

A review of the DAAD Alumni Summer School 2005
‘Topics of Integrated Watershed Management’

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Background

Watersheds are integrated systems with complex and dynamic relationships between resources – water, soil, air, plants and human beings. The watershed provides an appropriate analytical and management unit for water quality improvement. With increasing human population globally, the various water users must be coordinated with and integrated into the overall water management. Integrated watershed management requires participatory planning and multidisciplinary coordination, including geologic, wetland surveys, socio-economic studies, well water level monitoring, stream gauge data collection, water quality chemistry, bio-assessment surveys, stream corridor evaluations and database development.

Integrated watershed management provides a basis for partnerships regionally and for the adoption of multidisciplinary approach. Development cooperation has increasingly focused on integrated watershed management with the aim to protect and sustain resources of a region, at the same time make this resources utilizable for the population and in the long run decrease worldwide poverty (Förch et al 2005). Furthermore, this integrated approach captures, the resource management holistically, drawing on the Millennium Development goals particularly of reduction of poverty and sustainable environmental management.

It is in view of these ideals of development cooperation, that the DAAD Alumni⁹ Summer School was held in Siegen in April 2005, bringing together 24 professionals and academics from universities as well as the private sector. The team also participated in the IFAT International Trade Fair (IFAT 2005) in the European Water Wastewater and Solid Waste Symposium linking science and the private water sector. The participants were drawn from the East African countries of Ethiopia, Kenya, Uganda, and Tanzania, as well as South Africa, Vietnam, Cambodia and Germany. The background of the participants varied from Geographers, Engineers, Planners, Geologists, Lawyers, Foresters and Agriculturalists.

Aims of the Summer School

The aims of the Summer School were to exchange of ideas on Integrated Watershed Management, to compare the implementation of the European Union Water Framework Directive with realities in developing countries and to strengthen the relations and co-operation between Germany and Eastern Africa through networking.

Topics and Issues Presented

The topics included; Resource Management, Integrated Watershed Management Tools, Monitoring and Evaluation and Governance. Integrated management of the watershed enables a holistic approach to be used, taking into account the management of human, soil, water, energy resources as well as biodiversity. IWM relies on relevant tools and instruments for registration, presentation, monitoring and evaluation of the natural processes. Indeed regular monitoring and evaluation of environmental variables is vital for proper planning of IWM. Issue of

⁹ DAAD Alumni includes persons that have been supported for their education by the German Academic Exchange Service (DAAD), as well as those supported through InWent, DED, GTZ und KfW, or have self studied in Germany

governance are equally important in implementation of necessary procedures in IWM.

Participatory discussions were held; field excursions and visits to important sites were also taken to enhance understanding and comparison of the successful practices in Germany. The European Union Water Framework Directive and the Sieg catchment area formed the basis of the summer school. The EU water framework directive provides a tool that can be used in watershed management. Lessons from the visit Ruhrverband served as example basin stakeholder co-operation.

Results

Following the discussions, it was noted that management of watersheds is a task, which requires integrative concepts and skills and planning needs to be understood as an ongoing process and is dependant on regular monitoring and evaluation. Furthermore, keeping the natural resources for sustainable utilisation requires the implementation of the “user pays principle” on all levels and success is dependant on participation of stakeholders and empowerment of local governments. Watershed management is an ongoing process depending on regular monitoring and evaluation.

Within the framework of IWM, issues of equity must be addressed and success depends on participation of stakeholders and empowerment of local institutions. IWM requires autonomous institutions at catchment level to balance demand and resources. In addition, the attitude of stakeholders as well as resources and policies are important.

Human resources development and institutional capacity building are essential in IWM. Despite the difficulties in implementing the EU WFD, it may serve as a useful reference tool for developing countries, while the Ruhrverband is a good example of stakeholder co-operation in IWM. It was also noted that dialogue on water issues is essential for change.

Recommendations

- Linkages between regional and national level institutions are required in setting up policy and institutional framework, and overlaps among institutions should be harmonized through inter-agency cooperation for efficiency and effectiveness.
- Instead of the conventional top-down approach, a participatory approach should be encouraged.
- Use of indigenous knowledge in watershed management
- Documentation and sharing of country as well as regional experiences and best practices and of research findings to address pertinent watershed management issues.
- Dissemination of research results to key stakeholders
- Generation and management of database.
- Monitoring and evaluation has to address quality as well as quantity issues.
- Transform national water policies to promote water as an instrument of peace.
- Capacity building in managing information is essential, as well as in maintenance monitoring and evaluation of water management systems.
- Appropriate laws should be harmonized and adequately implemented.
- Demand-side management of basin resources must be encouraged.

Follow Up

As a follow up, the participants will continue networking within the existing Integrated Watershed Management Network (IWMNet). The proceedings (Förch et al, 2005) and have been published. The partnerships developed will continue to be strengthened through the networking and there will be concerted effort to incorporate the integrated methods in current teaching of programmes in various universities participating in the Summer School. Through fundraising activities the

team will work on joint proposals for research in IWM. The team will also continue to liaise with the Master Programme on Integrated Watershed Management to be launched at Kenyatta University in Nairobi, Kenya in September 2006. Future summer schools will target specific watersheds in the Eastern Africa region so that the expert knowledge can be integrated with local expertise to develop watershed management plans.

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