

Environment, Development and VTE



Some thoughts

Environment

- My 'Surroundings' is my environment?
 - Natural-trees, birds, the grass, water and air
 - What about the pollution around me, the bridges, roads, railways, etc.?
- Human-made?
 - Yes my environment is both natural as well as man-made
- 'Green' act means
 - *Maintaining the natural wealth*
 - *Reducing the adverse human impacts*

The Dilemma!

- ❑ Too big and too wide?
- ❑ Ambiguous?
- ❑ Inequitable distribution
- ❑ Contextual--No rights, no wrongs? Who right, who wrong? When right, when wrong?

Many Dilemmas!

- ❑ Is 'environment' a scientific term? Or...
- ❑ A term with some science but is mainly about social issues
- ❑ Money will reduce poverty, hence pollution
- ❑ Money needs economic development, economic development causes pollution; pollution leads to poverty
- ❑ Big populations lead to stress on environment
- ❑ Overconsumption is stressful for the environment

Defining 'environment' better

- All that surrounds me
or
- *Me*, my surroundings.....
 - And our inter'action' with each other?

What is Development?

- “Reaching an acceptable standard of living for all people by improving economic and social conditions” -- World Bank
- UNDP uses the concept of ‘human development’ measured by life expectancy, adult literacy, access to education, average income levels. ‘Human development is the end or goal – economic growth is a means’

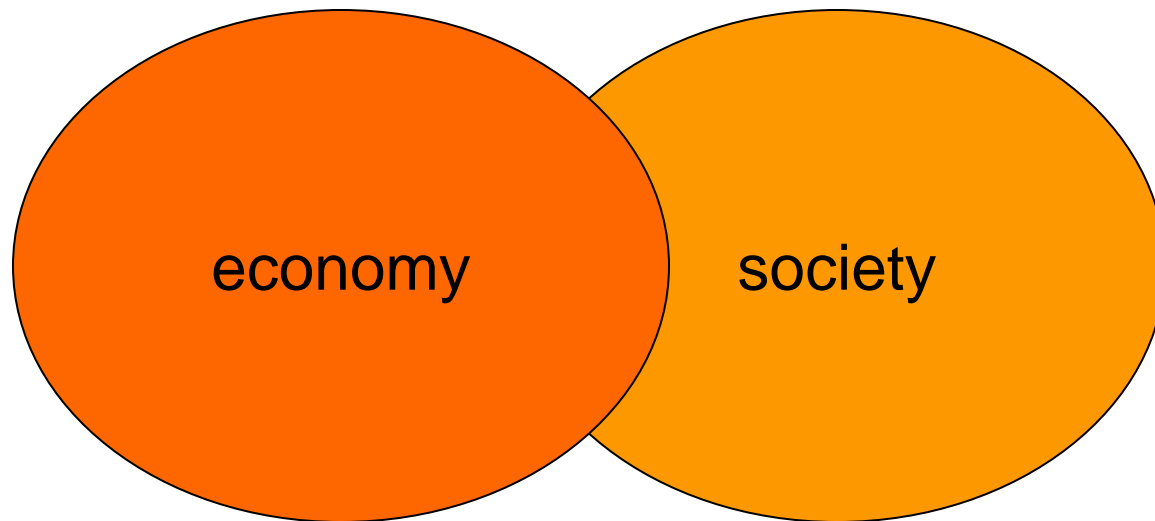
Development: Many dimensions!

- ❑ Increase in real income per capita
- ❑ A fairer distribution of income
- ❑ Opportunity to have a high paying job
- ❑ Opportunity to have a satisfying livelihood
- ❑ Improvement in health and nutritional status
- ❑ Improvement in education status
- ❑ Access to resources
- ❑ Assurance of basic human rights

Development.....

- Conventionally was about
 - Profit
 - Monetary gains
 - Higher outputs
 - Creating market and demand
 -
 -
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What is 'sustainable' development?



