

MISS: a Model of Sustainable Human Development

by

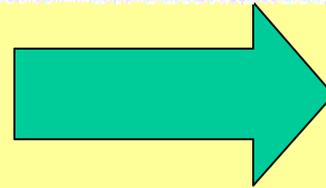
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MISS: MeasurIng Sustainability in Sen's framework

**Price Nobel
Amartya Sen's
View**



From
**Sustainable
Development**



To
**Sustainable
Human
Development**

From
Needs



To
Human Freedoms²

What Sustainable Human Development implies

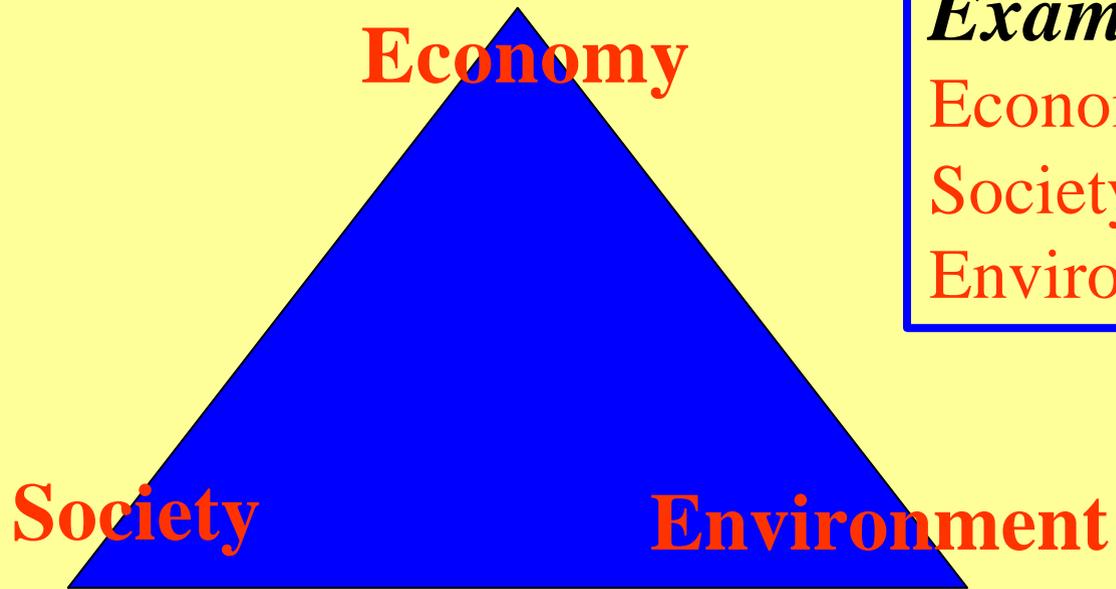
Broadening of **human potential**

Expansion of **opportunities** and **freedoms**

Income is only **a means** to reach an acceptable standard of living, and in no way an end in itself: utility is not the sole space of Human Wellbeing

**Give people opportunities
and chances to build the life they wish**

Other dimensions must be captured



Examples

Economy: percapita income

Society: crimes

Environment: air emissions

The way in which resources are converted into freedoms and opportunities is influenced by the degree of **institutional efficiency**

The MISS Model: What it is

A model of sustainable human development, designed for **Italy**, based on Sen's paradigm and built within the tradition of system dynamics.

Main purpose:

- to study the variations over time of some economic, social, environmental **indicators (functionings)**

due to:

- structural dynamics;
- variations in the **institutional setting**.

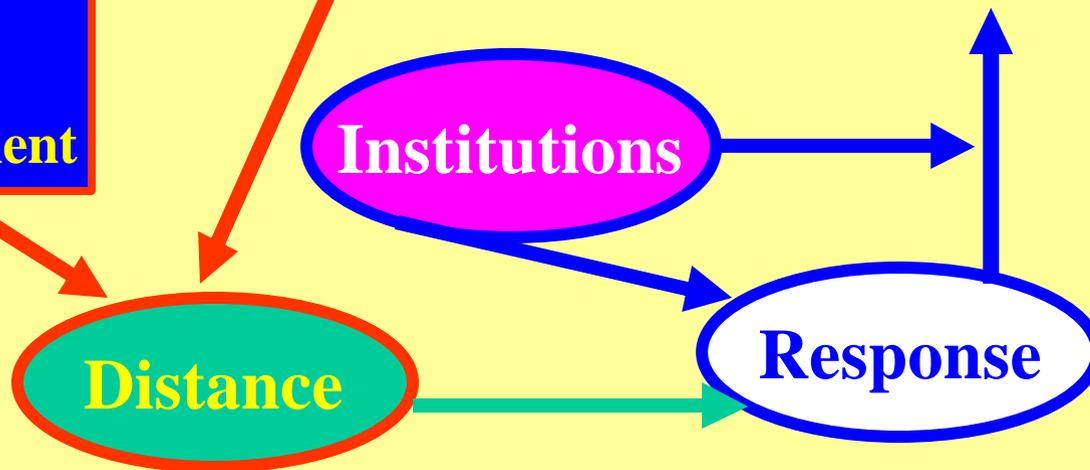
- to study the role played by the institutional context

The MISS Model: How it works

Basic idea: each individual brings with him a certain **demand for functionings**. For instance, education, health, job, mobility, shelter, environmental quality, safety, income.

