

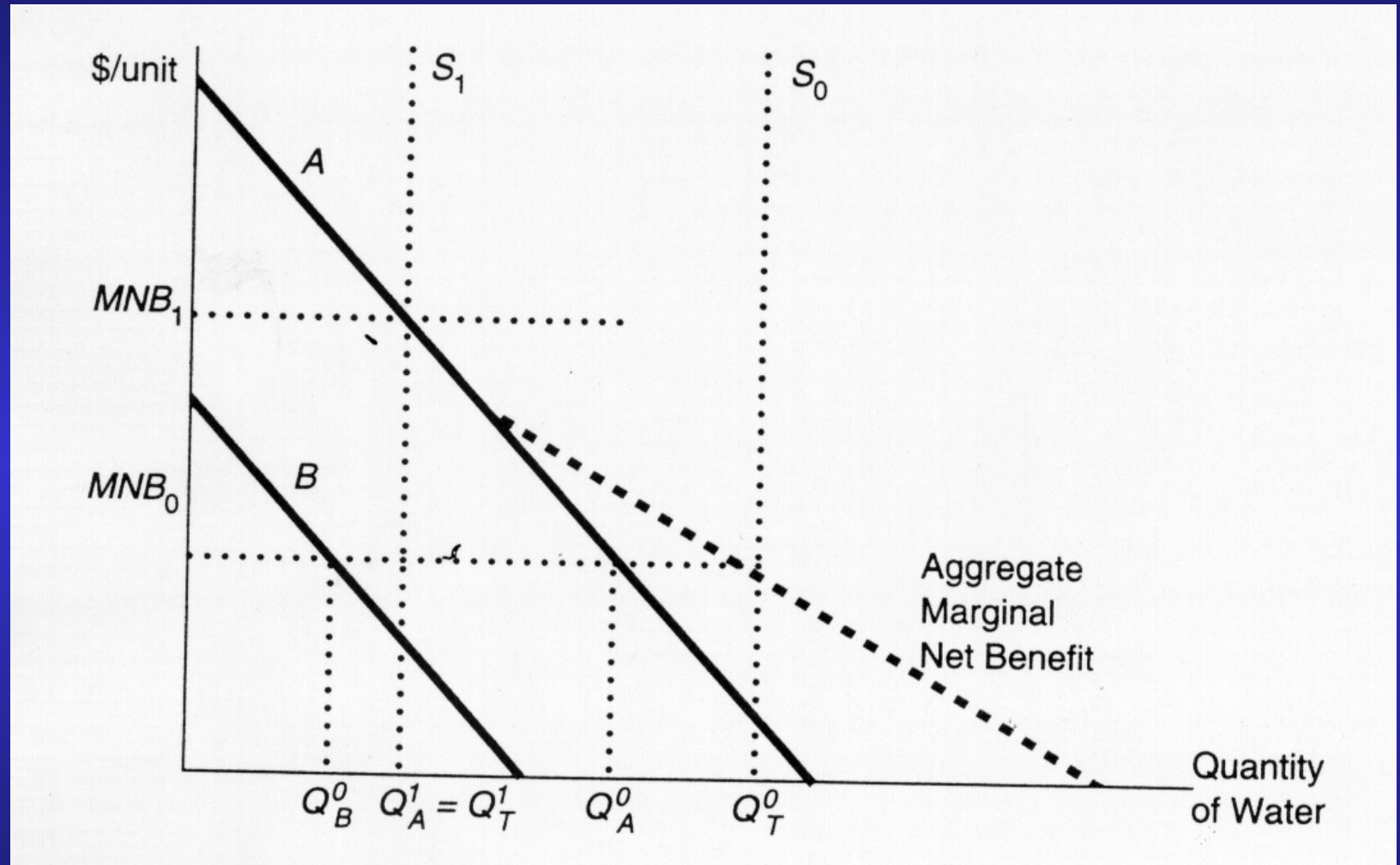


Economic Transboundary Water Management

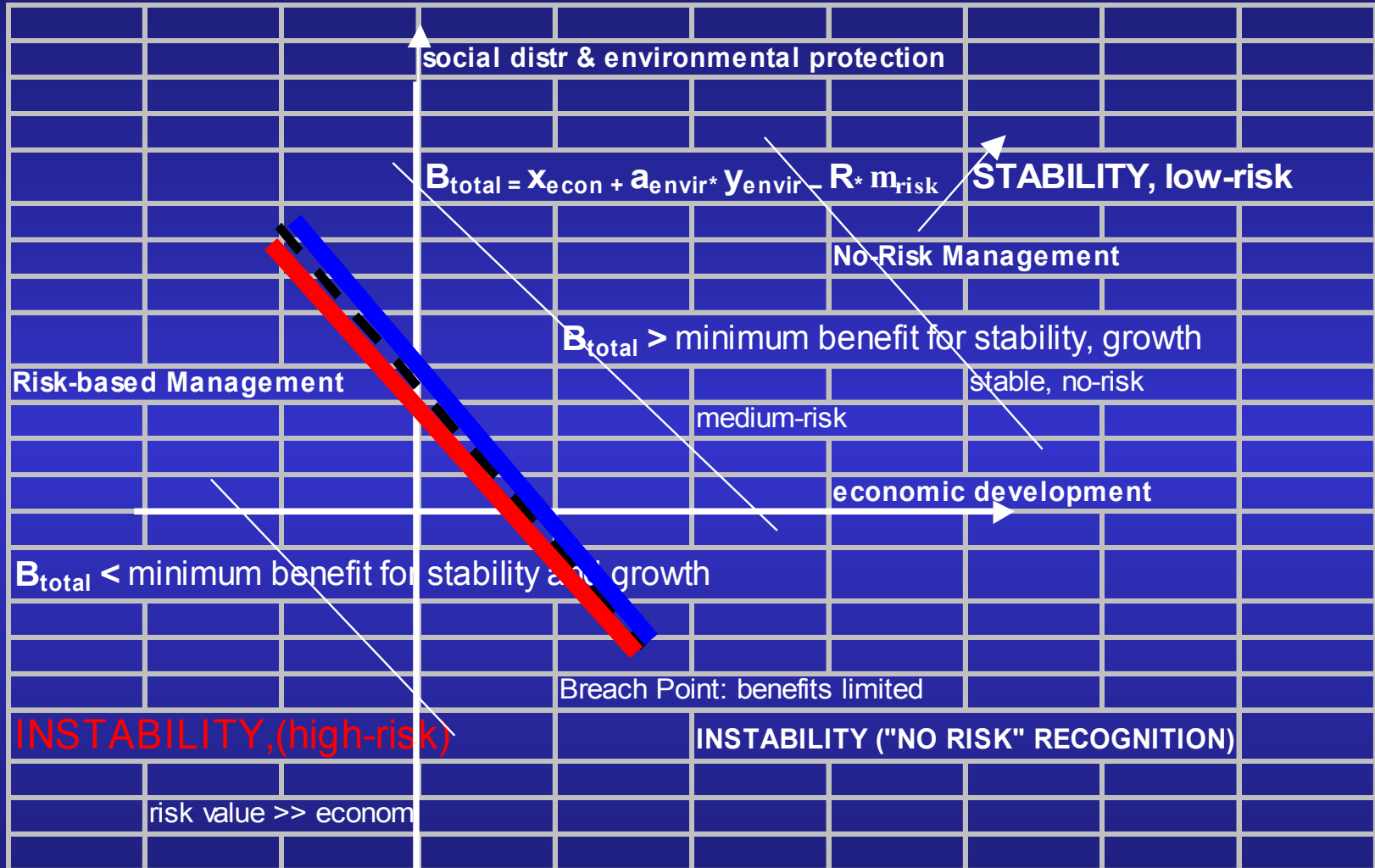
Economic valuation for subsidiarity and user based common property governance of transboundary waters.

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Marginal benefits/supplied quantity for different water uses, A and B. (Tietenberg, 1996)



No-Risk and Risk-Based Management

WATER MANAGEMENT OPTIONS, versus actual practice

MARKET-BASED WATER ALLOCATION (uni-sub-sectoral supply investment projects)

MARGINAL COST WATER PRICING (water is subsidized, without use restrictions)

IWRM: BASIN- SURFACE & GROUNDWATER - QUANTITY & QUALITY - , SOCIO-ECONOMIC INTEGRATION OF NATIONAL AND REGIONAL USE SECTORS (water supply, agriculture, environment & dilution (generally planned; less often implemented)

RISK-BASED MANAGEMENT; VULNERABILITY & UNCERTAINTY (“no-risk”, “no uncertainty”, “better safe than sorry” remains as general practice)

ETHICS & SOLIDARITY (common property, community level)

OUTCOMES: GLOBAL DEREGULATION, OVER-CENTRALISATION OF SUPPLY, IGNORING CONSERVATION, COMMUNITY INITIATIVES

Challenges in TRANSBOUNDARY WATER MANAGEMENT

Policy (water, land use) and hydrological (e.g drought, climate variability) uncertainty not addressed in mechanisms and treaties, left to incremental processes at increased social costs.

