

Addressing the Energy-Water Nexus through R&D Planning and Policies

Experts Group on R&D Priority Setting and Evaluation (EGRD)

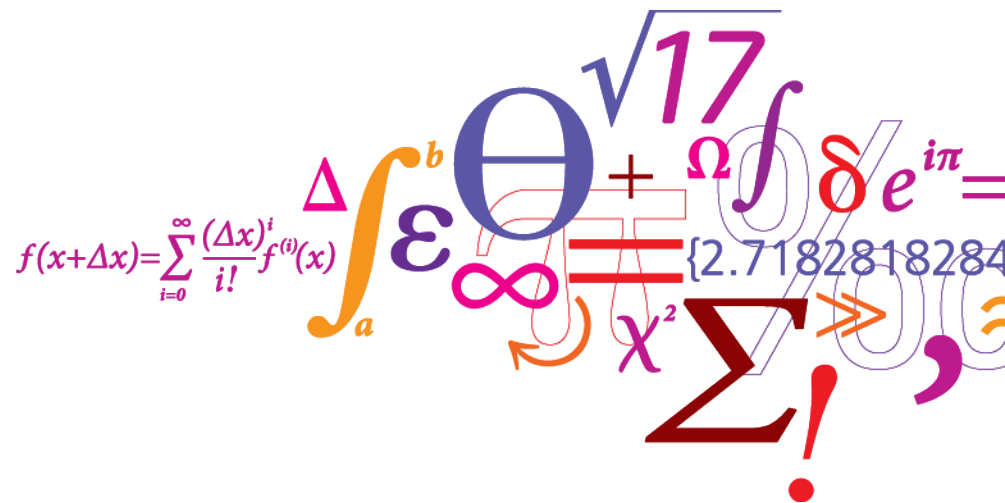
28-29 May 2018

Hosted by the EU Commission DG Joint Research Centre

Brussels

Dr. Birte Holst Jørgensen

Acting chair of EGRD



EGRD an informal advisory body


- Since 1993, the EGRD examines analytical approaches to energy technologies, policies, and R&D, more specifically promotes dialogue and information exchange on methodologies and approaches related to:
 - Energy technology assessment
 - Energy R&D priority-setting
 - Assessing benefits from R&D activities
- The results and recommendations support the Committee on Energy Research and Technology (CERT), feed into IEA analysis, and enable a broad perspective of energy technology issues.



Semi annual expert workshops


IEA Committee on Energy Research and Technology
EXPERTS' GROUP ON R&D PRIORITY-SETTING AND EVALUATION

Towards a Consumer-Driven Energy System
Understanding Human Behaviour




Workshop Summary

12-13 October 2017
Hosted by the Technical University of Denmark
Lyngby, Denmark



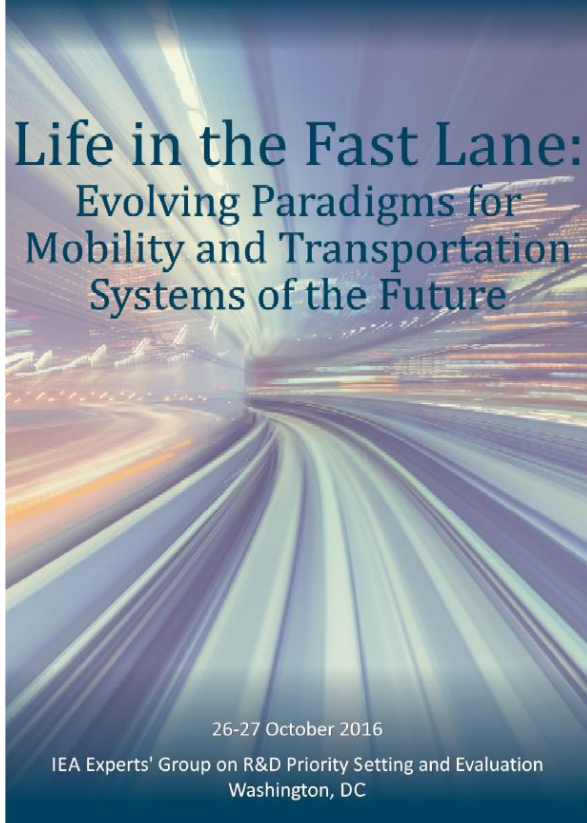
Experts' Group on R&D Priority Setting and Evaluation

