

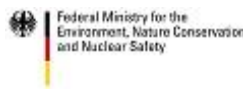
Petersberg Phase II / Athens Declaration Process
Principles for Multipurpose Management in the Sava River Basin
Zagreb, 15 - 17 November 2006

[Hydropower in a Multipurpose Approach](#)

by
Alessandro Palmieri
Lead Dam Specialist
World Bank

Organized by
**German Ministry for the Environment, Nature Conservation and Nuclear Safety and
International Sava River Basin Commission**

Within the framework of
Petersberg Process Phase II / Athens Declaration Process
and
GEF IW:LEARN, Activity D2

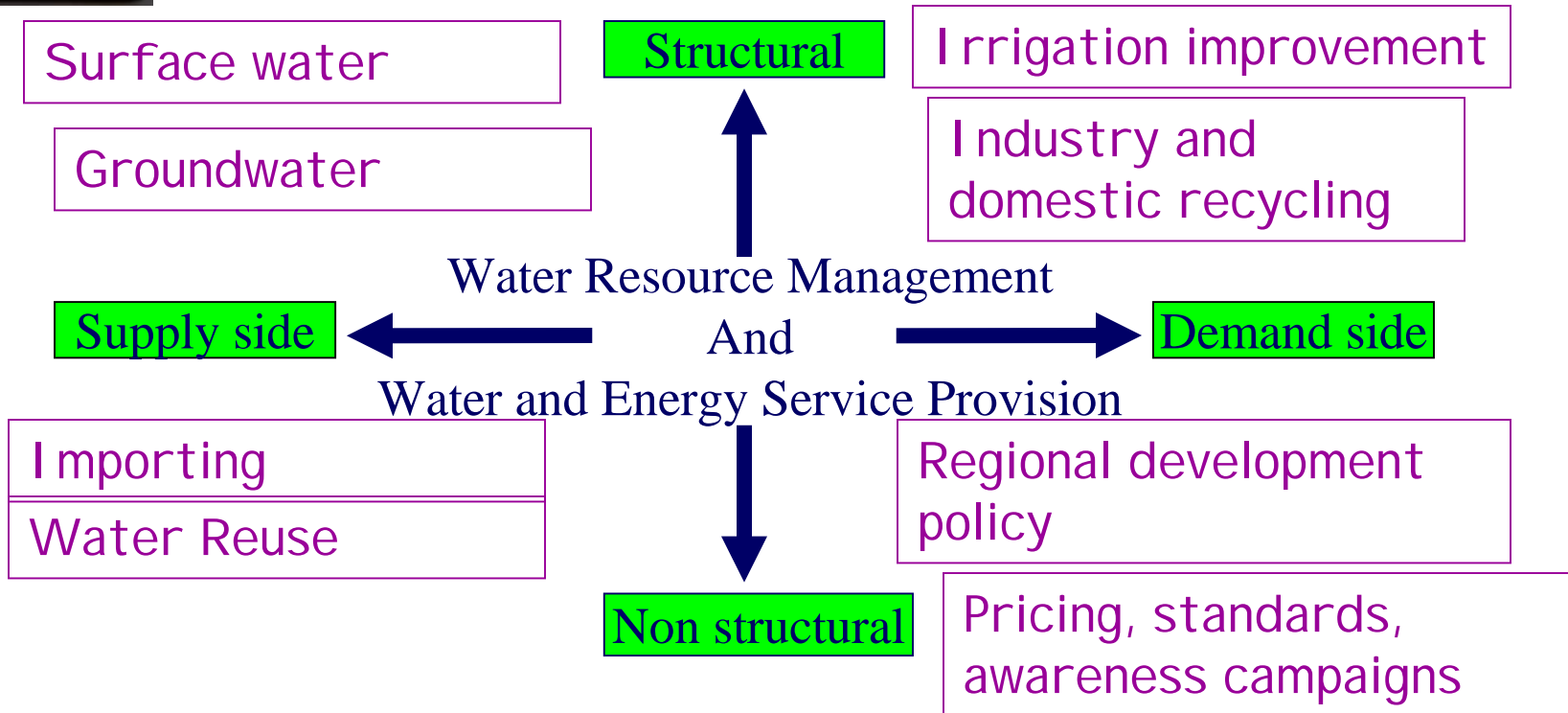


HELLENIC REPUBLIC
MINISTRY OF FOREIGN AFFAIRS



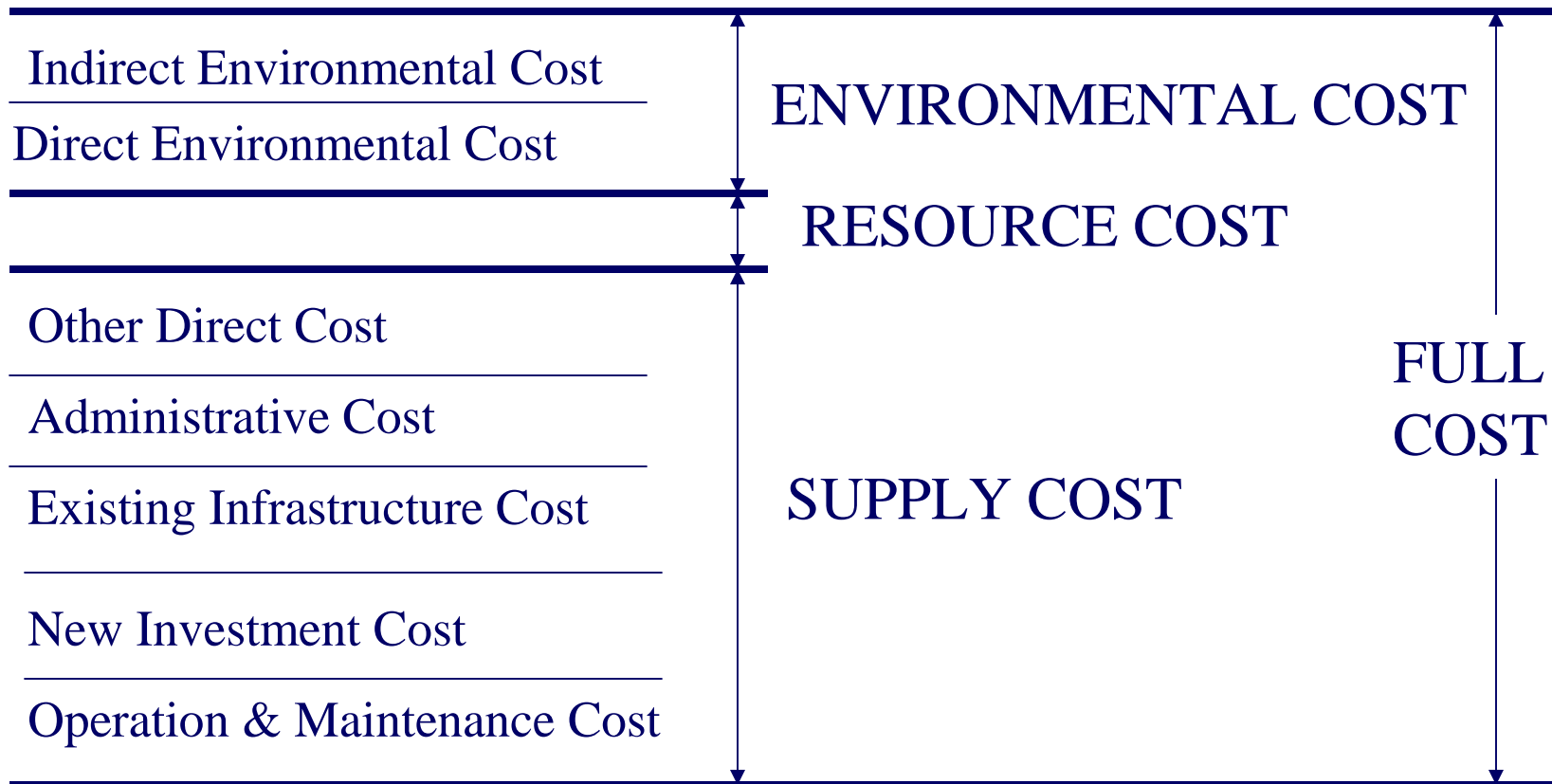


Strategic Options for Integrated Water Resources Management



Economics: The full cost of water services

(Art. 9.1 EU Water Directive)

