

## **The Planet in 2050**

**“Vision Statement” by Nebojsa Nakicenovic, 20 October 2008**

1. Humanity is on a brink of a grand transition to be compared with emergence of agriculture some 20 thousand years ago, the Neolithic and the Industrial Revolutions.
2. The transition will no doubt transform the very fabric of societies and establish new techno-economic and life-style paradigms, however, the exact dynamics and direction of change is elusive.
3. Ongoing global transformations include a pervasive urbanization, educational achievements and democratization. About half of the people in the world live in cities, have secondary education and enjoy pluralistic systems of governance. At the same time, a third of the humanity lives in deep poverty, lacks access to food, energy and many other necessities. Humanity is changing planetary processes in a fundamental way. The “anthropocene” is marked by coupled interactions between the “nature” and “human systems”.
4. Scenarios as a kind of “future histories” are one of major methods for assessing the deep uncertainties associated with the wide range of plausible future developments and fundamental transformations, their consequences and possible tipping points.
5. Integrated assessment combines the qualitative methods of storyline writing with quantitative modeling of future developments, ranging from human capacity and well being to economic activities, technological change and environmental implications from air pollution to climate change.
6. New efforts to integrate the findings of various, to a degree fragmented, assessments, including climate (IPCC), ecosystems (Ecosystems Assessment), energy (Global Energy Assessment) and earth systems are called for better understanding all facets of the anthropocene and the ongoing fundamental transformations. For example, the most recent set of stabilization scenarios (IPCC, AR4) outlines greenhouse gas (GHG) mitigation strategies, technology needs, structural changes and possible policy levers.
7. Stabilization scenarios that avert the more “dangerous” climate change by limiting future temperature increases to two degrees Celsius above the pre-industrial levels imply the fundamental transition and paradigm change that is likely to transform ways we live and work.
8. They imply negative GHG emissions in this century. It is imperative to assess how such goals are related to other development objectives while sustaining the planet to 2050 and beyond.