Defining it better

- *Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

Our Common Future - Report of the World Commission on Environment and Development, 1987

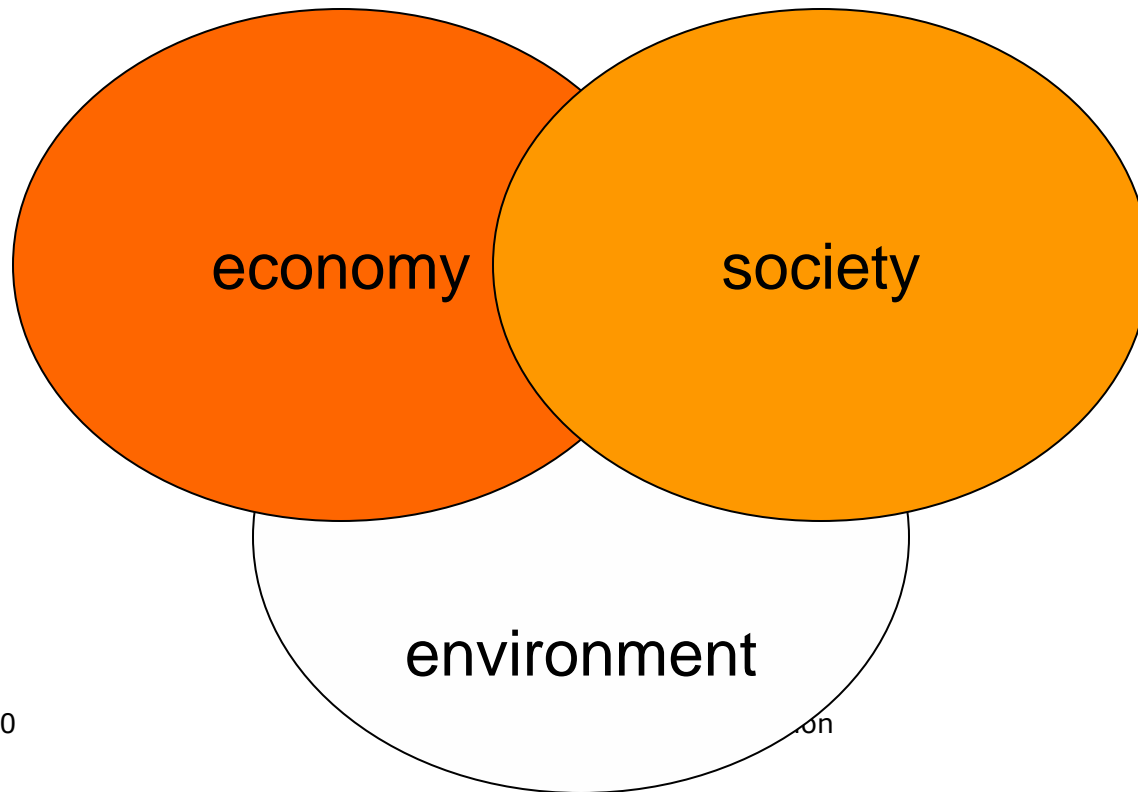
Main concepts:

'Needs' ... Development should satisfy the basic needs of people

'Equity' Development means that the basic needs of all people should be met; not just in the present, but also in the future

'Ecosystem durability'

Sustaining it!



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Dimensions of SD

- ❑ Conservation of natural resources so that they continue to provide life-support systems for all living beings, including those that sustain the economy
- ❑ People live in peace; there is equity and co-operation
- ❑ Appropriate development that recognizes links between economy and environment
- ❑ Democratic decision making over management of natural, social and economic systems

VTE

- VTE prepares the student for the world of work—developing professionals
- Can these professionals be trained to be 'sensitive and thinking professionals'?
- Professionals, who understand how their 'work' impacts the environment and vice versa

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- Perhaps, good quality of education and training can enable us to create such professionals
 - Education, which:
 - Is holistic, thus multidisciplinary
 - Is real-life based
 - Leads from theory to practice and vice-versa
 - Enables one to have an analytical view
 - Helps develop problem-solving skills
 - Facilitates learning
 - That is 'ESD'

Strengthening ESD in VTE

- ❑ **Macro level:** How can SD be anchored in the vocational education and training system?
- ❑ **Meso level:** How can SD be implemented in vocational education colleges?
- ❑ **Micro level:** Which competences ought to be promoted? What content should be educated in which form?

