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ECONOMIC AND SOCIAL COUNCIL

Economic and Social Commission for Western Asia (ESCWA)

Expert Group Meeting on Sustainable Land Management
as a Best Practice to Enhance Rural Development
in the ESCWA Region
Beirut, 25 – 27 March 2009

The role of the UNU-INWEH in Sustainable Dry Land Management, An overview

by

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International Network on Water, Environment and Health
United Nations University
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The Role of the UNU-INWEH in Sustainable Dry Land Management, *an overview*

Walid Saleh, Regional Coordinator

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UNU-INWEH Drylands Initiatives; *Presentation Overview*

Demonstration Projects:

- Jordan River (Jerash, Jordan – Wadi Alfarah, West bank) integrated watershed management (wastewater reuse, water harvesting)
- Small-scale rural wastewater treatment for Palestine
- Sustainable management of marginal drylands, SUMAMAD
- Knowledge management in the GEF KM: Land Initiative

Capacity Development:

- International Year of Deserts and Desertification – 2006
- Integrated water resources management diploma – The United Nations University Water Virtual Lea Center (WVLC)
- The United Nations University Traditional water technologies in drylands Master's Degree in integ drylands management, jointly with Tunisia and China

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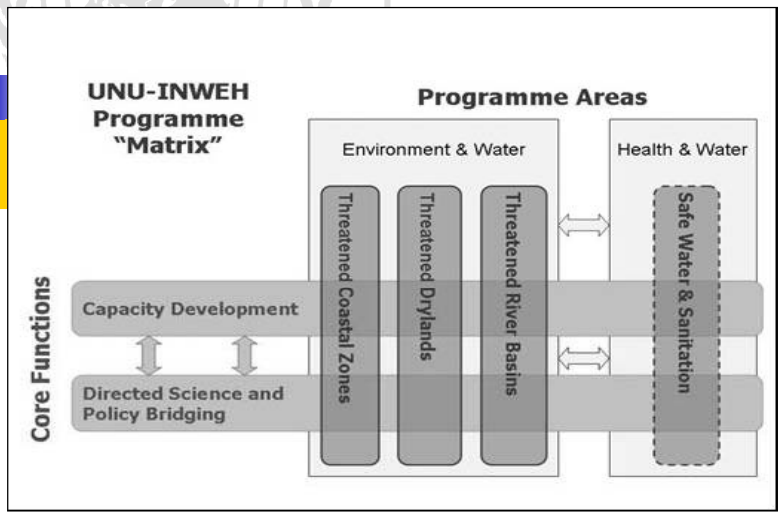

International Year of Deserts and Desertification - 2006

International Year of Deserts and Desertification

OPPORTUNITY:

Millennium Ecosystem Assessment:

- Desertification greatest threat to global society and environment - much work remains to be done
- Highlighted disparities between drylands & other ecosystems
- Points to major knowledge gaps
- Focused on inter-linkages between desertification, climate change, biodiversity and other global environmental issues

Processes at UN Convention to Combat Desertification:

- Report pointed to failure to "mainstream" issues w/ dev partners
- Highlighted disparities in funding for CCD & other MULTILATERAL ENVIRONMENTAL AGREEMENTS MEAs
- Identified lack of prioritization in "affected" countries
- Member countries choose to limit core budget

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SWWTP – Project completed

Results:

- Construction of Small Scale WWTP Units
  - Schools in the West Bank: (El Ameer Hasan School, Birziet and Al Khadoree, Tul Karem)
  - Schools in Gaza Strip (Al-Hertani School, Jabalia and A'kah School, Khan Yunis)

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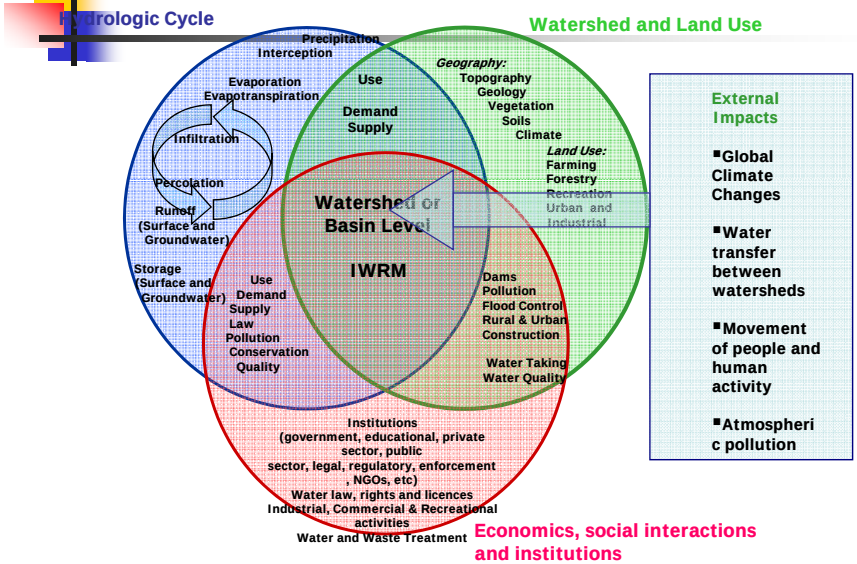
Sustainable Management of Wadi Al Fara'a-Jarash; An Integrated Approach

