

# RAIN HARVESTING

## REGIONAL STRATEGY FOR MORE GROUNDWATER



### *Summary*

*Due to lack of precipitation many European areas are irrigated, but often there is not enough water for irrigation. In the German Aquarius pilot area "Rain Harvesting" was identified as an important method to overcome the challenge.*

*The idea of "Rain Harvesting" is to retain surplus water from precipitation events with help of weirs in ditches, with leak-proof storage ponds or even by using the groundwater body itself for storage.*

*The method is not yet fully developed, but has shown some promising results that satisfy both the EU Water Framework Directive by keeping the water in the catchment and the general need for more irrigation water.*

### *Main Benefits*

#### **General aspects**

- » Rain harvesting secures water for both irrigation and local watercourses.

#### **Economic/job creation**

- » Rain Harvesting can secure jobs and lead to growth in the farming sector by securing access to water.

#### **Innovative aspects**

- » Rain harvesting measures could be financed by the irrigators. For this we have suggested a legal framework to rate and register the benefits for the water system.
- » Measures supporting small watercourses, e.g. planting shading trees

to keep down water temperature and plant growth in the water course, are identified as a win-win-solution for both the aquatic environment and the farmer. These activities can be realized or financed by farmers that irrigate while they would be "refunded" through additional irrigation water.

## *Boosters for Implementation*

- » The combination of a hydrogeological model with a riverflow-sedimentation model led to the knowledge on the interdependencies of groundwater extraction and effects on the local watercourses.
- » The “Rain Harvesting” pilots were “invented” by farmers in the local project steering group and as the result of a stakeholder excursion to the Swedish pilot area.
- » For development of effective strategies and measures, basic knowledge on the components of the regional waterhousehold has to be built up and researched on.
- » Only with farmers’ local knowledge of soil, drainage systems and waterflow, low cost rain harvesting measures will be found.

## *Barriers for Further Implementation*

- » Ways of financing “Rain Harvesting” measures have to be developed. The irrigation community appears to be willing to invest for consolidation of sources for additional irrigation water. For this it is necessary to develop and implement a legal framework to rate and register the benefits for the water system.

## *How to Get Over Barriers*

- » Irrigators, experts of administration and politicians have to develop a broad consciousness about the new strategies and have to develop the will to find solutions.

## *Policy Recommendations*

- » Politicians should initiate and mediate the necessary public and administrative discussion about “Rain Harvesting”.

## *More Information*

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