

Science for Environment Policy

Knowledge alone is 'not enough' to prepare for future climate risks: the case of Swedish forestry

Understanding the social context of Swedish forestry is key to understanding how the sector could be persuaded to move beyond 'business-as-usual' practices, to prepare for future climate risks, argues a new study. Using an approach that provides insights for future behavioural change more widely, the researchers explore the influences on forest managers' behaviour, and highlight certification schemes as one important driver of actions which make forests better adapted to climate change. Knowledge on climate change risks and actions in itself is not enough to change behaviour, the study finds. For many environmentalists it may seem 'logical' for forestry to adapt now to future climate change: it epitomises an industry where actions taken today will determine long-term development, given that trees will not be harvested until 70–90 years after planting. However, the sector has taken limited actions to adapt, despite an abundance of available information on the impacts of climate change — such as storms, drought and changes in insect population.

This lack of action corresponds with the conclusions in the two latest reports from the IPCC (2014 and 2007) that knowledge alone is 'not enough' to drive adaptation. This new study explored which other drivers could be used to encourage Sweden's significant forestry sector to adopt more adaptation measures.

The researchers drew on the theories of French philosopher Michel Foucault to understand the social, political and economic systems which operate in Swedish forestry. Through these concepts they could identify how the current logic of the sector might be presenting barriers to innovation and which adaptation actions would be more readily accepted.

Foucault developed the concept of 'governmentality'. This describes the set of assumptions or rationales that shape a person's behaviour and what they see as the 'truth'. For instance, the prevailing governmentality in forest management leads to the belief that the sector should focus on planting monocultures rather than mixed forest.

Two types of tools can be used to influence governmentality:

- **'Technologies of agency'** are designed to empower people to manage their own risks, and examples may include education, forest fairs and media.
- **'Technologies of performance'** regulate actions by encouraging people to 'calculate' their behaviour according to prescribed standards. Such tools may include audits, budgets or performance indicators.

With these concepts in mind, the researchers interviewed the 15 main forest industry stakeholders in Sweden, including forestry companies and forest owners' organisations. They were questioned on forest management more broadly, as well as adaptation to climate change.

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These discussions revealed that technologies of performance are more influential than technologies of agency, thanks to the culture of Swedish forestry. Large forest companies and industry are very influential over private non-industry forest owners and external contractors are used regularly for their expertise. This has led to an unequal spread of information and skills.

An important technology of performance is certification for ecolabelling, which has been a major driver of change, enforcing social and environmental standards. For example, retaining patches of mixed forest with broad-leaf species, which evidence suggests makes forests more resilient to climate change, is not necessarily done out of environmental concern per se, but because it is required by certification standards.

Maximising timber production is the main focus under the so-called 'Swedish forestry model'. The role of forests in climate-change *mitigation*, therefore, sat more comfortably within the interviewees' governmentality than adaptation, which was not seen as important. They were happy to increase production on the grounds of climate-change benefits — for instance, the argument that increased growth locks away more CO₂. Climate change was in fact seen as a business opportunity, and a reason for continued 'business-as-usual'.

Given the culture of Swedish forestry, appropriate adaptation actions could include channeling advice and influence through forest owners, who direct measures to be undertaken in their forests. Including adaptation guidelines in certification, as a prevailing practice, could also have strong potential.

The interviews also suggested that the forestry sector would be more willing to accept the issues surrounding adaptation if they are not talked about as climate change adaptations, but as good forest management measures instead. For example, one interviewee commented that an education day would probably attract much more interest if it was called 'storm-adapted forestry' than if it was called 'climate change-adapted forestry'.

The researchers conclude that their study underlines the importance of understanding and working with, and not against, existing social structures to implement adaptation.