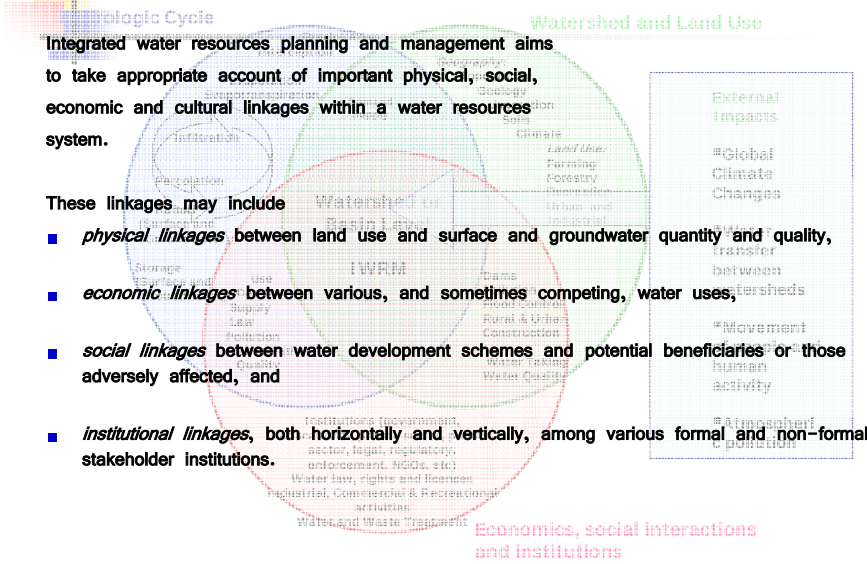




Integrated water resources planning and management aims to take appropriate account of important physical, social, economic and cultural linkages within a water resources system.

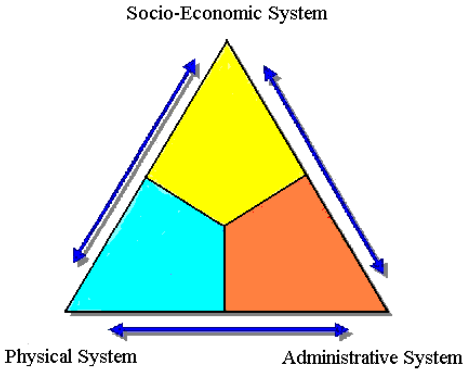
These linkages may include

- *physical linkages* between land use and surface and groundwater quantity and quality,
- *economic linkages* between various, and sometimes competing, water uses,
- *social linkages* between water development schemes and potential beneficiaries or those adversely affected, and
- *institutional linkages*, both horizontally and vertically, among various formal and non-formal stakeholder institutions.



Integrated Watershed Management

The *watershed system* as a whole can be seen to be composed of three components



View of Jordan river Basin and pilot areas

EXECUTIVE SUMMARY

- The overall project objective is to create sustainable development conditions for the rural population in the project area.
- An effective geographically based approach (at watershed level) and find solutions through an integrated view.
- Integrated Watershed Management Plan, which can be implemented by decision makers to guarantee more sustainable interventions.

The main outcome of the project

- **Sustainable interventions/pilots in the selected watershed;**
- **Short and Medium Term Integrated Watershed Management Plans for wadis**

- The interventions were selected in such a way that maximum sustainability is guaranteed (technical, financial, social, economical, institutional and environmental).
- Stakeholder participation and creation of ownership are essential to assure sustainability.

