ERD 2012

Confronting scarcity:

Managing water, energy and land for inclusive and sustainable growth

Global Water Security, 22 May 2012, Glasgow

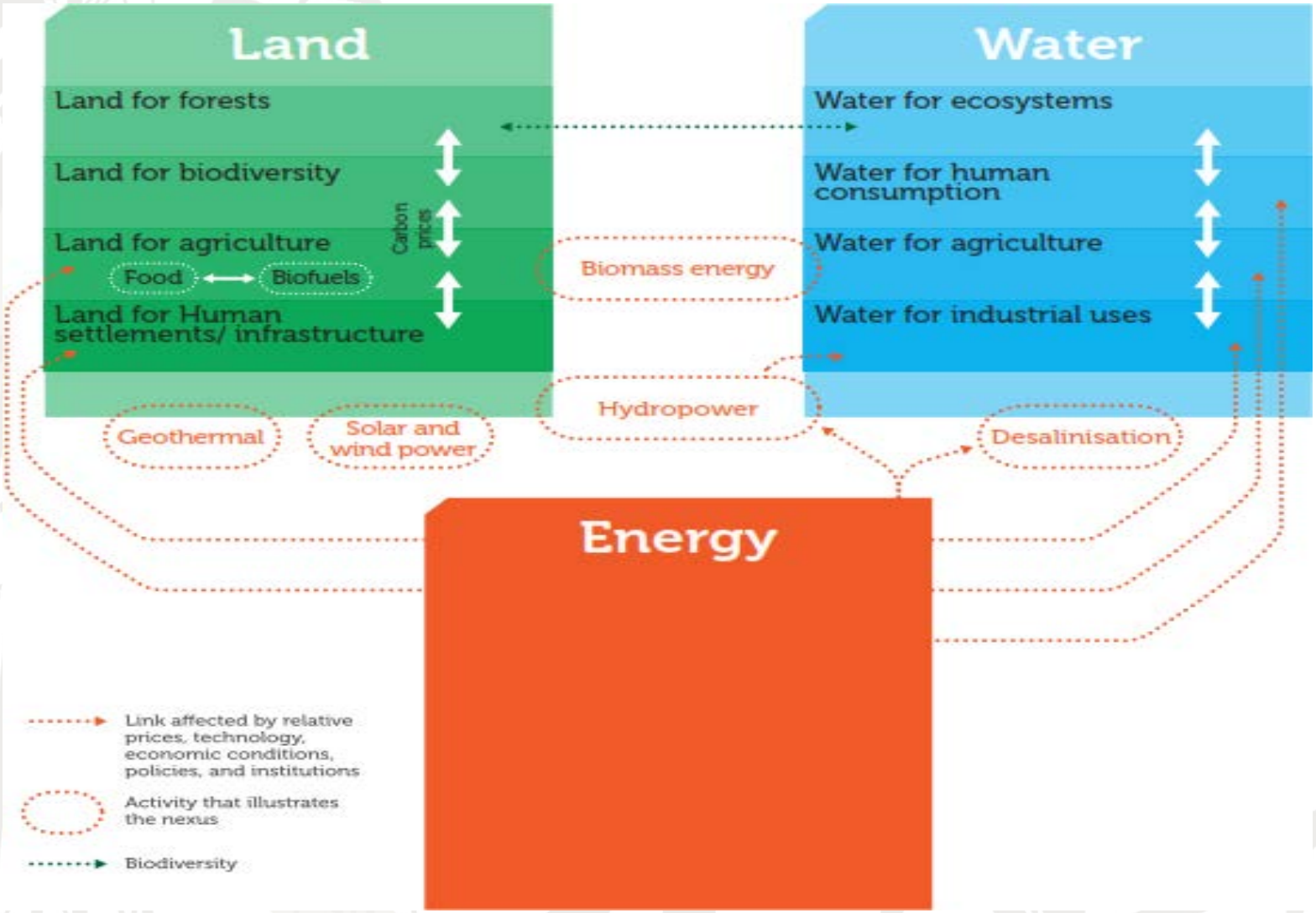
MOBILISING EUROPEAN RESEARCH FOR DEVELOPMENT POLICIES

EUROPEAN REPORT ON DEVELOPMENT

ERD 2012 in a nutshell

- Access to water, energy and land is crucial for human development, but global and interrelated **environmental pressures** are undermining the development prospects of the poorest countries and people.
- All countries urgently need to **recognise and address in an integrated manner** the rapidly growing scarcity and increased pressures on