KASWARMI

Knowledge Assessment on Sustainable Water Resources Management for Irrigation

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Objectives / Working Programme

WP4
Preparation of joint transnational research activities

WP3
Analysis of the current situation in selected irrigation areas

WP2
Knowledge base for sustainable water resources management for irrigation

WP1
Project Management and Communication

Preparation of future research activities for improving the use of natural resources for irrigation

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EGU 2009
Results

Interdisciplinary Scientific Network

LUH
Integrated Water Resources Management Basin Scale

UDEC
Irrigation Management & Design

UBA
Water Quality

UFCG
Salinisation

IADIZA
Desertification

UMSS
Socio-Economic Aspects

UFRB
Institutional Aspects

UCO
Sustainable Irrigation

SIUG
Decision Making

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State of the Art (WP2)

Design and management of irrigation systems, Socio-economic, institutional and environmental impact of irrigation in Latin America

- A few publications about socio-economic, ecological and technical aspects
- A lot of irrigation areas show a low irrigation efficiency
- Scars control of the ecological impact
- Competition and conflicts among water users
Results

Analysis of Study Areas in LA (WP3)

Chile:
Peumo Valley

Argentina:
Buenos Aires & Mendoza

Bolivia:
Cochabamba

Brazil:
Mossoró & Ponto Novo
Results

Analysis of Study Areas in LA (WP3)

Peumo Valley / Chile

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Results

Analysis of Study Areas in LA (WP3)

Buenos Aires / Argentina

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Results

Analysis of Study Areas in LA (WP3)

Mendoza / Argentina
Results

Analysis of Study Areas in LA (WP3)

Mendoza / Argentina

• Water scarcity
• Salinity
• Socio-economic conflicts
Results

Analysis of Study Areas in LA (WP3)

- Poverty
- Socio-economic conflicts
- Great water losses
- Low irrigation efficiency
- Steal of water
- Contamination

Cochabamba / Bolivia

Cooperative
Results

Analysis of Study Areas in LA (WP3)

Ponto Novo / Brazil

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Analysis of Study Areas in LA (WP3)

Mossoró / Brazil

Aquifer:
100 m depth (160 - 300 Mio. m³/a)
1000 m depth (20 - 40 Mio. m³/a)
Strategies for Future Research (WP4)

1) **Design and Management of Irrigation Systems for Sustainable Agriculture**
   1.1 Optimum Irrigation Design and Management Criteria for Sustainable Irrigation
   1.2 Development of Comprehensive Decision Support for Multi-Stakeholder Planning
   1.3 Crop Water Requirements, Deficit Irrigation and Instruments

2) **Socio-Economic and Institutional Impact of Irrigation**
   2.1 Organizational Capabilities
   2.2 Inadequate Normative Framework and Policies, Formal/Informal Norms, Valuing of Water (including Water Productivity)
   2.3 Assessment Framework to Facilitate Compliance with International Standards
   2.4 Interrelation between Enabling Environment / Water Management and Water Use

3) **Environmental Impact of Irrigated Agriculture**
   3.1 Water Management at River Basin Level including Conjunctive Use, Interbasin Transfer, Water Quality and Energy
   3.2 Assessment Framework for Monitoring Water Quality, Soils and Environmental Impacts, to Start Systematic Studies
   3.3 Use of Low Water Quality and Water Reuse
   3.4 Degradation of Soil in Irrigated Areas
Conclusions

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Project Management and Communication

Preparation of future research activities for improving the use of natural resources for irrigation.
Thank you!

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