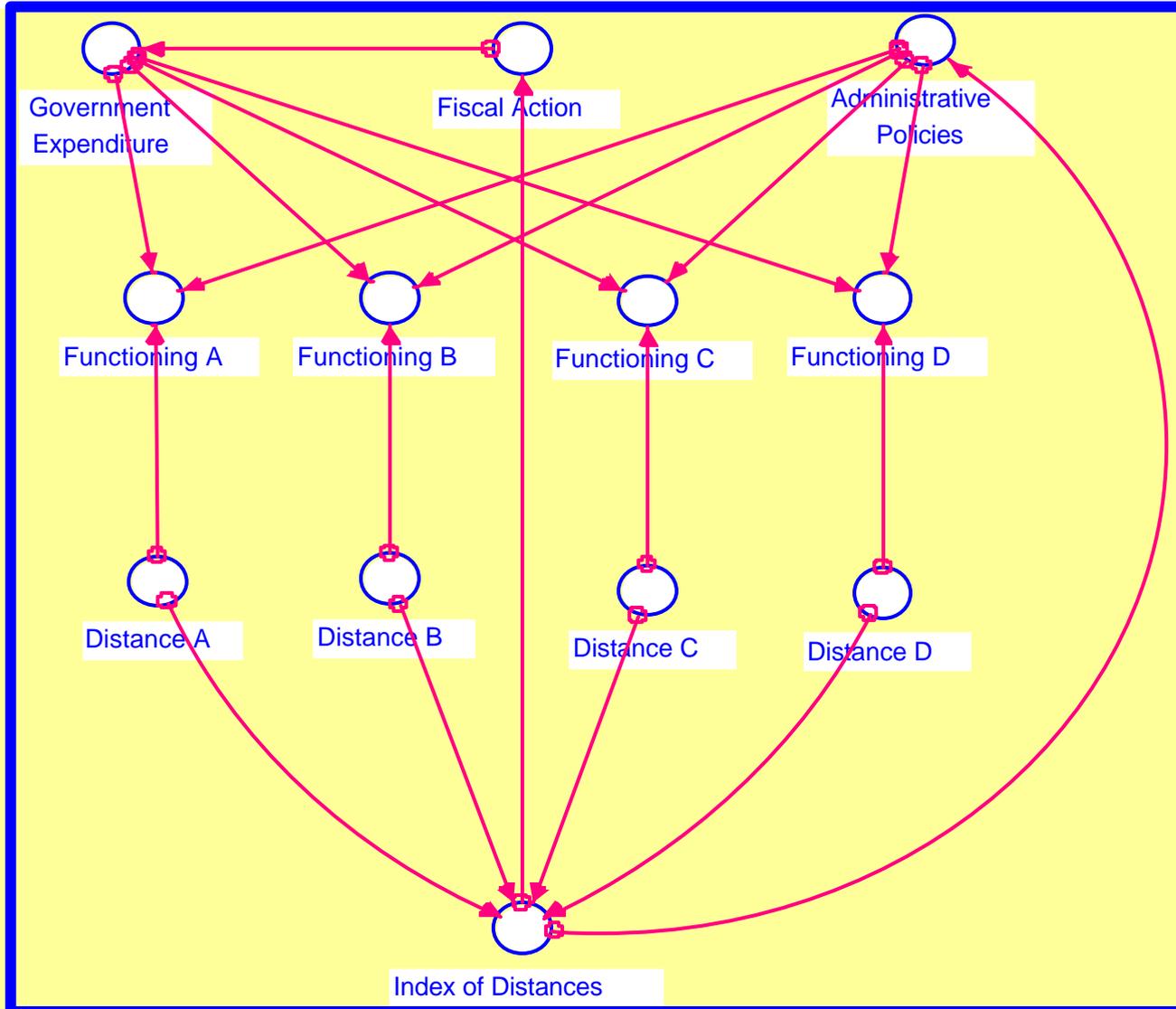
Left Side : “Ideal World”
Demand for Functionings:
Income; GHGs Emissions;
House Square Meters;
Years of School; Crimes;
Health Standard;
Vehicle Km/Road Km;
Road Accidents; Unemployment

