conduct an administrative control of incentives per hectare applications and insert the supplied data in the computer database. The database contains all the data regarding the cadastre plots and agricultural crops for which the farmer applied for the incentives. The applications for crop production incentives are submitted to the Ministry of Agriculture, Forestry and Water Management and for livestock breeding to the Croatian Livestock Centre. The Offices carry out the administrative control and approve the disbursements to the applications for incentives per hectare.

Other aid schemes

a) Operational programmes

Operational programmes were launched as development programmes by the Croatian Government and the Ministry of Agriculture, Forestry and Water Management in 2004, and were destined to increase the production of short supply products, primarily fruit, vine, meat and milk products. The reorganisation of production began by implementing the Operational Programme of development of cattle breeding, establishment of perennial crop (orchards, vineyards and olive groves), the development of pig husbandry, the development of vegetable production and supporting the production of Slavonian Kulen.

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The financial construction of this programme has been defined in the following way: advantageous credits were secured from the funds of the Croatian bank for Reconstruction and Development and the Croatian Agency for Small Business, while another 25% of the value of the project can be financed through incentives from the funds available from the state budget (following the capital investments model).

b) Tax advantages – indirect aid to agriculture

Excise Tax Act on Oil Products (Official Gazette 136/02, 123/03) prescribes excises for several oil products. Among other things, excise tax for the euro-diesel was regulated in this Act, the blue coloured diesel fuel (so called blue fuel) used in agriculture, and it is exempt from excise on oil products.

c) Agriculture support financed by the local self-government units

Pursuant to the Act on local and regional self-government (Official Gazette, 33/01 and 60/01), the counties, cities and municipalities may subsidize various programmes in agriculture and in rural development from their own budgets. On the state level, there is no mechanism which harmonizes, coordinates and monitors their activities, thus the measures and the aid amounts vary greatly. Primarily, investments are financed (through grants or subsidized interest rates), then animal husbandry programmes and even direct payments (per hectare for ecological production, for seedlings and payments per head of cattle in livestock farming,...) and other.

d) Insurance Programme from possible damages in the agricultural production

According to the State aid in Agriculture, Fishery and Forestry Act, the Ordinance on obtaining the right to insurance support from possible damages in agriculture, fishery and forestry (Official Gazette 47/03, 6/04 and 185/04) was adopted and a programme of support from possible damages in agriculture was established. The most important feature of this programme is the fact that it provides to farmers the possibility to insure their production, and the Ministry of Agriculture, Forestry and Water Management co-finances the defrayment of the costs of the insurance premium by securing to the insured farmer for every single insurance policy a financial support in the amount of 25% of the total cost of the insurance premium.

e) Compensation of damage caused by natural disasters

The Natural Disaster Protection Act (Official Gazette, 73/97) foresees the possibility for farmers to compensate the damage caused by draught, floods and hail or similar natural disasters in exceptional occurrences. The competent body for the implementation of this Act is the Ministry of Finances.

The users, i.e. the beneficiaries, of these funds and other forms of support in agriculture can be legal entities with head office in the Republic of Croatia and natural persons, citizens of the Republic of Croatia with residence in the Republic of Croatia.

Stipulated bilateral, regional and multilateral agreements regarding the liberalisation of the agricultural products market, including the Doha round of WTO negotiations.

Liberalisation of agricultural sector

Croatia's entrance in the World Trade Organisation (WTO) in the end of November 2000 marked the beginning of a higher liberalisation of the Croatian market of agricultural and food products. The Croatian agricultural market has been further liberalised by numerous free trade agreements stipulated with all European countries which are also Croatia's most important trade partners. Intensive trade negotiations have been underway during the recent years, and particularly from 2002 until 2004.

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The objectives of the free trade agreements are improving and increasing the economical cooperation between countries, removing obstacles and restrictions in the trade of goods as well as providing a legal framework and securing a fair competition on the trade market and defining trade preferences.

