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La formazione allo sviluppo sostenibile

Lo sviluppo sostenibile nel Rapporto Brundtland (Nazioni Unite 1987).

Uno sviluppo che soddisfi i bisogni delle generazioni presenti senza compromettere le opportunità delle generazioni future di soddisfare i loro bisogni.

Le dimensioni dello sviluppo sostenibile:

- ambientale
- economica
- sociale

La scala dello sviluppo sostenibile:

- globale
- nazionale
- territoriale
- urbana

L'importanza della dimensione urbana.

Gli strumenti per uno sviluppo sostenibile:

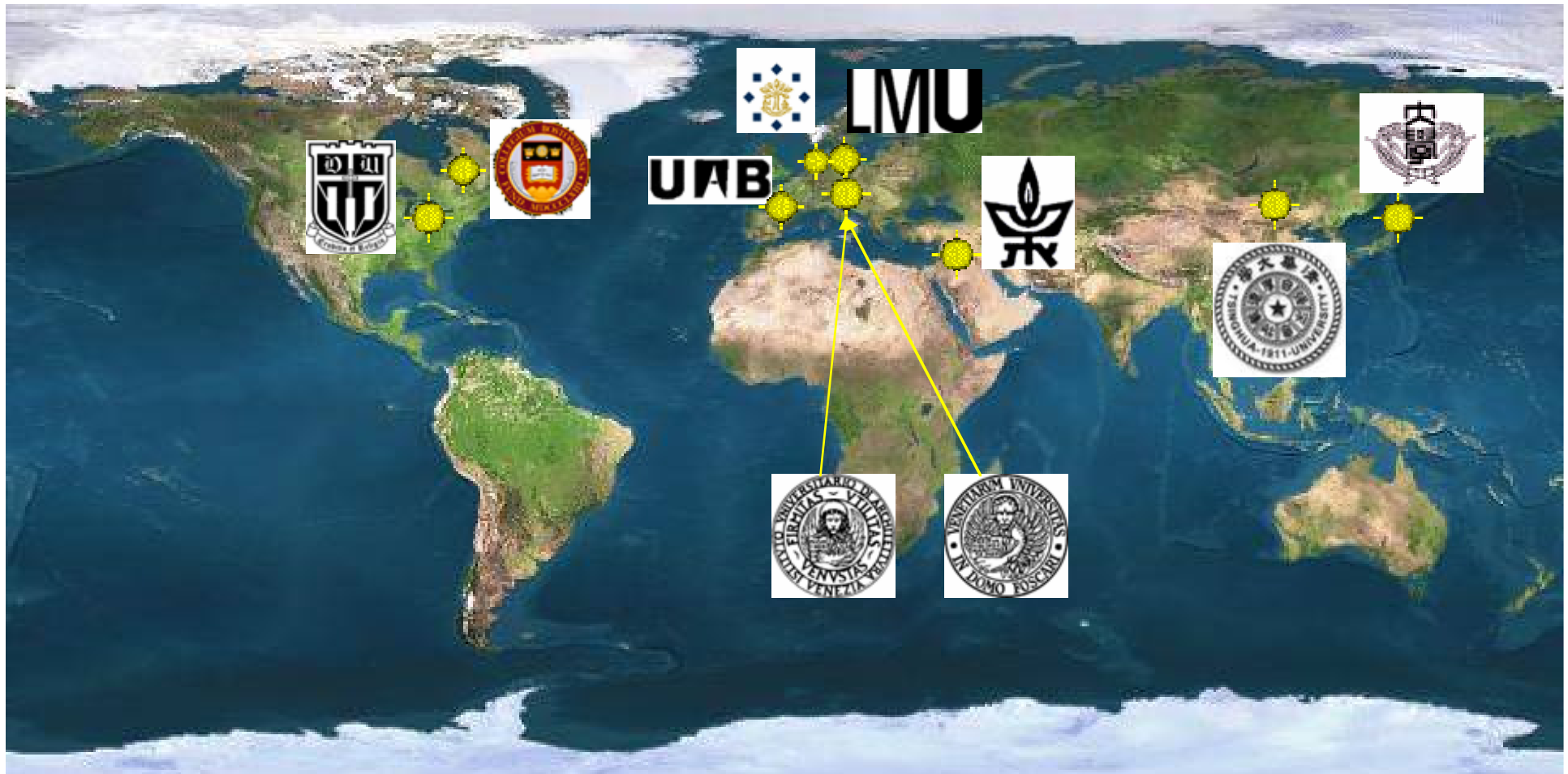
- la politica ambientale nelle varie dimensioni (giuridica, amministrativa, economica)
- la politica della ricerca e dell'innovazione tecnologica
- la responsabilità sociale

