

**“When can Sustainable
Development become a
reality and not merely a
slogan?”**

The words “Sustainable Development” were coined not long ago. Within UN Circles and outside, the words have sounded to be very social, economic and environmental. But their real impact has not yet been felt. The present talking points try to find out the why of it. These points can be put together to set the tone of the conference. The points are:

1) An understanding of the precise connotation of the terms “Sustainable Development” needs a deeper study and has a philosophical mooring which gives a simple message to the present citizens to the world. The message is: use the earth’s resources for development but leave enough for the unborn children of the earth. The implications of this message can be understood only by those who want to do more with less.

2) Sustainable development has deeper connotations for biodiversity. There are about thirty million life forms of plant and animal origin existing on our planet. The scientists have studied about five millions of these. The other life forms about which we don't know much may be intricately linked with our existence. The modern ecologists also maintain as an article of faith that nothing has been created for nothing. Thus, in the name of development, the flora and fauna of the earth must not be made extinct. The question arises: what should be done if some pests increase their number abnormally in nature. In that case, the number can be reduced through various procedures including biological control, but the organism should not be annihilated totally, lest they should have a pre-dating role. All countries should take a stock of their flora and fauna and should take measures for preserving them.

3) Already in 2015, the UN General Assembly adopted a historical agenda for transforming the world with sustainable development. The 17 sustainable development goals (SDG's) announced were:

1. End poverty in all its forms everywhere;
2. End hunger, achieve food security and improve nutrition and promote sustainable agriculture;
3. Ensure healthy lives and promote well-being for all at all ages;
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all;
5. Achieve gender equality and empower all women and girls;
6. Ensure availability and sustainable management of water and sanitation for all;
7. Ensure access to affordable, reliable, sustainable and modern energy for all;
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation;

10. Reduce inequality within and among countries;
11. Make cities and human settlement inclusive, safe, resilient and sustainable;
12. Ensure sustainable consumption and production patterns;
13. Take urgent action to combat climate change and its impact;
14. Conserve and use the oceans, seas and marine resources for sustainable development;
15. Protect, restore and promote sustainable use of terrestrial ecosystems, manage forests in a sustainable manner, combat desertification and halt and reverse land degradation and halt biodiversity loss;
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels and
17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

4) These sustainable development goals are indeed laudable ones. But if they have to be achieved by 2030, then two very important things must be taken into account:

(A) The creation of resources

(B) The adoption of a right mindset of the people of both developing and developed countries.

The second point will be dealt with a little later. Let us deal with the first. Most of the developing countries have huge untapped resources. It is a pity that their exploration and exploration have not been a very high national agenda. A matter of still greater pity is that developed countries which have physical resources are looking for innovations, reducing pressure on their own natural resources and sometimes using resources of other countries. Innovation should have been a priority item for developing countries which unfortunately still tend to view raw materials as the key factor for development. If one analyses the economic growth rate of some of the countries of Asia, one notices that although these countries have established a mastery in optical systems, shipbuilding, micro electronics, etc., they don't have all the raw materials they need. What they do is to bring the raw materials from other countries and make "value addition" to these materials through the use of scientific knowledge. No wonder, the present age has been dubbed as one of "Knowledge Economy". Scientific Knowledge itself should be regarded as the most valuable raw material. Thus, in order to implement the SDG's, especially for removing poverty and ensuring safe and healthy lives of people, scientific knowledge and innovations should be given the highest priority.

5) We now come to the mind set of people of developing countries and developed countries, especially in promoting gender issues and healthy but not extravagant life-styles. Developing countries have been advancing the case of women's empowerment. However, this empowerment of women does not come merely from their ability to earn money and can be realized through their education and ability to take decisions. Thus, inclusive engagement in education, decision making and empowerment generation should be the foremost considerations of developing countries in achieving SDG's. The challenges for developed countries are to maintain healthy lives avoiding extravagant life-styles. People of developing countries while trying to reach their topmost agricultural production capacity must go for industrial growth to meet their basic needs. In order that the climate change issues do not get aggravated further because of this necessary industrial growth, people of developed countries must appreciate this and be ready to change their life styles (avoiding high consumption of consumable items including fuels) and still maintain healthy diets. The question is how prepared they are for this change of life-style.

It would be useful to narrate an experience in this connection. In 2012, a conference was held at London titled “Planet Under Pressure”. The Royal Society of London was one of the hosts of the conference which was sponsored by the International Council of Science (ICSU). About 3000 people participated physically in this conference while 3000 others watched this on-line. The system of participation after the inaugurating ceremony was that participants could send their questions/ comments through e-mails or mobile phones to selected addresses. Out of the large number of questions received only 3-4 questions were to be entertained depending on the importance of the questions. Fortunately my question was entertained and it was: “The Planet is surely under pressure but are people of developed countries ready to bring about a change in their life-styles ensuring a sustainable development for people of developing nations?”