Groundwater supply option with limited distribution costs:

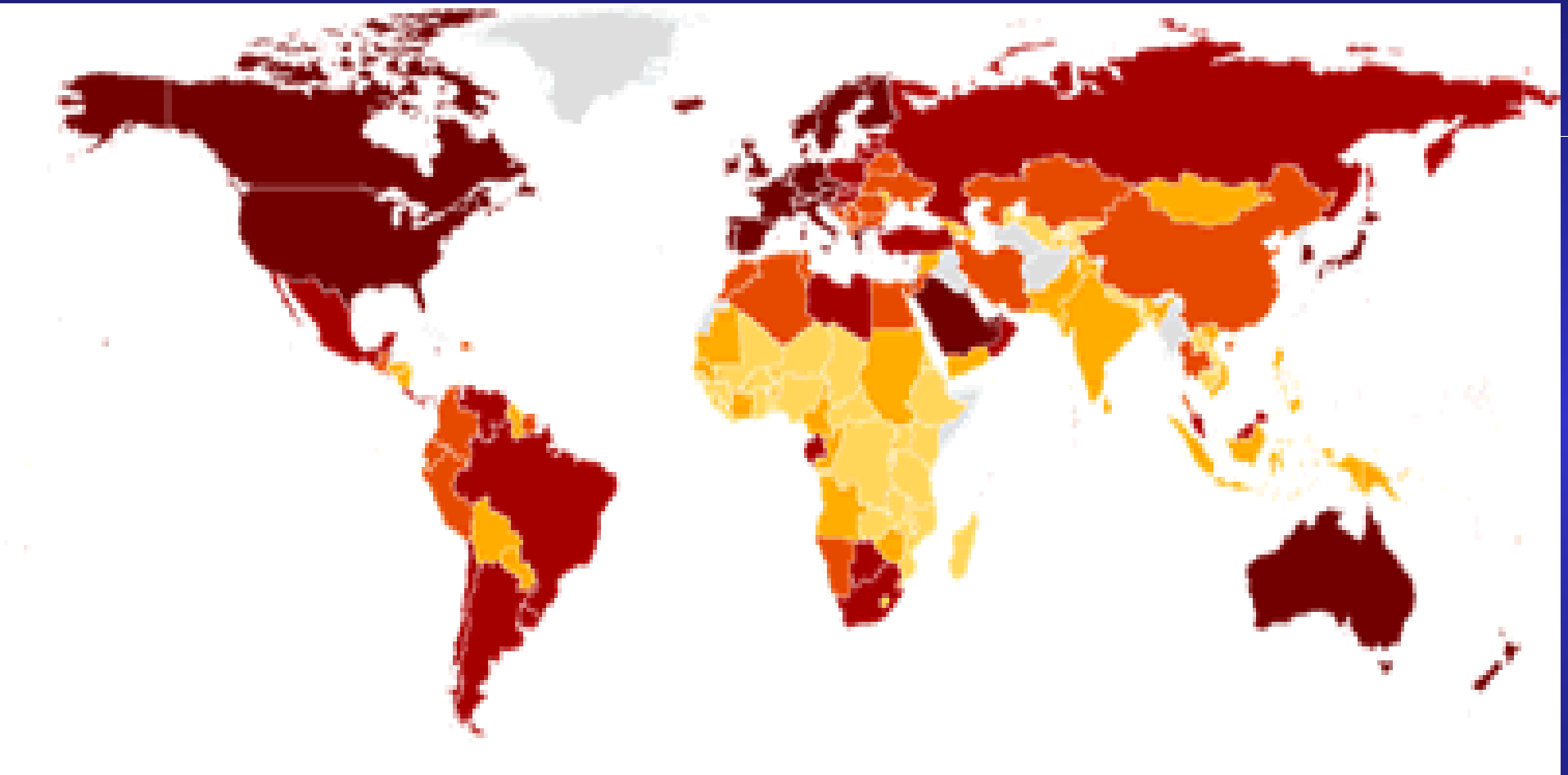
Mobilizing TB aquifer WRs for sustainable development for social welfare, growth and equity?