Blue Sky Research for Energy Technology
— Workshop Summary Report —



14–15 June 2017
IEA Experts' Group on R&D Priority Setting and Evaluation
Birmingham, United Kingdom

Life in the Fast Lane:
Evolving Paradigms for
Mobility and Transportation
Systems of the Future



26-27 October 2016
IEA Experts' Group on R&D Priority Setting and Evaluation
Washington, DC

Summary reports available at:

<http://www.iea.org/about/structure/cert/egr/>

<http://www.ieadsm.org/egr/>

Defining the Nexus

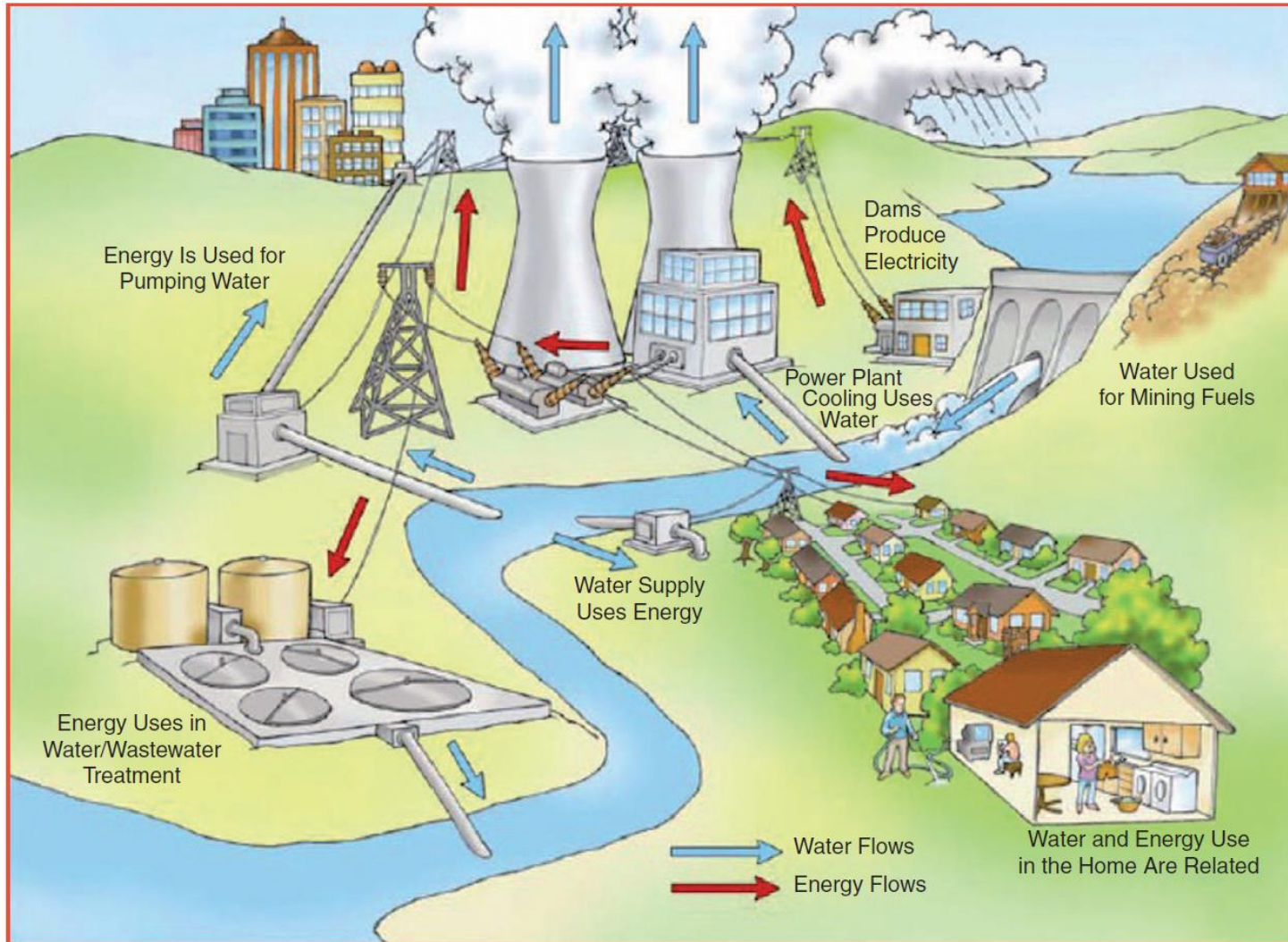


"A set of interactions, comprising important drivers for the use of resources.

Natural resources serve as direct input in the production processes of another resource or they can substitute the use of another resource.

Indirect effects related to the specific use of resources also have to be taken into account because claims for a particular use of one resource can compete with other demands".

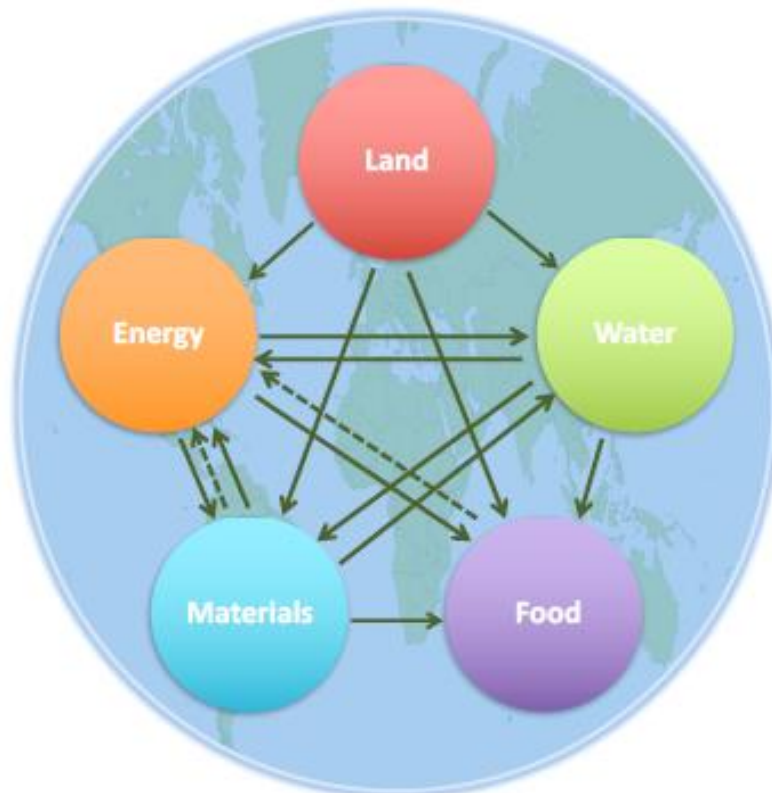
See Bleischweitz, B. and Miedzinski, M., "The Resource Nexus and the Resource Efficiency: What a Nexus Perspective Adds to the Story", in Lehmann, H. (ed.) Factor X: Challenges, Implementation Strategies and Examples for a Sustainable Use of Natural Resources. Springer Verlag (2018).



Source: NREL

Nexus complexities not addressed

The Resource Nexus



→ Input (Major or Minor Provision of A needed to produce a service from B)
 -> Substitution (A may substitute B for a certain service)

Questions to frame the energy-water nexus discussion

- *What are the vulnerabilities, stress points and synergies between energy and water?*
- *What are the trade-offs, and how are they managed?*
- *How can we help developing countries leapfrog in terms of technologies?*
- *Are there innovations which improve the efficiencies of energy, water and the energy-water nexus?*
- *What is needed to improve R&D planning and policies to address the energy-water nexus?*
- *How does the energy-water nexus affect governance, markets and regulations, and achieving the SDGs?*

Workshop agenda

Day 1

- Session 2: Setting the scene
- Session 3: Water for energy

Day 2

- Session 4: Energy for water
- Session 5: Integrated approaches
- Session 6: Governance, markets and regulation and the SDGs
- Session 7: Summary and conclusions