

UNESCO Discussion Note for the Global Thematic Consultation on Environmental Sustainability

The target date of the [Millennium Development Goals \(MDGs\)](#) is only three years away, but the world faces a more complex set of global environmental sustainability challenges than ever before. Environmental sustainability implies that the Earth's ecosystems will continue to ensure the long term viability of our planet and provide goods and services essential for human life. Targets on reducing biodiversity loss, decreasing CO₂ emissions and reversing the unsustainable use of environmental resources still are far from being achieved. Several environmental thresholds are considered to have been breached already and the growing pressure on natural resources, including freshwater, the ocean and biodiversity are increasing the potential for passing the 'tipping points' beyond which environmental change is likely to be irreversible. Reviewing progress and setting the objectives for post-2015 must consider how strategies and action on sustainability challenges can be strengthened in a holistic manner. This includes reflection on how we can harness science, education, media and culture for environmental sustainability.

Mobilizing Science for innovative solutions

Science, technology and innovation are key to develop sustainable solutions for the future. Scientific evidence and ethical principles should inform behaviors, policy action and governance decisions to strengthen environmental sustainability.

The Earth's environmental, social and economic systems are highly interconnected. Environmental sustainability must be addressed at all levels, including internationally through environmental agreements and mechanisms, monitoring and benchmarking. One example is the Intergovernmental Platform on Biodiversity and Ecosystem Services, an intergovernmental multi-stakeholder platform, which aims to tackle biodiversity loss by bridging the gap between science and policy to advance environmental sustainability.

Increasing pollution and current consumption patterns put strain on rivers and groundwater systems. There is an urgent need to go beyond the previous MDG 7 target of reducing by half the proportion of people without sustainable access to safe drinking water, by understanding the ecological impacts of water projects such as dams and dikes on water quantity, quality and related environment links and climate change. The key objective is to re-establish water quality and ecosystem functions, which includes, inter alia, storm water management, waste management, flood loss reduction, sedimentation and pollution control, improvement of water quality, and education.

The ocean shapes our climate and influences the distribution of ecosystems, biodiversity, and thus food availability across the globe. As highlighted in the [UN Blueprint for Ocean and Coastal Sustainability](#) moving towards sustainable development of the ocean requires strengthening global scientific efforts to fully comprehend and protect coastal and marine environmental health, as well as to conserve biological diversity, and mitigate the impact of ocean threats, such as ocean acidification. Policy making and implementation related to sustainable development must begin, and end, with collecting and analyzing data and information on the status and trends in natural

systems, and on relevant related human systems. This has been reaffirmed at Rio+20. Capacity development remains an issue of central importance to developing states. Building inclusive community resilience from disasters such as floods, droughts, earthquakes and tsunami must be urgently addressed. Efficient national and regional plans to enhance community resilience for human security threats can be designed by developing science-based options for building community resilience in high risk areas.

Educating for a Sustainable Future

Education MDGs (MDG 2 and 3) focus on access to education, but integrating education into MDG 7 is critical for achieving any environmental sustainability target. Decisions and actions taken today have a decisive impact on the future. In order to take responsible decisions and actions, people need to have the relevant skills and knowledge, skills and values. Environmental sustainability cannot be achieved by scientific, engineering or technological solutions alone. It is education that enables learners to acquire the values, skills and knowledge that allow equitable economic progress without depleting our natural resources. This requires fostering environmental awareness as well as teaching about sustainability issues and promoting participatory teaching and learning methods that support critical thinking and collaborative learning. The UN Secretary General's High-level Panel on Global Sustainability recognized this role of education in its [final report](#).

Education for Sustainable Development (ESD) is essential for environmental sustainability. Rio+20 reaffirmed that the importance of quality education is an essential condition for achieving sustainable development and Member States committed to strengthening ESD beyond the end of the UN Decade of ESD in 2014. The [2012 report on the UN Decade of Education for Sustainable Development](#) confirms that in a world facing more complex sustainable development issues than ever before, ESD is well positioned to serve as a framework for many types of education. Promoting responsible eco-citizenship and holistic sustainability competencies vis-à-vis the integration of ESD into all levels – from early childhood to higher education – and all areas of education is a critical lever for triggering market and political pressures on moving the sustainability agenda forward in the long run.

