PROJECT DEVELOPMENT FACILITY
REQUEST FOR PIPELINE ENTRY AND PDF BLOCK B APPROVAL

AGENCY'S PROJECT ID:
GEFSEC PROJECT ID:
COUNTRY: Croatia
PROJECT TITLE: Agricultural Pollution Control Project
GEF AGENCY: World Bank
OTHER EXECUTING AGENCY(IES): N/A
DURATION: 4 years
GEF FOCAL AREA: International Waters
GEF OPERATIONAL PROGRAM: OP 8
GEF STRATEGIC PRIORITY: IW-1, 3
ESTIMATED STARTING DATE: February 2007
ESTIMATED WP ENTRY DATE: March 2006
PIPELINE ENTRY DATE: (if applicable)

FINANCING PLAN (US$)	
GEF ALLOCATION	
Project *(estimated)*	5,000,000
Project Co-financing *(estimated)*	10,000,000
PDF A*	
PDF B**	350,000
PDF C	
Sub-Total GEF PDF	350,000
PDF CO-FINANCING (details provided in Part II, Section E – Budget)	
IBRD/IDA/IFC	
Government Contribution	
Others	
Sub-Total PDF Co-financing:	
Total PDF Project Financing:	

* Indicate approval date of PDFA:
** If supplemental, indicate amount and date of originally approved PDF:

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

(Enter Name, Position, Ministry)
Nikola Ruzinski
GEF Political Focal Point
Ministry of Environmental Protection and Physical Planning

Date*: (Month, day, year)*
October 26, 2005

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for approval.

Steve Gorman
GEF Executive Coordinator, World Bank

Date: *(Month, Day, Year)*

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PART I - PROJECT CONCEPT

A - SUMMARY

The Black Sea. The Black Sea has suffered severe environmental damage over the past decades mainly due to coastal erosion, eutrophication, conversion of wetlands, increased nutrient run-off from agriculture, invasion of exotic species, and inadequate resource management, all of which has led to a decline of its biological diversity, loss of habitat and long-term ecological changes. Black Sea Environmental Program (BSEP) studies reveal that 58% of the total dissolved nitrogen and 66% of the total dissolved phosphorous flowing into the Black Sea come from the Danube river basin. More than half of all nutrient loads into the Danube river originate from agriculture, about one-fourth from private households and about 10-13% from industry.

In Croatia, the Danube river, as well as its tributaries, the Sava and Drava drain sixty percent of Croatia's territory (approximately 33,940 sq km out of a total of 56,538 sq km). The three rivers flow southeast, through the Pannonian plains that make up the bulk of Croatia's agricultural lands. These rivers are therefore of particular significance for the agricultural sector of Croatia and play a critical role in preserving the natural ecological conditions of the region. The ecosystems along these rivers are of high ecological value, and in fact Croatia is among the most biologically rich countries in Europe, ranking second for the number of fish species, third for the estimated number of invertebrates, fifth for the number of reptiles and seventh for the number of vascular plants and mammals. Croatia has an unusually high concentration of endemic species and its rich biodiversity has been key to the promotion of inland tourism. Tourism and agriculture are the strategic sectors which can serve as the basis for Croatia's future development; however, the "green/blue strategy" advocated by the government to develop tourism and agriculture is still in its infancy and needs to be translated into concrete actions through relevant policy strengthening and institutional changes.

Agriculture and environment in Croatia. Agriculture represents an important component of the Croatian economy accounting for 6.8% of GDP and employing 8.3% of the labor force in 2002, which is above the Central and Eastern Europe Countries average. The Republic is divided into three regions: the Pannonian plains, the mountainous region and the Mediterranean region along the Adriatic Sea. Out of the total agricultural area in Croatia, the largest portion lies in the Pannonian plains (46.3 percent), a smaller section in the Mediterranean region (34.1 percent), and the balance in the mountainous regions of the Dinaric Alps (19.6 percent).

Agriculture is the biggest single influence on the Croatian environment and countryside. However, in 2001, agriculture accounted for only 2.6% of all Croatian investments in environmental protection and 2.5% of the total operational budget for the environment

The Pannonian region, which drains into the Danube river and its tributaries, is the most inhabited region of Croatia (67 percent of total population) and has the most favorable conditions for intensive agriculture production. The Pannonian plain is the bread basket of Croatia, with the majority of livestock production and food processing industry concentrated in the region. Livestock density, expressed as livestock units per hectare of agricultural land, is about 0.22 at the national level, but much lower when compared to most EU Member States. However, livestock density is much higher in the Pannonian plain where the ample grain production provides a strong basis for the sizeable dairy, beef, pork and poultry operations.

While the poultry industry is highly concentrated, the bulk of the dairy, beef and pork production comes from the small family farms that are resource constrained and unable to introduce modern nutrient management practices. In that regard the existing management practices for solid and liquid animal waste are of particular concern, given the high groundwater table that characterizes the Pannonian plain. Over the winter and/or in early spring, groundwater often merges with the surface waters and washes off the dissolved nutrients and agrichemicals, thereby posing a specific challenge for introducing sound nutrient management practices.

The impact of the intensive fertilizer and pesticide application in the most fertile lowland areas adjacent to surface water courses is manifesting itself in increasing water pollution and loss of biodiversity which has significant ramifications for national agricultural productivity and efficiency, soil fertility, and maintenance of the biological ecosystem. In 1999, 69% of surveyed water samples had an excess of nitrates, while 41% contained DDT and 12% contained lindane above the maximum allowable concentrations. Agriculture accounts for 53% of the total nitrogen load in the surface water of the Croatian Danube basin. Public health repercussions of nutrient, agrochemical and bacterial groundwater pollution in an environment where access to piped household water supply is scarce, is widely recognized by the rural population of the Pannonian plain to be the major threat to the wellbeing of the affected communities.

