

Science & Technology Caucus statement

The application of Science and Technology for achieving sustainable energy resources and services for the rural and peri-urban community should take into consideration the following:

- 1) Women's participation – particularly emphasis on basis primary education,
- 2) Promoting cleaner energy,
- 3) Using local resources,
- 4) Appropriateness to resources and skills level;
- 5) Government, and private sector initial funding and sponsorship;
- 6) An integrated energy framework and cultural bias.

A range of technology options, (such as tidal energy); needs to be available to allow energy technology choices appropriate to resource poor communities whose primary energy uses are for domestic purposes. This means, providing information about the options and financing schemes to enable them to access technologies. Coupled with this, support is required to ensure that the energy sector is able to supply these technologies in an affordable way. Technical and financial support is required to enable developing countries to prepare energy development pathways that meet the twin goals of minimizing greenhouse gas emissions and access to modern energy services for the poor.

Case Study

Tidal energy is generated by the daily rise and fall of the sea and can now be captured in an efficient and cost-effective way using the helical turbine. Successful implementation of this technology is underway near the mouth of the Amazon, in Brazil, and will impact small, isolated communities there. Tidal energy is sustainable, clean, reliable, and widely distributed. Support and funding for its development will bring benefits to many coastal nations, in particular Small Island Developing States, whose livelihoods could benefit greatly. Other examples for consideration include bio-fuels and solar energy.

Climate Change

We believe that climate change should be urgently addressed by the global community in a number of ways, among them: energy conservation, soil conservation (soil is a source of carbon resource, local management of bioregional native technologies) scientific research on technological approaches like sequestration, a transition to cleaner and renewable fuels, the implementation of a system of emissions credits, and consistent progress on and adherence to emission levels set by the Kyoto Protocol.

The Science & Technology Caucus recognizes the scientific and technological knowledge of women and youth and their critical role in bringing about technological change. We incorporate here therefore perspectives from their respective caucuses as well as the education caucus.

Youth Statement on the Availability of Sustainable Science & Technologies to People in Developing Countries

The availability of sustainable technologies to developing countries can be achieved by working with youth through partnerships and education. Low cost green technologies can be made available through youth-initiated micro-enterprises, funded through micro-financing from the government or other sponsors, to provide decentralized, renewable energy sources to local communities. Solutions devised through knowledge sharing by developed countries and developing countries must take into account the socio-cultural needs of the local people and involve them as an integral element in the solutions. The implementation models must be based on active participation of the local communities. Policy mechanisms must be expanded, energized and focused at the local level.

Youth on Partnerships for Sustainable Science and Technologies:

Youth, given the opportunity through partnerships with resource providers, could actively engage in sustainable entrepreneurship to make clean technologies and renewable energies available to their local communities. This in turn would help build their communities through economic and social development. The active engagement of the youth in dissemination of sustainable technological solutions would also help much faster diffusion of such technologies.

Case Study:

The organization Youth Spark provides five young entrepreneurs from different countries the resources needed to set up their own business. Through Spark, youth from Guyana, the Philippines, South Africa, Turkey and the Netherlands create employment opportunities in their communities through small-scale enterprises.

Youth on Science and Technology Education and Cultural Integration for Sustainable Development:

Worldwide, youth are actively educating other youth to promote the development and use of clean renewable energy sources for sustainable societies. They have taken an approach that involves and integrates the youth of the developing nations.

Case Study:

Creative Response of Youth for Solutions to HIV/AIDS, Education and Environmental Problems, a Nigerian youth organization, informs youth in rural areas about alternative sources of fuel that are cleaner and cheaper and more easily transported to the rural population within a short period of time. The organization would like to learn more about alternative energy sources so that it can pass information along to the communities in which it works. The organization's Future-Hope Community Project is also involved in advocacy to rural areas to raise the awareness of the young and to encourage their active involvement in energy issues.

Case Study:

In Nigeria, in order to create potential employment and in order to train youth in sustainable industrial practices, young technicians are educated on the site of a small hydropower plant in how to establish and maintain the plant.

Women on Science and Technology for Sustainable Development

The Women's Major Group would like to highlight within the science & technology context – ensuring women's access to and ownership of clean and affordable energy sources, especially poor women in developing, transitional and developed countries, is for governments to invest in affordable end-use technologies and fuels that directly meet poor women's energy needs; particularly for saving time and labor, income generation, reducing indoor air pollution, improving health, and ensuring food & personal security. Intellectual property rights should not limit women's access to energy technologies.

Education on Science and Technology for Sustainable Development

Education Caucus within the science and technology context would like to put emphasis on education as a cross-cutting issue, and proposes to see stronger language on implementation regarding education for sustainable development, meaning engaging stakeholders on three levels: the learning individuals, the learning organizations, and the learning society.

Conclusion

In conclusion, the Science & Technology Caucus urges Governments, and international organizations to go beyond Kyoto Protocol to achieve acceptable levels of green house gases. The very fact that we are struggling to accept the Kyoto Protocol is a red flag in itself. It is an indication of our shortcomings and calls into question our prospects of achieving the millennium goals by 2015. The Kyoto Protocol is not enough to solve the problem of climate change and in fact could produce a false illusion of having the problem solved. We propose adopting meaningful agreements to stabilize the earth's climate system.

We also acknowledge that not all scientific and technological ideas are feasible or practical. Engineers make science available and useful. It is the scientist and engineers that identify what technologies have to be developed to make innovations applicable. We recommend that developing countries support a platform for running GIS K-12 in support of the UNESCO Decade of Education for wise choices in local sustainable development.

We believe we need to introduce low cost solutions to address poverty at local level particularly to the women. It is equally important to educate women about infectious diseases and their treatments, as well as provide correct information on fertility, family planning, STD's, & HIV/AIDS .

We need to address the local health and environment impacts of burning traditional fuels in dwellings, and of burning of coal, especially low grade high-sulfur coal in inefficient ways. These health burdens are very heavy--involving some of the worst air conditions to which people anywhere are exposed. This is something of a balance to the several references to the climate change issues which are very important in the longer term .

The Science & Technology Caucus also wants to highlight that rural issues are critical, although it is the urban slums that need urgent attention because of their livelihood lifestyle, particularly

their access to energy/ electricity to live a decent life. We believe that to address this issue, all available energies will be needed to be utilized to reach a good quality of life for the majority.

1. Nothemba Mlonzi, Women in Oil & Energy South Africa (WOESA) statement
2. Practical Action NGO statement
3. South Caucus statement
4. SustainUS NGO statement
5. Youth Caucus statement
6. The Energy Research Institute (TERI, New Delhi)
7. American Association for the Advancement of Science
8. www.youthspark.org
9. E/CN.17/2006/5/Add.2: Pg 4, Paragraph 15 (a)
10. E/CN.17/2006/5/Add.2: Pg 6, Paragraph 25 (c)
11. Women's Major Group contribution
12. Education Caucus
13. New York Metro Chapter, Association of Women in Science
14. Personal comments by Dr. John P. Boright, NAS