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EU WATER INITIATIVE – RESEARCH COMPONENT

**The science – development – policy nexus
Review of 10 years of international S&T cooperation (INCO)
addressing integrated water resources management**

The challenge is to converge the water policy and management determined by political processes with the fundamentals exposed by ecosystem and social science.

KEY LESSONS

The panel concluded that the partnership approach to water research and problem solving as expressed through IWRM oriented research has been evolving effectively in international cooperation, but it needs to evolve further to become – Constructively Engaged Integrated Water Resources Allocation and Management. The focus of the EU-INCO water research has been progressively more policy-relevant. The reinforcement of policy focused science and of reciprocal synergies has been impressive.

Researchers working on underlying fundamentals using ecosystem science and economics must recognise that their task should include learning how to communicate their science and the underlying fundamentals which their methods reveal to other stakeholders in society. Conversely, governments, private sector and civil society movements should seek to incorporate scientific results more systematically in their deliberation and decision making processes to reach more robust solutions.

Future investment for example through FP7 in water management and water policy has good potential to increase its impact by adopting more systematically the constructively engaged approach to IWRM. Links to other policies, education, capacity building and innovation should be systematically sought to shorten impact times. Bridging the gap between research into the fundamentals and the perceptions of water users and water policy-makers should be a research focus in its own right.

INTRODUCTION

The European Commission requested an **independent panel of 10 experts** from Africa, Asia, Europe, Mediterranean and Latin America to critically review information on a sample of 67 international scientific cooperation projects related to integrated water resources management (IWRM). These projects mobilised 530 research teams and other relevant partners from Europe and associated states (252 teams) as well as partner countries in Africa, Asia, Eastern Europe and Central Asia, Mediterranean and Latin America (318 teams). Projects reviewed came from three successive Framework Programme (FP) funding cycles: 20 projects from FP4 (1994-1998 – completed projects); 34 from FP5 (1998-2002 – completed or in their final stages); 13 from FP6 (2002-2006 – started) for an EU contribution of more than Euro 50 million.

Policy Brief based on a review by an expert panel composed of **Pragya (Academician) Dipak Gyawali** (Royal Nepal Academy of Science and Technology, Nepal: **Chair**); **Prof. John Anthony Allan** (King's College London and SOAS, UK: **Rapporteur**); **Prof. Paula Antunes** (New University of Lisbon, Portugal); **Dr Basim Ahmed Duede** (Land Research Center, Jerusalem, Palestine Authority); **Visiting Professor Pietro Laureano** (University of Florence and Director of IPOGEA, Italy); **Prof. Cassio Luiselli Fernández** (Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico); **Dr Pedro M. Scheel Monteiro** (CSIR and University of Cape Town, South Africa); **Dr Hong Khanh Nguyen** (Vietnamese Academy of Science and Technology, Hanoi, Vietnam); **Prof. Pavel Nováček** (Palacky University and Charles University, Czech Republic); **Prof. Claudia Pahl-Wostl** (University of Osnabrück, Germany), validated by a mirror group of another 12 independent experts bringing diverse experiences from government, civil society, private sector and academia.

THE PURPOSE OF THE REVIEW:

- *to evaluate the relevance of the research for policy-makers and water users;*
- *to comment on the level and quality of the communication of the research results;*
- *to comment on the overall impact of the studies.*

Other EU-INCO procedures evaluate the quality of the research.

EU-INCO adopted the principles of Integrated Water Resources Management (IWRM) in the late 1990s and required that EU-INCO-sponsored water researchers use and promote these principles. IWRM principles have been difficult to practice as also noted in the context of the European Water Framework Directive (WFD). This is because IWRM entails difficult allocation politics between competing uses of water resources, the quantity and quality of which is not keeping up with demand.

Perspectives of stakeholders from different constituencies (government, private sector, civil society) tend to be different, as are water management conditions and traditions in different parts of the world.