water, energy and land (WEL). This involves a *WEL nexus* approach to policy-making and management.
- Requires **joint action** by a variety of actors (governments, business, and international actors such as the EU) to promote inclusive and sustainable growth (ISG) around a four-pillar response.

Water-energy-land (WEL) nexus



The policy responses: DSER framework

Manage **Demand** to reflect scarcity (e.g. change food and packaging wastage)

Expand quality and quantity of **Supply** (renewable energy, soils, water storage)

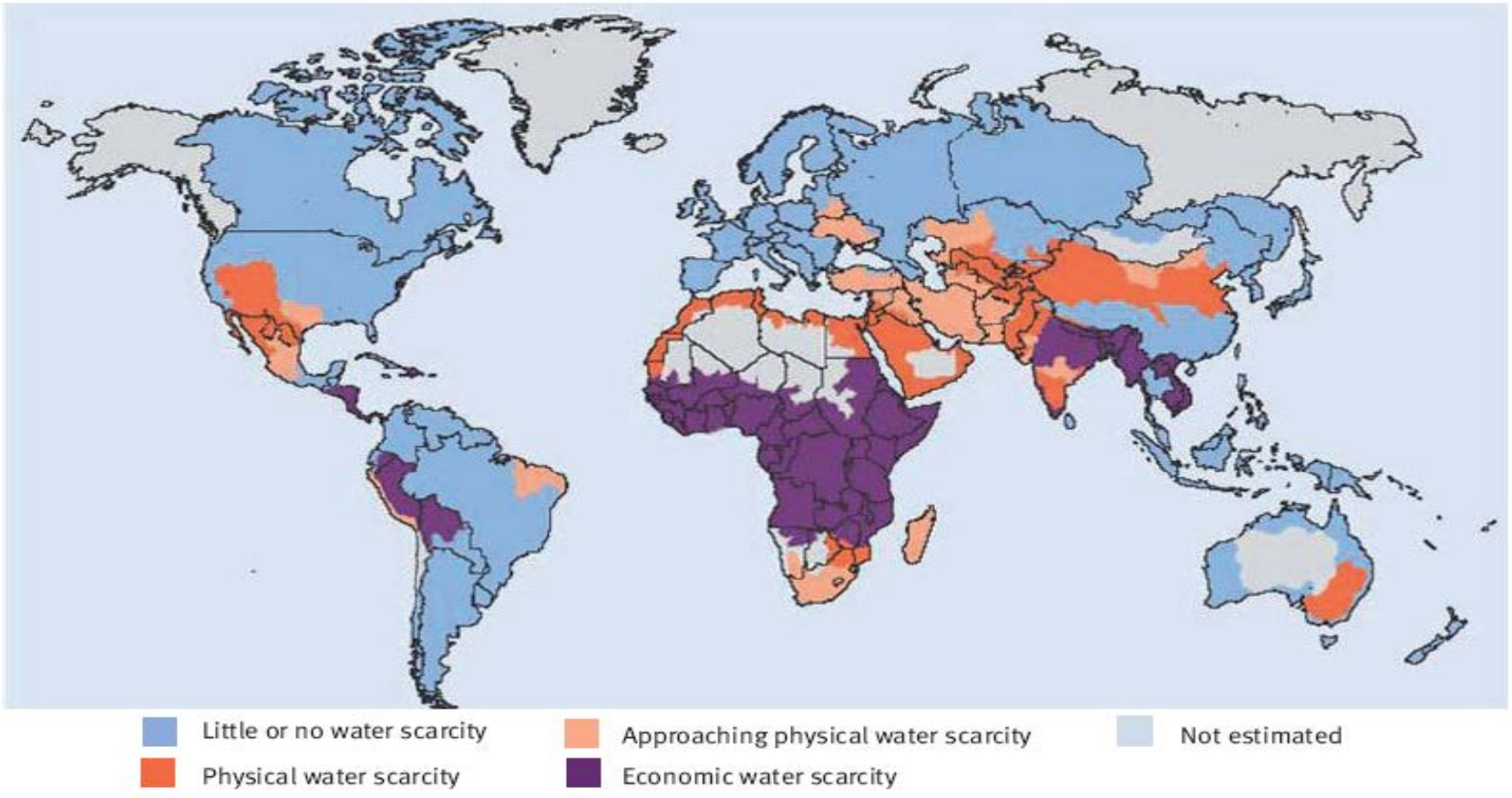
Challenges for public and private actors and international community