Approach

- Two-way interaction should take place and interests and decisions at lower levels need to be carried upward to be taken into consideration at higher levels, particularly to the national level;
- An important element in this process is the *participation of stakeholders in decisions processes at all levels*; this requires a *demand driven* approach instead of supply driven;
- To include experiences from local level, our project approach will therefore be *bottom up* instead of top down.

The actions, proposed in the Plans have to be implemented by the various implementing agencies, for instance MoEnv, MoWI and MoA.

It is therefore essential that all potential implementing agencies will participate actively in the planning process.

To create sustainable development conditions for the rural population in the project area

Objectives

To improve the living conditions of the population in the project area through implementation of sustainable interventions

Indicators

Local Stakeholders are managing the interventions (ownership)

Improved environment (e.g. water-conscious use; quality surface water improved; use of techniques to avoid soil degradation; water saving regulations introduced)

Improved living conditions (socio economic indicators)

Project Results

⇒ ***Geographical Information System (GIS)*** in place⇒ ***Database*** in place ⇒ ***Website*** in place⇒ Established ***Steering Committees***⇒ ***Report for the Baseline Study*** completed⇒ ***Report for the Selection of Pilots*** completed⇒ ***Seminar*** held⇒ ***Seminar proceedings***⇒ ***Thematic reports*** written

To create sustainable development conditions for the rural population in the project area

Objectives

To develop Short-Medium Term Integrated Watershed Management Plans, based on methodology and experiences gained during implementation of the pilots.

Indicators

- Population Aware of Environmental Issues
- Strengthened Authorities, willing and capable of implementing the Watershed Management Plans
- Exchange of Experiences and response of third parties to the Watershed Management Plans
- Dissemination of Project Results

Project Results

⇒ ***Tender documents*** available
⇒ **Sustainable pilots / interventions in the watersheds** in place
⇒ ***Monitoring systems*** in place
⇒ ***Public Awareness Campaigns*** executed
⇒ ***Thematic reports*** written⇒ ***Seminar*** held⇒ ***Seminar proceedings***
⇒ ***Report on the Integrated Assessment***⇒ ***Watershed Management Plan*** developed
⇒ ***Main Report*** written⇒ ***Articles*** submitted⇒ Int. ***Seminar*** held⇒ ***Seminar proceedings***

SUMAMAD

SUMAMAD

OPPORTUNITY:

- Major knowledge gaps in management of marginal drylands
- Drylands population on average lags far behind the rest of the world in human wellbeing and development indicators
- Desertification is the most significant process through which land productivity is lost
- When improperly managed, conversion of rangelands to cultivated typically leads to long-term loss in productivity
- Development of extensive network in drylands (1998-2003)
  - South-South collaboration
- Emerging institutional partnerships

SUMAMAD

ACTION:

UNU-INWEH

Focus on:

- improved and alternative livelihoods of dryland dwellers
- reduced vulnerability to land degradation in marginal lands through rehabilitation efforts of degraded lands
- improved productivity through identification of wise practices using both traditional knowledge and scientific expertise

4-year (2004-2007), $1.2m

Implemented in:

- China, Egypt, Iran, Jordan, Pakistan, Syria, Tunisia and Uzbekistan

SUMAMAD

Dryland Research Centers:

- ICARDA (Syria)
- Fars Research Center for Agriculture and Natural Resources (Iran)
- Pakistan Council for Water Resources Research
- Institut des Regions Arides (Tunisia)

Biosphere Reserves:

- Omayed Biosphere Reserve, Egypt
- Xilin Gol Biosphere Reserve, China
- Dana Biosphere Reserve, Jordan
- Lal Suhanra Biosphere Reserve, Pakistan

Partner Universities:

- Chinese Academy of Sciences
- University of Alexandria
- Samarkand University, Uzbekistan
- K. U. Leuven, Belgium
- University of Ghent, Belgium

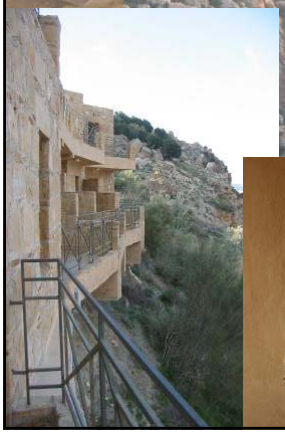
SUMAMAD - Iran

- Floodwater recharging
  - UNESCO – Man-made river award 2005



SUMAMAD - Jordan

- Dana Biosphere Reserve
  - Olive-oil based products
  - Ecotourism


SUMAMAD - Pakistan

- Dingarh and Lal Suhanra National Park
  - Water storage and filtration in Cholistan Desert
  - Aqualture in saline water