30-35 known Large TB Aquifer WRs in the world, with

Flow resources: 14 000 km³/yr; Stock resources: 24 000 000 km³

Covering a total area

28 million km², about 19% of total Earth's land surface₅



Poverty map

GNI per capita
(Current US\$)



Less than \$530

\$530 - 1,250

\$1,250 - 3,000

Source: World Bank 2004

TRANSBOUNDARY WATER MANAGEMENT

ALTERNATIVES FOR THE FUTURE

Mobilize water users and community based institutions at regional – basin level

1. Mobilization for income, growth and job opportunities of the water users to:

Resource and Environmental water costs

1.2. Assessment of marginal resource and environmental water costs at users' and State level

1.3. Marginal water pricing, recovery of marginal water costs at users' and State level

Resource and environmental water costs

NATURAL RESOURCE COSTS: opportunity costs from depleting /degrading /polluting and other inefficient allocation: difference in (1) economic value, and (2) social value (welfare, distribution, employment) as net marginal benefits of present use and “best alternative” water use within transboundary system/basin.

ENVIRONMENTAL COSTS: damage costs on the environment of a water use (e.g. water abstraction/polluting emissions), in economic use^{*)} value, burdening other users of the environment within the transboundary system/basin.

COST-EFFECTIVENESS based on cost and benefits in economic values

Subsidiarity, a commonly used socio-economic necessity and opportunity

Opportunities, alternative approaches to support local development of rural/urban welfare and security in TB basins.

Reduced transaction costs in the allocation of TB water resources

From private to public to Government versus community- based institutions and local common property based governance.

Community based management co-exist with established state institutions for management of the common trust property.

INSTITUTIONAL DIMENSION

Legitimate institutions: Public regulation balanced with common property based governance.

Sovereignty; (1) liberal economies e.g. international water sales; (2) centralised economies with e.g. limited international consents/concessions; balanced ownership and common property approaches: to share water reasonably for subsistence (water supply/sanitation, subsistence, non-commercial irrigation and drainage within TB basins.

Water services/equity; rational pricing for inclusiveness, full region coverage. Subsidies, soft long credits for reduced capital investment costs.....

Common trust property approach to initiate TBWM

Differentiate common property in public trust from public property, in water rights administration for urgent local issues: (a) TB basin border subsistence uses for limited social purposes; (b) TB environmental protection (e.g. water pollution- hot spots:

Agreed restrictions on disposal, use and change in use (e.g. restricted efficiency arrangements, no privatisation, nor speculation....) of common trust resources.

2. Enable and mobilize country cross-border cooperation on TB water based on common property in trust: no reduction in state sovereignty; no taking for public purpose and therefore no compensation issues

Relaxed standards, (e.g. wastewater reuse)

Local Management and Development of TB (Basin) Water Resources

A. Local: TB water allocation – to common property in trust governed resources for social development sectors, drinking water, irrigation water to small farmers ...

B. Local financial independence for sustainable TBWM investments

Cooperation Community Funds for Sustainable Shared Water Use supporting

6. Productivity growth, distribution, income, and job opportunities, agricultural production, in marginal and poverty communities,

2. Addressing local/domestic hot spots - quantity and quality

Local TB Water Management for development & sustainable social and economic development :

Growth, Productivity

Distribution, job opportunities,

Rural, Semi-urban Agriculture Rural poverty

Transboundary Common Property (Natural and Financial Resources in Public (country) Trust and Sustainable

Synthesis: suggestions for 'Thessaloniki Declaration'

Direct TBWM to sustainable socio-economic development for growth, welfare and job opportunities for poverty alleviation and environmental protection at community level

Introduce, integrate economic TBWM based on economic valuation

Explore alternative decentralised institutional approaches including common trust resource -based governance in TBWM

Adapt to emerging situations of financial constraints, changing opportunities and reduced funding in TB water management

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THANK YOU