

Delhi Sustainable Development Summit 2005

BEYOND UNIVERSAL GOALS

Steering Development Towards Global Sustainability

Organized by TERI, New Delhi, 3-5 February 2005

Online at <http://www.teriin.org/dsds>

In brief . . .

PLENARY SESSION 5

AGRICULTURE FOR SUSTAINABLE LIVELIHOODS

Chairperson Rajat M Nag

Speakers Dr Vibha Dhawan • Dr Mruthyunjaya

- Dr S Nagarajan • Mr Henrique H Ubrig
- Dr (Ms) Usha Barwale Zehra



The Green Revolution of the 1960s, involving the development of improved varieties through conventional breeding, irrigation, and expanded fertilizer usage, saved millions from starvation. However, the gains of this revolution have now plateaued and cannot cater to our future needs. There is an urgent need to introduce modern biotechnologies for sustainable food production. This includes the cultivation of superior-quality tissue-cultured and genetically modified plants and application of biopesticides and biofertilizers. It is equally important to reach these technologies to farmers at a faster pace so that their impacts are realized in the shortest possible time. Creating awareness among farmers about potential benefits of these technologies, strengthening of extension machinery, and micro-financing should be given due attention for better diffusion and broader-based impact of these technologies. A better intellectual property rights regime can encourage the development of new technologies and varieties and their accessibility to farmers.

Future food security depends strongly on sustainable water management. The challenge is to minimize groundwater mining, without compromising on food security. Major interventions – such as watershed management –

are needed in domestic, industrial, and agricultural sectors. Natural disasters and climate change also pose serious threats to food security. Mitigation alone will not be sufficient; adaptation is imperative. Better targeting of resources, at pre- and post-disaster levels, is crucial to alleviate damage from such natural disasters.

More than one-fifth of India's gross domestic product comes from agriculture. Having grown impressively during the 1970s and 1980s, Indian agriculture is now stagnating, even declining. Intensive cropping and unplanned resource-use have created significant second-generation problems and increased cultivation costs, undermining economic returns. Several crops have been lost; millets are being replaced by horticultural and high-value crops. Productivity in rain-fed areas is declining due to inadequate availability of capital.

A framework must be developed to ensure continued sustainable livelihoods for rural populations. Value addition and marketing are important issues beside access to better planting material and more efficient management practices. Existing technology, if better deployed, can also contribute substantially. With regard to genetically modified crops, genes need to be inserted in the right background. For north-eastern India, aquaculture and agro-forestry can provide good sustainable livelihood models.

Improvement opportunities lie in value addition. Only 2% of India's agri-economy undergoes value addition, compared to 70% in the US, 50% in the European Union, and 25% in Asia. Productivity gains can be attained through seed and crop protection technologies, food processing, and market access. India is the world's largest producer of milk but only 3% of its milk production undergoes value addition. Sustainable growth can be achieved by creating shareholder and societal value while reducing the environmental footprint throughout the value chain. Sustainable growth objectives should be built into research, product innovation, and business development.

PLENARY SESSION 6
SCIENCE AND TECHNOLOGY FOR GLOBAL SUSTAINABILITY

Chairperson Mr S Sundar

Keynote speaker Prof. Sir David King

Speakers Dr Dave Griggs • Mr Kiran Karnik

• Prof. Jong-dall Kim • Dr Klaus S Lackner

• Prof. Sir Chris Llewellyn Smith FRS



The session underscored the universally accepted concern that the pace at which development is taking place across the globe is swiftly outstripping the earth's capacity to bear the strain. Integral to the process of rendering this very development sustainable – since it can hardly be stopped – are perhaps the two most daunting challenges that humankind faces in this century: mitigation of global warming and eradication of poverty. Already, the speedy spike in temperatures around the world over the last few decades has heightened apprehensions of impending disasters such as melting ice sheets, receding glaciers, and increased and more frequent flooding, to cite just a few.

The phenomenon of climate change is certainly no respecter of boundaries; it is a global threat. It is only logical then that ideas, solutions, or breakthroughs in meeting the diverse and unexpected challenges thrown up by climate change cannot emerge from any single country, however well resourced. The trial is tougher for the lesser developed



We must see that our successors inherit a planet that can be as productive for them as it has been for us.

Prof. Sir David King

Chief Scientific Adviser to HM Government and
Head of Office of Science and Technology, UK

countries, as they are going to be the ones to be hit hardest by the impacts of climate change even as they are – unfortunately – the ones least prepared to deal with the new risks linked with it. Global collaboration, therefore, assumes a new strategic significance in this context: only by thinking, preparing, and acting in tandem can the countries of the world begin to tackle the all-encompassing crisis.

It is generally accepted that national-level deployment of science and technology is crucial to finding sustainable solutions. However, this activity should be tackled sensitively, in keeping with the ground realities in a given country. Any R&D should respond to the felt needs of local society and necessarily take into account the social, cultural, and political sustainability aspects. A holistic approach is required to coordinate international programmes, go beyond basic education, and increase knowledge sharing at a global level.

Science, engineering, and technology have made great strides in sustainable production by doing more with less through improvements in performance, economical use of materials and energy, faster processing, and more durable products. There is an urgent need for global political commitment as well as partnerships across national and local governments and the private sector. The sustainable fulfilment of future energy needs necessitates a quest for alternatives to fossil fuels, which drive the potentially catastrophic climate change and produce debilitating pollution.

