



Science Says It Has The Answers And Solutions To Implement 2030 Agenda

TN Note: Technocracy is at the center of this article. That is, science has all the correct answers and should be the trusted source for analysis, problem identification and remedy.

ST&I can help implement the SDGs in more ways than many policymakers realise, says Måns Nilsson.

The 2030 Agenda and its centrepiece, the Sustainable Development Goals (SDGs), call for a transformation in how societies interact with the planet and each other. This transformation will need new technologies, new knowledge and new ways of structuring societies and economies.

Scientific research obviously has a central role. But is innovation the only way it can contribute?

I was recently part of an independent expert group set up by the European Commission to advise on the role of science, technology and innovation (ST&I) in implementing the new global sustainable development agenda. [1] We identified many, sometimes unexpected, aspects of ST&I's potential role, and made some recommendations on how to maximise the benefits.

I see three principal roles for ST&I: characterising the challenges; providing the solutions; and strengthening public institutions and society. [2]

Characterising challenges

The 2030 Agenda is based on a principle of universality. This means that every country should contribute to achieving the larger vision of global sustainable development. But — naturally — the challenges, priorities and options for action will vary between countries, and for the different groups or institutions involved.

Scientific research can help to identify precisely what the sustainability challenges are in different contexts, what are the root causes of those challenges and how they relate to other challenges.

The agenda also needs to be interpreted. The SDGs may be numerous, but they are also notoriously vague. This allows — in fact, requires — countries to interpret them, work out where to focus their energies and decide what targets to set. This applies beyond governments too, to the different groups and institutions working to advance sustainable development.

This interpretation is largely a social and political process, but science has a key role to play, for example to provide data and models exploring how different targets interact. This is one role policymakers don't normally consider.

Finally, science has a role in tracking progress towards the goals. Some targets lend themselves to measurement with indicators derived from the natural sciences, but most require contributions from social and behavioural sciences too.

Providing solutions

The second way ST&I can contribute is by providing the technologies, strategies and business models for implementing the SDGs. We simply do not yet have all the solutions we need to make this agenda a reality.

Certainly much could be achieved through making wider use of already available or emerging technologies and know-how. But there will always be a need to adapt them and innovate. To make this happen, we will need to better align funding models, institutions and mindsets with the needs of sustainable development. Research institutions tend to be stuck in sectoral or disciplinary straitjackets, but delivering on the SDGs requires multidisciplinary work.

The 2030 Agenda explicitly recognises that sustainability challenges are fundamentally inter-related. Similarly, the solutions will need to integrate — or at least coordinate — action by many groups, informed by diverse scientific fields. A key role of research here is to ensure that agendas are coherent: that progress in one sustainability area does not undermine progress in another.

Scientific research can also help in assessing current practices, strategies and policy proposals — with an eye to capturing how different goals interact (both the trade-offs and the synergies). The aim here is to look for improvements, identify potential consequences and explore how promising activities could be scaled up or transplanted.

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