Although existing Croatian regulations limit the application of agricultural inputs, notably pesticides and fertilizers, they are not precise; their interpretation is quite liberal and monitoring and control is limited. Intensive use of agri-chemicals as well as reduction of the genetic pool caused by narrow crop rotations, lack of mixed cropping, the use of limited number of breeds and varieties, drainage of wetlands and their conversion to arable land as well as removal of hedges and trees from agricultural lands have resulted in monotonous landscapes, water pollution, decrease in species and habitat biodiversity.

Agri-environment policy and enforcement. The Ministry of Agriculture, Forestry and Water Management (MAFWM) has established a comprehensive agricultural support scheme for farmers. This scheme includes provisions for promotion of environmentally friendly agriculture practices; however the supporting regulations that would detail the practices that are eligible for receiving support have yet to be developed. On the other hand, MAFWM provides considerable support to in-situ preservation of the autochthonic livestock and poultry breeds.

Overall, the surface and ground water monitoring system in Croatia is inadequate. The water management department within the MAFWM that is responsible for development of water policy and harmonization of legislation with the EU Water Framework Directive undertakes some surface water monitoring but no ground water monitoring. Private companies responsible for drinking water supplies undertake some ground water monitoring on an ad hoc basis.

Croatian EU membership candidate status was confirmed in April 2004, with the principles, priorities and conditions for accession described in European Council Decision COM(2004) 275 on European Partnership with Croatia. Accordingly, the Government of Croatia is actively working to meet the requirements of the Decision, which will enable the country to comply with EU requirements and obligations as laid down in the EU Acquis Communautaire. Therefore the determinant of agriculture policy in Croatia in the coming years would be the adoption of the EU Agriculture Acquis and the creation of the institutions necessary for its implementation. Consequently, the linchpin of the agri-environment policy in Croatia in the coming years would be the creation of a regulatory and institutional framework that will enable the agriculture sector to comply with the requirements of the EU Environmental Acquis (cross-compliance requirement).

The recent reform of EU's Common Agriculture Policy (CAP) has substantially increased the weight of environmental compliance criteria while determining eligibility as well as the levels of public support to agriculture producers and processors. Therefore, candidate countries are strongly encouraged to mainstream environmental considerations into agriculture policy because the adoption of good agriculture practices is one of the key pre-conditions for absorbing EU pre-accession assistance targeting rural development (SAPARD[1] and future IPA[2] programs) and would ultimately strongly influence Croatia's CAP entitlement level upon becoming a member state. In this context, an agri-environment (AE) Program is an obligatory measure under the EU Rural Development Regulation (1257/1999) which establishes the framework for the comprehensive protection of the environment and nature from adverse agricultural practices on EU agricultural land. Some of the AE measures include: reduction or non-use of agricultural inputs, notably pesticides, mineral fertilizers and slurry; and production in accordance with organic farming standards. Thus the Croatian AE program is to encourage farmers to practice environmentally friendly agriculture.

The key AE cross-compliance pillars that have to be backed with an appropriate enforcement capacity is the transposition of the EU's Nitrates Directive and the development of a Code of Good Agriculture Practices (CGAP). These mutually reinforcing pillars are a condition for a new member states' access to CAP and therefore Croatia needs to fully develop appropriate regulatory and enforcement framework during the pre-accession period. The negotiations of the Agriculture and Environment Chapters of the EU Acquis are underway, a fact that reinforces the timelines of the proposed project since at present Croatia's AE regulatory and enforcement framework is in its infancy.

Project Objective. The development objective of the GEF-funded project is to increase significantly the use of environmentally friendly agricultural practices by farmers in Croatia's Pannonian plain in order to reduce nutrient discharge from agricultural sources to the Danube River and Black Sea. In support of this, the project will assist the Government of Croatia to: (i) implement the EU Nitrates Directive and thereby strengthen national policy, enforcement and implementation capacity for agricultural nutrient pollution control; (ii) develop a Code of Good Agriculture Practices and promote the adoption of the recommended farming practices with on-farm demonstrations of the priority environmental conservation investments; and (iii) public awareness campaign that would disseminate the knowledge about the choices the farming community will have at its disposal while responding to the more stringent requirements for reducing nutrient loads (nitrogen and phosphorous) entering local water bodies.

[1] Special Accession Program for Agriculture & Rural Development;

[2] As of January 2007 the EU's current development and pre-accession instruments, including SAPARD, ISPA, Phare and CARDS, will be united under one instrument, the Instrument for Pre-Accession Assistance (IPA). IPA will provide assistance in institution-building and regional development, human resources development, and rural development. This development assistance is intended to help prepare candidate countries for implementation and management of the EC's cohesion policy, particularly the European Regional Development, Cohesion, and Social Funds, for implementation of the Common Agricultural Policy, and for implementation of the *acquis communautaire* concerning the CAP. It will also provide financing for activities related to these actions. For more details see *Communication from the Commission to the Council and the European Parliament On the Instruments for External Assistance under the Future Financial Perspective 2007-2013*, Brussels, 29.9.2004.

The proposed objective will leverage sizeable public funding for co-financing the on-farm environmental conservation investments. In this context the project will assist the MAFWM to accredit AE measure under the SAPARD program and will also help MAFWM to develop a forward looking co-financing scheme that would direct an increasing share of the Government's support to agriculture toward co-financing AE investments.

