

# Energy-Water Linkages

## Work program for Phase 1

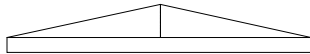
Energy Sector Coordinating Committee

CAREC

Ulaan baatar, Mongolia

July 5-7, 2010

Daryl Fields  
World Bank



## Energy Action Plan: Three Strategic Themes

### Energy-Water Linkages

#### Action Plan Objective

To strengthen cooperation by integrating energy and water analysis.

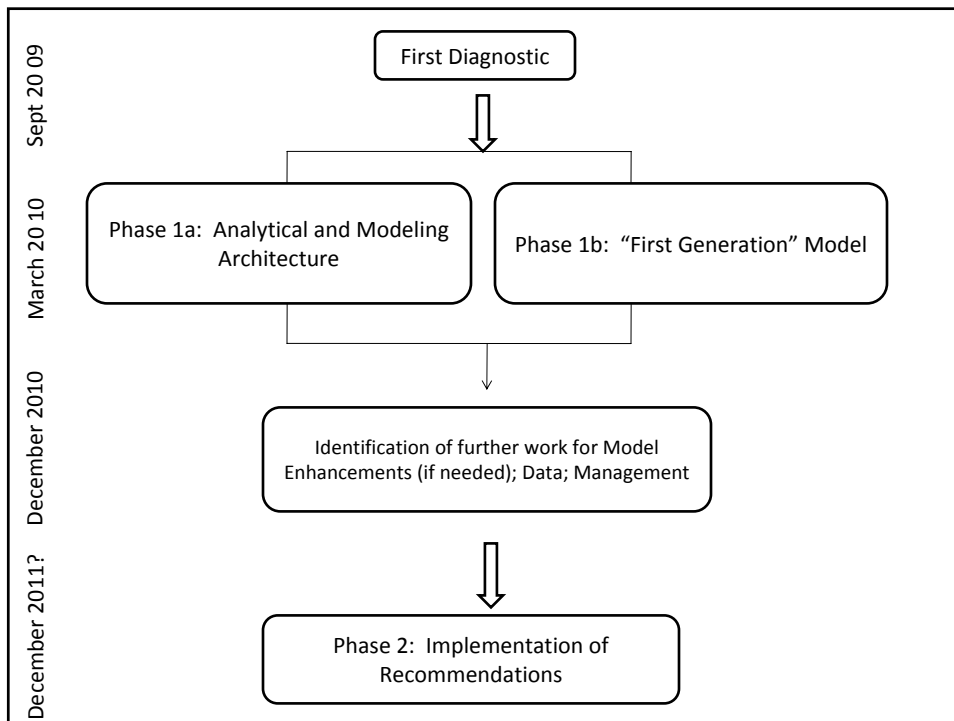
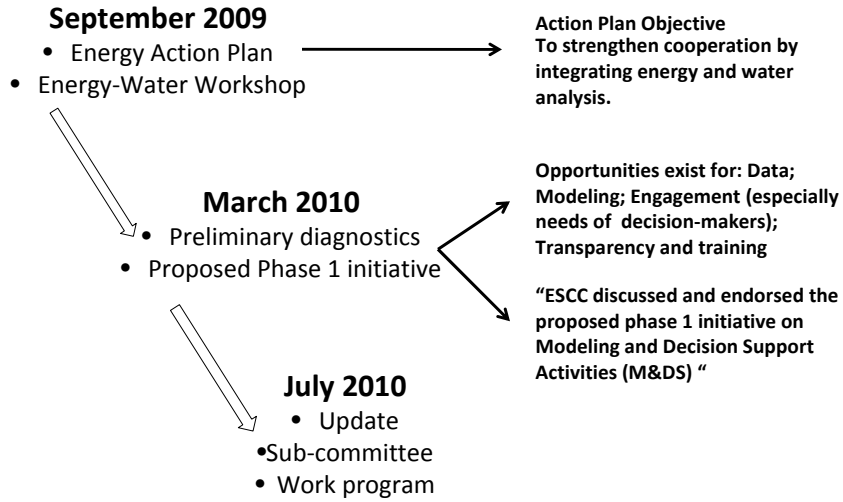
#### Why

- **Hydropower contributes to the reliability, stability and affordability of an energy system**
- **Transboundary water management** is critical to maximize the value of hydropower to the region's energy sector.