The trade preferences comprise certain agricultural and food products, and these are, mostly due to the sensibility of this sector, very limited. The following models of trade liberalisation apply for agricultural and food products:

- abolishment of custom duties on the date of entry into force of the agreement or during the transitional period
- reduction of customs duties on the date of entry into force of the agreement or during the transitional period
- abolishment or reducing the customs duties for limited quantities of products (the so called tariff quotas).

Free trade agreements are of utmost importance for the Republic of Croatia. Their execution leads to the realization of the basic objectives which were the main reasons for stipulating such agreements. This is confirmed by the high share of external trade exchange conducted within the free trade regime (an average custom duty in 2006 amounted to 6.5 % which is actually a rather low figure for such a vulnerable sector), and the custom duties were kept only for the most susceptible products.

The Republic of Croatia is today implementing the free trade regime with the following countries: 27 countries members of the European Union, 4 EFTA countries and Albania, Bosnia and Herzegovina, Kosovo, FYRM, Moldavia, Serbia, Montenegro and Turkey.

Trade relations with countries members of the EU were agreed during the year 2001 within the Stabilisation and Association Agreement negotiations between the Republic of Croatia and the European Union and all its member countries. The pertaining trade part – the Interim Agreement on trade and trade-related matters was exercised from 1 January 2002. In the early days of its application, the Interim Agreement comprehended trade between the Republic of Croatia on the one side, and 15 member countries of the European Union on the other.

After the European Union enlargement of the 1 May 2004, this Agreement included all 25 states member of the European Union. Due to this enlargement, the Stabilisation and Association Agreement was updated with the “Protocol 7”. The Stabilisation and Association Agreement entered into force on 1 February 2005 and with this date ceased the application of the Interim Agreement on trade and trade-related matters.

All the countries with which the Republic of Croatia stipulated the free trade agreements are members of the World Trade Organisation – WTO, except for Serbia; Montenegro and Bosnia and Herzegovina. The Republic of Croatia is member of working groups for these countries accession in the World Trade Organisation - WTO.

During 2006 the Republic of Croatia participated intensively in the new CEFTA negotiations whose main intention was to preserve the CEFTA and its enlargement to the countries of South-eastern and Eastern Europe. The negotiations held during the whole 2006 saw the participation of the Republic of Croatia, Romania, Bulgaria, Albania, Bosnia and Herzegovina as well as the United Nations Interim Administration Mission in Kosovo, on behalf of Kosovo. The negotiations were concluded on 10 November of 2006 by initialling the new CEFTA Agreement. The Agreement on CEFTA's enlargement was signed on 19 November 2006 and its implementation is scheduled for mid 2007. The new CEFTA Agreement comprises almost 40 bilateral agreements between the countries of Southeast Europe stipulated up to that date.

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Regarding the trade relations with the EU, adaptation of the Stabilisation and Association Agreement are currently underway due to the European Union's latest enlargement on Romania and Bulgaria.

WTO negotiations status

The Republic of Croatia is participating in the new round of multilateral trade negotiations launched in November 2001 in Doha and which are carried out in line with the Doha Development Agenda – DDA. As Croatia is a country that started the talks on joining the European Union, it follows and supports the positions of the European Union in this round of negotiations and through its permanent missions in Geneva coordinates the negotiation positions.

However, as a country that joined the WTO upon the completion of the Uruguay Round and as a country which has one of the most liberalised trade systems within the WTO, the Republic of Croatia decided during the WTO accession talks to undertake commitments to ensure a higher liberalisation of its market in comparison with the other countries members of WTO, especially the countries members with similar situation in the economic development, as well as with countries that have been members from the very beginning. Following that, the Republic of Croatia represents its interests through an informal group of the so called RAM – Recently Acceded Members, and Croatia is its informal coordinator. Apart from the Republic of Croatia, the RAM group includes the following countries: Albania, Armenia, China, Taiwan, Ecuador, FYRM, Jordan, Kyrgyz, Moldova, Mongolia, Oman, Panama and Saudi Arabia. The priority areas in the WTO negotiations for Croatia are: agriculture, access to the market of industry products and trade in services.

