Nuclear Renaissance: Technology, Society and Sustainable Development.
(University of Basel, Sustainability Research Group, Rony Emmenegger & Paul Burger)

Content:

The global environmental, energy and climate crisis raises questions about the role of nuclear energy in a transition towards a low-carbon future. Advocates of nuclear energy and a "nuclear renaissance" (Bratt, 2012: 52; Nuttall 2005) have argued that "Nuclear power is not the solution, but [that] there is no solution without nuclear power" (OECD 2002: 51; see also Nuttall 2005; Mez 2012). Key arguments pushed forward in favor of a nuclear renaissance are the technology's performance in terms of low-carbon emissions and energy security (e.g. Vaillancourt et al. 2008; Bauer et al. 2012). Along these lines, nuclear power has been framed as a "green" or "sustainable" technology to be favored as a potential alternative to other energy sources (Bickerstaff et al. 2008; Doyle 2011 cit. in: van de Graaff 2016: 5). But on what grounds can nuclear power be considered a 'sustainable' source of energy?
Sustainability assessments have proven instrumental for assessing technologies systematically, providing a basis for decision making among available options – including nuclear technology. On their basis, decisions about a technology choice can then be made, what requires to juxtapose pro and cons, and to deal with trade-offs. Beyond a narrow focus on the question *whether* or *not* nuclear power is a 'sustainable' energy source relative to alternatives, the debate has circulated essentially about the very meaning of sustainability. On the one hand, one may object that thinking in terms of an "un/sustainability" assessment would be more accurate to acknowledge the inevitable trade-offs between different energy technologies and value-based judgements technological choices eventually require. On the other hand, one may question the narrow understanding of the notion of sustainability within techno-economic framings that dominate classical sustainability assessments of nuclear technology in favor of more comprehensive approaches (Verbruggen et al. 2014).
In this workshop, we aim at inspiring a reflection about the implications of nuclear power for sustainable development more broadly. We suggest to take seriously Grunwald's (2007) intervention that technology is not per se sustainable or unsustainable, but has to be evaluated in the context of "societal processes, structures, values and customs" (Grunwald 2007: 250). It asks for an analytical shift away from only assessing nuclear power within energy systems towards a societal or socio-political perspective evaluating nuclear technology in light of sustainable development. Of interest in the workshop are themes related to nuclear technology such as (but not limited to) the following:

- Socio-political structures and power
- Nuclear narratives and imaginaries
- Public discourses and resistance
- Patterns of inequality and risk distribution
- Governance, politics and policies
- Ethics, democracy and deliberation
- Future visions and desirable futures
- Etc.

Contributions to the workshop work towards, in one way or another, a descriptive and normative basis for a critical and evaluative diagnosis of nuclear technology's societal embeddedness and

consequences – a diagnosis which we pose at the heart of a sustainable perspective. Such a perspective does not replace techno-economic approaches or technology assessments, but complements them. It thus inspires decision-making and technology choice not so much by providing knowledge about the *feasibility* or *efficiency* of nuclear technology for a sustainable energy transition, but rather by initiating a debate about what is *desirable* – and sustainable.

Program

	Opening
8.30 - 8.45am	Welcome and introduction Rony Emmenegger & Paul Burger (Sustainability Research Group, University of Basel)
	Keynotes
8.45-9.30am	Armin Grunwald (Professor of Philosophy of Technology at the Institute of Philosophy, KIT): *Nuclear Technology: Problem or Solution to Sustainable Development?*
9.30-10.15am	Behnam Taebi (Professor of Energy & Climate Ethics, TU Delf): "*The Futures of Nuclear Energy and Normative Uncertainties*".
10.30-11.30am	**Paper session I** Markku Lehtonen (Pompeu Fabra University): *Constructing Sustainability Promises upon Contested Nuclear-Sector Histories: From Modernist Megaprojects to Presentist Small Modular Reactors*? Rony Emmenegger (University of Basel): *Nuclear Renaissance as a Real-World Experiment and its Pitfalls for Sustainable Development.*
1-2pm	**Paper session II** Andy Stirling & Phil Johnstone (University of Sussex): *Neglected Military Drivers of Official Support for Civil Nuclear Power? Multi-method Social Sience with Potentially Significant Global Implications.* Séverine Huwyler (University of Basel): *Envisioning Futures: Nuclear Controversies about Sustainability and Risks in the Swiss Energy Transition.*
2.10pm-3.10pm	**Paper session III** Florian Abraham (University of Exeter): *Materialising Energy Futures Through the Lens of Kvanefjeld.* Alicia Gutting & Per Högselius (KTH Royal Institute of Technology): *Atomic Rivers: The (Un)Sustainability of Nuclear Energy from a Water Perspective.*
3.30pm-4.30pm	**Plenary discussion**
4.30-5pm	**Synthesis by discussants** Miranda Schreurs (Technical University of Munich) Etc.
6.30pm	**Workshop dinner** Restaurant Zum Tell, Spalenvorstadt 38, Basel.

Please *register for participation* by mail to rony.emmenegger@unibas.ch *before December 12*, 2022. The workshop will take place in a hybrid format at the University of Basel, Seminarraum U1.193 im Biozentrum, Spitalstrasse 41, 4056 Basel – or on Zoom.

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