



FES Chair Usha Thorat shares her vision for New India in the context of Sustainable Inclusive Development at GeoSmart India Conference 3rd December 2019

I thank Mr. Sanjay Kumar of Geospatial Media and Communications Ltd, the organisers of today's event, for having invited me to share my thoughts on a vision for a New India in the context of sustainable inclusive development.

What is sustainable inclusive development? Inclusive development is a concept easy to understand, in that, it is development that meets the needs, equitably of all segments of society. Sustainable development is a term more difficult as it may mean different things to different people. In 1987, the Brundtland Commission published its report, *Our Common Future*, in an effort to link the issues of economic development and environmental stability. In doing so, this report provided the oft-cited definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations General Assembly, 1987, p. 43).

Are we talking only of the future generations of the rich or also of the poor? That's where the inclusive part comes in. In the context of sustainability, it is important to realise that while the ecological footprint of the poor is minuscule, climate change and loss of biodiversity impact the poor more than the rich.

The concept of sustainable development can be interpreted in many different ways, but at its core, is an approach to development that looks to balance different and often competing needs, against an awareness of the environmental, social and economic limitations we face as a society. It also recognises that the alarming daily loss of species and habitats requires us to step away from a human-centric understanding of the natural world. For the sustainability of human life on earth, we need to look at all species and put Nature at the centre and not Man.

Changing social, political, cultural, technological and ecological conditions will exert new pressures on the natural resource base and the possibility of its misuse or overuse will always remain. It can, therefore, be argued that sustainable development will be the outcome of a political order in which a society is so structured that it will learn fast from its mistakes in the use of its natural resources and rapidly rectify its human-nature relationships in accordance with the knowledge it has gained. The important question, therefore, is: which political order will lead to conditions which encourage a society to learn fast from its mistakes in the use of its natural resources? An enlightened dictatorship or a participative democracy? There are many who would argue that decisions on natural resource management should be made by those who are going to be impacted the most hence the poor need to participate in the decision making . But there are others who would argue that money power will drive decisions even in a democracy and hence enlightened governments can take much quicker corrective action – the instance of China is quoted in this context.

These two threats viz. climate change and loss of biodiversity – are leaving the world's population and the future generations far more insecure in terms of water, food, energy and health. Like the young Swedish school girl Greta Thunberg declared at UN this year “This is all wrong. I shouldn't be up here. I should be back in school on the other side of the ocean. You have stolen my dreams and my childhood with your empty words. And yet I'm one of the lucky ones. People are suffering. People are dying. Entire ecosystems are collapsing. We are at the beginning of a mass extinction, and all you can talk about is money and fairy tales of eternal economic growth. How dare you!”

The fact is that the global energy system has changed little over the last 25 years. In 1994, about 80% of the global primary energy supply came from fossil fuels. This figure has remained unchanged in 2018. In 1994, about 2.8 billion people used polluting solid fuels to cook food – this number too remains the same in 2018. So, we have neither been able to shift the global energy system away from fossil fuels nor have we been able to provide adequate amounts of clean energy to all. A report released last week by UN says that the outlook is quite bleak. Since the cuts envisaged in 2010 to meet the projected emission levels of 2° and 1.5 ° degrees did not happen, the required cuts are now 2.7 % per year (instead of 0.7% envisaged) from 2020 for the 2° goal and 7.6 % per year (instead of 3.3% envisaged) on the average for the 1.5° goal. And this has happened because global cooperation on energy and climate change has weakened, rather than strengthened, over the years.

In the case of risks to ecosystem services and biodiversity, similar to the Paris Agreement on climate change, countries are in the process of negotiating a new global biodiversity framework through the Convention on Biological Diversity (CBD), which has been called a “New Deal for Nature.” This pact, expected to be agreed in Beijing in late 2020, will lay out the global strategy for protecting nature through 2030.

But how will the changes that are needed be brought about in the quickest possible time? What will be the incentives and disincentives to change patterns of production consumption and distribution such that they are more inclusive and sustainable? In tackling this problem, one can be either a pessimist or an optimist.

My brother, who is a scientist and works on glaciers and climate change, puts it rather well.

“My brain is pessimistic because the decision makers are rich. Consequently, they are also in a better position to protect themselves against the consequences of climate change. So, my brain says that limiting the global temperature rise to 1.5 or 2 degrees centigrade (Paris agreement) is a slogan and not a realistic aim. It is what the politicians and the rich want to convince the poor, that they are trying. However, they are actually not taking any steps that can achieve it. Nor do they intend to.” But he goes on to say “my principle is that when the brain says “it cannot happen”, but the heart says “nevertheless it MUST happen”, your actions must be dictated by the heart. Something like the bridge strategy. You have to play your hand assuming that the cards are going your way because you are sure to lose whatever you do, if they are not.”

An example of optimism is the vision of someone like Alexandria Ocasio-Cortez who imagines a Green New Deal brought in by the Democrats in 2020. She makes the point that the models of economic growth and public policy should factor in issues of climate change and loss of biodiversity in a way that it leads to a more healthy, inclusive, secure and sustainable society.

It is high time that we think of a Green New Deal for India. What should be the priorities for such a Green New Deal ?