The proposed objective of the project also re-enforces the development objective of the IBRD financed Agriculture Acquis Cohesion Project (AACP) that aims at "developing sustainable systems and capacities within the MAFWM to ensure timely compliance with EU *acquis* conditions in the rural sector". The proposed GEF-funded project will be partially blended with the AACP given the commonality of their core objectives, i.e. providing programmatic support to Croatia in meeting EU requirements in the areas of agriculture and environment to improve the overall conditions of the rural sector. Activities under the proposed project will, in part, provide incremental support to activities under AACP to strengthen Croatia's capacity and readiness to absorb EU pre- and post-accession funds. Also, both projects are designed to address country's strategy on sustainable agricultural development whose fundamental goal is: encouraging more efficient production and marketing of agricultural products in a way enhancing the welfare of farmers and consumers, contributing to the development of Croatian national economy, protecting the natural resources of the Republic of Croatia and ensuring competitiveness of Croatian agriculture on the world market.

Project Global Environmental Objectives: The global environmental objective of the project is to reduce the discharge of nutrients into surface and groundwater in watersheds draining into the Danube River and Black Sea. The Project will help introduce improved nutrient management practices as well as organic farming which, over the long run, will help reduce the discharge of nitrogen, phosphorus and other agricultural pollutants into the surface and ground waters of Croatia and consequently the Danube River and Black Sea. The project is being prepared under the umbrella of the *Black Sea/Danube Strategic Partnership-Nutrient Reduction Investment Fund* under which riparian countries are eligible for Global Environment Facility (GEF) Grants for projects that help control or mitigate nutrient discharge into the Danube River and Black Sea. Project activities are directly linked to the Strategic Action Plans for the Protection and Rehabilitation of the Danube River and Black Sea.

The proposed project will be Croatia's contribution to a regional effort seeking to reduce nutrient flow to the Danube River and Black Sea. It would be one in a series of projects that have been successfully launched in several Black Sea riparian countries to reduce non-point source pollution from agriculture and thereby improve the waters of the Black Sea - Agricultural Research, Extension and Training Project in Georgia, Agricultural Pollution Control Projects in Romania, Moldova and Turkey as well as the Wetlands Restoration and Pollution Reduction in Bulgaria.

Outcomes envisaged under the project include, inter alia, improvement in soil and water quality, enhanced biodiversity, increased awareness of environmental issues in agro-industry and among farmers, increased number of agro-processors adopting mitigation measures, increased area of agricultural land with resource conservation technologies, and increased production of organically-certified products

The project will yield benefits at the local, national and international level:

Locally benefits will accrue as follows: (i) at the farm level, additional income from effective use of organic waste, crop rotations, and improved agricultural practices; (ii) in the crop sector, outcomes will include improved production efficiency through cost-effective inputs and better

farm management; (iii) in the health sector, there will be improvements in health and sanitation as there will be an improvement in the drinking water and general hygiene of the villages; and (iv) through terrestrial and aquatic habitat enhancement, increased populations of flora and fauna of local economic and social importance. Reducing nutrient run-off into surface and groundwater, protecting long-term fertility of soils by maintaining organic matter levels, fostering soil biological activity through use of legumes and vegetables in crop rotation, as well as effective recycling of organic materials, including crop residues and livestock wastes, is expected to raise income and reduce the need for purchased inputs.

Nationally, the country will benefit through: (i) progress towards compliance with EU Directives; (ii) improved quality of surface and underground water in the project areas; (iii) improved agricultural productivity through better agricultural practices; (iv) increased capacity building of local institutions; and (v) sustainable rural growth and development through environmentally sound agricultural practices. The proposed project will assist the Government of Croatia in mainstreaming environmental considerations in agricultural practices. The synergy of such an approach will bring about greater benefits globally, regionally and locally vis-à-vis independent, discrete agricultural and environmental projects.

Internationally, benefits will accrue through: (i) a continual reduction in the discharge of nutrients and sediments into Danube River and Black Sea and the accompanying improvements in the local and Black Sea water quality; (ii) broad-based stakeholder participation that will increase public awareness and demand-driven approaches for protecting the Black Sea;(iii) improving habitat for migratory waterfowl and a variety of endangered species; and (iv) sequestering carbon in the grasslands, cropland and forests.

B - COUNTRY OWNERSHIP

1. COUNTRY ELIGIBILITY

Croatia is a signatory of *Danube River Protection Convention* (DRPC), a member of the *Environmental Programme for the Danube River Basin-Strategic Action Plan for the Danube River Basin: 1995-2005* as well as of the *Bucharest Convention* whereby the government has committed to improving the waters of the Danube river and Black Sea.

2. COUNTRY DRIVENNESS

The Government of Croatia is committed to meeting its EU accession obligations and compliance efforts with the EU *acquis* in agriculture and rural development are already underway. The Government is already allocating US$5 million annually towards achieving EU requirements in rural development.

The Government of Croatia, with World Bank assistance, is currently implementing the *Agricultural Acquis Cohesion Project* which aims to develop sustainable systems and capacities within the Government to enable the country to capture benefits in the agricultural sector accruing from accession to the European Union and meet EU *acquis* requirements. These outcomes are envisaged to be achieved through: (i) implementation of EU *acquis* in rural development; (ii) empowerment of MAFWM management and administration; and (iii) ensuring safe food and SPS conditions. A key activity under component (i) would include a program of investments and technical assistance to private and public sector farmers and agro-processors in environmentally friendly agricultural practices so as to “keep their land in good agricultural condition” which will

tie into the aforementioned AE Program and assist in qualifying the potential project beneficiaries for receiving SAPARD funds.