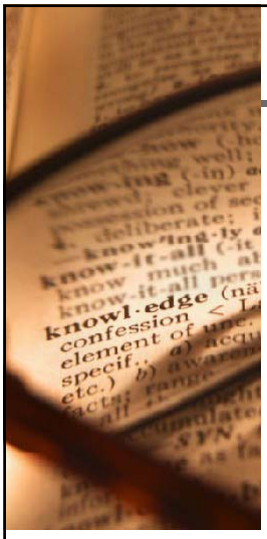
SUMAMAD - Egypt

- Omayed Biosphere Reserve
  - Work with local community
    - Mostly Bedouin and pastoralists
  - Solar-energy based desalination

SUMAMAD

OUTCOMES:

- Creation of supportive policies
- Wider international dissemination of results
  - Development of a generic project assessment framework
- Local recognition:
  - establishment of trust with communities
  - creation of local cooperative enterprises
- Request from Flemish Government of Belgium to plan new phase from 2008 onwards
- Links with Water-Energy provision in rural areas



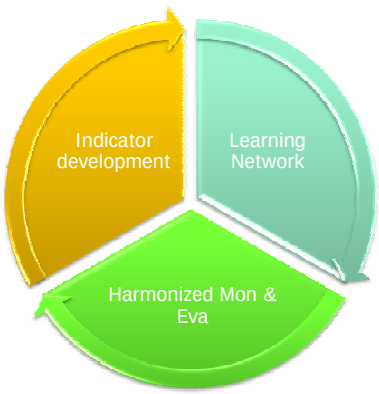
KNOWLEDGE MANAGEMENT IN THE GEF KM:LAND INITIATIVE

KM needs in the GEF LD FA

- Since 2002 GEF Land Degradation Focal Area invested 550 Mio USD (+ 2.6 Billion USD co-financing) in Sustainable Land Management (SLM) projects
- Information on controlling, preventing and mitigating land degradation, but knowledge not managed
- Urgent need for:
  - Synthesis of project-based, location specific knowledge into generic findings
  - Mechanism for compiling and sharing knowledge within and beyond Land Degradation (LD) Focal Area (FA)
  - Using the knowledge from GEF projects to design new initiatives
  - Measures of success to identify best practice

Response: KM:Land initiative

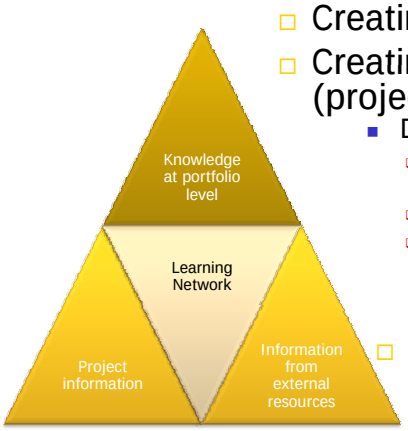
- **Overall goal**: To strengthen knowledge management (KM) in the GEF Land Degradation Focal Area.
- Three-phased initiative, pursuing three objectives:



The concept of a Learning Network

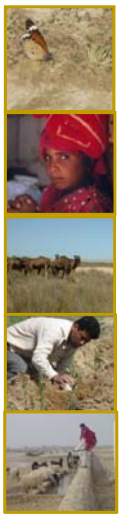
- Informal network for the exchange and interpretation work-related knowledge and experience
- Members have shared understanding of purpose
- Established mode or Forum for interaction among members
- Stewards competencies, transfers knowledge and explores emerging ideas
- Knowledge is retained in a “living way”

Functions of the GEF Learning Network



- Creating a network of individuals
- Creating an informational (project) inventory for GEF
  - Dialogue on themes that documents
    - Generic lessons to be transferred to other projects
    - Synthesized scientific findings
    - Application of indicators to extract best practice
- Creating an online portal
  - Online-discussion fora
  - Wiki-tools
  - Mechanism to share resources and products

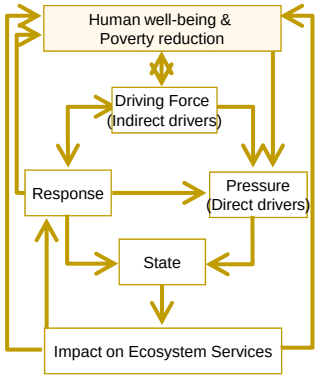
Scope and target audience



- Scope:
  - Entire GEF Land Degradation Focal Area
- Target audience:
  - GEF project managers and agency staff
  - Independent experts
  - Existing networks and institutions
  - Regional and thematic networks