Promote use **Efficiencies** (Productive, allocative, WEL / nexus-wide)

Improve **Resilience** to shocks and protect **poorest**)

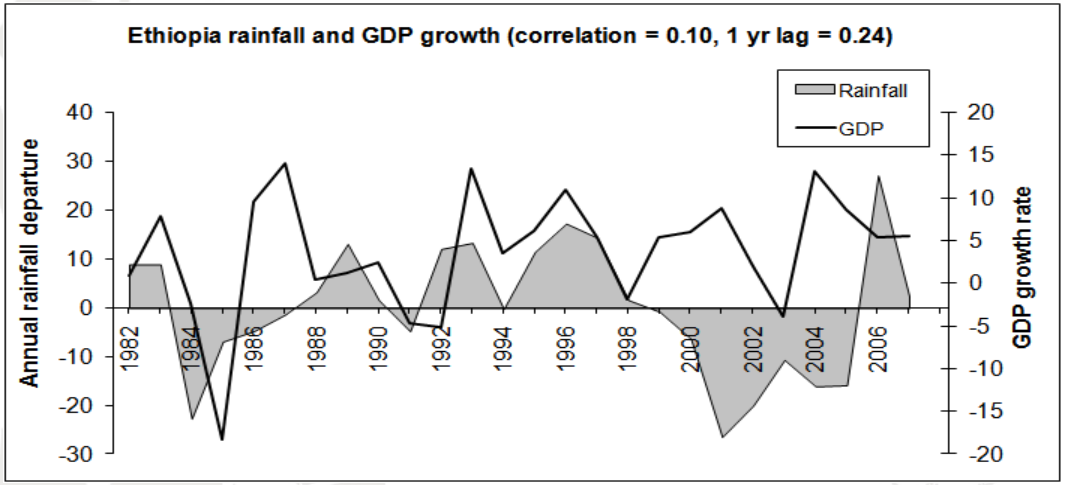
ERD perspectives on water scarcity

Physical scarcity: more than 75% of river flows are allocated to agriculture, industry or domestic consumption. Economic scarcity: water resources are abundant relative to human purposes but human, institutional and financial capital limit access to sufficient water and malnutrition in these areas.



