

Science technology and innovation for achieving sustainable development

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1. Importance of education - science – technology and innovation in sustainable development
2. Education , STI need public support
3. Science – policy interphase
4. Science – Food security and nutrition and sustainable agriculture
5. Science and the precatory principle
6. STI –culture in a broader perspective
7. Science and ethical integrity
8. Scientific work and organization

1. Importance of education - science – technology and innovation in sustainable development

- Education is part of the STI.
- Promote education, science research, technology development in the context of sustainable development (less carbon future, less impacts to the environment)
- Environment not as the third pillar but as integral part of socioeconomic development
- Not only “hard sciences” and engineering but also economic, social research and humanities.

2. Education-STI needs public funds.

- Because education is a right in all its levels (public funds)
- Because science needs public funds to be developed (historically)
- Because otherwise does not always responds to sustainable development goals
- Because otherwise science research is promoted in certain directions and not independently (agriculture, medicine, climate change, etc.)
- Private – public relation is needed but not as a substitution of public responsibility

3. Science – policy interphase

- From science to policy (science based decisions (social and hard and engineering; but not only)
- From policy to science (needs for sustainable development: national, regional, global)
- Monitoring the state of the environment
- By open environmental data systems, transparent and available to all
- Democratic and open process of participation in decisions based on scientific knowledge (there are always different points of view that do not have consensus in the science community)

4. Science – Food security, nutrition and sustainable agriculture

It is very dangerous to only say:

....“Enhancing agricultural productivity will be essential to food security and climate change adaptation in the decades to come”....

.....”more climate-resistance

crops would make them less vulnerable to rising temperatures and flooding. Innovation in crop and plant breeding has already been successful and will need to be scaled up”

Why?

The problems related to genetically modified organisms (biodiversity loss, concentration of agriculture seeds, increasing imports, poverty, health effects)

Non sustainable practices and technologies (fertilizers, pesticides) that cause desertification, water and air pollution

- Recognize biodiversity, combat to desertification conventions and UN FCCC regarding sustainable agriculture
- At least recognize **Resolution adopted by the General Assembly 66/288. The future we want (Rio-20)**

111. We reaffirm the necessity to promote, enhance and support more sustainable agriculture, including crops, livestock, forestry, fisheries and aquaculture, that improves food security, eradicates hunger and is economically viable, while conserving land, water, plant and animal genetic resources, biodiversity and ecosystems and enhancing resilience to climate change and natural disasters. We also recognize the need to maintain natural ecological processes that support food production systems.

5. Precautionary Principle

"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action."

5. STI –culture in a broader perspective

“Cultural diversity has an important—yet often underestimated—role to play in tackling current ecological challenges, coping with climate change, preventing biodiversity loss and ensuring environmental sustainability”

Real space and support to social sciences and humanities and its role in SD. Explicitly

6. Science and ethical integrity

- The discussion of the ethical and moral issues around which sustainability and science is involved

8. Scientific work and organization

- Promote collective work rather than only individual competition
- Promote interdisciplinary, social sciences, humanities, philosophy, culture