SLM Framework underpins KM

- Identifying findings that generically relate to framework elements
- Synchronizing information emerging from other initiatives
- Identifying gaps in the knowledge
- Prioritize research and capacity building



Major principles of the KM approach

- Demand driven approach is essential: based on project needs
  - High flexibility in order to respond to demands and move forward on emerging issues
- Reach all stakeholders
  - Define the user groups of the KM mechanism
  - Messages must be relevant and well-packaged for each target audience (translation)
- Knowledge base should require minimum input from project managers
- Institutional ownership of the KM mechanism is essential for long-term sustainability
  - Financial and human resources
  - Committed partner institutions

Tools and processes

- Web portal
- Forum for exchange of information, experience and materials
- Web space for storage of information and materials (small database with simple database management system)
- Define process for synthesis

Technology

- Be innovative, but avoid technology overload
  - Integrate the technological and substantive side
- Passive technology is not sufficient, regular input is required
  - Online tools need to be complemented by learning events
  - Synthesis cannot be done without input

Linkages of KM:Land

- KM:Land actively seeks linkages at regional, international and thematic levels to coordinate knowledge creation and sharing
- Collaboration within GEF family
  - Across GEF Focal Areas (i.e. BD, IW, CC)
  - Coordination role of regional GEF umbrella programmes
- Linkage with the UNCCD process
  - Collaboration with DSD Consortium, WG 3
- Linkage with international networks with a focus on SLM
- Collaboration within UNU-INWEH: IW-Science and Water-Health Nexus

KM-Conclusions

- Significance to GEF
  - Inter- and intra project information exchange and knowledge sharing strengthens capacity to implement projects
  - Synthesized knowledge and lessons are used to design new projects
  - KM contributes to strategic planning in the entire LD FA
- Significance beyond GEF
  - Availability of generic findings synthesized from projects are available beyond the GEF realm
  - Improve flow of knowledge between international development and scientific community and other stakeholders

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Capacity Development:

- Integrated water resources management diploma – The United Nations University Water Virtual Lea Center （WVLC）
- The United Nations University Traditional water technologies in drylands Master's Degree in integ drylands management, jointly with Tunisia and China