Recognizing the role of the agricultural sector in the national economy of Croatia, the Ministry of Agriculture and Forestry decided, with the assistance of UN Food and Agriculture Organization (FAO) to formulate the strategy of sustainable agricultural development, in accordance with the provisions of the Constitution of the Republic of Croatia regarding the development of economy on market principles. The fundamental goal of the strategy is: encouraging more efficient production and marketing of agricultural products in a way enhancing the welfare of farmers and consumers, contributing to the development of Croatian national economy, protecting the natural resources of the Republic of Croatia and ensuring competitiveness of Croatian agriculture on the world market. In achieving this goal, particular emphasis should be given to family farms, which are the basis of Croatian agriculture. Thus, the Strategy represents the concept of sustainable development of Croatian agriculture as an integrated approach to national development, with its goals: efficiency, righteousness and sustainability being carefully integrated into a coherent and operational framework.

Croatian policy makers are aware of the causal link between agriculture and the environment. Several recent policy initiatives are quite encouraging. These include work on several regulations, introduction of new economic instruments (e.g. organic farming), and important institutional changes (e.g. a strengthened extension service). Some relevant legislation passed recently include: (i) Ordinance on the Protection of Agricultural Land from Contamination by Harmful Substances; (ii) Ordinance on Environmental Impact Assessment; (iii) Law on Plant Protection; (iv) Law on Agricultural Land that prescribes measures protecting land against adverse agricultural practices and regulates application of harmful substances to the soil; and (v) Law on Organic Agriculture.

The Government is taking steps to institute various forms of fines, penalties and charges to deter unsustainable agricultural practices. A number of these are prescribed in the “Directive on the Protection of Agricultural Land from Contamination with Harmful Substances” and “Regulations on Plant Protection”. Penalties are laid out for the discharge of agricultural pollutants into water (e.g. direct discharge of slurry or farm wastewater), application of slurry and liquid manure during winter and in excessive quantities, as well as the improper use of pesticides. However, the enforcement of these penalties is inadequate and insufficient. It mostly affects the big cooperatives and hardly any impact on the private farming sector.

The government has also initiated several international projects dealing with the protection of the environment and agriculture. This positive evolution in attitude regarding agriculture and the environment is encouraging and creates a favorable momentum for the introduction of the proposed GEF measures that would reduce nutrient discharge into surface and groundwater.

The Government of Croatia is a member of the Environmental Program for the Danube River Basin (EPDRB) established in 1991 to build regional cooperation in water management and initiate high priority actions that would reduce pollution loads to the Danube, including national reviews, basin-wide studies of point and non-point sources of pollution and biological resources, institutional strengthening and capacity building activities, and pre-investment studies in selected tributary river basins. It is also a signatory to the Danube River Protection Convention (DRPC) signed in 1994 whereby the signatories to the Convention agreed on "conservation, improvement and the rational use of surface and groundwater in the catchment area", to "control the hazards origination from accidents", and to "contribute to reducing the pollution loads of the Black Sea from sources in the catchment area."

Croatia's committed efforts towards EU accession, the favorable political climate and the recognition of the links between sustainable agriculture and the environment provide an excellent window of opportunity for the GEF to assist the country in undertaking a nutrient reduction program as part of its EU-mandated AE Program.

C – PROGRAM AND POLICY CONFORMITY

1. PROGRAM DESIGNATION AND CONFORMITY

(Please see Annex 1 for conformity of proposed project with the eligibility criteria under the Danube Black Sea Strategic Partnership Program – Investment Fund)

The project will implement priority actions identified in the Black Sea/Danube Strategic Partnership - Nutrient Reduction Investment Fund, Black Sea Strategic Action Plan, Danube River Strategic Action Plan and Danube River Basin Pollution Reduction Program supported by GEF. The Project's objective of reducing non-point source nutrient pollution from agriculture is consistent with GEF Operational Program Number 8, *Waterbody Based Operational Program*, which focuses "mainly on seriously threatened water-bodies and the most important trans-boundary threats to their ecosystems." Under the Program, priority is accorded to projects that are aimed at "changing sectoral policies and activities responsible for the most serious root causes or needed to solve the top priority trans-boundary environmental concerns."

The project's approach of combining good agricultural practices with ecologically sustainable use of natural resources identified under the Danube River Pollution Reduction Program, also makes it consistent with several additional GEF Operational Programs, including program number 3 "*Forest Ecosystems"*, program number 12 *"Integrated Ecosystem Management"* and program number 9 *"Integrated Land and Water Multiple Focal Areas Operational Program"* which supports "more comprehensive approaches for restoring and protecting the international waters environment". Rehabilitation and improved management of degraded watersheds, in combination with improved nutrient management will also reduce threats to biodiversity and promote increased carbon sequestration.

The project will provide an opportunity for the GEF to be a catalyst for actions to bring about the successful integration of improved land and water resource management practices. GEF support will help reduce costs and barriers to farmers adopting improved and sustainable agricultural practices. It will help develop mechanisms to move from demonstration level activities to operational projects that reduce non-point nutrient pollution to the Danube River and Black Sea.

2. PROJECT DESIGN

Preliminary Project Components

Component 1. Agri-environment Policy Development and Enforcement Capacity Building (GEF: US$2.0 million approx)

(a) Implementation of the EU Nitrates Directive. **O**ver the project preparation phase, MAFWM and the Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC) will make the strategic policy choice regarding the designation of nitrate vulnerable zones i.e. whether the nitrates action program will be implemented on the whole territory of the country, or in designated vulnerable zones. If Croatia opts for the latter approach, the project, during

preparation, would also assist the Ministries to establish the basic criteria that would be used for the selection of the vulnerable zones. This project sub-component would assist the MAFWM and MEPPPC to develop the nitrates action program that would comply with the EU requirements and which needs to be completed by Croatia's accession. Particular emphasis will be placed on consultations with the population that would be affected by the action program(s) and on the socio-economic impact analysis of the mitigation measures. If Croatia opts for the designated vulnerable zones approach the project would also assist the Government to select such zones and inform and engage the inhabitants of the selected zones.

