Action recommendations of the research project | IDEALE | September 2024

The advancing energy transition requires a broader approach to energy security

Before Russia's invasion in Ukraine in 2022, few were interested in the links between energy transition and security. Now, this topic has become a priority for Europe, seeking to quickly redefine and improve its energy security, while progressing on decarbonising its energy systems. The IDEALE project examined the interplay between energy and security policies before and after 2022 and provides recommendations on how to approach security in the energy transition context.

Recommended actions:

- Adopt a more comprehensive approach to energy security.
- Identify trade-offs and synergies between security, defence and energy transition policies and agree on common trajectories.
- Formalise policy coordination between energy and security to increase transparency of decision-making and bandwidth to address climate security risks and other energy security concerns.
- Increase learning on emerging geopolitical risks, and benefits and risks of renewable energy, based on latest scientific and stakeholder knowledge.
- Unlearn conventional thinking around hydrocarbon-based energy security.
- Anticipate and mitigate local security concerns related to energy transitions.
- Increase energy resilience, by promoting positive security, social justice and community empowerment.

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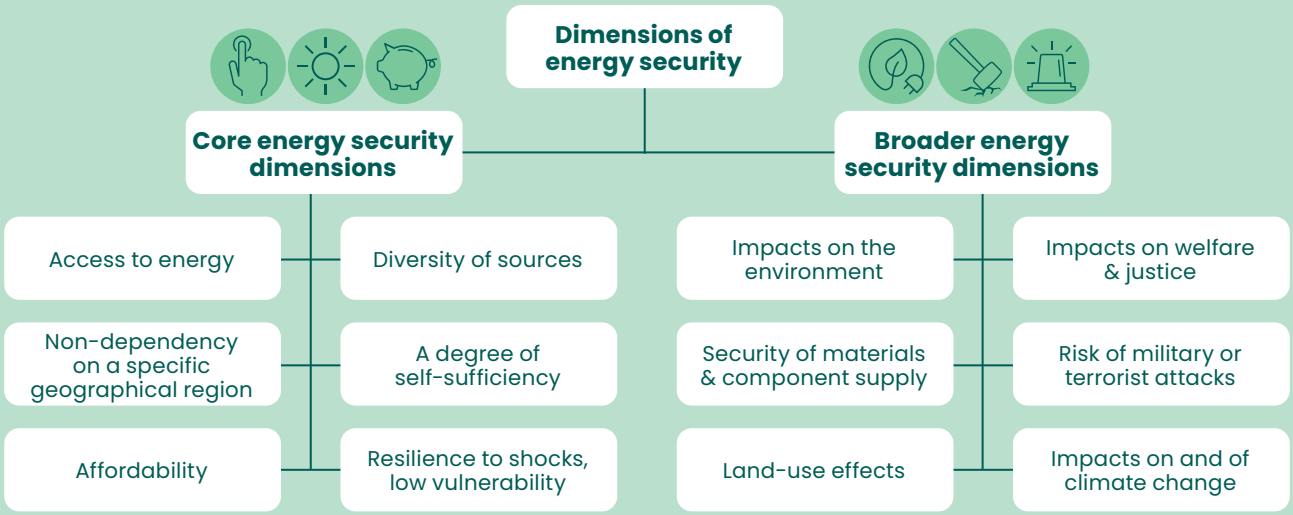
A broader take on energy security



The different dimensions of energy security need to be considered in policymaking at the interconnections between security and defence and energy transition. Source: Kivimaa, 2024.

1 Increase policy coherence between energy transition policy and security and defence policies by agreeing on common trajectories

The IDEALE project, conducted between 2019–2024, found incoherences between energy transition policy and security and defence policies in the four case countries (Estonia, Finland, Norway, Scotland/UK). It is often impossible for policies to be fully coherent. However, when different sectors have explicit interconnections, as between energy and security, these must be understood and the coherence between the two policy sectors improved.

Coherence means choosing specific development pathways over others. Thus, some traditional policies may need to be abandoned when energy transition progresses, e.g., stockpiling fossil fuels. In the defence sector, if electrifying the military fleet is not a realistic option for securing operational capability, electrification as an objective is not viable for this sector.

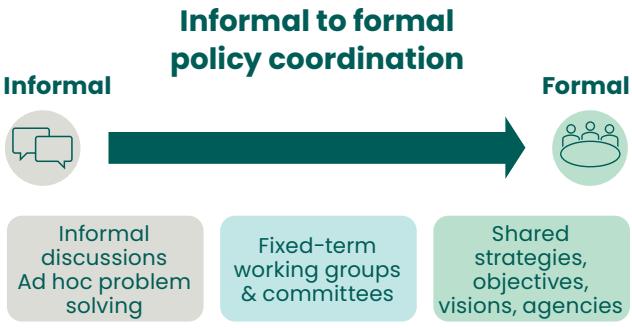
Potential trade-offs and synergies between different measures must be identified. Increased climate security concerns may also enable new synergies between the two sectors. Thus, by pursuing common trajectories, coherence between the policy domains can improve and the implementation of policies become more efficient.

