

Dr Ajay Mathur, Director General, TERI,

Mr Sanjay Seth, CEO GRIHA Council,

Esteemed dignitaries,

Distinguished guests, dear ladies and gentlemen,

The title of this summit 'Sustainable is Affordable' is remarkable. It also reflects the concern that environmental sustainability should not be compromised while addressing the challenges of social and economic development. This is true for Switzerland, and equally true for India.

I have been in India for almost eighteen months now. Every time I travel within the country, whether it is to a metropolitan city or to smaller cities, I see giant strides made in infrastructure development in the housing sector. India is being built now. We therefore have an opportunity to make this big infrastructure development energy efficient, resilient and sustainable.

India is urbanising and this trend will continue over the next few decades. As more people move into cities and towns to earn their livelihoods or for education, there will be a need for housing, for better transport and mobility options, for resources such as electricity and water and for more efficient and effective management of municipal services.

The vision, policies and programmes of the Government of India towards addressing the issues of urbanisation are commendable. The Smart City Mission is an ambitious and bold initiative, which, in our opinion, is achievable. India's plan to have about 12 million affordable houses built by 2022 is not only aimed at new construction in the housing sector, but also at providing a better quality of life – better homes, better access to sanitation, access to safe drinking water - for millions of people. In addition, there will be new construction in the middle and high-income categories of residential buildings by the private and public sectors. As estimates show, the total building stock in residential, commercial and public spaces in India will double to reach 32 billion square metres by 2030.

Can we make 12 million affordable houses and 32 billion square metres of building stock sustainable? Can we also make them resource efficient, resilient and energy efficient? The answer is an overwhelming yes!

Let me illustrate this through what our international cooperation programme under the aegis of the Swiss Agency for Development and Cooperation (SDC) is doing in India. The programme focusses on climate change and the environment. As part of our work on low emissions development or mitigation to climate change, where the focus is on clean energy and energy efficiency, one of the core areas of work is on 'Built Environment'. The built environment component engages at three levels – (1) Building materials – materials that are used in the construction of the buildings; (2) Building design – making buildings more energy efficient; and (3) Resilient cities – integrated approaches to making cities move liveable and sustainable.

In the 'building materials' cluster, our focus is on developing and commercialising Low Carbon Cement, a new type of cement which combines locally available material, such as clay and limestone, in cement production. In the first phase, a team of Swiss experts from the Federal Polytechnic School in Lausanne and Indian experts from IITs had tested the product. In the current phase, our partners are working on standardisation, so that the low carbon cement can be used as a general construction material. The research has revealed that Low Carbon Cement has the potential of reducing greenhouse gas emissions by up to 30%.

Our initiative on energy efficiency in buildings is anchored within a separate MoU with the Ministry of Power. Under this collaboration, we have developed guidelines for energy efficient multi-storey residential buildings in different climate zones. In the last few months, SDC and BEE have been working intensively on developing an Energy Conservation Building Code for Residential buildings in India. Last week, on Energy Conservation Day, the Ministry of Power informed us that the Code will be released soon. Such a simple instrument could result in high-energy savings in residential buildings. It will provide direction to the building materials industry for mainstreaming sustainability.

As to low carbon and climate resilient city development, we focus on four partner cities, namely Coimbatore, Udaipur, Siliguri and Rajkot. The aim is to mainstream climate change into urban planning. These cities have prioritised four thematic areas – buildings, transport and mobility, management of solid and liquid waste and water. Technical advice is being provided to city authorities in implementing scalable pilots and developing long-term bankable projects.

As an example, let me share some interesting work that we are doing in the city of Rajkot:

- The project has provided Rajkot Municipal Corporation with technical guidance to make an affordable housing project, which is under construction, energy efficient. Simple design features related to windows and natural ventilation have been integrated to improve the thermal comfort inside the apartments – thus achieving a decrease of about five degrees Celsius in temperature. The housing project is aptly called 'Smart Ghar'. The affordable housing projects in Rajkot lead to improved quality of life and better thermal comfort for those living in these dwellings.
- A position paper to shape policy on making affordable housing in India resource efficient and low carbon has been prepared using Rajkot as an example.
- A study on the use of energy, especially of electricity and electrical appliances by low-income households, is about to be completed. It will provide insights into the behavioural pattern of energy utilization and therefore will be useful in developing policies and guidelines for energy efficient affordable housing for all.

Switzerland is committed to following and promoting climate compatible low carbon development. Our Energy Strategy 2050 is built on these principles. Achieving development needs while being sustainable and low carbon is embedded in India's commitment to combating climate change. These days, Switzerland and India are celebrating 70 years of Friendship. So, in the spirit of Indo-Swiss Friendship and partnership, I will use this forum to offer Switzerland's cooperation towards achieving the goals of Smart City Mission, Housing for All and Clean India Mission. We can offer the Swiss experience, knowledge and practices in working with cities towards an integrated approach for low carbon and climate resilient urban planning, energy efficient housing and management of transport, mobility and municipal services.

In the end, let me congratulate The Energy and Resources Institute (TERI), a longstanding partner of SDC, for organising this Summit.

Ladies and gentlemen, let me wish you the very best for your deliberations over these two days.