Quality policy

The legal framework for the quality policy

The area of quality policy in the Republic of Croatia is regulated by the Ordinance on Designation and Protection of Geographical Indication of the food („Official Gazette“ 80/05, 11/07) and the Ordinance on recognition of special food characteristics and assignment of the designation „traditional reputation“ („Official Gazette“ 127/05). Both Ordinances were adopted on the ground of the former Food Act 117/03, 130/03, 48/04, 85/06) which is no longer in force.

The Ordinance on Designation and Protection of Geographical Indication is mostly harmonized with the Regulation 2081/92 dated 14 July 1992 on protection of designation of geographical indication and designation of origin for agricultural products and food products and other EU regulations defining this sector. The Ordinance on recognition of special food characteristics and assignment of the designation „traditional reputation“ is almost completely in line with the Council Regulation 2082/92 on certificates of specific character for agricultural products and foodstuffs dated 14 July 1992 and other relevant regulations adopted on the ground of this one.

However, the European Union passed new Regulations in 2006 which replaced the Regulations valid up to that moment for the mentioned area. The Council regulation No 510/2006 of 20 March 2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs replaced the Council Regulation 2081/92. Council Regulation (EC) No 509/2006 of 20 March 2006 on agricultural products and foodstuffs as traditional specialities guaranteed replaced the regulation 2082/92. The Commission Regulation No. 1898/2006 was adopted in December 2006 and it lays down detailed rules for the application of the Council Regulation 510/2006.

The Republic of Croatia continued with the further harmonisation of the laws and regulations for this area with the European Union legislation. For this reasons, at the beginning of May 2007 a new Food Act was passed („Official Gazette“ 46/07) with provisions, related to quality policy, are in line with the

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new EU Regulations and further harmonisation will be carried out through adopting amendments of the abovementioned Ordinances or by passing new ordinances which will replace the present ones.

The above mentioned Regulations define the meaning of designations, the procedure for protection on the EU level and the provisions that should be adopted by the national protection system, the applicants and the contents of the application, as well as specifications, the range of protection, the system of conformity certification and control for foodstuffs and agricultural products holding one of the designations. These Regulations promote the higher variety of agricultural and food production, that is the production of products wearing certain particular characteristics. The product holding one of the mentioned designations is a product with certain particular characteristics originating from the values of its ingredients, production and processing methods and the climate it originates from and on these grounds, this product has a major value for the consumers.

Quality policy implementation system

Regarding the implantation of the current secondary acts regulating the quality policy system the Ministry of agriculture, Forestry and Water management published in June 2006 the following:

- the tender for authorizing legal entities for determining the conformity of production and processing of the product and the very food product with the specification and the conduction of control over production and processing and the final food product that will hold or already holds the designation of origin or of geographical indication.

The tender is open until the required number of legal entities for the establishment of the system of determining the conformity and control is authorised. At the present moment, only one certification body is authorized to conduct the mentioned system.

Apart from that, the Ministry of Agriculture, Forestry and Water Management has for the second year now been drafting a programme for granting financial funds for co-financing the accreditation of certification authorities according to HR EN 45011 standard. The funds for the mentioned programme are secured from the State Budget of the Republic of Croatia for the year 2007. The tender for the implementation of this programme was already published and will stay open until all the financial funds are allocated, at the latest by 1 November 2007.

Furthermore, one of the direct activities launched by the Ministry in 2006 within the "Marketing preparation of the agricultural products and foodstuffs" programme is financing the creation of the specifications for autochthonous food products which enter the protection system.

Besides, the Ministry of Agriculture, Forestry and Water management is organising a number of training seminars and round tables within different projects which very often host consultants from EU member countries. These seminars and round tables are organized all over Croatia and our objective is to train the producers of autochthonous food products. So far, we have also organized for some producers' associations several study trips to Germany, Austria and Italy and the driving idea is the exchange of experiences with similar association from the mentioned countries. The goals of these study trips are to provide our producers of autochthonous food products with new knowledge and experiences regarding the designation of origin and designation of geographical indication protection system.