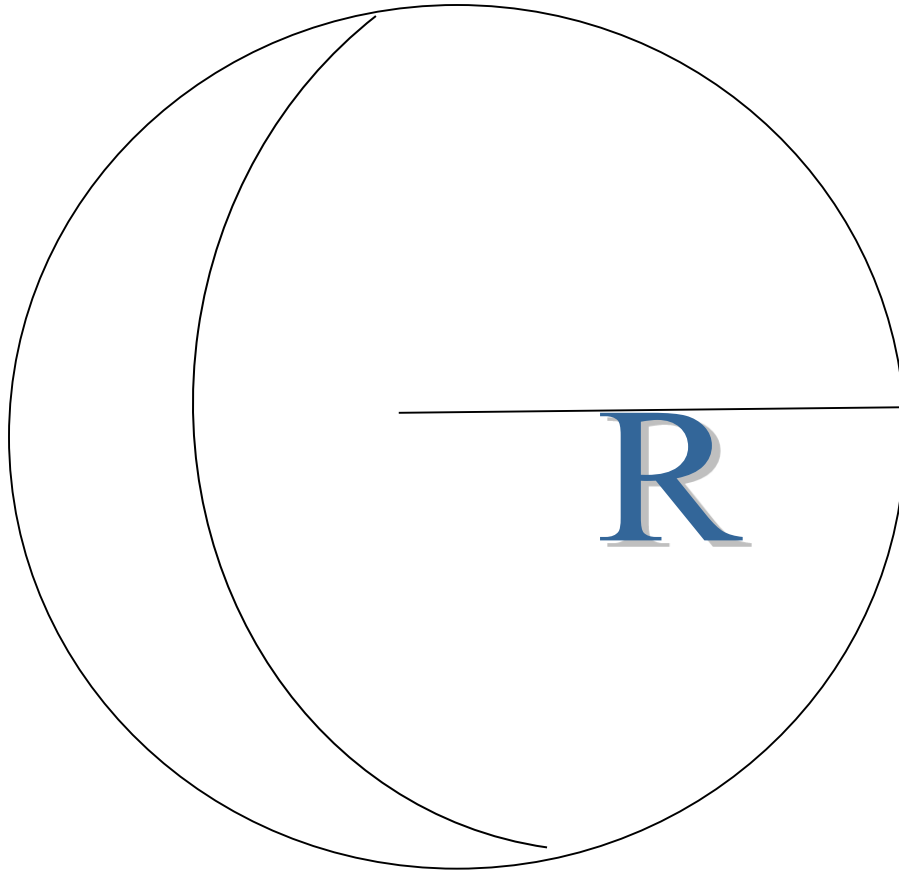
The conductor of the programme not only put this question to the 3000 strong audience but requested the participants to raise their hands if they agreed with the proposal. And what was the response? Not a single hand was raised. I was absolutely shocked. Sustainable Development is essentially a matter of life-styles. How can pressure on the earth’s reserves be reduced unless there is a change in the mindset of people of developed countries to review their unsustainable life-styles in favour of improved life-styles of the tens of millions of suffering people in developing countries. Thus, it dawned on my mind that a lot of consciousness has yet to be generated in the minds of citizens of the world about the core issues involved in Sustainable Development.

This conference while addressing all aspects of sustainable development has rightly identified Academics of Sciences as one set of possible players in making societies understand and follow the real message of sustainable development.

6) Role of Academies of Sciences in the in the achievement of SDG's

The role of Academies of Sciences in communicating the messages of SDG's to societies is indeed a plausible one especially in view of the fact that Academies of Sciences can best act as the think-tanks of Governments.

For example, they could make people understand the limitation of the present day resources of the earth. This has been done by the Club of Rome for quite sometime but the messages have not reached the general public in both developed and developing countries. An Academy of Science can explain this problem to the members of the public in the following way



Earth

The earth could be drawn as a sphere and it could be said to people that even if we assume that the whole earth is filled with nothing but oil and if we prick the earth with a sharp needle, oil will gush forth (which is a non-sensical proposition anyway), the total mass of the oil would be $\frac{4\pi}{3} \times R^3 \times D$ (where R is the radius of the earth and D the density of oil). Now if all people of the world want to adopt a life-style existing in USA, Canada, Europe etc., then how long would this oil last? This is a back of an envelope calculation and it can be shown conclusively that unless the people of developed countries lessen their consumption of things (without sacrificing a healthy life pattern), the developing countries cannot improve their life-styles and the pattern of development would not be sustainable at all! This reminds one of a statement of Gandhi: “There is enough in the world for everyone’s need but not for everybody’s greed”.

The above points, if raised by Fellows of Academies of Sciences who are very distinguished people on their own rights, would enhance the estimation of Academies of Science in the eyes of the public who tend to view Academies of Sciences as ivory towers of knowledge. The Issues of Sustainable Development could bring Academies of Sciences to down-to-earth problems and increase their interactions with the society.

While the findings of the Club of Rome are respected and explained, it could be pointed out that the avoidance of peril of high consumptions can be made by going in for scientific innovations of all kinds which could enable citizens of the world to do more with less.

Academies of Science could undertake a responsibility towards dispelling wrong notions about the growth rate of economies and improved life-styles of people. There could be high growth rates of economies without people benefiting from this if the distribution of wealth among poorer sections of people is not given a high priority. Thus while attempts should be made to increase the growth rate of economies through production of goods and services using scientific knowledge, Academies of Science should advocate with seriousness the implementation of a Social Safety Net Programme (SSNP) that has to be in place to meet the basic needs of the people in the following sectors: food, shelter, education and health and arrangements must be made for Vulnerable Group Meeting (VGF), allowances for the disabled, old age pensions and grants for orphanages.

Finally, the achievement of SDG's is a multi sectoral work. The Academies of Sciences can act as suitable players in explaining the scientific aspect of SDG's and also the responsibilities of scientists in making Sustainable Development happen. Only a concerted effort of all the stakeholders can make 'Sustainable Development' a reality and not a slogan. The sooner that happens, the better for all of mankind.

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