1. First, let's take agriculture, which is closely linked to water.

Agriculture contributes 18% of GDP and absorbs 60% of the population. It absorbs 78% of fresh water and of this; just two crops - rice and sugarcane, guzzle 60% of the water. Indian agriculture has become unsustainable in many ways. Economically, it is dependent on minimum support price effectively for rice and wheat, free power and hence free water and subsidised fertilisers. There are periodic loan waivers, without which farmers cannot take fresh loans to grow crops. The benefit of subsidies for agriculture accrue more to the larger farmers and the irrigated areas. Continuing the fiscal support to agriculture implies lower allocation to other priority areas like health and education. From the point of view of natural resources like water and land, agriculture has become unsustainable. There is over use of water and groundwater is seriously depleted. Water is free as long as you can use the free power to dig tube wells and borewells or lift water from rivers and canals. Soil has got seriously degraded and desertification is rampant due to water erosion, loss of top soil and vegetative cover, wind erosion and a host of other reasons including pressure of population on land, overgrazing and overuse of inputs, including fertilisers and pesticides. The burden of the population on small holdings and the use of energy sources like firewood by poorer households also leads to impact on the environment. As agriculture, livestock and fisheries absorb 60% of the population of the country, our top priority should be to focus on sustainable inclusive development of agriculture and rural households.

We need to have a new agricultural revolution that focuses on crops that use less water (Per Drop, More Crop, to quote the Prime Minister) and consumption patterns need to be incentivised to consume products that use less water and energy. We need to ensure that water is managed efficiently and there is no over exploitation of ground water. We need to protect our forests, our grasslands and water bodies. There have to be ways of charging those who overuse the free power to draw water used for water intensive crops. This would involve politically tough decisions but which need to be taken if we want agriculture to be sustainable.

Prime Minister Modi, in his address to the High-Level Segment of the 14th Conference of Parties (COP14) of the UN Convention to Combat Desertification (UNCCD) in Sep 2019 in Delhi, talked about the compelling case for action on the land front combined with action to address the water crisis facing the world. To quote, "Because when we address degraded lands, we also address the water scarcity issue. Augmenting water supply, enhancing water recharge, slowing down water run-off and retaining moisture in the soil are all parts of a holistic land and water strategy. We are working with the motto of Per Drop More Crop. We are increasing the use of bio fertilisers and reducing the use of pesticides and chemical fertilisers... And India would put an end to single waste plastic in the coming years. We in India, take pride in using remote sensing and space technology for multiple applications, including land restoration." It is hoped that this message will translate into action.

2. The second area of priority is energy.

The challenge before India is how to meet its energy requirements while being mindful of the impact of climate change. Given that per capita CO₂ emission levels are below the world average, India has a right to demand a 'common but differentiated' responsibility at an international level. However at the national level, we cannot 'hide behind the poor' and there is urgent need for intra-national 'common

but differentiated' responsibility too. The carbon footprint of the four highest income classes earning more than Rs 8,000 per month, representing a population of about 150 million people in the country already exceeds sustainable levels. If these income groups do not check their CO2 emissions, they will not only contribute to global warming, but will also deny hundreds of millions of poor Indians access to development.

The National Energy Policy (NEP) is a broad scale policy covering the whole national energy system in India. The policy focuses on national electrification by 2022, providing clean cooking technologies to all, reducing share of imports of fossil fuels, and diversifying energy mix, decarbonisation to achieve energy security and sustainability and supports India's growth objectives. It needs to have specific measures for a differentiated responsibility to keep CO2 levels at sustainable levels within income classes.

There are experts who feel that a decentralised distribution model of producing renewable energy is the answer for India. Germany, the leader in renewable energy, has most of its solar PV installed on rooftops. About 1.5 million households in Germany have installed more than 30,000 MW worth of solar PV panels on their rooftops. They are either feeding it to the local grids or consuming it domestically. What Germany has done, it is believed can be done on a much grander scale and in a much more decentralised fashion. Is this a Utopian dream or is it feasible?

3. The third priority is how we urbanise and develop our cities.

Cities the world over are the biggest emitters of CO2. Management of water, energy, transport, waste and sanitation and dealing with pollution will have to go hand in hand. Significant urbanisation has already taken place but is expected to grow rapidly in the next ten to fifteen years when 600 million are expected to be living in cities. The UN SDG: Goal 11 aims to "make cities and human settlements inclusive, safe, resilient, and sustainable" by 2030. A clear blue print is needed for India for achieving this goal as part of the Green New Deal.

These are just three areas where technology, especially geo-spatial technology and data, can help enormously in managing land and water, managing supply and demand for energy more equitably, and in building sustainable inclusive safe and resilient cities. Geo-smart technology should empower the most vulnerable populations to make ecologically smart decisions about their lives, livelihoods and localities.

One example of this is the effort by the Foundation for Ecological Security, of which I am proud to be Chair, to launch a geo-spatial India Observatory, later today at this conference. This website will disseminate 1600+ ecological, economic and social parameters mapped down to the village level (to the extent available) as a public good. It will also release tools to use this data for even semi-literate persons at the local community level to plan for land and water management in a sustainable way.

It would be very exciting to see how this conference will contribute to using geo-spatial technology for a more sustainable inclusive society.