Increasing energy efficiency must be accorded priority, though it will only ameliorate the problem, not solve it. Governments must devise and implement ways to ensure that investment in energy efficiency replaces investment in increased supply. Investments in efficiency improvement and new technologies, particularly renewables, must be encouraged in the bid to achieve a truly sustainable global energy system.

PLENARY SESSION 7
CONCLUDING SESSION

Chairperson Senator Tim Wirth
Speakers Prof. Akio Morishima • Sir Charles C
Nicholson • Mr Björn Stigson



The concluding session of DSDS 2005 began by considering a new paradigm that needs to emerge through a shift in the economy, society, and the environment where quality of life and people's aspirations, not just economic growth and material wealth, will be the prime concerns for all. The Asia Pacific Forum for Environment and Development (set up by the Institute for Global Environmental Strategies, Japan) is one such organization that is attempting to lay a framework for sustainable development in the Asia-Pacific region. It hopes to create a knowledge centre that will work as a hub for eminent people from different walks of life such as academia, the corporate sector, policy-making bodies, and so on.

If business is to contribute effectively towards sustainability, it must continue on its path of creating value for people. Though the main goals for businesses are profit and value creation, working closely with governments was essential too. Sustainable development should now be seen not as a philanthropic exercise but a business imperative. Growing economies like China and India must strive, and strive urgently, to realize a sustainable form of development in various spheres.

The two important and clear reminders of the need to follow sustainable development can be global temperature and global population. It is essential to limit the increase in global temperature to 2 °C. Also, the increase in global population from the current figure of six billion to a projected one of nine billion will mount further pressure on the world's resources and make our goals more difficult to achieve. The emphasis on family planning and information dissemination was also highlighted in this regard.

During the question-and-answer session, it was pointed out that a global framework was required to address global issues such as poverty, population, and climate change. What is needed is not a single strategy but a mix of different best practices from different sectors.

India is destined to play a crucial role in the world's search for sustainable solutions as it has demonstrated in the past on several issues such as those in the environmental arena.

FROM DSDS 2005 TO DSDS 2006

Dr R K Pachauri, Director-General, TERI, New Delhi

Closing yet another successful session of the DSDS, Dr Pachauri articulated the need to partner with different organizations. Joining hands with other institutions would help fight challenges like rising population and crass materialism in a more organized manner. Imbalances in funding for education, sanitation, health, and so on could be corrected through a financial model that generates resources. Decentralization at all levels along with efficient delivery mechanisms and sound technological research will make the task at hand simpler.

HE Mr Olafur Ragnar Grimsson, President of the Republic of Iceland, inaugurates *TERI Technology Exhibition* in the presence of Mr Arun Shourie, former Minister for Information Technology and Telecommunication (and Disinvestment), Government of India, at *Dilli Haat*



As they said it . . .

During reconstruction in the wake of the recent tsunami, there is opportunity to take into account increased risks due to climate change.

Dr Dave Griggs, Director - Climate Research, Hadley Centre for Climate Prediction and Research, UK

Urban development depends on fossil fuels, but the future of our cities lies beyond fossil fuel use.

Prof. Jong-dall Kim, Professor, School of Economics and Trade, Director, Research Institute for Energy, Environment and Economy, Center for Solar City Daegu, Kyungpook National University, Daegu, Korea

We need to think in terms of an energy revolution. We need a carbon-neutral economy.

Dr Klaus S Lackner, Ewing-Worzel Professor of Geophysics, Earth and Environmental Engineering, Columbia University, New York

If we can bring down the use of energy, we can save on the investment in producing capital to pay for energy.

Prof. Sir Chris Llewellyn Smith FRS, Director, UKAEA, Culham Division, UK

Two million people have slipped below the poverty line after the Asian tsunami.

Mr Rajat M Nag, Director-General, Mekong Department, Asian Development Bank, The Philippines

Natural disasters impact differently on different livelihood groups. The poor are the most vulnerable.

Dr Mruthyunjaya, Director, National Centre for Agricultural Economics and Policy Research

Injecting both capital and technology in rain-fed areas will help achieve sustainable livelihoods.

Dr S Nagarajan, Director, Indian Agricultural Research Institute, New Delhi

I cannot tell you how important Indian leadership has been to us! We are optimistic because of the kind of leadership we see here.

Senator Tim Wirth, President, United Nations Foundation, Washington, DC, USA

We must correct the existing imbalances in the fields of education, health, transport, etc. These are the factors that create the urban-rural divide.

Dr R K Pachauri, Director-General, TERI, New Delhi

Business is business and must remain so, but in line with social goals. Business must provide skills, markets, products, and services to improve the quality of life and prospects for millions.

Sir Charles C Nicholson, Group Senior Advisor, BP Plc, London, UK

We live in a world increasingly being shaped by sustainable issues. No part of society can find solutions to these issues on its own.

Mr Björn Stigson, President, World Business Council for Sustainable Development, Switzerland

Old assumptions are no longer valid; the key is innovation. There is no technological quick fix.

Henrique H Ubrig, President - South Asia, E I Dupont India Pvt. Ltd, India

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