2 Formalise coordination at the energy-security nexus

Incoherence between energy and security policies is partly explained by little formal administrative coordination before 2022, with largely informal mechanisms in place in the case countries. This informality reduced the transparency and accountability of policymaking.

The energy crisis increased discussion of energy security in the media and policymaking. It increased the political nature of energy policy, i.e., made it politicised.

Increased transparency and more formalised coordination between the policy sectors is likely to facilitate common development pathways between energy transition policy and security and defence policies.



Implementing mechanisms such as steering groups and shared strategies formalises coordination and strengthens coherence between energy and security.

3 Promote long-term decision-making

Increased public attention can lead to important decisions being made in short timeframes to appear popular in front of voters. The traditionally important role of fossil fuels in security and defence has been reinforced in some states by the events of 2022, hindering the shift to sustainable energy. Instead, over a longer period, energy transition can improve comprehensive security by reducing fossil fuel import dependence, decreasing the size of geopolitical risks, reducing the size of disruptions in more decentralised systems, and empowering communities and citizens as energy producers. Thus, ensuring decisions are based on medium-to-long term horizons will minimise incoherences and facilitate actions focused on the synergies between energy transition, security and defence.

4 Unlearn conventional thinking around hydrocarbon-based energy security

Negative security refers to the traditional state-based understanding of security against the appearance of threats. Concrete examples were found in all case countries. Estonia has relied on a maximising the production of domestic fossil energy for energy independence from Russia. Finland has secured emergency stockpiling of fuels. In the UK, the defence sector has safeguarded global fossil fuel trade routes. Since 2022, this state-based negative security may continue to be prioritised due to the increased awareness of the vulnerability of critical energy infrastructure to malicious attacks (e.g., those targeting the Nord Stream gas pipelines and the Baltic Connector gas pipeline).

Yet, the vulnerability of fossil fuel infrastructure against attacks shows how renewable energy and local energy solutions can improve energy security by being more distributed and hence less vulnerable. Conventional thinking of energy security needs unlearning and to be replaced with a new approach.

5 Anticipate and mitigate local security concerns

Zero-carbon objectives for energy policy can impact local livelihoods and may increase local tensions and conflicts.

In Estonia, oil shale production takes place in a region of high unemployment where the transition impacts livelihoods. Hence, the EU just transition mechanism supports new employment in the region. Yet, oil shale phaseout has caused concerns over Russia taking advantage of the social instability the phaseout may cause, because the region has a large Russian speaking population and is close to the country border.

In Finland, the phaseout of peat has also had some effects on local economies, despite many workers having reached or being close to the retirement age. Energy poverty is a key policy area in Scotland.

Energy transition may create unequal access to new technologies, e.g. solar panels, heat pumps or electric vehicles, as they are not typically available for low-income households or those living in rented accommodation.

Inequalities of the transition need to be noted and mitigated to reduce local and domestic security risks.

6 Increase resilience by promoting positive security, social justice and community empowerment

Positive security corresponds to a multi-actor perspective that emphasises individuals' and communities' feelings of empowerment, freedom from insecurity and emancipation. It is connected to more just and democratic energy systems and policymaking. E.g., renewable energy, when decentralised and owned by individuals or local communities, can contribute to positive security by enabling citizens and improving local energy resilience.

Positive security creation in the case countries included, e.g., Scotland's Just Transition Commission and the EU's Just Transition Mechanism. The Norwegian Sovereign Wealth Fund is an example of positive security associated with fossil fuels, and, hence, their phaseout is feared to reduce societal security.

Orienting policy towards just transitions, where citizen participation and energy democracy are more likely to align with positive security, is a potential solution to combat internal security risks arising from fossil fuel phase out and populist politics. In times of unrest, promoting positive security is important to deal with security threats caused by resistance to transitions.

