

## From Millennium Development Goals to sustainable development solutions

The Millennium Development Goals (MDGs) adopted in 2000, represent the commitment of the international community to address the widespread concerns about poverty, hunger, disease, illiteracy, gender inequality and environmental degradation. With the tenure of a 15-year period (2000–2015), the MDGs, signed by 189 countries in September 2000, consist of 8 Goals and 18 Targets. Goal 1 (top most priority) was to reduce by half extreme poverty and hunger. The other goals with their respective targets are to increase the net enrolment ratio of boys and girls in primary education, to promote gender equality and empower women, to reduce by two-thirds the under-five mortality of children and maternal mortality, to halt the spread of HIV/AIDS, and to control malaria and other major diseases.

The genesis of MDGs could be traced to the UN Conference on the Human Environment (Stockholm, 1972), where Indira Gandhi, the then Prime Minister of India, emphasized that unless the genuine needs of the poor are met and the greed of the rich curbed, environmental degradation can hardly be averted. Maurice Strong, the then Adviser to the UN Secretary-General, observed that poverty and environmental degradation formed a vicious spiral, one accentuating the other. The concern was that rapid economic development was taking place at the cost of environmental integrity, and social and gender equity. The Brundtland Commission was appointed to suggest ways and means to reconcile development and conservation. The Commission's Report *Our Common Future* (Oxford Press, 1987) emphasized that whatever may be our political frontiers, ecologically our fates are intertwined. The UN Conference on Environment and Development held at Rio de Janeiro in June 1992, provided through Agenda 21, an operational framework for environmentally sustainable development in the 21st century. Also, at Rio, a Framework Convention on Climate Change and a Global Biodiversity Convention were adopted. Later, a Convention on Desertification was also adopted by Members of the UN. In spite of all these Conventions, serious environmental threats like climate change, biodiversity loss and water famine continue to grow. Consequently, the UN Environmental Summit held in 2002 at Johannesburg, South Africa noted with concern that the

social and environmental dimensions of sustainable development are not receiving adequate attention. Today's youth, born at a time of unprecedented technological advances, sadly find that the same technologies are tending to erode their employment base.

In an era of rapidly increasing inter-generational inequity especially to access resources, youth without jobs cannot provide the social substrate essential for sustainable development. The exodus of 'environmental refugees' from rural areas and 'feminization' of rural poverty is antithesis to sustainable development. It is against this backdrop of accelerated economic development triggered by free but *not* fair trade under globalization, that the RIO + 20 was held in June 2012 in Rio de Janeiro. As to the next step, Jeffrey Sachs, Adviser to MDGs, published his viewpoint under the title 'From Millennium Development Goals to sustainable development goals' (*Lancet*, 2012, **379**, 2206–2211). The 'global report card' for the fight against poverty until 2012 indicated that developing countries have made notable progress towards the achievement of MDGs, but the progress is highly variable across goals, countries and regions. The social and environmental pillars of sustainable development, however, tend to remain weak.

China's progress towards achieving Goal 1 has been impressive. India is likely to miss achieving the 50% reduction of the people living in abject poverty and hunger by about 2.82% by December 2015 (MDGs India Country Report 2011; [www.mospi.nic.in](http://www.mospi.nic.in)). The national poverty reduction programmes such as Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA), Swarnajayanti Gram Swarozgar Yojana (SGSY) and National Rural Livelihood Mission (NRLM) have been successful to varying degrees. Yet, according to the National Food Security Act 2013, nearly 75% of our population needs social protection for escaping from the hunger trap. The major shortcoming in several of the national programmes designed to achieve rural poverty reduction and enhanced food and nutrition security at the household level is the lack of necessary balancing among the social, environmental and economic dimensions of sustainable development. Further, a very essential fourth dimension is 'good governance' free from corruption, discrimination, nepo-

tism, etc. In fact, good governance is the foundation for sustainable development. The National Food Security Act, for example, will achieve its objective only if the implementation of the food entitlements is based on a culture of honesty.