As for the programmes referring to the protection of plants from pests in a environmentally friendly way, the Republic of Croatia has a legal framework for the ecological production and in this production system the activities directed to the protection of plants from pests are conducted in a way which is fully in line with the environment protection standards. In the promotion of this system, the Republic of Croatia will encourage the Agricultural production integration system in which the pests control is conducted through agro-technical measures and biological control. A legal framework will be soon

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prepared for this purpose and the production techniques will be established as well as the certification of such production, considering the fact that the products from this system deserve a special market position.

As for the measures for improvement and development of the infrastructure intended for strengthening and organising the placement of the products on the market and bearing in mind considerable problems Croatia has with inadequate and lacking market infrastructure in the sector of fruit and vegetables, in the last three years the national support system was launched for investments in market infrastructure in the sector of fruit and vegetables. In the fruit sector, it is necessary to solve the issues of storage and processing of apples, which is the most important fruit for production and consumption in Croatia. A cold-storage chain with controlled temperature for long term storage of fruit (apples) was established as one of the support measures. This programme is being expanded on other varieties of fruits and vegetables and particularly on processing plants for vegetables (take-over, processing, sorting, packaging and temporary storage).

Irrigation and management of agricultural land and water

Today, in the Republic of Croatia relatively small agricultural areas are irrigated when considering its needs and possibilities. Official data indicate that in Croatia 9,264 hectares or 0.86% of used agricultural land is irrigated placing thus Croatia on the last positions among the European countries. The rich water potential and fertile soils are not used enough. Average yields of vegetables, fruits and other crops are rather low and vary considerably through the years primarily depending on draught. Draughts occur in Croatia in average every three to five years and, depending on intensity and length, may reduce yields of different crops by 20 – 70%. The draughts in 2000 and 2003 caused a loss of 3.4 billion Kuna in the agriculture sector. The Croatian agriculture is witnessing constant fall in production, unbalanced demand and supply, the constant negative indicators of foreign trade balance and gradual reduction of its share in the GDP (1999 - share 11.58%, and in 2003 - share 9.93%).

Thus the economic figures indicate the inefficient use of available resources – land and water, slow flow of capital.

The prevailing part of the agricultural structure is composed of private family farms, owing more than 80% of land. More than 70% of these farms are not larger than 3 hectares and these lands are mostly very fragmented. Even among those farms with larger areas, a very few of them are vital and market oriented farms which could in present circumstances compete with imported products. Average area of agricultural land used for one product is 2.4 hectares. Agricultural households use an average of 1.9 hectares and business subjects 159.2 hectares.

For this reason the Government of the Republic of Croatia launched the ***Project of irrigation and management of agricultural land and waters in the Republic of Croatia***. The National Commission was established in conformity with the mentioned Decision. It is headed by Prime Minister Ivo Sanader and the Minister of Agriculture, Forestry and Water management, Petar Čobanković, was appointed as his deputy. The Minister designated an Expert team in charge with the coordination of the elaboration and adoption of the strategy of current and future development of the irrigation system in the Republic of Croatia with the goal of improving the management of natural resources, organisation of agricultural infrastructure and market economy of agricultural products. The Strategy was elaborated and adopted by the Expert Team in July 2005 under the title ***National project of irrigation and management of agricultural land and waters in the Republic of Croatia*** – the beneficiary of the project: Faculty of Agriculture of the University of Zagreb). The Strategy was adopted on the session of 17 November by the National Commission and the Government of the Republic of Croatia.

The intention and the objective of *National project of irrigation and management of agricultural land and waters in the Republic of Croatia*: better management of agricultural land and waters in irrigation conditions. The construction of this system for small, fragmented and separated properties complicates and increases considerably the costs not only of the construction but also of the maintenance of the

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system. Thus, the *National project of irrigation and management of agricultural land and waters* recommends that the State should co-finance the construction of the system according to the size of the property for which the water supply system is being built. In this way, the State stimulates the consolidation and association of agricultural producers which, finally leads to a more rational management of the newly constructed systems.