***(b) Drafting of Code of Good Agriculture Practices*:** This sub-component will help the MAFWE to learn from EU members' experiences with the preparation and implementation of their national Codes of Good Agricultural Practices. The project will mobilize national and international technical assistance which would enable the MAFWE to develop a Code that incorporates internationally- tested and proven good agricultural practices which are relevant for the Croatian diverse topographic and climatic conditions. Particular emphasis would be placed on identifying the Croatian environmentally friendly indigenous farming practices and on consultations with the farming community.

(c) Organic Farming Regulatory Framework Upgrade: This sub-component will support the Croatian Government in harmonizing the national regulations on organic farming and accreditation with the relevant EU regulations and thereby enable the MAFWE to achieve its objective to progressively increase the share of organic produce in the total agricultural output.

(d) Improve Monitoring of Soil, Freshwater quality and Environmental Impacts: Croatian soil testing and inland surface and ground water quality testing program will be upgraded to a level that meets the EU standards. This sub-component will strengthen the capacity of the Soils Institute to supervise and set intercalibration standards for the regional soil testing laboratories. The project will also assist MAFWE's Water Management Department to adopt the EU's surface and ground water monitoring guidelines and implement the required procedures in terms of sampling frequency, sampling site selection, and timing. MAWFM's Agriculture Inspectorate, which already receives coordinated capacity building support from EC funded projects and the AACP Loan, will be trained to enforce the Nitrates Directive in a participatory manner. The project will also engage the Agriculture Inspectorate staff to contribute to and consequently monitor the implementation of the Code of Good Agriculture Practices.

During project preparation, an estimate (tons/ha) will be made of nitrogen and phosphorous reductions due to project interventions in the project area. Based on these findings, the project will estimate total nutrient load reduction over the life of the project.

Component 2. Agri-environment policy implementation (GEF: US$1.0 million approx). During project preparation, the project will provide assistance to MAFWM to develop the implementation details of select agri-environment measures related to on-farm activities. The project will co-finance the initial implementation of the selected measures[3] that would be

[3] Examples of measures that would be eligible for co-financing include: (i) *nutrient management* – handling and application of animal waste materials on agricultural land areas at rates determined by the nutrient needs of crops and nutrient content of the waste; (ii) *conservation tillage*- crop production in which the crop residues from the previous crop remain on the soil surface to provide erosion protection; (iii) *integrated cropping management* – the use of crop rotations and strip cropping to prevent erosion and provide adequate supplies of animal feed and forages in integrated farming systems; (iv) *vegetated buffer areas* – permanent vegetated strips would be established at field and stream riparian boundaries and in

implemented in close cooperation with the Project Steering Committee and MAFWM's Paying Agency, which is already receiving capacity building support from the AACP Loan. To enable accession of EU SAPARD/IPA program funds, the project will assist the Government of Croatia with accreditation of the SAPARD/IPA measure titled "Agricultural production methods designed to protect the environment and maintain the countryside" which aims at promoting farming practices that are fully in line with the proposed objective of the GEF project. MAFWM has already requested GEF support to the Croatian SAPARD Agency[4] in preparing the necessary details for accreditation of this measure. The GEF resources will be used to mobilize national and international technical assistance that would enable the Croatian SAPARD Agency to meet the requirements of the European Commission for the accreditation of this measure.

Component 3. Public Awareness and Replication Strategy (GEF: US$1.5 million approx). This component will strengthen the capacity of the Croatian Agriculture Extension Institute as well as the private sector consultants to advise the farmers on: (i) the most cost effective on-farm technologies that need to be employed for complying with the nitrates directive with particular emphasis on fertilizer/manure application based on soil nitrogen balances; and (ii) adjust the relevant provisions of the Code of Good Agriculture Practices to the needs of the dominant farming systems in the various regions of Croatia and interpret the Code in a manner that would ensure farmer buy-in. Simultaneously, a local and nationwide public information campaign will be undertaken to disseminate the benefits of proposed project activities and achieve replicability of the same. At the local level, the main audience will be the direct stakeholders of the project (local and county officials, farmers, community groups and NGOs). The efforts at the national level would concentrate on institutions and groups (Government agencies, national environmental or professional associations, academia, NGOs, etc.) and the population at large. The aim would be to familiarize the population with the project and its benefits and thereby raise the interest of potential future clients. The project will provide for the organization of national and regional workshops, field trips, visits, training, publication in international agriculture and environmental journals and other activities to promote replication of project activities in other similar areas of Croatia as well as Black Sea riparian countries. The project will work closely with ongoing similar efforts in Georgia, Bulgaria, Poland, Romania, and Turkey, and the exchange of experiences will help in contributing significant reductions in the nutrient loads entering the Danube River and Black Sea. It will also share information with the UNDP and UNEP regional projects so that project results and outcomes could be disseminated to a wider audience (e.g. in countries not covered by similar Bank projects).

Component 4. Project Management (GEF: US$0.5 million approx). Under the Agricultural Acquis Cohesion Project, a small Project Implementation Unit (PIU) within the MAFWM Department for Policy, EU and International Relations would be set up to manage the project. It would be staffed with a Project Manager, Financial Controller, a Procurement Officer and an administration/secretarial support person. Technical specialists to manage the GEF-funded activities of the project will be hired as required and paid through the GEF grant funds. The output of the PIU would be to mainstream project implementation functions within the MAFWM by gradually transferring component management to responsible MAFWM departments and institutions. This will have the added benefit of ensuring project sustainability.

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water courses that will reduce and help prevent soil loss and its associated nutrient loss loads; (v) *agro-forestry and protective forest belts*; etc..

