



Office of the
National Science Advisor

Bureau du
Conseiller national des sciences

Science, Technology & Society Forum

Closing Plenary Session

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STS Meeting
Kyoto, Japan
October 2007

Canada

Thank you very much, Dr. Yoshikawa. Good morning ladies and gentlemen. I want to begin by saying what a pleasure it has been to be involved in the last three STS Fora and to participate in the STS Council. Since the inaugural Forum in 2004 these events have grown in size, stature and impact and I want to give due credit to Koji Omi for his vision and commitment, in not only creating this Forum but also in building it to what it is today – the Davos of the scientific world. Thank you, Omi-san for your splendid leadership.

The two sessions this morning are a very difficult act to follow. Indeed with all of the insightful, wise and eloquent commentaries we have heard, one is tempted to think that everything that is worth saying about the Forum has already been said. So please bear with me if I seem to be going over well tilled ground.

One of the themes at this STS Forum has been “Harmony with Nature” and indeed the title of this session implies returning to a state where human development no longer perturbs and degrades the environment of our world. However, addressing the issues of sustainable development on our planet, through the application of science and technology is a huge challenge.

Sustainable development, using one well known definition is, and I quote, “a commitment to improving the quality of human life while living within the carrying capacity of supportive ecosystems.” The debate on sustainability is an ongoing one, highly appropriate for this forum, and finding solutions to the problem

requires the example and leadership of all of us here and the countries we represent. It also demands a commitment from global institutions such as the United Nations and the World Bank because the issues pertain to the impact of all humankind on our earth. I stress all because this is not an issue for only one or two countries but for everyone – it is a global problem.

Some of you may well be familiar with the UNDP Human Development Index (HDI) and the annual Living Planet Report produced by the WWF, the Zoological Society of London and the Global Footprint Network. Through a combination of a Living Planet Index and its Ecological Footprint, the latter report helps to establish baselines, sets targets and monitors achievements in managing the transition to sustainability, including our biodiversity. According to the 2007 report, the footprint of a country includes all of the cropland, grazing land, forest and fishing grounds required to produce food, fibre and timber it consumes, to absorb the wastes emitted in generating the energy it uses, and to provide space for its infrastructure. The HDI (or Human Development Index) is calculated from life expectancy, literacy, education and per capita GDP.

The UNDP considers an HDI value of more than 0.8 to be high human development and with respect to the Ecological Footprint Index, a footprint lower than 1.8 global hectares per person on the planet, denotes sustainability at the global level. Successful sustainable development therefore requires that the world, on average, meets at a minimum these two criteria. Not surprising

perhaps, while some countries have made advances, no region, nor the world as a whole met both criteria in 2007, according to the World Wildlife Foundation report. This is a clear message that all is far from being well on earth.

Over the past two days we have been discussing, as German Minister Schavan pointed out and I quote, “some of the great questions of our time...”, energy, climate change, global warming and development – the new source of peace in the world, as she expressed it.

In listening to the presentations and discussion at the Plenary Sessions this week, it was clear that the tone of the dialogue had undergone a significant evolution, even since STS 2006 and more so since 2005. The major change is that there was no debate about whether our planet’s climate is changing and no rejection of the notion that human activity is largely responsible for that global warming. Quite a change! Instead the dialogue focussed principally on the urgent need for all nations to take action to reduce Greenhouse Gas emissions and on the mix of energy measures, energy technologies and energy vehicles which will enable us to slow, stop and reverse anthropogenic greenhouse gas inputs to our ailing planet.

Key conclusions of the Plenary Session “Energy Solutions for the Sustainable Environment” emphasised the following points: (i) The need for a commitment from all countries including the big emitters, to a post-Kyoto Framework for CO₂

Greenhouse Gas reductions. (ii) That such reductions will demand international collaboration, ingenuity and innovation. (iii) That multiple measures and vehicles will be needed to succeed in this endeavour including energy conservation and efficiency, a mix of alternate energy technologies, carbon capture and storage on a large scale and emissions trading. (iv) That there is an imperative for a mandatory regulatory framework which makes the “Rules of the Road” as one speaker put it, clear to industry in order to stimulate innovation.

