

VLEEM

Seminar on "Human Development and Sustainability of Energy Systems"

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Towards a socially viable world

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How demography and migration impact energy systems in the VLT, in VLEEM

Needs for energy services are first expressed by individuals and households

- Energy services related to the « food » function are proportional to population
- Energy services related to the « shelter » function are proportional to households
- Energy services related to mobility and the « self-accomplishment » function are proportional partly to population, partly to households

People at work, and the basic education level they had as youngsters, determine wealth

- Wealth on the very long term is considered to be produced comprehensively by informed human capital
- Affluence is considered to be the main driving force of energy services per capita or per household

Demography, migrations and sustainability

- ◆ **1. Does the continuation of the population growth jeopardize the social viability in the very long term? Worldwide or regionally, or both? Is the malthusian UN assumption of stabilisation worldwide by 2050 necessary?**
- ◆ **2. At which speed, and down to which point, a country's population can decrease without breaking socio-economic equilibria?**
- ◆ **3. To which extent population migrations among world regions can contribute to regional socio-economic equilibria or destroy them?**

How time-budgets, gender inequality and cultural diversity impact energy systems in the VLT, in VLEEM

Needs for energy services are mostly determined by cultural habits and the use of time, in addition to affluence

- ES related to the « food » function increase as time-budget decreases
- ES related to the « shelter » function is mostly a matter of architecture and materials
- ES related to mobility is mostly a matter of access to cars, speed and time-budget
- ES related to « self-accomplishment » is mostly a matter of time-budget and cultural practices

Cultural traditions determine wealth

- Cultural traditions may slow down or accelerate progresses in basic education of future workers, and therefore the future productivity of labour
- Cultural traditions determine the role of women in the society, and therefore their basic education level, their participation to paid work and their fertility

Time-budgets, gender inequality, cultural diversity and sustainability

- ◆ 1. « Papy cohorts » pensions: how long shifting time from paid work to leisure (aspiration of working social cohorts in post-industrial countries) can continue when the population is decreasing and aging?
- ◆ 2. Equal gender access to instruction and labour : is the dilemma « maternity or social participation » an issue as regard very long term socio-economic viability?
- ◆ 3. Cultural ethnocentric unipolar world or diverse multi-modern societies? Any chance that the « american way of life » could be a sustainable world standard?

How welfare, poverty and the social link impact energy systems in the VLT, in VLEEM

In VLEEM, influences of welfare, poverty and social inequalities on energy are partly captured through affluence

- Needs of energy services of individuals are directly related to affluence
- Differences among social cohorts are also captured by affluence
- Needs of energy services of production are also related to wealth and affluence through production volumes

But welfare, poverty and social link are more than affluence

- Welfare includes also patrimonial, time-use, liberty and gender equality notions which have been shown discriminant as regard needs of energy services
- Nevertheless, it is not possible to relate directly the needs of energy services to an indicator for welfare, because of cultural diversities

In view of a sustainable world, how to cope with welfare, poverty and social link :

- ◆ 1. How to measure welfare and poverty? is GDP relevant? Is HDI (Human Development Indicator) more appropriate? Is it enough?
- ◆ 2. Are all socio-economical models sustainable? Is there any rupture point linked to internal and global social gap?