Il ruolo fondamentale dell'educazione ambientale:

- scuola
- università (vari livelli, formazione interdisciplinare)
- programmi specifici di formazione

La necessità di una dimensione internazionale di ogni processo formativo.

L'esperienza di Venice International University



Dove si trova.



VIU Aims:

- Programming and promotion of undergraduate, graduate and continuing high level education
- Managing research centers and programs
- Promoting conferences and workshops

VIU Activities:

- School of Humanities and Social Sciences
- Globalization Program
- Advanced Training and Research

TEN Research

Fields of specialization

- Environmental management
- Industrial Ecology
- Natural resources
- Green ports

Tedis Research

Fields of specialization

- Industrial districts, technologies and networks
- SMEs, local clusters and internationalization
- Creativity, Design and Innovation
- Logistics

TEN-TeDIS in cooperation

- Sustainable Supply Chain
- Industrial Risk Management
- Communication of Environmental Data
- Green Design

VIU and IMELS for Capacity Building

In 2003, IMELS selected the **VIU_TEN center** as scientific partner to develop and implement its **Capacity Building** activities for P.R. of China and East European countries

AGROINNOVA-University of Turin as developing partner of the Capacity Building program

- October 2003, Beijing – launch of **Sustainable Development and Environmental Management Advanced Training Program** within the Sino-Italian Cooperation Program for Environmental Protection
- April 2004, Budapest – 1st **Course for Sustainability: Strategies, Methodologies, Policies and Actions for Central and Eastern European Countries**

VIU_IMELS Capacity Building Program

Target:

- civil servants, policy makers, government officials (decision-making)
- professors, researchers, experts (academia, science)
- journalists (media)
- managers, entrepreneurs (companies)

Aims:

- to build-up **awareness** on Environmental Management to foster **Sustainable Development**
- to provide the participants with **theoretical issues** and **case studies** linked to European and Italian experiences of Sustainable Development
- to **share knowledge and information** on international successful practices in pursuing Sustainable Development
- to create an **international network** among **experts** and **stakeholders** involved in environmental management for Sustainable Development

Advanced Training and Research

Sustainable Development and Environmental Management Advanced Training Program

- Sino-Italian Cooperation Program for Environmental Protection
- Course for Sustainability: Strategies, Methodologies, Policies and Actions for Visegrad, Central Asia and Black Sea Countries

In collaboration with



The Italian Ministry
for the Environment, Land and Sea



Sustainable Development and Environmental Management Advanced Training Programs - China