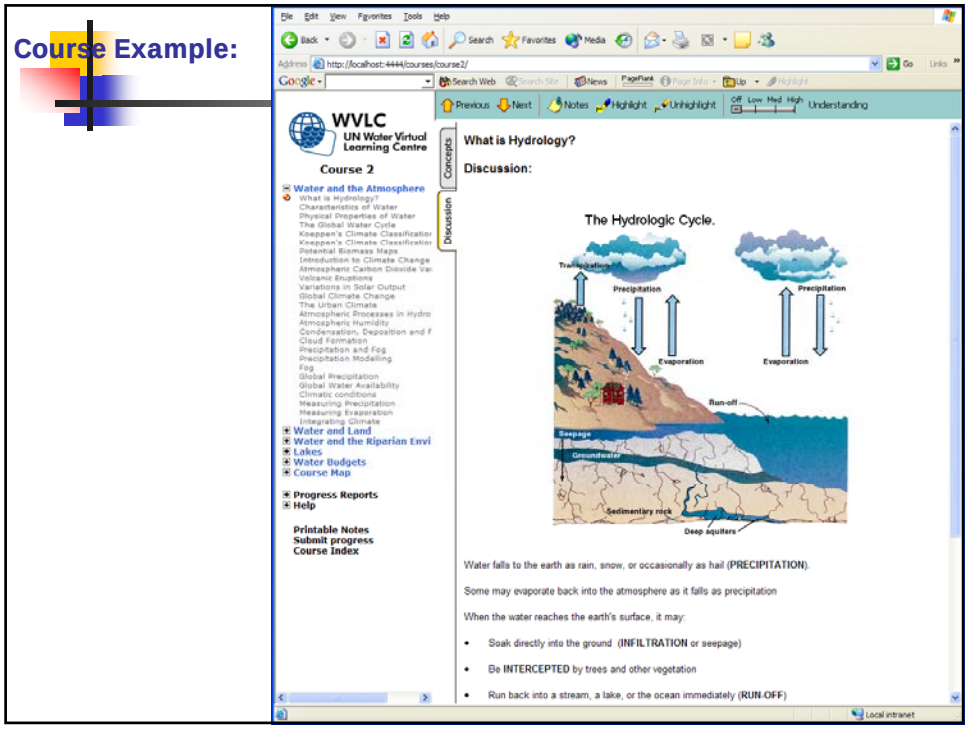
WVLC
The Water Virtual Learning Centre

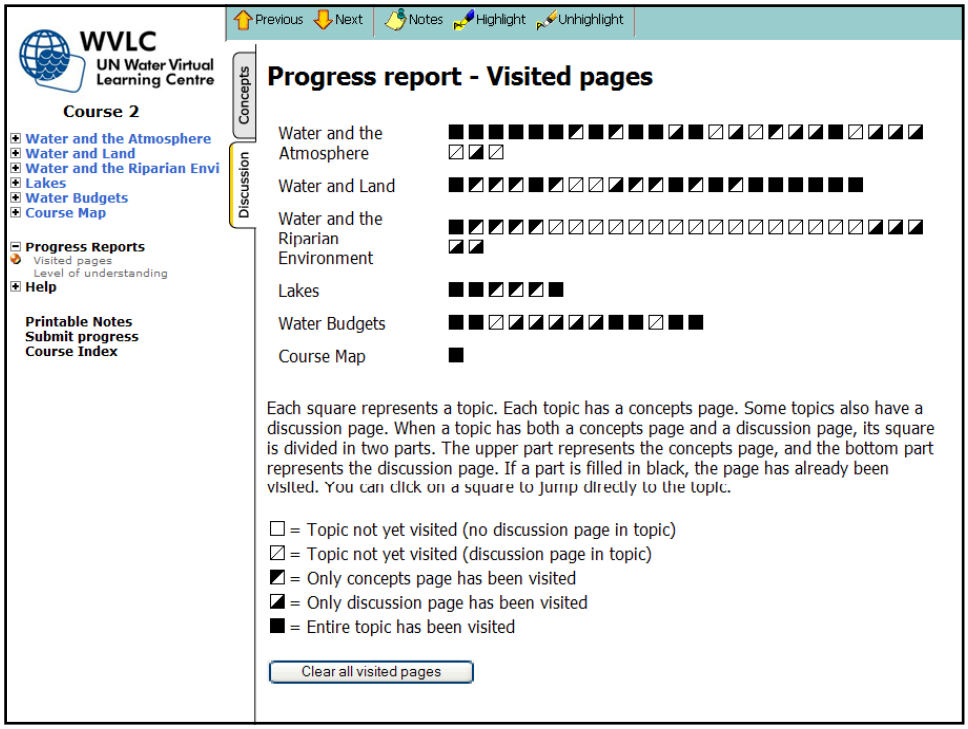
Capacity Development-WVLC

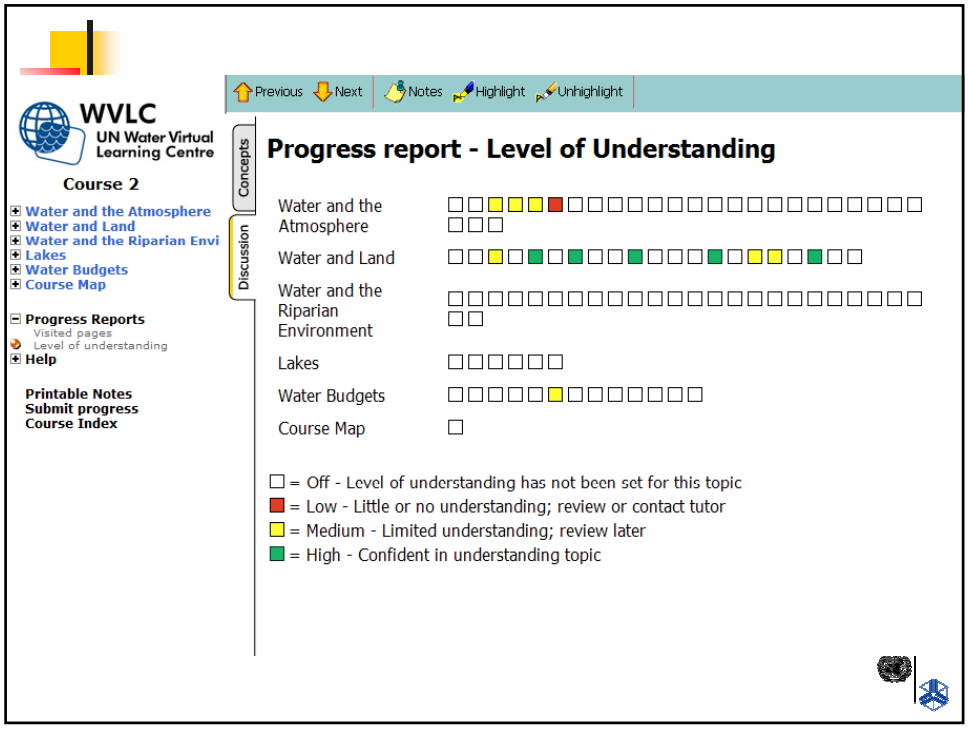
- The courses have been specifically designed to:
  - be easily modified and updated
  - use non-proprietary standards for formatting and presenting course materials
- The courses can, in the future, be modified and delivered by the Regional Centres according to their own requirements while still retaining the core curriculum materials
- Since replicate copies of the courses will be stored and made available to all the Regional Centres, duplication of effort will be minimized while still allowing significant local and regional contribution to the course material.