The **principal lesson** learned from the experience is that future calls for water research (and practice) make it clear that those engaged in IWRM focused studies need to understand that IWRM is a political process. Researchers need to engage constructively with public sector, private sector and with civil movement players engaged in water use and management. In addition they must take into account the preferences of these players.

Dialogue-based communication of researchers with all these players is most likely to enable uptake of research about the fundamentals of ecosystems and societal conditions important for IWRM. Research and water management approaches that only engage with part of this public/private/civil movement nexus are not sound.

EU economies have adopted environmentally protective and economic efficiency principles since 1980, which have often reduced the volumes of water used and have also encouraged the adoption of cost reflective tariffs. The adoption of such tough economic and environmental regulatory regimes has made little progress in partner countries except in southern Africa.

MAIN CONCLUSIONS AND LESSONS

The EU-INCO water research has reflected the world-wide trend in the adoption of IWRM. Some of the sponsored research teams were ahead of the curve where the leadership was comfortable with interdisciplinary research and constructive engagement with government, with the private sector and with civil movement activists.

Communication and impact proved to be very challenging requirements for the researchers. Researchers are willing to communicate and achieve impacts. But if these very important policy goals are to be addressed more effectively in the FP7 phase, three measures need to be introduced.

1 *The calls for research must specify that the **communication of research** is a prime goal of the sponsored research in much the same way that gender relevance was spelled out in Framework 6.*

2 Indicators of successful communication and impact need to be identified with special emphasis on links to major societal constituencies, education, training and innovation.

3 Where necessary, **funding** should be available to support these important policy relevant features as part of the research process.

The research landscape and the encounters of EU-INCO activities with it are in constant flux. The EU-INCO water research initiatives are an important element of the EU-INCO brand. But the EU-INCO budget is very limited; it had only 2.5% of the total FP5 **budget**. Of this sum less than one third was devoted to water research. The total FP5 EU-INCO budget was only 0.1% of the investment in research of the then 15 Member states including their contributions to EU research funds. FP6 saw a reduction in allocations to the specific international S&T cooperation in the INCO mode, though overall international allocations were increased. The net result was still a reduced international water research budget in FP6 and a limited capacity to contribute to the **EU Water Initiative** with its focus on contributing to water-related Millennium Development Goals and promotion of IWRM.

IWRM RESEARCH IN FRAMEWORK PROGRAMME 7 AND BEYOND

The following recommendations mainly refer to the enhancement of science and its relationship to **bottom-up development and top-down policy**. These are important for the success of the EU Water Initiative and its ability to increase the impact of scientifically validated knowledge for developing robust solutions. These two aspects of the science-development-policy nexus have been integral to the EU-INCO 'way of life' for two decades. It is possible that this way of life could **engage a much larger proportion** of the DG Research budget process during the FP7 period. EU-INCO water research experience reviewed could also have relevance far beyond the remit of EU-INCO.

RECOMMENDED STRATEGIES

Four main strategies have been identified to **accelerate the pace** at which local water managing practices and water policy could converge with the underlying fundamentals exposed by water science.

- *Promote the **constructively engaged research and practice** of integrated water resources allocation and management (CE-IWRAM) in FP7 and in international water research cooperation of EU Member States;*
- **Align cooperation** more strongly with region-specific CE-IWRAM priorities;
- *Require that international water research adopt the constructively engaged IWRAM approach and seek **links to education, capacity building and innovation;***
- *Require research to continue to **connect local knowledge**, gender-aware socio-economic development, cultures and policy institutions and implementing bodies.*

The influence of **women** on the way water is perceived, used and disposed is widely recognised. The social impediments to influencing their water using behaviour and especially to their participation in water research and in water managing institutions are enduring problems that need to be addressed specifically.

Detailed information, including the technical review report and general public brochures in English, French, Spanish and Portuguese, is available at:

<http://europa.eu.int/comm/research/water-initiative>.