2003 – 2 institutions

2004 – 5 institutions

2007 – 6 institutions

2009 – 7 institutions

- MOST
- CASS
- MEP
- BMEPB
- SEPB
- TSTC
- NDRC



Advanced Training Program in China



2003-04
523 people/11 trainings

2004-05
619 people/19 trainings

2005-06
649 people/18 trainings

2006-07
923 people/27 trainings

2007-08
952 people/22 trainings

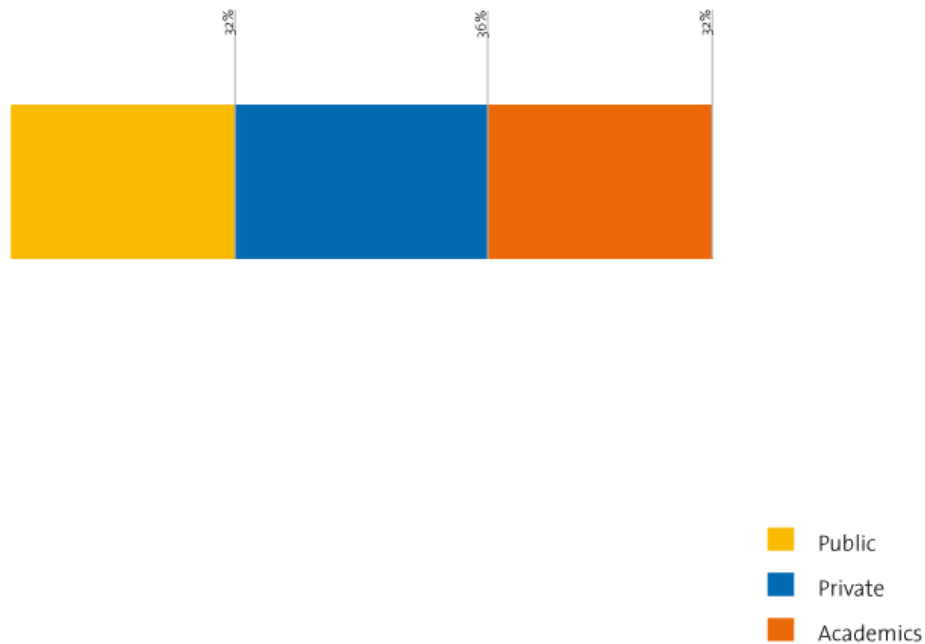
In 2009:

- 1344 participants
- 29 trainings

Since 2003

- nearly 5500 Chinese Participants totally

Advanced Training Program: Methodology



Lecturers:

496 totally

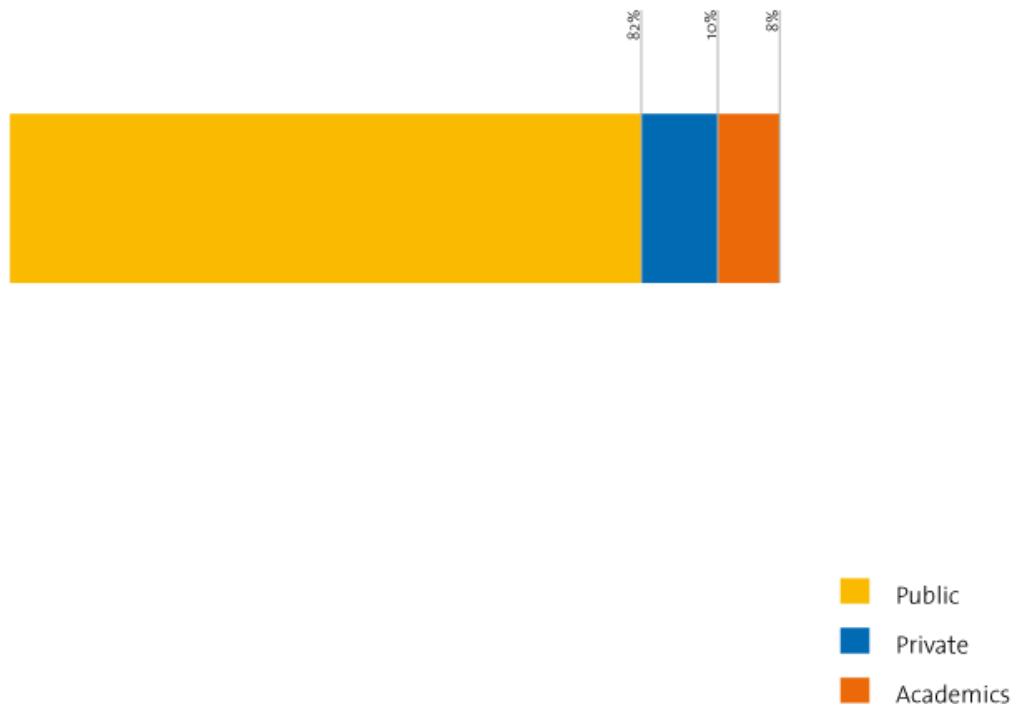
—academia
(32%)