The media: building awareness

Well-informed and professional media form an essential platform for debate, knowledge-sharing; accountability; create awareness and can shape public policy for environmental sustainability. As such, strategic environmental journalism is a key enabler to advance progress on MDG 7. It centres on positioning journalism as a communicative enabler of civic participation in key public environmental decisions and policies. This approach (Savitz, 2006) encapsulates three key principles: Education; Democracy and Development. *Educationally*, it should enable the provision of easily accessible environmental information and knowledge which can make environmental sustainability become a regular feature of education. *Democratically*, it should facilitate an inclusive platform for the scientific community and the population to examine environmental questions within the context of everyday experiences across communities (Eide et al., 2010). *Developmentally*, it should explicitly link environmental questions to the totality of economic and human development.

As research on African media reporting of science issues demonstrates (Makere University/UNESCO, 2011), that this can practically be done by improving the basic *environmental literacy* of journalists in order to enable them understand the complex local and global implications of environmental sustainability; providing journalists with *easier access* to environmental information and knowledge; and increasing the *quantity* of environmental reporting globally.

Culture: a driver for effective sustainable development

The cultural dimension has not been adequately taken into account in the design of policies conducive to environmental sustainability despite the multidimensional relationship between culture and the environment. The environment is part of the cultural context and part of the collective and historical memory of a community or society. The sustainable use of the environment to meet basic needs has a cultural component ranging from traditional cultural approaches, for example, to resource management, to the incorporation of new services.

Therefore, culture in all its diversity has an important impact in attempts to address current ecological challenges such as biodiversity loss. Cultural factors influence lifestyles, consumption patterns and the ways in which we interact with our natural environment. Moreover, culture is also a vehicle for pro-poor, green development and the generation of jobs. Worldwide cultural heritage destinations, especially UNESCO World Heritage sites, produce revenues from visits and sales of local crafts, generating employment for communities.

Social and ethical considerations

Equality and inclusion need to be a central concern when addressing environmental sustainability since this can only be achieved by including marginalized groups in decision making through a rights-based approach. Gender equality is an important dimension to take into account. For example, the constant and dynamic interactions of climate change with social processes shape and transform human societies. Women and men experience the immediate and long-term consequences of both slow onset and extreme weather events differently, in particular regarding survival chances in the case of natural disasters - a recent study found that more women than men die from natural hazards, because of social norms, roles and family responsibilities (Ahmad, 2012). Creating adaptive, evidence and research-based social protection mechanisms, which look more directly at the levels of needs satisfaction and wellbeing of every individual, can strengthen people's resilience to shocks, and in particular the resilience of women and girls.

The basic concept of sustainable development remains "to meet the needs of present generations without impairing the capacity of future generations to meet their needs." This concept gives rise to several ethical difficulties. One of them being: the ways in which knowledge itself needs to be thought of in ethical terms, given that knowledge about possible future consequences is a requirement for ethical responsibilities to be discharged. This is currently inadequately recognized. Existing literature typically does not engage with issues of practical application, and evidence base with regard to ethically informed environmental policies is weak, unlike in better structured and more

specialized areas such as bioethics. What definitely can be said is that environmental challenges constitute what one author, referring specifically to climate change, has termed a “perfect moral storm” (Gardiner, 2011). In other words, they do not lend themselves to application of established principles, but rather require critical reassessment and genuinely new thinking.

Proposed questions for the dialogue on environmental sustainability:

- How can science, technology and innovation be more effectively put at the service of people for managing natural resources?
- What is the role of education in achieving environmental sustainability?
- What specific roles can media play in reporting on environmental sustainability?
- How can culture best be factored into strategies to achieve environmental sustainability?