



CENTRAL AND EASTERN EUROPE

Nutrient Policy Summary

Challenge

Hypoxic “dead zones”, marine areas of low oxygen, have increased globally almost nine times since 1969. There is widespread scientific agreement that changes in the global nitrogen cycle and increased nutrient loading, primarily caused by non-point source pollution such as agricultural activities and storm water runoff, are directly linked to these “dead zones” and other significant impacts on our water resources.

Current Status of Countries in Nutrient Reduction Policy Implementation

Countries in Central and Eastern Europe are in various stages of readiness and capacity to implement nutrient reduction strategies, much of which depend on how each country is pursuing or not pursuing accession to the European Union (EU). EU member states have obligations to implement certain environmental directives, such as the Water Framework Directive and the Nitrate Directive. Non-EU member states are striving towards harmonizing their standards with these EU requirements.

The region has benefited from the harmonization process and the funding that comes with it. GEF projects in the region have supported accession and harmonization goals, especially in the

development of replicable governance approaches that establish the systems and institutions addressing various transboundary issues related to nutrient management. “Codes of Good Agricultural Practices” required under the Nitrates Directive have provided a solid policy foundation for the implementation of nutrient reduction practices throughout the region. Obstacles to the success of these projects include the need for cooperation amongst government agencies, incentivizing the protection of water resources and monitoring implementation of the projects discussed. The success of any multi-lateral projects strongly depends on the countries working together and with all other partners.

Policy Recommendations

Based on research, stakeholder discussions and outcomes from peer-to-peer exchange of policy makers, farmers, NGOs and other stakeholders, the following are initial recommendations to incentivize and drive action regarding nutrient reduction/conservation agriculture practices:

- **Incentives for implementing systems of practices** – Governments should develop certain monetary (based on income levels) and regulatory incentives for implementing systems of practices over individual practices. A recent synthesis performed by the Living Water Exchange reviewed project

Representative Policy Actions and Interventions by GEF Projects in the Region

The Living Water Exchange has inventoried GEF projects and associated practices in the region. The table below highlights the policy interventions, practices and outcomes by project and country developed by these projects:

Country/Region	Project	Policy/governance intervention
Baltic Sea	The Baltic Sea Regional Project	Connection between governments, scientific institutions agricultural extension services and NGOs to facilitate continued cooperation and development of follow-up projects.
Bosnia and Herzegovina	Water Quality Protection Project	Development of the Wastewater Improvement Plan to reduce river pollution, and its endorsement by the government.
Bulgaria	Developing a Model for Sustainable Water and Waste Management for Rural Areas in Bulgaria	The Bulgarian local authorities have developed principles of multi-stakeholder (democratic) informed strategic planning to be endorsed by the appropriate national authorities as operational guidelines.
Bulgaria	Sustainable Land Management Project	The overall goal was to enhance capacity for preventing land degradation and establish a coherent and sustainable land management policy that contributes to protecting ecosystem health, integrity, functions and services while promoting sustainable livelihoods in Bulgaria. It focused on providing institutional and technical support, strengthening financial mechanisms and mobilizing resources for sustainable land management. The project trained more than 250 experts from regional inspectorates and the national Agricultural Advisory Service.
Danube River Basin	Boosting Capacities for Nutrient Reduction and Transboundary Cooperation	The overall goal of the Danube Regional Project was to strengthen nutrient management through changes in national and transboundary management policies. Specific examples include the development and application of 'Danube River Basin specific' Best Agricultural Practices that were tested on family farms in Serbia leading to changes in farming approaches with the potential for basin-wide replication, and the development of guidance documents on wetlands and floodplains, illustrating through pilot projects how best practices in management could increase nitrogen removal and phosphorus retention.
Moldova	Agricultural Pollution Control Project	Component 2: Strengthening national policy, regulatory and institutional capacities. This component focuses on strengthening the capacities of the Government of Moldova to achieve conformity with EU requirements in agricultural pollution control. The project assisted the Government of Moldova in promoting the adoption of environmentally-friendly practices in crop and livestock production and in rural agro-industries that contribute to nutrient pollution, including wetland and integrated watershed management; strengthening national policy, regulatory and institutional capacity for agricultural nutrient pollution control; and promoting a broad public awareness campaign and replication strategy. The project also assists the Government of Moldova to harmonize its legislative framework with relevant EU directives and to honor its international commitments to reduce nutrient loads in the Danube and the Black Sea.
Romania	Agricultural Pollution Control Project	Component 2: Strengthening national policy and regulatory capacity. This component includes support to the Ministry of Environment and Water Management and the Ministry of Agriculture, Forests and Rural Development for supporting the implementation of the Nitrates Directive and the harmonization of legislation with EU requirements; developing a code of good agricultural practices; and strengthening the capacity of the National Authority for Ecological Agriculture in its efforts to promote scientific organic farming and land-use management.
Russia and Estonia	Development and Implementation of the Lake Peipsi/Chudskoe Basin Management Programme	Environmental restrictions for concentration of animal husbandry and regulation via financial support schemes were put in place.
Serbia	Danube River Enterprise Pollution Reduction	The project supports policy and legal reforms that target the reduction of enterprise nutrient pollution and supports SAM in its goal to gradually harmonize environmental laws and regulations with those in the EU aquis. The project also builds technical capacity of the Ministry of Environment and Spatial Planning, Serbian Environmental Protection Agency; the Ministry of Agriculture, Forestry and Water Management; and other institutions with legal mandates to enforce water-quality standards. The project also supports the implementation of a Code of Good Agricultural Practices' adoption of the law and sanctions against polluters; the draft Strategy and Action Plan for implementation of the EU Nitrate Directive, including a project replication strategy; introduction of environmental standards and methodologies required by EU directives and Serbian laws.
Tisza River Basin	Establishment of a Basin Management Framework	Within the overall goal of the Tisza project was the development and endorsement of an Integrated River Basin Management Plan linking land and water management to reduce the impacts from excess water quantity on water quality. Central to this management plan was the development of agreed strategies addressing issues including nutrient problems. The finalization of the plan was supported by demonstration projects designed to assist policy makers and land managers recognize the multiple benefits derived from floodplains and wetlands and how these natural features can assist in the overall water management within a basin.
Turkey	Anatolia Watershed Rehabilitation Project	This project provides a platform for collaboration between multiple ministries and interest groups to address issues related to rural poverty.



information and prioritized Best Environmental Practices (BEPs) that have demonstrated substantial potential for positive impacts on water quality, are replicable and scalable, and can be applied systematically. While most practices are agricultural, several, such as creation or restoration of wetlands and buffers, can be also applied in urban settings. The eight priority BEPs identified were: 1) nutrient management; 2) manure management; 3) wetland restoration/creation; 4) riparian buffers; 5) conservation tillage/erosion control; 6) cover crops; 7) grazing management; 8) and ecological/organic production systems. Implementing these practices in a systematic fashion with an emphasis on “farming systems” as part of ecosystems will provide greater water quality benefits than would occur through individual and random practice implementation. Farmers that implement such systems and go beyond what is legally required should be eligible for:

- 1 Potential monetary payments per tonne of nitrogen or phosphorous reduced;
 - 2 Potential credits per tonne of nitrogen or phosphorous reduced that can be traded or sold to other landowners/farmers or point source discharges of nitrogen and/or phosphorous; and,
 - 3 Decreased but appropriate regulatory reporting.
- **Recognition of current landowners/farmers that have and are continuing to implement systems of BEPs/conservation agriculture practices** – Policies that offer incentives should consider landowners and farmers that have a history and demonstrate a continued commitment to innovation and implementation of BEPs. This approach would ensure that landowners who are “doing the right thing” receive the same opportunities as new participants.
 - **Implementation of the following technical policies:**
 - Use a nutrient mass balance approach at a farm or village level (only important as they re-intensify - currently short on nutrients in much of CEE)
 - Apply the “Framework for Replication” (“2-page Best Environmental Practice Summary as posted on <http://nutrient-bestpractices.iwlearn.org/>): Use a systematic, adaptable approach to improving and/or maintaining water quality (including nutrient balance plus nutrient reduction BEPs (“the 5-step systems approach as posted on <http://nutrient-bestpractices.iwlearn.org/>”))
 - Highlight the need to link nutrient and manure management
 - Create “BEP systems” for dominant production systems within local region and incentivize implementation
 - Better link monitoring and implementation, perhaps on a small watershed basis to demonstrate the impact of management changes and BEP implementation, both locally and as demonstrations nationally/regionally
 - Increase accountability for implementation and impacts of projects, programs and policies designed to restore/protect water quality
 - **Technical assistance for landowner/farmer on nutrient management and/or BEP implementation** – Peer-to-peer exchange participants indicated that accredited training courses regarding nutrient management and/or BEP implementation are important in ensuring appropriate interventions are deployed. Community scale technical assistance and engagement was effective in changing behavior as part of Living Water Exchange demonstrations. Community interventions should also include training on “Codes of Good Agricultural Practice.” In addition, training on BEP demonstration project implementation was identified as a critical need. Perhaps regulatory burdens might be reduced if farmers participate. Specific training might include:
 - Creating a “local expert” training program so that, over time, there are local, respected individuals who can provide advice on BEPs and water quality protection to farmers and the local community (part time experts with initial intensive training (1-2 months) and annual continuing education (1-2 weeks)).
 - Provide internet/phone access to external experts to support the local experts (sort of like extensions only with support and design so it can accomplish its needed tasks.)
 - **Incentives** – monetary and/or regulatory –for sharing the purchase and use of key equipment to implement BEPs – The scale of production and practices for the majority of small holder farmers in the region is such that collaboration among farmers to share equipment and experiences could be helpful in focusing on higher value crops and implementing BEPs. Farmers are often reluctant to do so, leaving the majority at or below a subsistence level.
 - **Incentives for wetlands restoration that results in multiple benefits** – Wetlands offer a key edge of field technique/capability for reducing nutrient loads into water bodies. Incentives should be provided to landowners that restore wetlands that result in multiple benefits in addition to nutrient reductions, including greenhouse gas reductions, habitat creation, water retention and increased biodiversity.

These recommendations should be taken into consideration when designing the EU budget for the European Neighborhood Policy, accession countries and the Common Agricultural Policy for the years 2014 to 2020.

Appendix: Summary of Current Policy Initiatives, Agreements and Funding Opportunities

The following information summarizes the major transboundary policy initiatives, agreements and funding opportunities related to nutrient reduction practices. These efforts are somewhat focused on European Union (EU) requirements because they are driving change throughout the region and as stated, even non-EU member states often are moving forward with meeting requirements. EU member states and candidate countries are often only eligible for possible funding.

EU member states and candidate countries

For perspective, the following is a list of EU member states that are considered part of the Central and Eastern European region: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

The following are candidate countries in the region: Croatia, Former Yugoslav Republic of Macedonia and Turkey