Right Side: “Real World”
Supply of Functionings
generated by a country (Italy)
over a certain
time horizon



The MISS Model: How it works

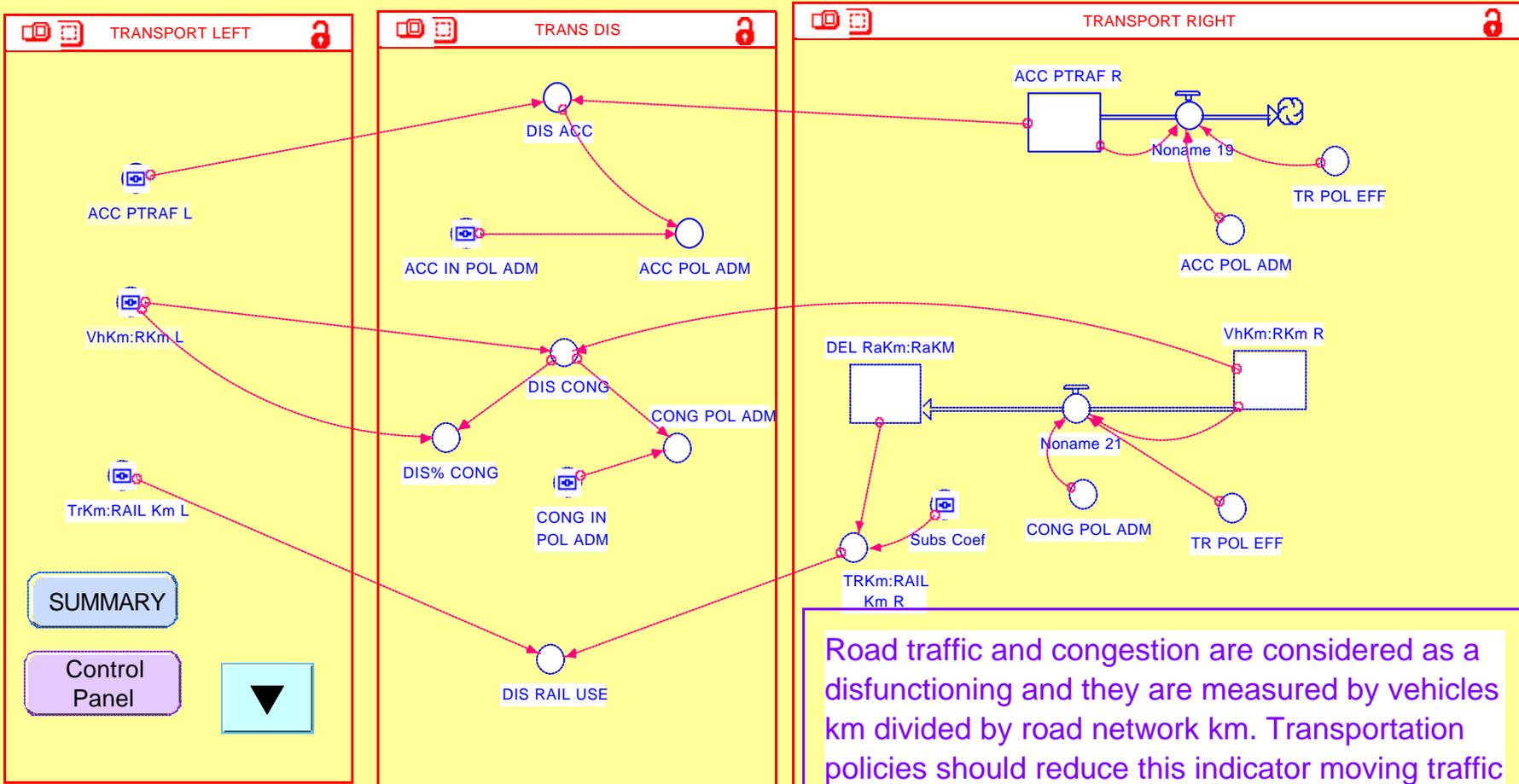
The Responde Module: basic mechanism



A wide distance between Real World and Ideal World Implies Administrative Response and Fiscal Actions by Government which in turn influences the supply of functionings, so reducing the distance. Ideal values of functionings are set on the basis of International Organisations' suggestions, but can also be defined by any user

The MISS Model: How it works

Transportation Module: basic mechanism



The MISS Model: Synthesis

Researchers:

A group of economists working in Lombardy (North Italy).

Support:

by different institutions and by CRASL (Research Centre for Environment and Sustainable Development in Lombardy), an institutions of Catholic University.

Targets:

to operationalise the capability approach passing from words to maps and numbers; to explore the basic determinants of Sustainable Human Development and the link between Economy and Institutions in Italy.

Project Lifetime:

March 2004- March 2005. First simulations results in Fall 2004 ⁹