Source: Molden 2007

Example 1: economic water scarcity

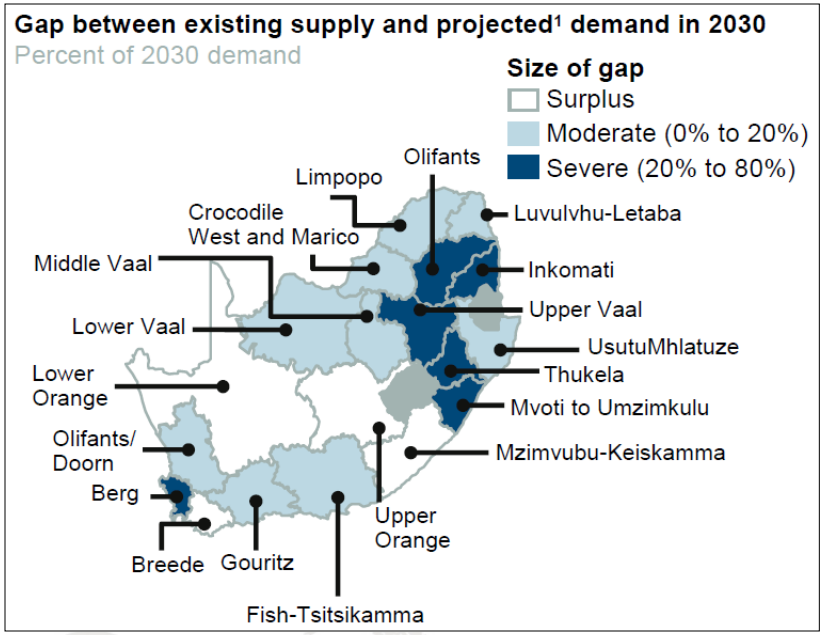


Conway and Schipper 2011

E.g. Water storage in Ethiopia

- 1500 m^3/p/y, but rainfall variable and limited infrastructure
- Economy “hostage to hydrology” (Grey & Sadoff 2007)
- Public sector investment programs in multi-purpose dams
- Store water, provide water and energy access, stop deforestation
- WEL issue, synergies and trade-offs in terms of ISG to be expected

Example 2: physical water scarcity



Source: 2030 Water Research Group 2009. Charting our water future

E.g. South Africa

- 1000 m³/p/y, complex infrastructure
- 1998 law: right to water and environmental reserve, allows trading, catchment agencies
- Implementation challenges – political economy and logistics
- Water-Land nexus; participatory public sector attempt to manage ISG, but trade-offs persist!

IWRM – a ready made nexus approach?

"a process which promotes the co-ordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems"

Global Water Partnership, 2002

ERD – key messages on water

- Managing water is not only about physical but also economic water scarcity and insecurity
- Economic water scarcity (LICs): manage access and variability
- Physical water scarcity (MICs): manage allocation and demand
- Water key for ISG, involves synergies and trade-offs
- Water often closely connected to land and energy
- Shifts in responsibilities, but public sector remains key
- IWRM in line with ISG and WEL, intensify cross-sectoral aspect

Thank you

For more information on ERD 2012 (incl. 23 background papers):

www.erd-report.eu

www.odi.org.uk

www.die-gdi.de

www.ecdpm.org

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Roles of the public sector

- **Co-ordination and facilitation** (governance involving various stakeholders, in various sectors / levels: e.g. land in Sub-Saharan African, South African National Planning Committee and water)

- **Regulation and incentive framework** (legal, regulatory, implementation capacity, e.g. for investment in land or renewable energy; appropriate pricing using PES and abolishing natural resource wasting subsidies)

- **Public expenditure** (public goods such as innovation systems; infrastructure, benefit sharing, shock facilities)

Roles of the private sector

- Private sector invests increasingly in **resource supply**: water, renewable energy and land
  - Opportunities / innovation for triple wins : e.g. solar power for the poor
- On the **resource use** side, private sector has begun to focus on sustainability:
  - Drivers for **sustainable business models** include cost-efficiency, securing access to good quality inputs, license to operate, and market access;
  - **Different experiences** amongst companies, some taking an ecosystem approach (e.g. Coca Cola stewardship, flower companies and PES in Lake Naivasha, Unilever and sustainable agriculture; Levis and cotton farmers, Cargill and ecosystems approach);
- Innovative **partnerships** with business for sustainable resource use
  - To challenge companies to do more, and foster learning amongst them

Roles across the EU (PCD)

