Carel Dieperink, Peter Driessen:

The development of multidisciplinary bachelor and master's programmes and the inter-linkage between research and teaching

At Utrecht University there is experience for almost 15 years with academic environmental teaching. A few years ago the traditional programmes were transformed into a bachelor masters model. Both bachelor and master programmes are multidisciplinary in nature.

We can distinguish between two bachelor programmes:

- **Environmental Science (BSc)**
- **Environmental Studies (BA)**

These programmes are taught in Dutch. In our paper we will give an explanation of the main characteristics of the programmes, the inter-linkages between them, and the organisation. Especially we will pay attention to some multidisciplinary courses and to problem solving skills.

The master's degree programme is entitled **Sustainable Development**. It's an English-taught Master's programmes with highly selective entry requirements. The masters programme is intended to produce graduates who wish to work towards an environmentally accountable society. At its core is the analysis of the changes needed to achieve such a society. Much attention is paid to how these changes can be steered locally and globally in both the short and the long term, and to research methodology.

In the first part of the programme, which is compulsory for all students, issues of sustainable development are discussed from a variety of standpoints. Students learn about the approaches used by both natural and social scientists and they have to work in multidisciplinary teams. In the second part of the programme, students choose a specialisation. The programme consists of three different tracks, allowing students to specialize in a natural-science or social-science profile, depending on their undergraduate education. The following tracks are offered:

- **Energy and Resources** The focus is on issues that have to do with sustainable use of energy and materials; the approach is based in the natural sciences.
- **Land Use, Environment, and Biodiversity** The focus is on the sustainable use of land and water; here too, the approach is based in the natural sciences.
- **Environmental Policy and Management** The focus is on steering the social changes required to achieve an environmentally accountable society; the perspective is rooted in the social sciences

The programme prepares the student for various occupations. Having earned a master's degree, one can embark upon a Ph.D. programme and go on from there to conduct scientific research. Alternatively, a master's degree provides access to academic-level positions outside the field of scientific research.In our paper we will elaborate the main characteristics of the programme and give some examples of multidisciplinary courses.

The master programme on Sustainable Development has a strong link with the research programme on environmental issues. This research programme is organised in the **Copernicus institute for Sustainable Development and Innovation**. The Copernicus Institute wants to contribute to the development of knowledge and techniques as well as methods and instruments in the field of sustainable development, taking note of related social debates and policy processes. It is the ambition of the institute to make a difference – in science and education and in society at large – in the exploration of a sustainable world. Within the Copernicus Institute there is specific attention for:

- demand, supply and use of energy and materials;
- land use, the environment and biodiversity;
- social steering and innovation.

The Copernicus Institute houses a wide range of disciplines, with researchers form the field of natural and social sciences. There is an input for physics, chemistry, biology, technology, economy, ecology, hydrology, soil science, geography, environmental science, innovation science, sociology, policy science, business studies, and philosophy of science. The researchers of the Copernicus Institute perform also as lectures in the teaching programmes.