In the *National project of irrigation and management of agricultural land and waters*, the irrigation was defined as one of the measures for reducing draught consequences and even for avoiding them completely in certain areas. The reduction of yield of agricultural crops cultivated without irrigation on the territory of the Republic of Croatia in average climate conditions total from 10 to 60%, and in dry periods to 90% of biological potential, depending on the crop, type of soil and area. Next to that, the irrigation place in the agriculture of developed neighbouring countries are enough as arguments for the assumption of a better perspective and place of this measure in our agriculture and economy in general. One of the key starting points for planning the irrigation is defining the availability and quality of water resources. Currently, in Croatia, for all purposes, we use less than 1% of renewable water resources. When discussing rational management of water resources for irrigation purposes, one particularly refers to creating the conditions for securing water supply for irrigation purposes. And as for land resources, Croatia disposes of 3,137,114 hectares of agricultural land, of which approximately 244,000 is suitable for irrigation, and with minor restrictions, that number rises up to 600,000 hectares. For achieving a competitive agriculture, the imperative must be placed on:

- improving the structure of farms through the consolidation of agricultural land,
- undertaking systematic measures by regulating the agricultural land which includes the construction of the irrigation system,
- developing a stimulating legal and institutional framework and promoting a coherent implementation of the agricultural land and water management policies with the aim to increase the productivity and sustainable management of natural resources.

General goals of the *National project of irrigation and management of agricultural land and waters*

The strategic background for its implementation includes the following activities:

- to analyse and quantify the potentials for systematic introduction of irrigation system in the Republic of Croatia;
- to define the rights and commitments of all participants in the irrigation system;
- the document is a quality foundation for planning the introduction of irrigation system, the construction of infrastructure and the realisation of production plans for different agricultural crops in new conditions of organized and monitored implementation of irrigation.

while the special goals of the *National project of irrigation and management of agricultural land and waters* are defined as follows:

short-term: - elaboration of county irrigation plans
 - construction of irrigation pilot-projects

and

long-term: - overview and ranking of further projects on the county and state level for the implementation of the irrigation project;
 - defining the organisation and the status of institutions in charge of planning, financing, executing and monitoring of the project;
 - proposal of the dynamics of the systematic introduction of irrigation in the Republic of Croatia by 2020.

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The *National project of irrigation and management of agricultural land and waters* foresees the construction of irrigation systems on additional 35,000 hectares of agricultural land by 2010 and on additional 65,000 hectares by 2020. The following sources are to be used for the funding requirements of this project:

- the state budget of the Republic of Croatia
- European Union pre-accession funds
- Regional and local administration
- End users (farmers)

REALISATION OF THE *National project of irrigation and management of agricultural land and waters* IN THE PERIOD 2004-2006 AND THE INVESTMENTS PLAN FOR THE YEAR 2007

Within the framework of the current activities for the realisation of *National project of irrigation and management of agricultural land and waters* the following organisational changes were brought:

- The Department for Irrigation was established within the Water Management Directorate – Sector of Water Management by Croatia's Government Regulation on internal organisation of the Ministry of Agriculture, Forestry and Water management.
- A *working group for the implementation of the National irrigation plan* was formed within *Hrvatske Vode* (Croatian Water Resources Management).
- Working teams for coordination and monitoring of the County Irrigation plans are currently being set up on the county level. Through these teams, the end users will be given the opportunity to express their requirements and interests for the introduction of irrigation on their agricultural land.

The Realisation of *National project of irrigation and management of agricultural land and waters* is conducted in three phases:

I phase: County Irrigation Plans

II phase: Irrigation pilot projects

III A phase: Project documentation for single irrigation systems and

III B: Repair/reconstruction of the existing and the construction of new irrigation systems.