—public sector
(32%)

—private
companies
(36%)

Fig.1 – Lecturers' affiliation in 2008

Advanced Training Program: Methodology

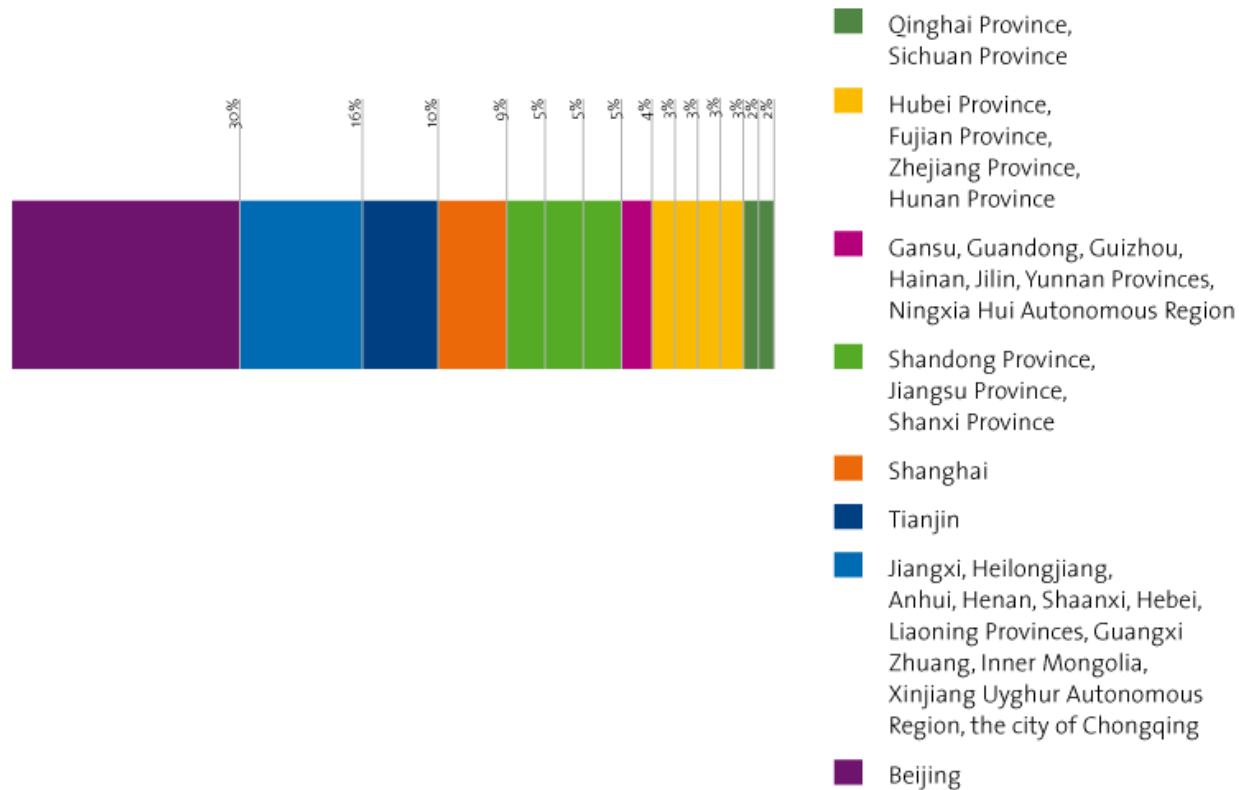


Trainees:

- _ Gov. officials / civil servants (82%)
- _ Private sector (10%)
- _ Professors / researchers (8%)