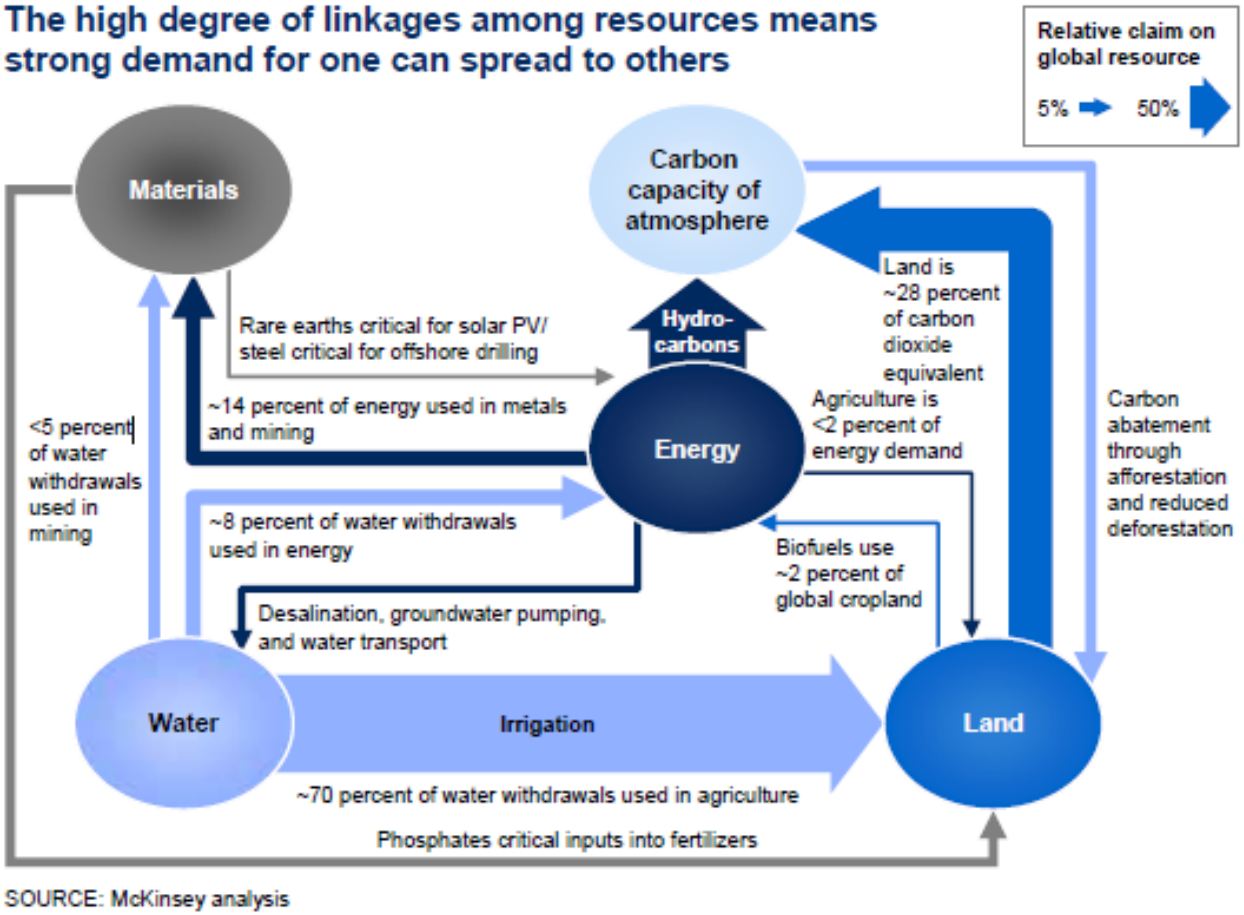
(EU institutions and Member States)

- EU **internal policies** (Sustainable consumption and supply; Resource Efficient Europe, reforming CAP, reassessing biofuel policies)
- EU **external policies** such as trade and investment policies (e.g. partnerships to promote responsible investment in water, renewable energy and land)
- EU **development co-operation** (e.g. influence implementation of EU Agenda for Change; renewable energy partnerships using blending; improve transparency around land deals; WEL nexus diagnostic and policy initiative, challenging business to promote an ecosystems approach)
- EU's role in shaping **global governance** (enhanced UNEP, SDC and SDGs, ambitious positions on climate change and of course Rio+20)

Action is particularly needed to

- Reduce the environmental footprint of consumption
- Promote innovation
- Establish or reform institutions
- Develop inclusive land policy
- Price natural resources and services comprehensively and appropriately, whilst safeguarding the welfare of the poorest

Increased interconnections



Source: Mckinsey Global Institute and Mckinsey Sustainability and Resource Productivity Practice (2011) *Resource Revolution: Meeting the world's energy, materials, food and water needs*

ERD WEL Case study: Lake Naivasha

Source: Google Maps