#### How

<b>Investment</b>	Identify consensus projects to improve the rational and effective use of energy and water
<b>Capacity Building &amp; Knowledge Sharing</b>	Enhance integrated energy-water models, analytical tools, and shared databases
<b>Policy measures</b>	Strengthen Central Asian institutions to lead the dialogue and analysis on rational use of energy-water resources

# Review



## Phase 1b: “First Generation” Model

**What:** Build a basic basin model using readily available data

**How:** Independent consultant

- Collect data from international, commercial and local (Central Asia) sources
- Develop a dynamic information framework
- Roughly simulate impacts of climate change, water productivity and water management
- Hold workshops to share model architecture and results

**Update:**

**Contractor:** University of Washington

**Schedule:**

July/August: Set up data models; Gather readily available data in CA

October: Initial runs; Presentation to ESCC

November: Focus on hydropower and irrigation models

December/January: Model presentation; Recommendations

**Request:**

Facilitate July/August meetings

## Phase 1a: Analytical and Modeling Architecture

**What:** Establish a consensus view on modeling needs and institutions

**Output:** Recommendations for detailed analytical model enhancement and management

- High priority data needs
- Model refinements (e.g., energy operations, climate change, socio-economic indicators)
- Most appropriate modeling platform and interface
- Institutional arrangements for ongoing use, maintenance and sharing of analytics

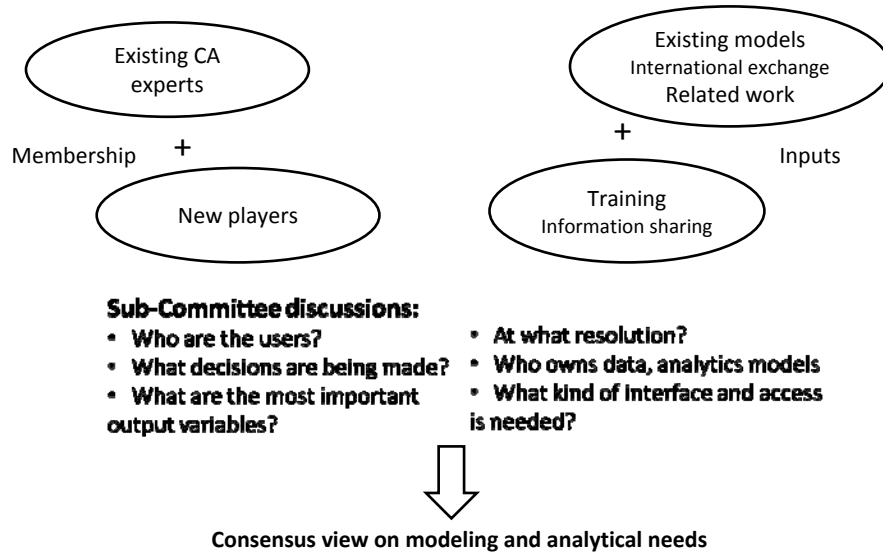
**ESCC additional recommendations (March 2010):**

- Build on existing studies and models
- Help fill current information gaps
- Expand to other resources and facilities and environmental and climate change impacts
- Include training and capacity building
- Establish a Modeling and Decision Support Technical Working Group/Sub-Committee.

## Modeling and Decision Support Technical Sub-Committee Draft Terms of Reference (1)

- **Purpose:** To advise on and recommend refinements to energy-water analytical foundations and institutional arrangements under the CA Energy Action Plan
- **Timeframe:** Initially, one year.
- **Duties of members:**
  - Provide input from national and/or regional activities
  - Participate in and contribute to training and capacity building
  - Contribute to discussions and recommendations
- **Funding:** World Bank and other donors as identified (e.g., Switzerland)

## Sub-Committee Work Program



## **Modeling and Decision Support Technical Sub-Committee Draft Terms of Reference (2)**

- **Membership:**
  - All ESCC national governments, as requested
  - Relevant regional institutions
  - Cross-sectoral (energy, water, environment, etc.)
  - Selected academic and non-governmental experts
  - Maximum 20 members with alternates
- **Authority of sub-committee:**
  - Provide recommendations to the ESCC

## **Modeling and Decision Support Technical Sub-Committee: Schedule**

- **August/September 2010:**
  - Initial country discussions (issues, current approaches, ideas, concerns) – consulting support facilitated by World Bank for ESCC and EC-IFAS
- **October 2010:**
  - Workshop 1: Expert exchange, Capacity building, Discussion of priority issues and needs
- **December 2011:**
  - Workshop 2: Priorization of activities and recommendations
- **Early 2011:**
  - Workshop 3: Recommendations on institutional needs

## Decisions and Discussion

- **Discussion:**
  - Are ToR appropriate (purpose, duties and structure of membership)?
  - What ministries should be involved?
  - What institutions should be involved?
- **Decisions:**
  - Approval of ToR for Energy-Water Linkages sub-committee
- **Requests:**
  - Assist University of Washington (July/August)
  - Respond to request for sub-committee nominations and initial consultations