I. County Irrigation Plan is the key planning document that defines the possibilities and needs for irrigation of agricultural lands on the territory of a certain County. Recently, the elaboration of irrigation plans begun in 18 of 21 counties. 8 of those plans were adopted, 3 are in the procedure of being adopted (review) and 7 are currently in the process of elaboration. The plans in 18 counties should be adopted throughout 2007, while the remaining three counties (Krapinsko-zagorska, Bjelovarsko-bilogorska and Varaždinska) will begin drafting their irrigation plans. The Ministry of Agriculture, Forestry and Water management covers 50% of the elaboration costs of these plans and the rest of funds is provided by the County.

II. On the grounds of *National project of irrigation and management of agricultural land and waters* 4 national pilot projects of irrigation covering the area of 7.970 hectares were defined and these include the following:

- Multi-purpose Canal Sava – Danube (irrigation of Biđ-bosutsko polje);
- Irrigation system Opatovac (Vukovarsko – srijemska County);
- Irrigation system Kaštel-Trogir-Seget (Splitsko – dalmatinska County)
- Irrigation system of the lower Neretva valley (Dubrovačko – neretvanska County);

The realisation of the national pilot project of irrigation Opatovac started in September 2006 with the beginning of works on the construction of reservoir Opatovac (municipality Lovas). As for the other

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three national pilot projects, the projects tasks were defined and the creators of technical documentation selected. The Ministry of Agriculture, Forestry and Water management covers completely the costs of the realisation of all national pilot projects and the funds are transferred through *Hrvatske Vode* (Croatian Water Resources Management).

III. A Project documentation for single irrigation systems is prepared for known end users and irrigation locations. At the present moment, the elaboration of concept designs and main projects for single irrigation systems is underway, whereas some of the projects await the issue of location permits. 12 counties with 32 projects are included in this phase. The Ministry of Agriculture, Forestry and Water management finances 50% of the costs of these projects while the remaining part is covered by the counties, cities or the end user.

III. B While awaiting the completion of technical documentation and the issue of necessary permits for the construction of new systems, the restructuring of existing irrigation systems began. In the period 2004-2006 two systems were restructured and put into operation:

1. **Irrigation system Vransko polje** (Zadarska County) – reconstruction of the irrigation system 483.74 ha.
2. **Irrigation system Grabovo** (Vukovarsko – srijemska County) - reconstruction of the irrigation system 500 ha.

Besides the mentioned systems, a partial reconstruction of several hydro-technical facilities used for irrigation purposes in the area of Dalmatia was also performed in the previous period.

- Reservoir Vlačine (Zadarska County)
- Pumping station and the irrigation canal on lower Neretva (Dubrovačko – neretvanska County)
- Irrigation canals on Sinjsko, Imotsko and Vrgoračko fields
- Bazjaš pumping stations and canal (Vukovarsko – srijemska County).

In 2007 complete technical documentation for SN Belišće was completed (cadastre municipality Gat and cadastre municipality Črnkovci), location and building permit were issued and through public tenders the most favourable bidder was selected for the construction of the system. The signing of the agreement and the beginning of the construction is expected to happen soon. The system will cover an area of 500 ha.

III. implementation phase of the *National project of irrigation and management of agricultural land and waters* (III.A and III.B) covers an area of 41,164 ha.

In order to implement efficiently not only the irrigation programme but also the agricultural land management programme, currently, rehabilitation is underway of the detailed canal network, whose purposes are irrigation and drainage melioration (canals of III and IV order). The total length of canal network in Croatia is 25.000 km, 4.272 km of which are operational, and the remaining part of 20,728 km is still to be renewed. By the end of 2008 the detailed canal network is planned to be brought to the “starting position“ and the administration is to be transferred to counties as set out in the Water Act.

It is important to stress that the *National project of irrigation and management of agricultural land and waters* is at the moment in the first phase of its realisation and the emphasis is primarily placed on activities aiming at structuring the organisation, that is, on the elaboration of plans and technical documentation. The procedure of elaborating the technical documentation from the concept design, location permit issue, main project, building permit issue up to the final project is very long.

It is expected that the technical documentation will be completed by the end of 2007 for the major part of the launched projects that cover an area of 49,134 ha. Thus, in the second phase (2008) the

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construction of more new irrigations systems should begin and therefore far more funds will be allocated in the projects.