



Water Virtual Learning Center

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**United Nations University – International
Network on Water, Environment and Health**



Water Virtual Learning Center



OPPORTUNITY:

- Severe challenges to meet the MDGs:
 - In 2005, 1.1 billion people did not have access to an improved source of drinking water
 - 2.6 billion people (40% of global population) do not use a toilet
 - If the current trend persists, nearly 1.7 billion rural dwellers will still not have access to improved sanitation by 2015

- Lack of capacity to design, deploy and manage in developing countries

- Need for:
 - Focus on the present generation of working professionals
 - Innovative modes of delivery
 - Development of common knowledge base across disciplines

- Allocation of resources to UN-DESA from UN Development Account



E-Learning for Practitioners

ACTION:

- Development of distance-learning IWRM programme
 - International committee for curriculum outline development
 - Database for available material – online, courses, CDs
 - Professionals designed the courses
 - English edited and transcribed into studyspace
- The core curriculum consists of 10 courses, 250 study hours
- Flexible in terms of delivery mechanisms and procedures to accommodate:
 - widely varying schedules and requirements
 - technology access
 - backgrounds of the participants
- Delivered by regional partners and customized for each region

Flexible Architecture and Linear approach

File Edit View Favorites Tools Help

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Address http://localhost:4444/courses/course2/ Go Links

Google Search Web Search Site News PageRank Page Info Up Highlight

Previous Next Notes Highlight Unhighlight Off Low Med High Understanding

WVLC
UN Water Virtual Learning Centre

Course 2

Water and the Atmosphere

- What is Hydrology?
- Characteristics of Water
- Physical Properties of Water
- The Global Water Cycle
- Koepfen's Climate Classification
- Potential Biomass Maps
- Introduction to Climate Change
- Atmospheric Carbon Dioxide Variations
- Volcanic Eruptions
- Variations in Solar Output
- Global Climate Change
- The Urban Climate
- Atmospheric Processes in Hydro
- Atmospheric Humidity
- Condensation, Deposition and Fog
- Cloud Formation
- Precipitation and Fog
- Precipitation Modelling
- Fog
- Global Precipitation
- Global Water Availability
- Climatic conditions
- Measuring Precipitation
- Measuring Evaporation
- Integrating Climate

Water and Land

Water and the Riparian Environment

Lakes

Water Budgets

Course Map

Progress Reports

Help

Printable Notes

Submit progress

Course Index

What is Hydrology?

Discussion:

The Hydrologic Cycle.

The diagram illustrates the hydrologic cycle. It shows a landscape with a hillside on the left and a body of water on the right. On the hillside, there are trees and a small house. Arrows indicate the following processes: Transpiration (upward arrow from trees), Precipitation (downward arrow from a cloud), Evaporation (upward arrow from the ground), and Run-off (downward arrow from the hillside to the water). Below the surface, arrows show Seepage (downward arrow from the ground), Groundwater (horizontal arrow in the subsurface), and Deep aquifers (downward arrow from the ground). The ground is labeled as Sedimentary rock.

Water falls to the earth as rain, snow, or occasionally as hail (**PRECIPITATION**).

Some may evaporate back into the atmosphere as it falls as precipitation

When the water reaches the earth's surface, it may:

- Soak directly into the ground (**INFILTRATION** or seepage)
- Be **INTERCEPTED** by trees and other vegetation
- Run back into a stream, a lake, or the ocean immediately (**RUN-OFF**)

Local intranet

Course 2

- + Water and the Atmosphere
- + Water and Land
- + Water and the Riparian Envi
- + Lakes
- + Water Budgets
- + Course Map



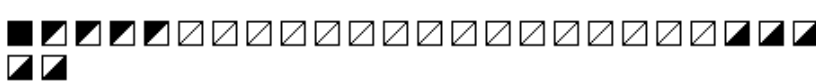



- Progress Reports
- 🕒 Visited pages
- 📊 Level of understanding

+ Help




Printable Notes
Submit progress
Course Index

- Concepts
- Discussion

Progress report - Visited pages

Water and the Atmosphere	
Water and Land	
Water and the Riparian Environment	
Lakes	
Water Budgets	
Course Map	

Each square represents a topic. Each topic has a concepts page. Some topics also have a discussion page. When a topic has both a concepts page and a discussion page, its square is divided in two parts. The upper part represents the concepts page, and the bottom part represents the discussion page. If a part is filled in black, the page has already been visited. You can click on a square to jump directly to the topic.

- = Topic not yet visited (no discussion page in topic)
- = Topic not yet visited (discussion page in topic)
-  = Only concepts page has been visited
-  = Only discussion page has been visited
-  = Entire topic has been visited

Clear all visited pages



Course 2

- + [Water and the Atmosphere](#)
- + [Water and Land](#)
- + [Water and the Riparian Envi](#)
- + [Lakes](#)
- + [Water Budgets](#)
- + [Course Map](#)

- **Progress Reports**

- Visited pages
- Level of understanding
- + **Help**

- Printable Notes**
- Submit progress**
- Course Index**

Progress report - Level of Understanding

Concepts	Water and the Atmosphere	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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Discussion	Water and the Riparian Environment	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Lakes	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Water Budgets	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Course Map	<input type="checkbox"/>

= 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



Course 2

- + [Water and the Atmosphere](#)
- + [Water and Land](#)
- + [Water and the Riparian Envi](#)
- + [Lakes](#)
- + [Water Budgets](#)
- + [Course Map](#)

- **Progress Reports**
 - Visited pages
 - Level of understanding
- + **Help**

[Printable Notes](#)
[Submit progress](#)
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Concepts

Discussion

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](#)



Operations: Technology

- ❑ Courses on CD-ROM and delivered to participants
- ❑ Internet connections not required to complete the courses, but required for communication with Regional Centers
- ❑ E-mail, bulletin boards and conferences available if they have Internet connections
- ❑ Software environment is “StudySpace”
- ❑ Uses the analogy of a lecture format – Concepts and Discussions
- ❑ Quizzes, on-line tests, built-in tracking, e-mail, databases etc.

Operations: Regional Centers

- ❑ Regional Centers customize and deliver materials
 - ❑ adapt materials to reflect local conditions
 - ❑ add regional “examples” of IWRM
- ❑ Communications and tutors from Regional Centers
- ❑ Regional Centers present Course 1 and 10 on-site or at other sites
- ❑ Examinations are held after each of the course through email WHILE final exam held on-site

Operations: United Nations University

- ❑ UNU/RC grants Certificates of Completion for Course 1 satisfactorily completed
- ❑ UNU grants UNU Diploma in IWRM upon completion of all 9 courses and after attendance, completion and satisfactory examination performance in Course 10

Expanding List of Partners



University of Ghana
June 2004



Asian Institute of Technology, Thailand
July 2004



University of Fiji
May 2005



University of NB
May 2005



Arab Gulf University,
Nov 2007



CATHALAC,  Bahama
Feb 2008  UNITED NATIONS
UNIVERSITY
UNU-INWEH

Wider Reach to Audiences



Ghana

STUDENTS



Fiji



Nairobi