[4] The establishment of the Croatian SAPARD Agency is a coordinated effort of the Croatian Government, EU CARDS program, EU PHARE, Dutch bilateral assistance and the World Bank financed AACP.

3. SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

Institutional sustainability – The project is being prepared at the request of the Government of Croatia that recognizes the need to address the growing threat to the waters of the Black Sea and its global environmental implications. To ensure institutional sustainability, relevant staff of the PIU, directly in charge of implementing the technical aspects of the project, will be located in the project area which will help bring project management to the local level. The Ministries of Environment and Agriculture at the national level as well as the local government, agencies and farming communities will be actively engaged in project preparation. The project will provide assistance for capacity building in policy and regulatory matters which will enable the MAFWM and Ministry of Environment to establish a sound basis for overall management of the project.

Social sustainability - The project will emphasize the early involvement of key stakeholders in project preparation and implementation, including policy makers, local public officials and community leaders, farmers, their associations, NGOs. Such involvement will create a sense of ownership and contribute to social sustainability.

Financial Sustainability - The project would benefit the farmers by promoting yield-enhancing agricultural practices that will improve productivity and overall agricultural production. Also, the promotion of organic farming has the potential to open new markets for the local farmers. Such project interventions will assist in raising farm and household incomes and improving the standard of living in the project area. Sustainability of funding for watershed management operations after the life of the project will be ensured once the long-term economic benefits of project interventions become evident to the local and national populations and government as well as with the incorporation of agri-environment measures in the annual budgets of the MAFWM and by leveraging SAPARD/IPA funding.

4. REPLICABILITY

Project's activities will be developed to maximize the potential for replicability. A specific component on replication strategy will be developed under the project whereby a public awareness and communication campaign on project activities and benefits will be undertaken to generate interest for replication of project interventions both within and outside Croatia and in other riparian countries. This will be achieved through national and regional workshops, field trips, training, publication in international agriculture and environmental journals, participation in Global Distance Learning programs and other similar activities. A GEF website will be developed and maintained in accordance with IW-LEARN guidelines. The project will also earmark funds to finance country official(s) participation at two GEF International Waters conferences, travel to brief the Danube & Black Sea Commissions, as well as for an exhibit that can be taken to different meetings to describe the project. The project will also interact closely with the regional projects of UNDP and UNEP under the Strategic Partnership Programs to allow dissemination of project results to a larger audience, which would enhance the scope of project replicability. During implementation, the project will also seek to benefit from the ongoing activities and lessons learned under the regional projects so as to improve project performance.

5. STAKEHOLDER INVOLVEMENT/INTENDED BENEFICIARIES

The project will be prepared with the full involvement of national and local stakeholders. These would include individual farmers, farmer organizations, NGOs, local and national government

officials as well as relevant research institutes. As women are deeply involved in productive labor, the project will seek to ensure the involvement of women in the development of project activities as well as their participation during project implementation.

The intended direct beneficiaries under the project include the populations living in the Danube river basin. However, project activities will have a wider impact and benefit a large segment of the country as project interventions are, over time, replicated in other similar watersheds.

D - FINANCING

1) FINANCING PLAN

A GEF Grant of approximately US$5.0 million will be requested to finance the project. This will be matched by the Government of Croatia, project beneficiaries and possibly other donors (to be explored during preparation).

2) CO-FINANCING

The Government of Croatia, recognizing the economic, social and ecological importance of the proposed project, has indicated its full support for the project and is willing to provide co-financing for project implementation through the life of the project. Project beneficiaries will also co-finance project implementation, mostly through in-kind contributions.

During project preparation, co-financing details and mechanisms will be developed. The project will also explore the possibility of co-financing from other agencies and donors, such as the EU.

E - INSTITUTIONAL COORDINATION AND SUPPORT

1) CORE COMMITMENTS AND LINKAGES

The proposed project addresses an important concern indicated in the Country Assistance Strategy (CAS) for Croatia, viz. protecting the environment. The CAS specifically points to the urgent need to address environmental degradation by, *inter alia*, cleaning up contaminated rivers and water sources, restoring marginal agricultural lands, and improving management practices for water. Project interventions will be designed to address these environmental issues which will have the added benefit of improving the livelihoods of populations in the affected areas. The proposed project is also consistent with the Croatia CAS objective to assist the country to achieve its EU membership aspirations.

2) CONSULTATION, COORDINATION AND COLLABORATION BETWEEN AND AMONG IMPLEMENTING AGENCIES, EXECUTING AGENCIES, AND THE GEF SECRETARIAT, IF APPROPRIATE.

During project preparation, the scope and design of project activities will be developed in consultation with UNDP and / or UNEP representatives. Given their experiences with regional projects, the proposed project will benefit from their input and where possible collaboration between the Bank, UNDP and UNEP will be sought and encouraged.

3) IMPLEMENTATION/EXECUTION ARRANGEMENTS

Under the Agricultural Acquis Cohesion Project, a small Project Implementation Unit (PIU) within the MAFWM Department for Policy, EU and International Relations would be set up to manage the project. It would be staffed with a Project Manager, Financial Controller, a Procurement Officer and an administration/secretarial support person. Technical specialists to manage the GEF-funded activities of the project will be hired as required and initially paid through the GEF grant funds with the objective for the trained specialist to be converted into permanent MAFWM positions over the life of the project. The Ministry of Agriculture, Forests and Water Management will be the line ministry.