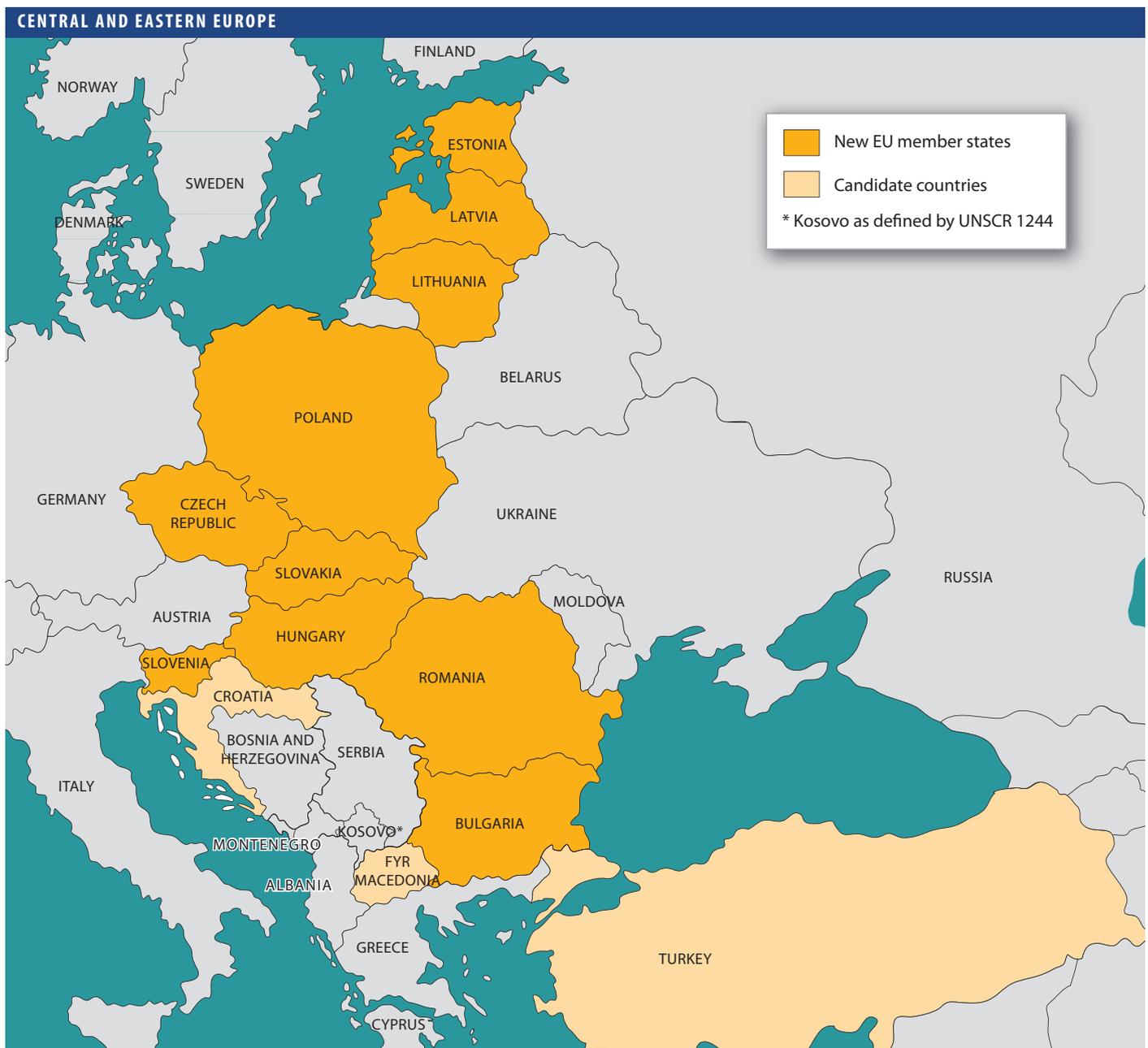
Major policies, requirements and timetables

EU Water Framework Directive

This directive commits European Union member states to achieve good qualitative and quantitative status of all water bodies by 2015. The directive requires the production of a number of key documents over six year planning cycles. Most important among these is the River Basin Management Plans, one published in 2009, with follow-ups due in 2015 and 2021. Their aims include:

- Preventing deterioration, enhancing and restoring bodies of surface water, achieving good chemical and ecological status of such water by 2015 and reducing pollution from discharges and emissions of hazardous substances
- Protecting, enhancing and restoring the status of all bodies of groundwater, preventing the pollution and deterioration of groundwater and ensuring a balance between groundwater abstraction and replenishment
- Protecting preserved areas

For complete text, please visit: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0060:EN:NOT>.