- Variations of the course, at different levels, can serve as a general introduction to IWRM for technical staff, administrative staff, planners, higher level managers or other interested parties.
- It can also serve as an adjunct to other programmes that are more focused (e.g. a Master's level programme in hydrology), or as a qualification or an entrance pathway to such programs.
- This programme can be used as a foundation for more advanced courses (e.g. Advanced Hydrology courses) by building on the general IWRM background from the WVLC.

Course Example:






WVLC
UN Water Virtual Learning Centre
Course 2
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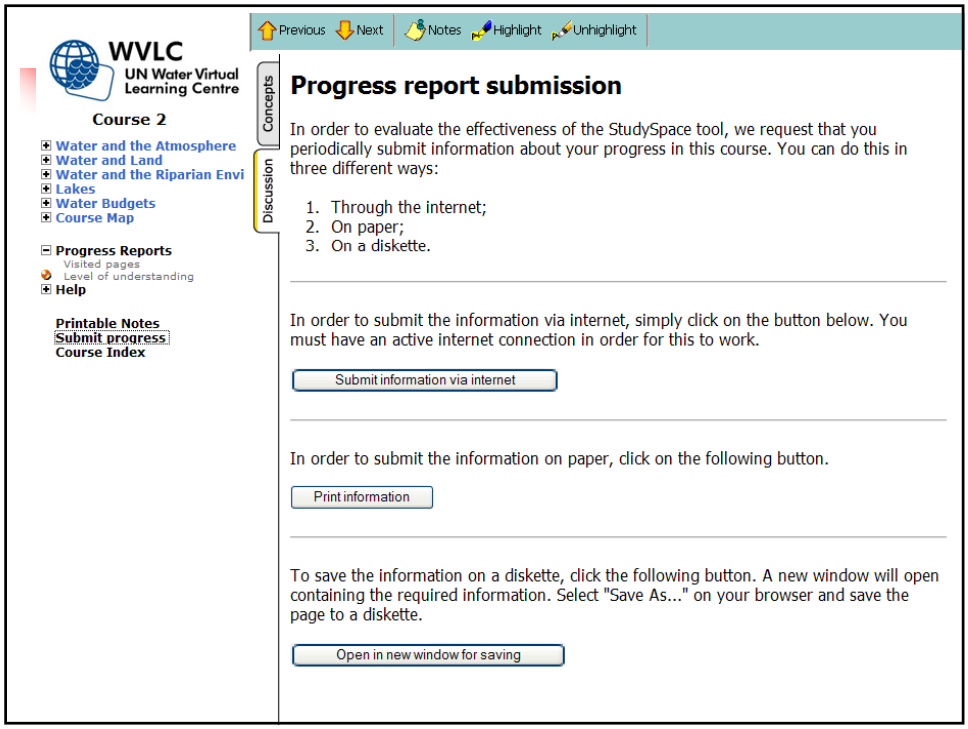
Lakes
Water Budgets
Course Map
Progress Reports
Visited pages
Level of understanding
Help
Printable Notes
Submit progress
Course Index
Previous
Next
Notes
Highlight
Unhighlight
Concepts
Discussion
Progress report - Level of Understanding
Water and the Atmosphere
Water and Land
Water and the Riparian Environment
Lakes
Water Budgets
Course Map
= Off - Level of understanding has not been set for this topic
= Low - Little or no understanding; review or contact tutor
= Medium - Limited understanding; review later
= High - Confident in understanding topic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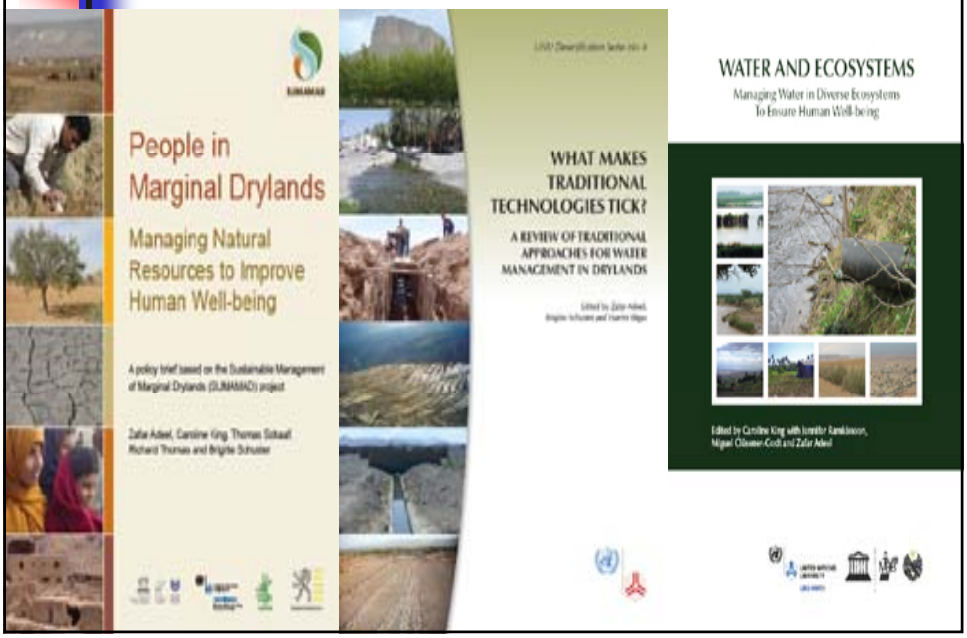
