

occur in market environment of managing, and, secondly, scientifically prove and check up it in practice.

## SUSTAINABLE MANAGEMENT IN DEVELOPING COUNTRIES

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A growing population pressure on the finite water resources, as well as changes in consumption and production patterns, and trade policies due to development, urbanisation and industrialisation, are resulting in a rapidly increasing demand for water and in upstream-downstream conflicts of interest. The challenges include to meet basic water needs for human being, for the living as well as for coming generations, and for the environment, and to secure enough water of acceptable quality for agriculture, industry, energy etc. without compromising the sustainability of vital ecosystems. An integrated water resources management and compromise building is required to balance water uses to available resources and to land use and ecological services.

Integrated Water Resources Management, applied in a river basin approach, is recognised as a pre-requisite for any water-related intervention. The EC Water and Development policy should therefore be based in such an approach and include the following:

- Ensuring the access to safe water and sanitation systems and to hygiene to meet basic human needs;
- Supporting improved governance structure to secure best possible use of water and an enhanced cooperation in Integrated Water Resources Management of shared, including transboundary;
- Providing for Cross-sectoral coordination of different water uses, including ensuring water for food security, in rural as well as urban areas, water for the environment, energy, industry, transport etc.

The main challenges to achieve Water Security as recognised in the Ministerial Declaration at The Hague World Water Forum are:

**Meeting basic needs:** to recognise that access to safe and sufficient water and sanitation are basic human needs and essential to health and well-being, and to empower people, through a participatory process of water management.

**Securing the Food supply:** to enhance food security, particularly of the poor and vulnerable, through the more efficient mobilisation and use, and the more equitable allocation of water for food production.

**Protection Ecosystems:** to ensure the integrity of ecosystems through sustainable water resources management.

**Sharing Water Resources:** to promote peaceful co-operation and synergies between different uses of water at all levels, within and, in the case of boundary and trans-boundary water resources, through sustainable river basin management or other appropriate approaches.

**Managing risks:** to provide security from floods, droughts, pollution and other water-related hazards.

**Valuing Water:** to manage water in a way that reflects its economic, social, environmental and cultural values for all its uses, and to move towards pricing services to reflect the cost of their provision.

**Governing Water Wisely:** to ensure good governance, so that the involvement of the public and the interests of all stakeholders are included in the management of water resources.

The EC is a major donor in grant financing. It has thus in collaboration with the EU Member States the remit and resources to make a significant contribution to global efforts to water security.

The goal for an EC water and development policy is to promote strategies directed towards sustainable management of water resources, within the overarching objective of poverty alleviation.

The EC Development priorities include several aspects where water is a key factor and would need to be emphasised, such as:

- Transboundary water management is a crucial part in the context of regional integration and cooperation, with the objective to foster conflict prevention and promote peaceful cooperation between different interest.

- Access to water supply and sanitation as a basic social service and a key element in poverty alleviation.



- Rural development and food security require stronger coordination to ensure development of products that will give higher economic yield. Such development as well as development of different small-scale farming systems would require a sustainable management of the water resources.

- Capacity building, including institutional capacity are key issues in the water sector.

- There is a need to integrate water and development issues including their environmental effects in trade and development issues.

## WILLEBRAND'S FACTOR

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Willebrand's factor was at first described in 1926 by Eric A. von Willebrand, who investigated the diseases of inhabitants of Arland Island in Finland, displaying by bleeding.

Willebrand's factor is a high-molecule glycoprotein, which is produced in endothelium and in megakaryocytes and its synthesis represents many-staged process. At the first stage, so-called Willebrand's factor precursor, which is polypeptide consisting of 360 kDa. In its structure one can distinguish four types of domains. At the second stage post-relaying modification of Willebrand's factor takes place, which is based on the connection of subunits pre- Willebrand's factor in dimer and then in the process of glycosylation in multimer. Final product has a very high mass from 500 kDa to 10000 kDa. While synthesis Willebrand's factor by endothelium cells its excretion takes place, as in plasma, so as in subendothelium space, in which it is in close contact with fibrils of collagen. Availability of subendothelium depot of Willebrand's factor is one of the most important conditions, ensuring effective adhesion of thrombocytes and hemostasis in the case of endothelium layer injuring. Besides, Willebrand's factor molecules contain  $\alpha$ -granules thrombocytes. Willebrand's factor is considered to be the subunit of VIII factor (F VIII Ag) and strengthen thrombocytes sticking to vascular wall, probably forming molecular bridges between them and subendothelium of injuring