EU Nitrate Directive

The objectives of the EU Nitrate Directive are:

- Reducing water pollution by nitrates from agricultural sources
- Preventing further pollution

The components are:

- Monitoring of water quality in relation to agriculture and identification of polluted or threatened waters
- Designating Nitrate Vulnerable Zones
- Establishing voluntary codes of good agricultural practice, including:
 - Limiting the time when fertilizers can be applied
 - Minimum capacity of manure storage vessels
 - Limitations on the conditions for fertilizer application (i.e. on steep slopes, near water courses)
 - Crop rotations, soil winter cover, catch crops to limit leaching
- Establishing mandatory action programs for vulnerable zones
 - Measures in the (voluntary) code of good agricultural practice, which become mandatory in vulnerable zones
 - Other measures such as limitation of fertilizers to be applied taking into account crops needs, maximum amount of animal manure to be applied
- Requiring national monitoring and reporting every four years
- Reporting from the Commission to the Council and the European Parliament – 2010

The full text of the EU Nitrate Directive is at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31991L0676:en:NOT>.

Black Sea Strategic Action Plan

- Lead country: Turkey. Also: Bulgaria, Georgia, Romania, Russia, and Ukraine (coastal countries). However, links to river basin projects also affects Bosnia and Herzegovina, Croatia, Czech Republic, Hungary, Moldova, Slovak Republic, Slovenia, and Yugoslavia.
- The Black Sea ecosystem continues to be threatened by inputs of certain pollutants, notably nutrients. The action plan called for harmonizing water quality objectives for the Black Sea countries and then implementation and monitoring of appropriate policies to achieve each objective to “see a visible change” in water quality.

Convention on the Protection of the Black Sea Against Pollution (The Bucharest Convention)

- The implementation of the Convention is managed by the Commission for the Protection of the Black Sea Against Pollution and its Permanent Secretariat in Istanbul, Turkey.
- The Black Sea Commission comprises one representative of each of the Contracting Parties (Bulgaria, Georgia, Romania, Russian Federation, Turkey and Ukraine) to the Bucharest Convention.
- Protocols
 - Control of land-based sources of pollution
 - Dumping of waste
 - Joint action in the case of accidents

Danube River Protection Convention

- The Convention was signed on June 29 1994, in Sofia, Bulgaria, by eleven of the Danube Riparian States – Austria, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Moldova, Romania, Slovakia, Slovenia and Ukraine – and the European Community, and duly came into force in October 1998, when it was ratified by the ninth signatory.
- The main objective of the Danube River Protection Convention (DRPC) is to ensure that surface waters and groundwater within the Danube River Basin are managed and used sustainably and equitably.

Caspian Environmental Program

- Participating countries: Azerbaijan, Islamic Republic of Iran, Kazakhstan, Russian Federation and Turkmenistan.
- A regional umbrella program developed for and by the five Caspian Littoral States aiming to halt the deterioration of environmental conditions of the Caspian Sea and to promote sustainable development in the area.
- Matched Small Grants Program
 - Grants from USD 10,000 to 50,000 (with at least 100% matching) funded by the Global Environment Facility (GEF) and implemented by UNDP.
 - Eligible program areas
 - Unsustainable use of bio-resources
 - Threats to biodiversity
 - Pollution including nutrient loading
 - Unsustainable coastal area development
 - Climate change adaptation
- Micro Environment Grants
 - Purpose is to raise public awareness, knowledge and understanding of the environmental problems of the Caspian Sea and will help finance small scale projects that use awareness raising to address urgent environmental problems through grants of USD 500 to 3,000
 - Grants support projects in the areas within 100 km of the sea and its major tributaries

Adriatic Sea Partnership

- Climate change adaptation
- Participating countries: Albania, Bosnia and Herzegovina, Croatia, Italy, Montenegro and Slovenia
- Factsheet
- The Adriatic countries have begun to make commitments for protection and management of the Adriatic Sea region. These include the Contingency Plan for the Adriatic, the Ballast Waters Management Plan, the Integrated Coastal Zone Management and action under the EU Marine Strategy and the EC Water Framework Directive.

