

European Network on Education and Training in Renewable Energy Sources (EURONETRES)

The EURONETRES has been planned as a regional voluntary cooperative framework, uniting academic institutions of the European countries, interested in the capacity building on RES¹ at national and regional levels and in particular, in education and training of specialists in RES for the extended use of RES in Europe as well as in other regions of the World.

EURONETRES has been foreseen as an integral part of the Global Renewable Energy Education and Training (GREET) Programme of UNESCO, which is a priority area of the Organization’s actions in the field of engineering sciences and RES as approved by the 32nd Session of the UNESCO’s General Conference, which took place in September-October, 2003 in Paris, France. The Network will be sponsored by UNESCO through the UNESCO Office in Venice – Regional Bureau for Science in Europe (ROSTE).

- A member of the Working Group is nominated by the Steering Committee {or the Executive Committee} as coordinator of the Group, with the responsibility to coordinate and to operate the Working Group, in consultation with the Executive Committee
- The Working Groups can invite experts in RES from institutions which are not members of the EURONETRES



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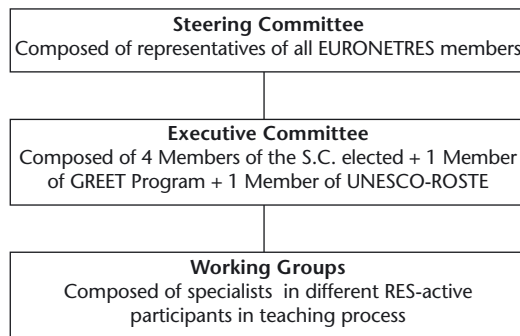


Figure 1 (above)
EURONETRES Structure

Members of the Network

The membership of the Network is open for educational-R&D institutions in Europe, which have a certain experience in RES education and training and have the intention to share this experience with partners, to contribute to the improvement of educational process on RES and to undertake new initiatives in this particular field. The membership of EURONETRES should be confirmed by the directorates of those institutions which also nominate their official representatives in the Network, one representative from each institution.

Working Groups Composition

- A Working Group is composed by specialists in the specific field, members of the EURONETRES Institutions

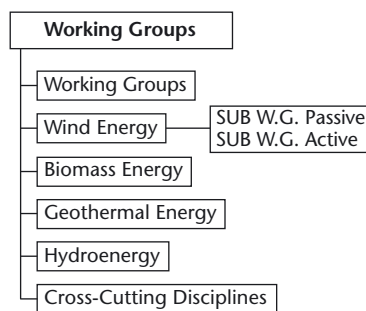


Figure 2
Structure of Working Groups

The Education Levels of EURONETRES

- A. University Level Education
 - A.1. Undergraduate Education
 - A.2. Postgraduate Education
- B. Retraining Education for Diploma Holders
- C. Technicians Education and Retraining (or Specialisation)

¹ RES = Renewable Energy Sources

- D. Students Education in Primary and Secondary Schools
- E. Mass Media for Initiation – Education of the Citizens on RES

EURONETRES will be activated progressively into the different levels of Education. The time to initiate the Education in the various levels will be decided by UNESCO. The modalities and the content of the Education in the various levels will be elaborated and decided by EURONETRES. The University level education will be the first to come in action, because the other levels need larger number of specialists to educate the educators.

A. University Level Education

A.1. Undergraduate courses on RES

Taking into account the differences in knowledges needed in the various University Departments (Department of Engineering, Department of Sciences, Department of Economics, Department of Social Sciences, etc), it is necessary to facilitate the responsible Departments to adopt the appropriate content of their courses to RES. The opportunity will be given by the elaboration of the program of studies followed by text books CDs, elaborated from the working groups (eg. basic knowledge, solar energy courses, biomass energy courses, the economics and social aspects of RES, the environmental aspects of RES, etc.). The responsible professors and other teaching staff in a Department have to adopt the EURONETRES material as a minimum for their students.

Advantages from the Adoption of the Undergraduate EURONETRES Education

- The students who have passed the examination in a specific course, prepared by the Working Groups, will obtain a specific Certificate of 2nd cycle by the Department. This Certificate will be valid for all the Universities participating in the EURONETRES. Thus, among other things, the students will be facilitated in their mobility within EURONETRES Universities (stimulation of cooperation and mobility).
- The Engineers or other scientists who obtained their diploma from their University and in parallel have earned a number of Certificates

on RES, will have the advantage to find more easily a job related to RES.

- Other advantages for the Universities to adopt the common rules for such Certificates, are coming from the fact that there are normally very few Universities that can offer courses for ALL THE RES, so, if they participate in EURONETRES, their students can collect Certificates in different disciplines (Solar, Wind, Geothermal, Hydro, Biomass Energy and also Economic, Social and Environmental aspects of RES) from other Faculties/Universities participating in EURONETRES (accredited Certificates).
- Another very important advantage is that the Diploma holders can participate in a specialization (retraining procedure) on RES, collecting Certificates from different EURONETRES Universities and so, they will create new opportunities to find jobs as specialists. That will be valid not only for EUROPE (the job creation is stemming from the targets adopted by the E.U. towards RES), but also worldwide.
- The EURONETRES Universities are expected to accept many engineers and other Diploma holders from other parts of the world, to be specialized on RES.
- Moreover, students who have obtained one or more Certificates and their normal Diploma and wish to continue their studies for a M.Sc degree will be more easily accepted in a EURONETRES University.

A.2. Postgraduate Education on RES

An assessment, made under the initiative of UNESCO/ROSTE, showed that there are only a few (2–3) cases in Europe, where there are pure Postgraduate studies, in the level of MASTER on RES. On the other hand there is a huge demand, already established, from private companies and research centers for highly specialized engineers and other scientists on different sectors of RES. This demand will become higher and higher in near future. A higher demand is expected also in the developing countries and in the International Organisations dealing with RES.

The wish of UNESCO, adopted from EURONETRES, is to elaborate and to adopt common rules and common content of

studies at a HIGH LEVEL. Only those Departments which are able to fulfill the rules and requirements and dispose the necessary facilities for one or more postgraduate studies in specific disciplines of RES (Solar, Wind, etc) will be accepted to the common effort in EURONETRES.

The Working Groups will elaborate dynamic curricula and the requirements needed for each discipline (Solar, wind, etc.).

The Postgraduate Diploma (Master) given from a Department under the common rules and conditions, will be equal for all the Universities of EURONETRES. The Departments wishing to participate in EURONETRES but do not fulfill all the requirements concerning the teaching staff, the Practice and Laboratory facilities, can elaborate and present a cooperation agreement with other Departments, by visiting professors and research laboratories in the same country or within other countries.

The Working Groups will evaluate the demands from the departments and will propose to the Executive Committee of EURONETRES for the final decision. The evaluation of the students and their final examination will be done under STRICT RULES, that the Working Groups will elaborate and the Steering Committee will adopt, in order to guarantee the objectivity about the merit of the Master of Science or Diploma. The Diploma of MSc will be awarded from the Universities concerned, but will be accompanied with a separate Certificate from the Executive Committee of the EURONETRES and so the MSc Diploma will be equivalent in all WORLDNETRES members.