Fig.2 – Trainees' affiliation in 2008

Advanced Training Program: Methodology



Trainees:

_5074 totally

_all Chinese provinces

_majority from Beijing

Fig.3 – Trainees' provenience in 2008

Advanced Training Program: Structure and Topics



ENVIRONMENTAL POLICIES

ENERGY EFFICIENCY & RENEWABLES

CLIMATE CHANGE & CDM

RURAL DEVELOPMENT & SUSTAINABLE
AGRICULTURE

URBAN SUSTAINABILITY-ECOBUILDING

WASTE MANAGEMENT

AIR QUALITY CONTROL

WATER MANAGEMENT

ECOLOGICAL INDUSTRIAL DEVELOPMENT

ENVIRONMENTAL IMPACT ASSESSMENT

ENVIRONMENTAL EDUCATION

ECOSYSTEM PROTECTION

ELECTROMAGNETIC POLLUTION

Advanced Training Program: Dissemination and Follow up



The *Sustainable Development and Environmental Management* Book



Environmental Training Community Webportal

- 1500 ppt presentations
- 540 Experts
- 2500 Training Participants

Environmental Training Community Newsletter



To enlarge the community...

The e-learning program!

- Larger number of participants, reaching more locations at the same time
- A Pilot project on distance learning successfully concluded in 2006-2007
- The program was replicated in 2008 in a widened form
 - Introductory course on Sustainable Development
 - 280 trainees in 8 classrooms located around China
 - Italian lecturers teaching in Milan and Beijing (technical support)
 - 2 study tours in Italy for 15 + 15 participants, selected out of the 280
- In 2009 the program has been further enlarged, reaching 377 people in 8 different locations in China. The study tours in Italy have been 2, of 15 participants each.



Center
CLIMA



PROJECT



CLIMA Project

Ca' Foscari University of Venice §

European Union Partners



Vrije Universiteit
Amsterdam



Ecole des Hautes Etudes en
Sciences Sociales



University of Padua



Italian Ministry for the
Environment, Land and Sea *

Tsinghua University



Renmin University of
China



University of Karachi



National Development and
Reform Commission *



Asian Partners

§ *Project coordination*

* *Associates*

Project's objectives

- **training of young researchers on management of Climate Change issues linked to Sustainable Development**
- **create a scientific network between European and Asian Academic institutions**
- **strengthening the link between Academia and policy-makers through the availability of technical expertise and competences**

Project's outcomes

- **An international Network on Climate Change and Sustainable Development**
- **Scientific papers accepted by relevant international journals**
- **Curriculum and contents for an on-line Master course (materials usable also within the partner universities to integrate their didactic offer)**
- **Establishment of fruitful relations between the participating scientists and the relevant stakeholders within their countries**

Training Program

TS	Title and issue (as in the project)	Location	Date
1	Global, National and Local Governance on Climate Change	Vrije University Amsterdam	Jan. 22 – Feb. 2, 2007
2	Coastal Management and Climate Change & Risk Assessment and Climate Change	University of Karachi	Apr. 23 – May 4, 2007
3	Protection of soil and biodiversity & Energy Efficiency and Energy Sources	EHESS, Paris	Nov. 5 – 16, 2007
4	Integrated Water Management and Climate Change & Air Pollution and Climate Change	Renmin University, Beijing	Mar. 31 – April 11, 2008
5	Final Conference	VIU, Venice	Oct. 9 – 10, 2008