In this regard, you may be interested in a news release on October 1st from the Canadian Council of Chief Executives, an influential non-partisan organization, composed of the Presidents and CEO’s of Canada’s leading private sector companies, including natural resources companies and banks, which speaks to some of these points. (Incidentally, this is not exactly a left wing group).

The call for aggressive action to tackle climate change by the Chief Executives stated ...”Canada needs a national plan of action... all Canadians contribute to the creation of GHG emissions and nothing meaningful will happen unless we all accept our share of the responsibility.” Also, and again I quote, “Targets are an important spur to action... the ultimate goal must be to achieve a substantial absolute reduction in emissions of GG’s in Canada and globally...”

Finally, on global leadership, the news release states, “Canada must champion a future international process that will ensure the participation of all major emitting countries...”

These goals and recommendations match quite well with the sentiments expressed at this STS Forum.

Now I would like to turn to another issue broached at this Forum – one which is close to my heart, namely – Mobilizing science and technology resources to meet the HDI challenges of the developing world. A few years ago, the Canadian Prime Minister, recognizing the potential of STI to transform the economic and social wealth of underdeveloped nations, set out a challenge to Canada (and his G8 colleagues). This was to dedicate 5% of Canada’s domestic R&D expenditures for overseas development. Although this challenge was not subsequently pursued (I’ll say more about this later) it had the very desirable effect of stimulating domestic research agencies and departments to explore stronger linkages with our Development Agencies to enhance knowledge connections with the South.”

The development agencies themselves strengthened their own approaches to S&T for development with an increased focus on innovation policy and support of knowledge for capacity-building. A challenge fund was created to engage the national granting agencies in mobilizing their R&D to a more global outreach. A

networks of centres of excellence programme was expanded to allow selected international partnerships and an international S&T partnership fund was also created to cement S&T opportunities with India, China and Brazil. In addition, a Global Health Initiative, led by four of our science departments and agencies, mobilizes the assets and expertise of the health research and health systems agencies.

As a G8 country, we also looked to trigger more leverage with our counterparts abroad. For example, the G8 Carnegie Group of Science Ministers and Advisors took on the challenge and the group combined its efforts to help support Africa's Consolidated S&T Action Plan. This initiative is still being actively pursued by the G8 and AMCOST Ministers. The African Development Bank has also recently adopted a landmark science strategy. The World Bank has explored S&T for development approaches and held the first in a series of assessments of African development and science along with a major conference on S&T for development in February of this year.

Other donors and foundations have come on board with other key interests, especially with respect to agriculture. The India-Brazil-South Africa Alliance has been formed with specific attention paid to biotechnology, nanotechnology and oceanography. Malaysia has offered to host a UNESCO-sponsored International Centre for South-South Cooperation in science, technology and innovation.

The new Africa Progress Panel is looking to hold the G8 to its commitments in health, education and research. Major philanthropic organizations are examining their portfolios on development with targeted support especially in health research. China is now investing in Africa and other developing economies are beginning to emerge as donors and partners.

So, why is all of this important? Well, knowledge is now the new currency for development. It is the platform for trade and investment and a key to ensuring adherence to MDGs and Education for All Objectives. But it is more than that. If we wish to meet the HDI and WWF Footprint challenges, S&T and innovation must be viewed as critical to economic growth and capacity building. G8 countries have a responsibility to engage in new partnerships with the South. Science for sustainable development and capacity building is an important issue along with human rights, social justice, health and education.

In other words, it is no longer simply an aid question. It is funding and support for research collaborations, research training, research infrastructure and research partnerships which increasingly makes the difference.

Perhaps it is time to reconsider the idea of dedicating a portion of domestic R&D expenditures or overseas development assistance to science and technology for development?

Thank you.