PART II - PROJECT DEVELOPMENT PREPARATION

A - DESCRIPTION OF PROPOSED PDF ACTIVITIES

A PDF Block B is requested to fund the following:

Mobilize national and international technical assistance to carry out baseline/socio economic[5] analysis and advise MAFWM on: (i) the socio-economic ramifications associated with the alternative Nitrates Directive implementation approaches in order to enable the Government of Croatia to make an informed decision about the proffered approach; (ii) agri-environment policy implementation measures which could be financed from Government's resources as well as trough SAPARD/IPA program; (iii) best international practice with preparation of Code of Good Agriculture Practice and associate outline of the content; (iv) the discrepancies between the existing organic farming regulations and the relevant EU legislation as well as on the most efficient harmonization approach.

PDF-B funds will be essential for capacity building and ensuring a participatory approach to developing the project design as well as implementation plan. Consultative meetings need to be held with farmers, NGO's and local officials to obtain their inputs and incorporate them into the design of the project and its implementation. This would include identifying specific activities supported by the project, investment needs and drawing up terms of reference (TORs) for major contracts. PDF-B funds are critical to build national capacity for developing project design and its implementation, monitoring and evaluation after project effectiveness. Training of personnel will be provided at both the local and national level to implement the project.

Also PDF funds are requested for setting up a project preparation unit and for initial training in public awareness techniques, and other areas identified by the project preparation team. In addition, the preparation team will need to develop financial management plans, including financial capacity assessment, social assessment plan and stakeholder participation, environmental assessment, including environmental management plan and operational manual as well as incremental cost analysis. Such information is required to develop the design and phasing of the project as well as to monitor the project's impact.

B - PDF BLOCK B (OR C) OUTPUTS

Identification of project site – hotspots of nutrient pollution to the Danube River and Black Sea
Detailed Project activities and associated costs
Baseline data against which project will be monitored during implementation
M&E Plan

[5] Baseline/Socio-economic Surveys is required to collect and analyze baseline information. These include verifying current types of farm enterprises and farming systems; land-use patterns; livestock production systems, soil and water quality data, assessment of farms and land that could benefit from project interventions, etc. In addition, baseline surveys need to be undertaken on socio-economic aspects, institutional arrangements, farming practices and costs, existing services and inputs (machinery, seeds, fertilizers and weed/pest control chemicals), farm product prices and markets, flora and fauna of the different land-use types (bio-diversity status), agricultural practices, environmental conditions, incentives for adopting alternate land use practices, and potential for off-farm incomes.

Social Assessment
Environmental Assessment, including Environmental Management Plan
Stakeholder Participation Plan – mechanisms for consultation and coordination; local participation
Institutional arrangements for project implementation
Project Implementation Plan
Incremental Cost analysis
Project Costs
GEF Project Document for Council Submission

C - JUSTIFICATION

The Project will implement priority actions identified in the Black Sea Strategic Action Plan supported by GEF. By improving agricultural practices, through relatively low cost investments, changes in consumer practices, the Project would assist the Government in meeting its international obligations to reduce discharge of nutrients to the Black Sea as well as moving towards meeting the European Union Directives. In support of the objective, the Project would assist the Government of Croatia in encouraging farmers to adopt environmentally friendly agricultural practices which, while reducing the discharge of organic matter, will yield substantial benefits in terms of improved quality of Croatian surface and ground waters and the Black Sea, improved quality of agricultural products and its competitiveness in Croatia and European markets as well as improvement in the quality of rural communities. The project will also help lay the ground for the inclusion of agri-environment measures among the investments that receive support from the national budget and the relevant accession assistance from the EU.

D - TIMETABLE

Activity	**Date**
Identification Mission	September 2005
GEF pipeline entry submission	March 2006
Appraisal	September-October 2006
Negotiations	October-November 2006
GEF CEO Endorsement	December 2006
Board	January 2007
Effectiveness	February 2007

E – BUDGET

Name of Co-financier (source)	Type	Amount (US$)	Status
Government through the IBRD-funded Agricultural Acquis Cohesion Project	Loan	4,000,000	To be confirmed
Project Beneficiaries	In-kind	2,000,000	To be confirmed

Other donors (EU, etc.)	TA, Loan, Grant	4,000,000	To be confirmed

Annex 1

The proposed project is being prepared under the *GEF Strategic Partnership on the Danube-Black Sea Basin - Nutrient Reduction Investment Fund* whereby project proposals from countries in the Danube River Basin and the Black Sea will need to fulfill the following basic eligibility criteria for financing under the Investment Fund: (i) be of one of the three eligible project types (see footnote below)[6]; (ii) respond to regional priorities as identified by the respective SAPs adopted by the Danube and Black Sea Commissions, and be selected as a priority investment in the proposing country's Black Sea or Danube National Environmental Program; (iii) Leverage non-GEF funds with a co-funding ratio of 1:05 at the minimum; (iv) adhere to the principles of the GEF Operational Programs; (v) be replicable; (vi) establish and undertake a monitoring and evaluation system; (vii) ensure that the country is up-to-date on its contributions to the Black Sea and/or Danube Commission(s) and Secretariat(s) to which they belong; (viii) country-expressed commitment to policy, institutional, or legal reforms related to regional nutrient reduction and improved water quality management**;** and (ix) endorsement from the proposing country's GEF focal point.

The proposed project meets the eligibility criteria for financing under the Partnership Program as follows:

Project Type. The activities designed under the project are in accordance with the Partnership criterion to "reform and improve agriculture and land management practices with impact on nutrient use and non-point discharges through run-off". The primary focus of the project is to assist Croatia in reducing nutrient pollution (both nitrogen and phosphorous that have been identified as the main pollutants of the Black Sea under the Partnership Program) from agricultural sources to surface and ground waters and thereby improve the waters of the Danube river and Black Sea. This will be achieved through a combination of interventions, including designation of nitrates vulnerable zones and development of action programs for reduction of nutrients, promotion of a code of good agricultural practices, assistance in developing policy and a legal framework to regulate discharges and run-offs of nutrients from farms, agro-enterprises and industry, etc.

