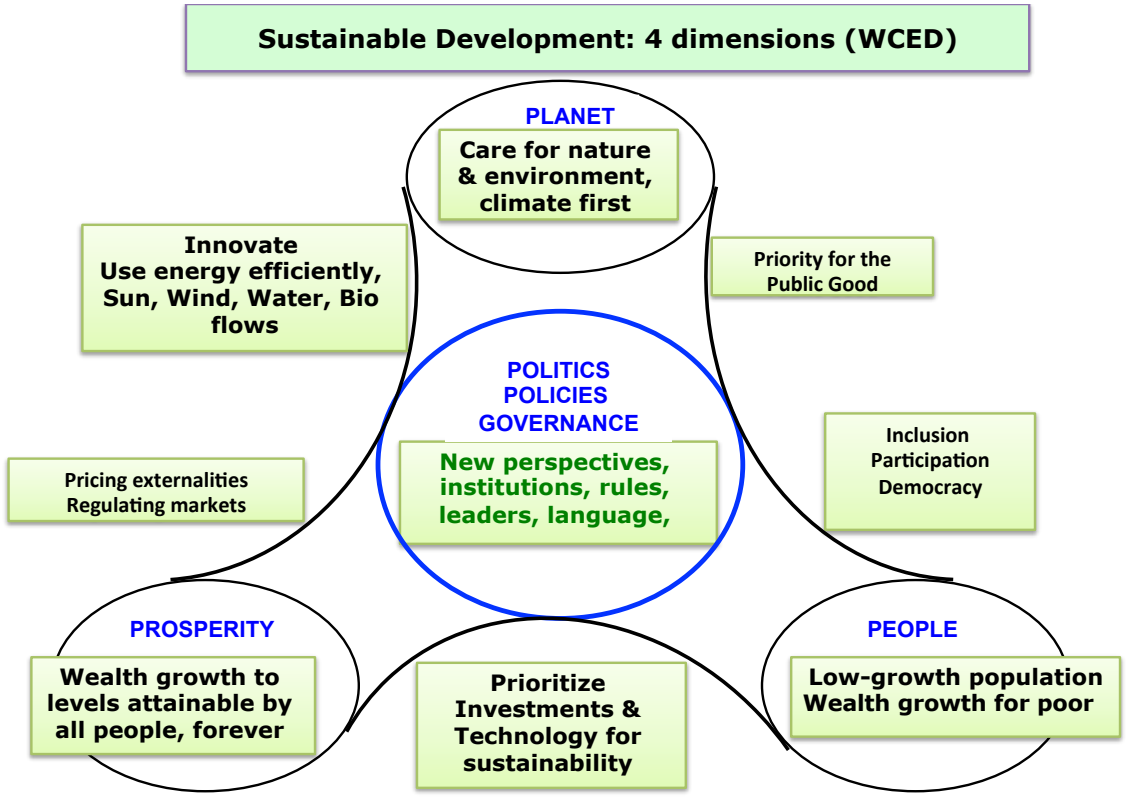
Core activity: SUSTAINABLE ENERGY TRANSITION RESEARCH