Macro level

- ❑ Integration of relevant topics and competences in initial training
 - *curricular competencies—environmental protection measures, minimizing waste...*
- ❑ Specialization by means of environmental occupations
 - *Green Jobs—energy efficiency in construction, organic farming*
- ❑ Additional qualifications on advanced training level (*Greening jobs*)
 - *Advance courses—service technicians for wind farms, technical consultant on environmental protection, Recycling and Waste Management Technician, etc.*

Meso Level

- In and around the institute/campuses
 - Demonstration plants for Renewable Energies in a Vocational Centre
 - The Building as a 'Teaching Resource' in a Centre of Competence for Sustainable Construction
 - A Vocational Institute on it's way to a Sustainable Training and Education Centre

Meso level: Some Examples

- ❑ *Thermal solar plant, photovoltaic plant, block heat and power-plant*
- ❑ *Wind power-plant;*
- ❑ *Using energy prudently*
- ❑ *Construction of a new eco friendly training building*
- ❑ *Measurement stations and visualisations*

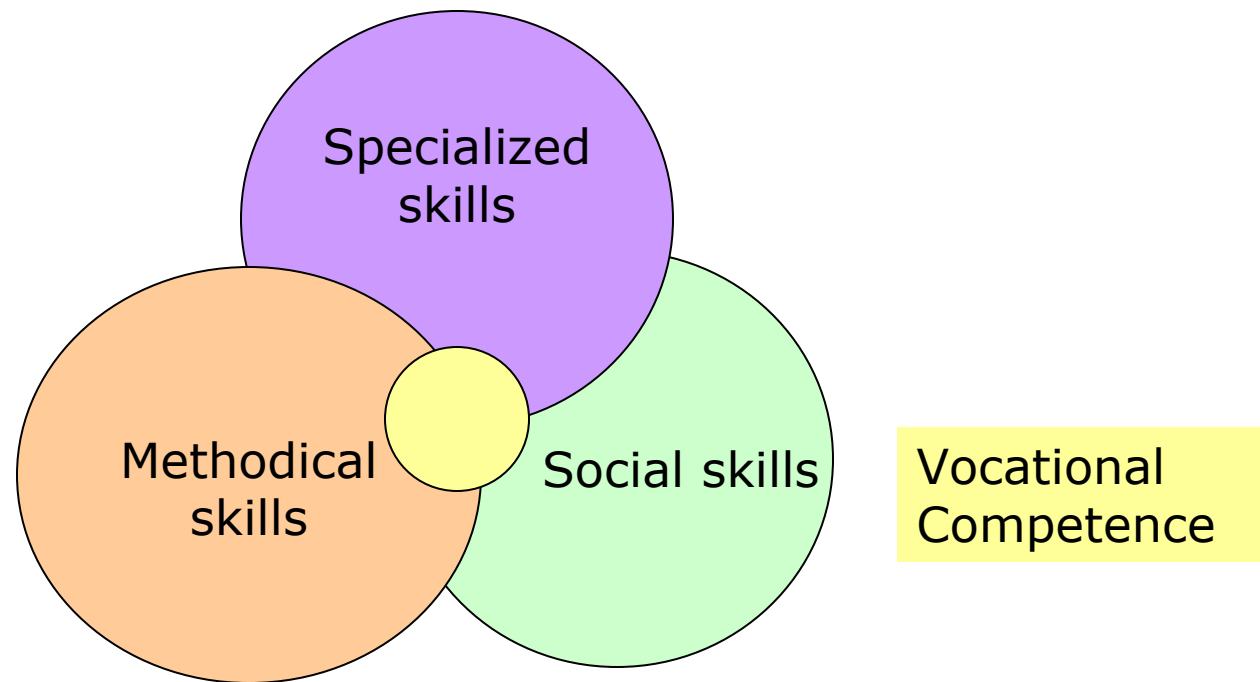
Examples: Model SD campus

- ❑ Development of profile and strategy
- ❑ Integration into the quality management system
- ❑ Well-directed use of pilot projects (production school and promotion of sustainable consumption) for sustainable college/institute development
- ❑ Involvement of all faculty members by means of projects teams and institutional events, etc.

Micro level

- Integration into subjects
- Style of teaching-learning
- Examples:
 - Social science effort within the EMF
 - Disposal of toxic waste
 - Efficient use of energy
 - Teaching learning through projects, creative workshops, simulations, investigations, etc.

A new eye!



Creating a 'thinking professional'

- Not just
 - Regulations
 - Standards
 - Norms and rules
 - Safe work environment
- But also...

Creating a 'thinking professional'

- ❑ Creativity and Innovation
- ❑ Ability to challenge and question
- ❑ Problem solving abilities
- ❑ Correct budgeting and costing; 'life-cycle' study of a product
- ❑ Sensitivity to ergonomics; Understanding users and his/her needs and rights
- ❑ An ability to seek feedback, reflect, learn and move on



Thank You