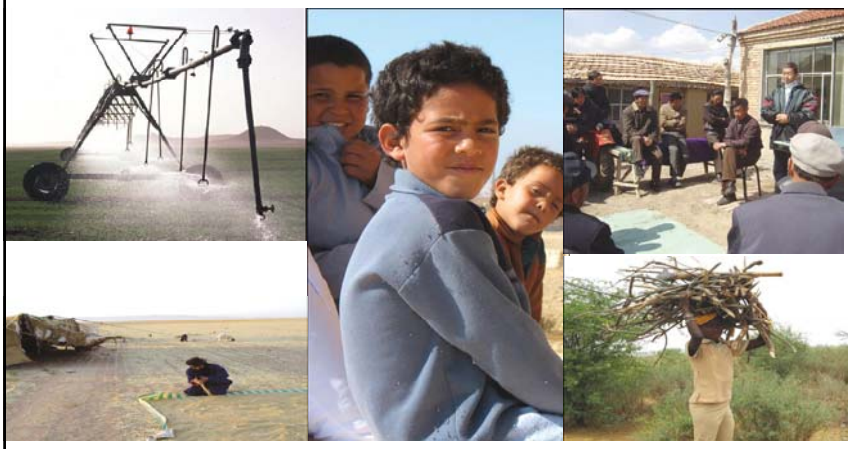
Progress report submission
In order to evaluate the effectiveness of the StudySpace tool, we request that you periodically submit information about your progress in this course. You can do this in three different ways:
1. Through the internet;
2. On paper;
3. On a diskette.
In order to submit the information via internet, simply click on the button below. You must have an active internet connection in order for this to work.
Submit information via internet
In order to submit the information on paper, click on the following button.
Print information
To save the information on a diskette, click the following button. A new window will open containing the required information. Select "Save As..." on your browser and save the page to a diskette.
Open in new window for saving

Some of UNU-INWEH Publications on Dry Lands



Overcoming One of the Greatest Environmental Challenges of Our Times: **Re-thinking Policies to Cope with Desertification**



Authors: Zafar Adeel, Janos Bogardi, Christopher Braeuel, Pamela Chasek, Maryam Niamir-Fuller, Donald Gabriels,Caroline King, Friederike Knabe, Ahang Kowsar, Boshra Salem, Thomas Schaaf, Gemma Shepherd, and Richard Thomas

Ecosystems AND HUMAN WELL-BEING

Desertification Synthesis