SUSTAINABLE DEVELOPMENT

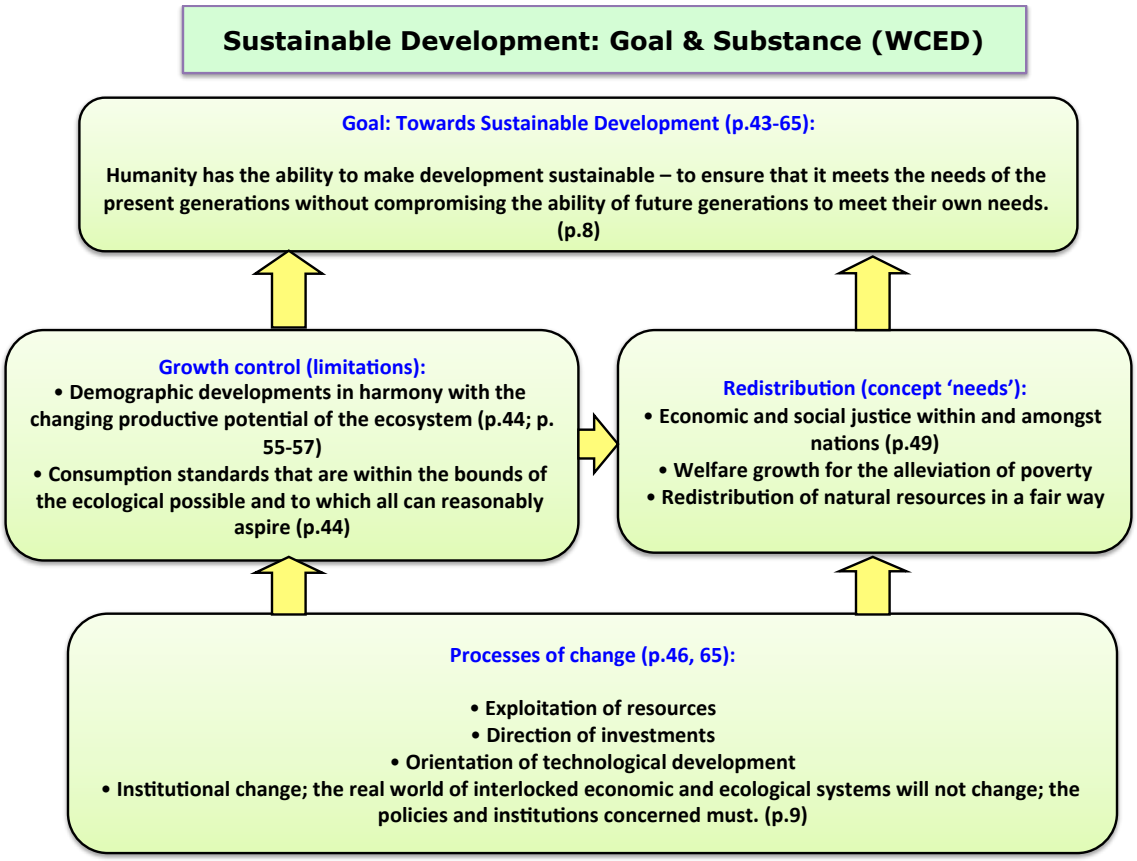
The concept of sustainable development (SD) was introduced in the World Conservation Strategy (IUCN 1980) and had its roots in the concept of a sustainable society and in the management of renewable resources. Adopted by the WCED in 1987 and by the Rio Conference in 1992 as a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. SD integrates the political, social, economic and environmental dimensions. (Source: IPCC, AR4, WGIII, Glossary)

A multi-faceted diamond

SD is multi-faceted like a diamond and it has to be polished and refined. The newspeak reduction to the 3P's of 'Profit, People and Planet' reduces and annihilates the essence of SD. At least four facets need continuous interaction and integration: **Governance (Politics), People (Civil Society), Prosperity (Economics) and Planet (Environment, Climate).** Proposals to advance SD and its implementation can be evaluated by specific criteria but at least the four facets must function as stems for the specific criteria.



Back to the origin: Our Common Future (WCED, Oxford University Press,1987). Similar to all basic concepts of science and society [think of: matter, energy, entropy, wealth, intelligence, democracy], SD cannot be defined as a short dictionary entry. The most cited description "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" is but a goal statement. For approaching such goal three main change processes are required: redistribution, growth control and socio-economic redesign.



A substantiated definition of SD is not limited to only the goal of SD, but reveals the main building blocks of the SD pathways (see figure above, where the four dimensions Planet, People, Prosperity and Governance also permeate the four headlines of socio-economic redesign).

ENERGY TRANSITION RESEARCH

Since 1975 I was engaged in academic and applied energy research that encompassed technological, economic and policy facets. Energy use has a significant impact on the environment. In the period 1988-2001 environmental issues were added to my research, mainly for designing the Environmental Policy Planning process in Flanders; conceptualize, organize and lead the State-of-the-Environment Reporting in Flanders, and as principal advisor to the minister for the environment. Since 1988, but more intensively

after 2001, climate change issues were included in my research, also by contributing as a member of IPCC in the period 1998-2014, most intensively to the Special Report on Renewable Energy (www.ipcc.ch). My work being rooted in Sustainable Energy Transition Research wavered out over seven main areas. I have been a director of the multi-disciplinary centre SESO and of a research unit on technology, energy and environment STEM. I supervised and co-operated with tens of research assistants and associates.
The seven research fields are like petals around the core of Sustainable Energy Transition. The entries of the Main Menu of this site are supplying more detail on the fields and the obtained results, with the help of a large number of co-authors.

7 research fields on Sustainable Energy Transition