**////Title: Understanding Trust, Mistrust, and Distrust in the Nuclear Sector**

**////Standfirst:**

Is more trust always better? It is widely known that trust and confidenceare fundamental in high-risk industries, such as nuclear energy and radioactive waste management. While public trust is definitely essential for policymaking, the upsides of mistrust and distrust are often overlooked by practitioners and social science researchers. This was recently examined in a special issue of the *Journal of Risk Research*, where a series of articles highlighted the ways in which mistrust and distrust can play a constructive role in the nuclear sector.

**////Main text:**

Trust is crucial for ensuring the success of public policies. This is especially true in the fields of nuclear energy and radioactive waste management, where expertise remains highly concentrated in the hands of small and closed groups of expert insiders. While efforts at building trust are ingrained in public policy practice, the disadvantages of excessive trust and the advantages of mistrust and distrust are often underestimated.

A recent special issue of the *Journal of Risk Research,* guest-edited by Markku Lehtonen [mark-oo lay-tuh-nen], Ana Prades [anna prah-duhs], Josep Espluga [yoh-sep esp-loo-gah], and Stathis Arapostathis [stath-iss ah-rah-poh-stath-iss], explored the contributory roles of mistrust and distrust in public policy and decision-making within the nuclear energy sector. One of the key contributions of this issue is questioning the generally accepted idea that more trust is always better.

Dr Markku Lehtonen, an energy policy and sustainability researcher at Pompeu Fabra University in Spain, was the lead guest editor of the special issue. In his contributions to the issue with his colleagues from a range of European countries, he elaborates and applies a conceptual framework for understanding when and how mistrust and distrust can play a constructive role.

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*Trust* can be broadly defined as a situation where an individual chooses to believe something or someone, without having full knowledge that the belief is justified.

*Distrust*, by contrast, denotes the absence of trust, and the desire to challenge, reject, and resist. In between the two, we find *mistrust,* which springs from doubt or fear, and leads a person to adopt a prudent wait-and-see approach, and to seek further information to decide whether to trust or not. Most policy practice and scholarship treat mistrust and distrust synonymously, but this special issue separates the two from each other.

The definitions of trust, mistrust, and distrust differ by discipline and individual scholars. The aim of the special issue was not to settle the debate, but to provide an organising framework for the articles in the issue.

In their contributions, Dr Lehtonen and his colleagues distinguish between different types of trust, mistrust, and distrust, and how these dimensions interact with each other.

The first type of trust, mistrust, and distrust is *interpersonal,* that is, between individuals. The second kind concerns citizens’ attitudes and behaviour towards *public and private institutions.* In the nuclear sector, this institutional dimension involves trust, mistrust, and distrust in relation to nuclear safety authorities, the government, and nuclear operators, for example. Lastly, the ideological dimension relates to views concerning abstract entities and their role in society, such as the state, markets, technology, and democracy.

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Many of the benefits of trust seem self-evident. Without at least a basic level of trust, human interaction and life in society would be costly and difficult, if not impossible. However, there can be such a thing as *overtrust*. A naively trusting individual can, for example, be an easy target for exploitation or take excessive risks.

Mistrust, on the other hand, can help to anticipate the future, deal with complexity and uncertainty, and facilitate cooperation in situations where there is an imbalance of power. Dr Lehtonen and his colleagues’ explorations into trust, mistrust, and distrust in the nuclear energy sector started from the observation that a ‘healthy suspicion’ towards the powers that be constitutes the foundation of liberal democracies. The authors describe this type of mistrust as a form of ‘civic vigilance’.

For example, mistrust towards the key nuclear-sector actors has led to the creation of citizen-led counter-expertise organisations. In countries such as France and Sweden, the state has supported such mistrustful vigilance, through stable funding and by giving counter-expertise organisations a formal role in the policy process.

The interplay between trust, mistrust, and distrust has its own paradoxes. For example, mistrust towards nuclear-sector players is the raison d’être of independent nuclear safety authorities. If citizens had full trust in the nuclear industry, such independent control authorities would not be needed. However, these very institutions – which can be seen as institutionalised forms of civic vigilance – can only operate successfully if citizens trust them.

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The special issue explored studies from across Europe. In doing so, the issue illustrates the complexity and interconnectedness of trust, mistrust, and distrust, especially in the operation of various types of civic vigilance.

Drawing on expert and stakeholder interviews as well as secondary material, Dr Lehtonen and his colleagues examined the role of the often-neglected ideological dimension of trust in shaping the emergence of civic vigilance in the form of counter-expertise, in the Finnish, French, German, and Spanish nuclear sectors.

The selected countries display great variation in their trust dynamics and nuclear policies. In Finland, for example, mistrustful counter-expertise has remained weak, largely because of the strong ideological trust in the state. In addition to the Finnish citizens’ solid ideological trust in state bureaucracy, and exceptionally strong institutional trust in the nuclear safety authority, the absence of significant nuclear incidents over the years has meant that citizens have felt little need for counter-expertise.

In Spain, civic vigilance has remained underdeveloped, but for a different reason. Fact-based argumentation based on diverse types of expertise has had little space to develop, in a context in which citizens hold deep mistrust towards state institutions, and politicians frequently use nuclear issues merely as an instrument in battles for political power.

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The articles in this special issue illustrate the challenges of balancing essential trust on one hand, and mistrustful vigilance on the other, in a technology sector where expertise and regulation are concentrated in the hands of a few.

One promising area of future research identified in the special issue is addressing the variations among different high-risk industries and technologies, each with their specific historical legacies, and how these variations help shape trust, mistrust, and distrust dynamics.

Furthermore, the articles in this special issue highlight the need to better understand when constructive mistrust turns into dysfunctional distrust. They also highlight the need to distinguish, in concrete policy situations, between vital trust and dangerous overtrust.

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A further research challenge arises from the current era of geopolitical and economic instability, and the expansion of nuclear energy primarily in authoritarian countries in Asia. It is vital to better understand the trust, mistrust, and distrust relations in authoritarian regimes, not least given the highly trans-national nature of the nuclear sector and its supply chains.

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This SciPod is a summary of the paper ‘Introduction to the special issue ‘Trust, mistrust, distrust, and trust-building in the nuclear sector: historical and comparative experience from Europe’, in *Journal of Risk Research*, 2022. <https://doi.org/10.1080/13669877.2022.2067892>

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