Funding Streams and triggers

Current EU Common Agricultural Policy (CAP)

- Agri-Environment Measures
 - “Aids may be paid to farmers who sign up voluntarily to agro-environment commitments for a minimum period of five years. Longer periods may be set for certain types of commitment, depending on their environmental effects. It is obligatory for Member States to offer such agro-environment schemes to farmers.”

- The commitments must go beyond the relevant mandatory standards
- "Agri-environment measures are co-financed by Member States. EU expenditure on agri-environment measures amounts for 2007 - 2013 to nearly 20 billion EUR or 22 % of the expenditure for rural development."
- Agriculture and Water
 - The main CAP instruments promoting sustainable water management
 - Certain rural development measures support investments for improving the state of irrigation infrastructures or irrigation techniques that require the abstraction of lower volumes of water, as well as actions to improve water quality.
 - The cross-compliance framework includes statutory requirements related to water protection and management arising from the implementation of the groundwater directive and nitrates directive, as well as Good Agricultural and Environmental Conditions (GAEC) standards.
 - "Cross-compliance is a mechanism that links direct payments to compliance by farmers with basic standards concerning the environment, food safety, animal and plant health and animal welfare, as well as the requirement of maintaining land in good agricultural and environmental condition."
 - At EU level, the Water Framework Directive plays a vital role in protecting water quality and quantity. This Directive requires Member States to establish river basin management plans (at the latest by end 2009), and to ensure that water pricing policies provide adequate incentives for users to use water resources efficiently (at the latest by end 2010).
 - Payments under Article 38 of the Rural Development Regulation will contribute to the implementation of the Water Framework Directive.
- Agriculture and Nitrates
 - The CAP can help reduce nitrate pollution of waters through:
 - Rural Development measures, particularly agri-environment measures, support for investments in the storage of manure, training)
 - Cross-compliance, including the Nitrates Directive, establishment of buffer strips along water courses
 - The operational programs for fruit and vegetables
- Funding opportunities under the CAP
 - Direct payments
 - Support farmers' incomes in return for them respecting standards of environmental protection, animal welfare, food safety and keeping the land in good condition; not linked to production
 - Market measures
 - Support schemes for specific crops
 - Rural Development
 - EU will commit €96 million from 2007-2013 to improve competitiveness for farming and forestry, to protect the environment and the countryside, and to improve the quality of life and diversification of the rural economy
 - Fourth area introduces funding opportunities for locally based approaches to rural development
 - Main funding instruments
 - European Agricultural Guarantee Fund (EAGF)
 - Finances direct payments to farmers and measures to regulate agricultural markets such as intervention and export refunds
 - European Agricultural Fund for Rural Development (EAFRD)
 - Finances rural development programs of the Member States
- Health Check – 2008
 - Assistance to sectors with special problems (so-called 'Article 68' measures): Currently, EU Member States may retain by sector 10 percent of their national budget ceilings for direct payments for use for environmental measures or improving the quality and marketing of products in that sector. This possibility will become more flexible. The money will no longer have to be used in the same sector; it may be used to help farmers producing milk, beef, goat and sheep meat and rice in disadvantaged regions or vulnerable types of farming; it may also be used to support risk management measures such as insurance schemes for natural disasters and mutual funds for animal diseases; and countries operating the Single Area Payment Scheme (SAPS) system will become eligible for the scheme.
 - Additional funding for EU-12 farmers: €90 million will be allocated to the EU-12 to make it easier for them to make use of Article 68 until direct payments to their farmers have been fully phased in.
 - Shifting money from direct aid to Rural Development: Currently, all farmers receiving more than €5,000 in direct aid have their payments reduced by 5 percent and the money is transferred into the Rural Development budget. This rate will be increased to 10 percent by 2012. An additional cut of 4 percent will be made on payments above €300,000 a year. The funding obtained this way may be used by Member States to reinforce programs in the fields of climate change, renewable energy, water management, biodiversity, innovation linked to the previous four points and for accompanying measures in the dairy sector. This transferred money will be co-financed by the EU at a rate of 75 percent and 90 percent in convergence regions where average GDP is lower.
 - Cross Compliance: Aid to farmers is linked to the respect of environmental, animal welfare and food quality standards. Farmers who do not respect the rules face cuts in their support. This so-called Cross Compliance will be simplified by withdrawing standards that are not relevant or linked to farmer responsibility. New requirements will be added to retain the environmental benefits of set-aside and improve water management.
- CAP Reform
 - The European Commission solicited input from interested parties, but it is now closed
 - Objectives of the future CAP
 - Viable food production
 - Sustainable management of natural resources and climate action
 - Balanced territorial development
 - Potential funding changes
 - Direct payments
 - Introduction of a mandatory "greening" component that supports environmental measures applicable across the whole of the EU territory, with priority given to actions addressing both climate and environment policy goals
 - Simple, generalized, non-contractual and annual environmental actions that go beyond cross-compliance and are linked to agriculture
 - Simplification of cross compliance rules—the inclusion of the Water Framework Directive will be considered once the directive has been implemented and the operational obligations for farmers has been identified