CURRICULUM

Modules	Units
<p><i>1. The Climate Change Problem and its Impacts on Sustainable Development</i></p>	<ol style="list-style-type: none"> 1. <i>The Climate System</i> 2. <i>Anthropogenic Causes of Climate Change</i> 3. <i>Impacts of Climate Change</i> 4. <i>Climate Change and Development Scenarios</i> 5. <i>Global Energy Systems and GHGs Emissions</i>
<p><i>2. Global Policy Approaches to Climate Change</i></p>	<ol style="list-style-type: none"> 1. <i>Climate Change and International Law</i> 2. <i>International responsibility and other legal responses</i> 3. <i>Negotiations and Climate Treaties</i> 4. <i>Financial, Technological and Economic Mechanisms</i> 5. <i>Climate Change and Non-State Actors</i> 6. <i>Mitigation, Adaptation and Post-Kyoto Policy Choices</i>
<p><i>3. National and Local Governance on Climate Change</i></p>	<ol style="list-style-type: none"> 1. <i>Dealing with Special Local Challenges of Developing Countries: Poverty Reduction and Global Climate change</i> 2. <i>National Policies on Climate Change</i> 3. <i>Institutional Structure, Division of Responsibilities and Financial Transfers</i> 4. <i>Policy Tools at National, Urban and Rural levels</i> 5. <i>Downscaling Impacts, Local Adaptation Measures and National and Local Emission Inventories</i> 6. <i>Types of Policy Measures: National, Urban and Rural</i> 7. <i>Mainstreaming Adaptation and Mitigation in National Urban and Rural</i>

CURRICULUM

Modules	Units
<p>4. Sustainable Integrated Coastal Zone Management and Climate Change</p>	<ol style="list-style-type: none"> 1. <i>Impact of Climate Change on Coastal Ecosystems</i> 2. <i>Scenarios of Sea Level Rise</i> 3. <i>Economic Impacts of Climate Change on Coastal Areas</i> 4. <i>Social impacts of Climate Change on Coastal Areas</i> 5. <i>International and Regional Legal Instruments for Coastal Areas Management</i> 6. <i>Promoting Sustainable Tourism in Coastal Areas</i> 7. <i>Tools for Coastal Defense</i>
<p>5. Modeling and Risk Assessment for Climate Change Policy</p>	<ol style="list-style-type: none"> 1. <i>Climate Change Modeling</i> 2. <i>Integrated Assessment Modeling: Assessing Climate Change and Policy Costs</i> 3. <i>Ecological Risk Assessment and Climate Change</i> 4. <i>Economic Risk Assessment and Climate Change</i>
<p>6. Energy and Climate Change</p>	<ol style="list-style-type: none"> 1. <i>Energy Resources in the World—Peak Oil—Energy Security—Geopolitics Issues</i> 2. <i>Global and Long Term Energy Scenarios</i> 3. <i>Energy Conservation and Energy Efficiency Potential</i> 4. <i>Carbon Free Technologies: Prospective and Potential for Renewable Energy Resources</i> 5. <i>Economic Instruments and Aspects (the Role of Price Signals and Technology transfer)</i>

CURRICULUM

Modules	Units
7. Biodiversity and Soil Protection and Climate Change	<ol style="list-style-type: none"> 1. <i>Impact of Climate Change on Biodiversity and Ecosystem</i> 2. <i>Biodiversity Protection and Carbon Sequestration Methods</i> 3. <i>Economic Valuation of Ecosystems & Biodiversity and the Impact of Climate Change</i> 4. <i>International Policy on Biodiversity and Climate Change</i> 5. <i>Climate Change and Soil and Water Conservation Management Options</i>
8. Water management and climate change	<ol style="list-style-type: none"> 1. <i>Air Pollution and Climate Change</i> 2. <i>Impact Assessment of Air Pollution on Human Health, Agriculture, Amenity & Ecosystem in Relation to Climate Change</i> 3. <i>Tools for Air pollution Control in Relation to Climate Change (technical, legal, social and economic)</i> 4. <i>Sector Approaches to address Influence of Air Pollution on Climate Change</i>
9. Air pollution and climate change	<ol style="list-style-type: none"> 1. <i>Impact of Climate Change on Water Resources</i> 2. <i>Implications for Economic Sectors of Climate Change Impacts on Water Resource</i> 3. <i>Policies for Water Management in Relation to Climate Change</i> 4. <i>Integrated Water Assessment and Management in Relation to Climate Change: Methodology and Analytical Tool</i>