As follow-up of the RIO + 20, the UN Secretary-General Ban Ki-Moon set up a High-Level Panel with Presidents of Indonesia and Liberia and Prime Minister of the United Kingdom as co-chairs to develop the post-2015 Development agenda. This report was released in June 2013. Another report entitled 'An action agenda for sustainable development' also first submitted in June 2013 and a revised version in October 2013 to the UN Secretary-General was prepared by eminent persons from the Leadership Council of the Sustainable Development Solutions Network (SDSN). Both the reports list the eradication of poverty as the number-one priority and set out the other goals concerned with gender equality, education, health, food, freshwater and sanitation, climate change, energy, employment, natural resources, good governance, peace and finance for mainstreaming the human and environmental dimensions in all developed programmes. As an editorial in *Science* (28 June 2013) puts it, 'the plain truth is that it is not clear how these goals will be met, but it is evident that to fill the development gap, we must fill the knowledge gap from different sources'.

The reference to the 'knowledge gap' is quite appropriate, and the experience of the M.S. Swaminathan Research Foundation (MSSRF) is that the 'knowledge' for sustainable rural development needs to be a blend of traditional knowledge, the ecological prudence of tribal and rural communities, modern science and frontier technologies. The resultant ecotechnologies should have a *pro-nature*, *pro-poor*, *pro-women* and *pro-livelihood* orientation to achieve sustainability in the conservation and management of natural resources. Ecotechnologies could also help develop *on-farm* and *non-farm* ecoenterprises for resource-poor rural communities.

The post-2015 development path is possibly riddled with difficult obstacles and uncertainties. The present and future generations would have to face severe shortages of resources to meet their essential needs like food and drinking water. Climate change is moving towards 'tipping-point' and violence in human societies is also increasing. Widening inter-generational inequities will not favour sustainable development. Poverty and hunger which the post-2015 development agenda seek to eradicate, may themselves grow into huge problems, far beyond control and management. Technology-centric and environment-degrading industries designed merely for immediate economic growth should be banned, especially when these threaten the livelihoods of millions of local communities. Mining activities in the biodiversity-rich regions, setting up of industries in arable land and development activities for short-term gains are not socially, ecologically and economically sustainable in the long run. As the SDSN

report emphasizes, every country should move away from the business-as-usual trajectory towards a sustainable development path. The lessons from MDGs (2000–2015) should be guidepost for the post-2015 sustainable development goals. Poverty figures indicate that the benefits of impressive economic growth have not trickled down to the weakest and the poorest. At the same time, economic activities have jeopardized the livelihood of tribal forest-dwellers and others dependent on minor forest products. This is why the dimension of 'inclusiveness' is now being added to efforts aiming to foster economically and environmentally sustainable development.

Since the cause of hunger in India is largely due to poverty, the National Food Security Act of 2013 should help to eliminate chronic undernutrition. The evergreen revolution (Swaminathan, M. S., *Sustainable Agriculture: Towards an Evergreen Revolution*, Konark Publishers, 1996) based on a 'farming system approach' is designed to achieve productivity in perpetuity without associated ecological harm. In the coastal regions, culture fisheries could supplement capture fisheries. And with global warming leading to the melting of glaciers, and sea-level rise, a strategy of 'sea water farming' as demonstrated by the MSSRF would ensure the availability of oil, vegetable and forage crops to coastal communities.

The Secretary-General of the UN launched at Rio de Janeiro in 2012, a 'Zero hunger challenge' with a target date of 2025 for the elimination of hunger, malnutrition and food insecurity. The five pillars of the zero hunger challenge are: (i) 100% access to adequate food all year round, (ii) zero stunted children less than 2 years of age, (iii) 100% increase in small holder productivity and income, (iv) all food systems to be sustainable, and (v) zero loss or waste of food. Without achieving the zero hunger challenge, sustainable development will not be possible. The Food Security Act should help overcome poverty induced chronic under nutrition. Protein hunger can be eliminated by increasing the production and consumption of pulses. The UN has declared 2016 as the International Year of Pulses. Hidden hunger caused by the deficiency of iron, iodine, zinc, vitamin A, vitamin B12, etc. can be addressed by making every farm a Nutri-Farm, thereby providing agricultural remedies to the prevailing nutritional maladies. Also, 2014 is the International Year of Family Farming. Hence it will be appropriate to initiate a movement for leveraging agriculture for nutrition security at the level of each farm household. If we can generate the necessary synergy between technology and public policy, we can meet the zero hunger challenges by the end of the decade.

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