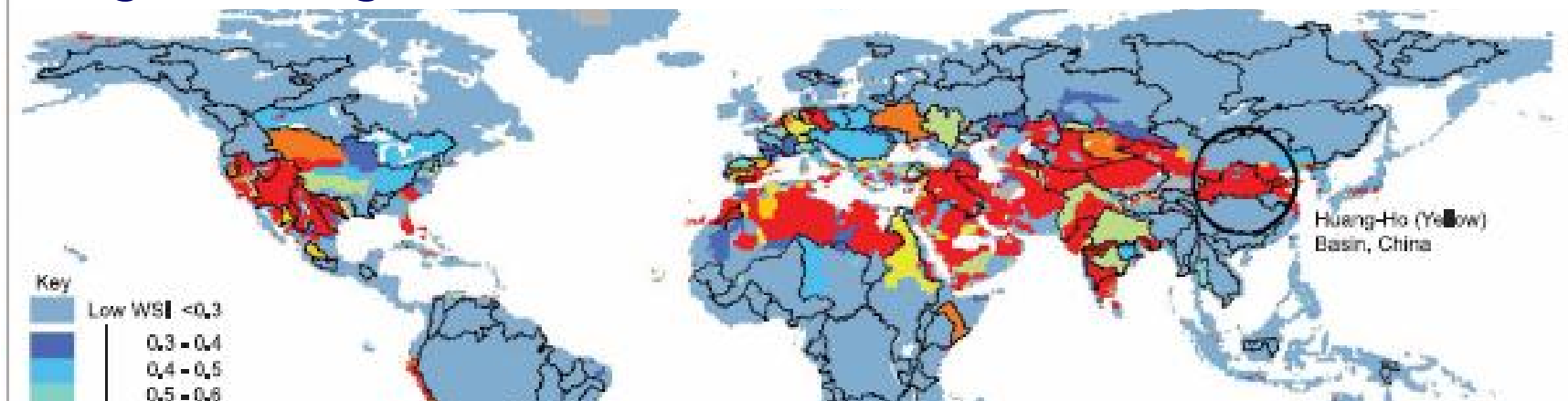


Benefits-Sharing Mechanisms

Mechanism	Description/Examples
Project design	Maximize benefits of integrated water resources management. E.g., irrigation, flood protection
Ancillary investments	Investments outside core infrastructure to broaden reach of benefits. E.g., rural electrification, local infrastructure
Financial allocations	Distribute economic rent. E.g., preferential electricity rates, taxes, joint ownership
Policies and institutions	Build enabling environment for leveraging benefits. E.g., joint water management, trade policy

Climate variability adaptation: stochastic approach

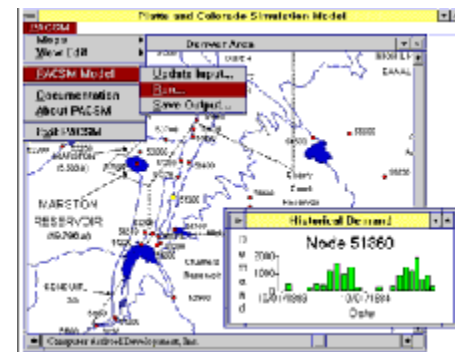
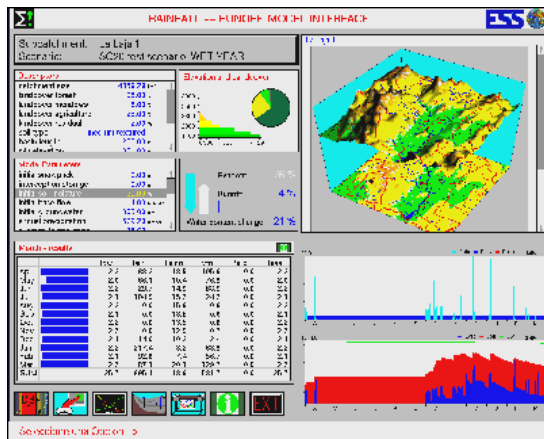
Global warming models: often in sharp contrast to one another; a lot of judgment required to abstract engineering value for them.



Need for a tools permitting analysis of hydrological trends AND classification of strategies under uncertain conditions.

Multipurpose: challenge or opportunity?

- The role of modern Decision Support Systems:
 - Consumptive uses on trans boundaries water bodies;
 - Hydropower generation and flood mitigation;
 - Water yield and in-stream flows;
 - Sediment management can be an additional 'water user';
 - Out of Basin Export



Hydropower: supporting multiple objectives