- Rural development
 - Objectives: contribute to:
 - the competitiveness of agriculture
 - sustainable management of natural resources
 - balanced territorial development
 - Guiding themes
 - Investments should lift both economic and environmental performance
 - Environmental measures should be more closely tailored to the specific needs of regions and local areas
 - Measures to help unlock the potential of rural areas should pay attention to innovative ideas for business and local governance
 - Instruments
 - Investments
 - Infrastructure
 - Payments for ecosystem services
 - Support for LFA, environmental and climate change measures
 - Support for innovation, knowledge transfer and capacity building
 - Business creation
 - Social and institutional development
- Broad policy options
 - Gradual changes to the current policy framework
 - Major overhauls of the policy to increase sustainability and balance and make the measures more targeted
 - Far reaching CAP reform with a strong focus on environmental and climate change objectives while moving away from direct income support and market measures
- In 2009, funding was used for nutrient reduction in Italy and Spain.
- NGO operating grants
 - Grants are provided on a yearly basis and are distributed based on the extent to which the organizations can contribute to EU policy development and implementation in the priority areas of the 6th Environmental Action Plan (climate change, nature and biodiversity, environmental health, and natural resources and waste).
- NTERREG IVC
 - Program financed through the European Regional Development fund that promotes interregional cooperation, including the exchange and transfer of experience and knowledge between regions in the EU.
 - Also includes the following sub-themes: natural and technological risks, water management, waste management, biodiversity and preservation of natural heritage, energy and sustainable transport, cultural heritage and landscape

Implementation examples

The following offers a brief explanation of the following key co-benefits of improving nutrient management:

- Biodiversity
- Climate
- Well-being/standard of living of society
- Environmental protection
- Better animal health and welfare
- Improving food quality
- Guaranteeing food safety
- Ensuring that farming can continue in all regions

IEU Directorate General for the Environment

- LIFE Fund
 - "The European Union's financial instrument supporting environmental and nature conservation projects throughout the Union and in some candidate and neighboring countries. Since 1992 LIFE has co-financed some 2,750 projects for a total of €1.35 billion."
 - The deadline for submitting proposals to Member States for the LIFE+ 2011 call for proposals is July 18, 2011. The projects would start in June of 2012.
 - The European Commission has scheduled Information Sessions in each EU member state for potential LIFE+ applicants. The sessions were to have taken place by April 2011.



About the Living Water Exchange

The Living Water Exchange, a GEF/UNDP project promoting nutrient reduction best practices in Central and Eastern Europe, will share information and accelerate the replication of the most appropriate nutrient reduction practices developed from GEF and other investments in the region.

For more information, please visit
<http://nutrient-bestpractices.iwlearn.org/>
 or email Chuck Chaitovitz
chuck@getf.org