7 Increase foresight on cross-border risks related to globally interconnected systems that can be disrupted intentionally or as a result of climate change

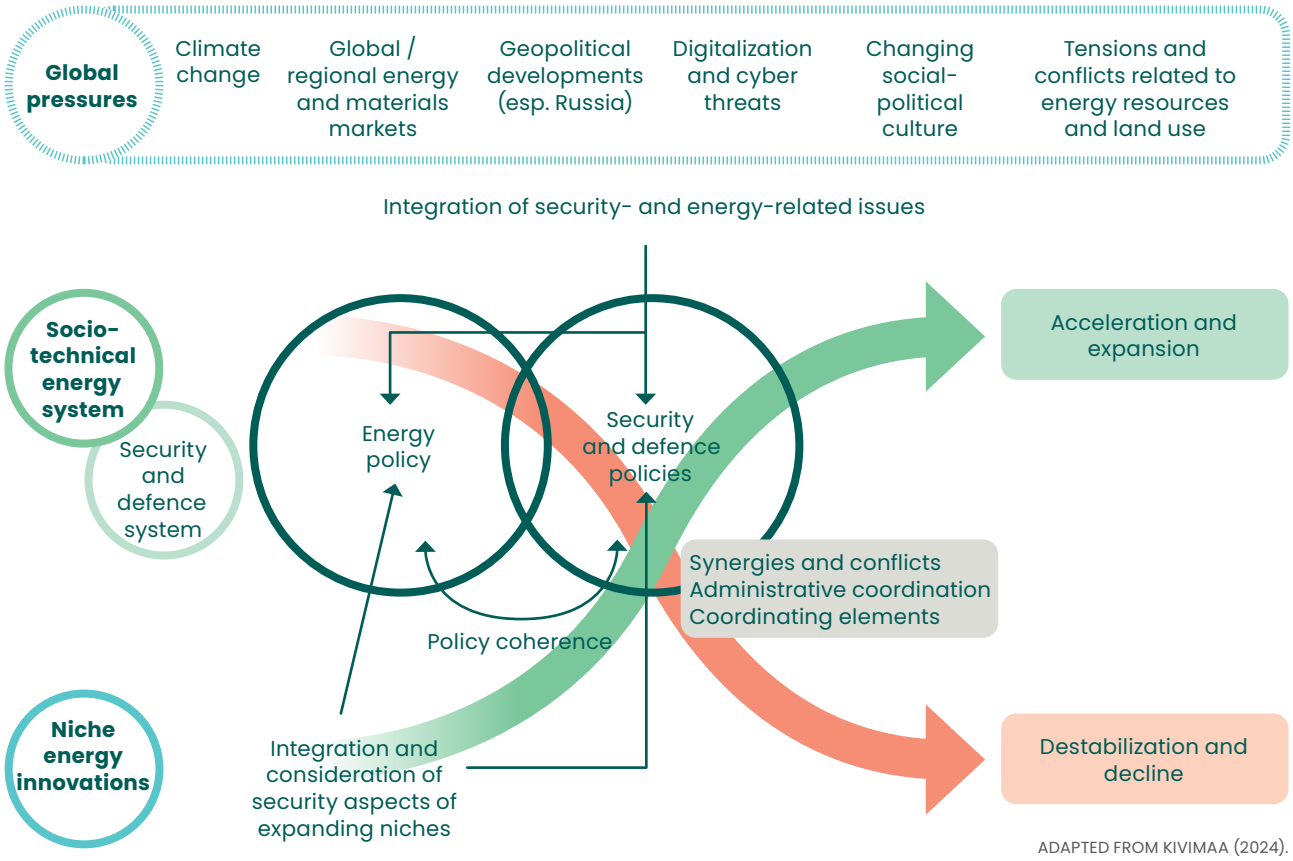
While energy transition brings potential for improved security of societies, it presents technical, social and institutional risks, which decisionmakers need to anticipate and address proactively. Assessments of both benefits and risks to the transition, largely not done in the case countries before 2022, should be more systematically conducted at the national level.

The potential risks of the energy transitions that need to be addressed include:

- Increased complexity and potential technical disruption to systems, which may be mitigated by technological innovation and improved cyber security. Switching to electricity grids and renewable systems may offer more resilience in comparison to fossil fuel systems.
- Potential reactions of large fossil fuel states, which require smart use of diplomacy, cooperation and social justice tools.
- Availability and price of critical raw materials and technical components; and new kind of network dependencies require thinking about potential supply countries. Sourcing from the Global South may decrease positive security locally (e.g. Sovacool 2019). Sourcing from the Global North may promote positive security by empowering local communities, with still risks related to 'resource colonialism' of the Sámi lands (e.g. Sörlin et al. 2022) or local environmental destruction.

Considering these risks and focusing also on lowering energy demand, optimisation of new technologies, and emergence of new types of renewables is important. Policies towards circularity, recovery of critical minerals and global social justice are essential.

Analysing the interconnections between energy transitions and security and defence policies



ADAPTED FROM KIVIMAA (2024).

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