Priority Investment. The proposed project is considered a priority investment by the government of Croatia. Agriculture is an important sector of the national economy with the Pannonian region, often labeled the breadbasket of Croatia, comprising nearly half of Croatia. The region has the most favorable conditions for intensive agricultural production and livestock production. The fact that the entire Pannonian region drains into the Danube river and its tributaries underscores the significant direct impact of the ongoing agricultural practices in the region on the waters of the Danube. Reduction of nutrient run-off into the Danube River from agriculture is an integral part of the country's environmental strategy which also reflects the country's commitment to moving towards EU accession by addressing the EU Nitrate Directive. It is to implement such

[6] Three types of projects (or a combination thereof) will be eligible for financing under the Partnership: (1) Restoration or creation of wetlands that reduce nutrients discharge or loads; (2) Reform and improvement of agriculture and land management practices with impact on nutrient use and/or non-point discharges through run-off; and (3) Wastewater treatment in communities and industries, for reduction of nutrient discharges.

efforts, that the government of Croatia has requested GEF and Bank support under the proposed project.

Leveraging and Co-funding Ratio. The GEF funds for the proposed component will leverage additional Bank, Government, EU, bilateral and beneficiary contributions for baseline non-incremental project costs. The project currently has a co-funding ratio of 2:1 and during project preparation, will aim to come close to the ratio of 1:3 as stipulated in the Investment Fund Brief. The GEF grant of US$5 million for the implementation of project will be co-financed by the US$25 million Bank loan under AACP in an amount approximating US$4.0 million. Other contributions from the Government, EU and project beneficiaries are tentatively estimated at US$6.0 million which will be confirmed during project preparation.

Program Conformity. The proposed water management component is consistent with Operational Program 8, the Waterbody-based Operational Program as it supports measures that reduce pollution to the Black Sea and Danube Rivers. The project targets Strategic Priority IW-3 to "Undertake Innovative Demonstration for Reducing Contaminants (in this case Nitrates) and Addressing water scarcity", and contributes to SP IW-1 *Catalyzing Financial Resources for Implementation of Agreed Actions* as the proposed intervention will help stimulate follow-on investments at the community and farm level, and support institutions promoting action. The project will also assist Croatia with its integration into the European Union, by helping the government harmonize its national legislation with EU Nitrates Directive 91/676/EEC ***concerning the protection of waters against pollution caused by nitrates from agricultural sources***. This Directive aims at (a) reduction of pollution caused or induced by nitrates from agricultural sources; and (b) prevention of water pollution by nitrates.

Replicability. The proposed activities, to be undertaken in pilot watershed areas of the Pannonian region of the country, will be designed to promote replication of nutrient reduction investments on a national scale within Croatia as well as the Danube and Black Sea basin as a whole. As part of its replication strategy, the project will develop and maintain a website in accordance with IW-LEARN guidelines. Knowledge dissemination will be an integral part of the component and towards this, the project will earmark funds for (i) participation in IW-Learn workshops, (ii) finance country official(s) participation at two GEF International Waters conferences, (iii) travel to brief the Danube & Black Sea Commissions, as well as for (iv) an exhibit that can be taken to different meetings to describe the project.

Monitoring and Evaluation. During project preparation, a monitoring system will be designed to measure both stress reduction and process indicators. For stress reduction indicators, a baseline of the nutrient loads (tons of N& P/ha) entering the surface and ground waters in the selected project sites will be undertaken at the start of the project. During project implementation, at agreed intervals, data on nutrient loads entering the water bodies will be recorded and measured against the baseline. Stress reduction indicators would also include increased acreage under environmentally friendly agricultural practices, improved soil quality and improved quality of drinking water. Process indicators will include, *inter alia*, adoption of improved environmental policies by the government to address non-point agricultural pollution control and increased adoption of improved agricultural practices among the farming communities. The detailed list of indicators will be developed during project preparation.

During project preparation, an estimate (tons/ha) will be made of nitrogen and phosphorous reductions due to project interventions in the project area. Based on these findings, the project will estimate total nutrient load reduction over the life of the project.

Government Contributions to the Black Sea and/or Danube Commission(s) and Secretariat(s).

The Government of Croatia has regularly made timely payments of all dues to the Commission and Secretariat.

Country commitment to policy, institutional, or legal reforms for regional nutrient reduction and improved water quality management**.** The Government of Croatia is committed to reducing agricultural nutrient pollution to the country's surface and ground waters and thereby improve the waters of the Danube River and Black Sea. Several recent policy initiatives are quite encouraging. These include work on several regulations, introduction of new economic instruments (e.g. organic farming), and important institutional changes (e.g. a strengthened extension service). Some relevant legislation passed recently include: (i) Ordinance on the Protection of Agricultural Land from Contamination by Harmful Substances; (ii) Ordinance on Environmental Impact Assessment; (iii) Law on Plant Protection; (iv) Law on Agricultural Land that prescribes measures protecting land against adverse agricultural practices and regulates application of harmful substances to the soil; and (v) Law on Organic Agriculture.
The Government is taking steps to institute various forms of fines, penalties and charges to deter unsustainable agricultural practices. A number of these are prescribed by the "Directive on the Protection of Agricultural Land from Contamination with Harmful Substances" and "Regulations on Plant Protection". Penalties are laid out for the discharge of agricultural pollutants into water (e.g. direct discharge of slurry or farm wastewater), application of slurry and liquid manure during winter and in excessive quantities, as well as the improper use of pesticides. The government is also a signatory to the Environmental Program for the Danube River Basin and the Danube River Protection Agency and is committed to honoring its international commitments under these conventions.