

2. *Telecommunications*

RACE: (Research in Advanced Communications for Europe)

Its aim is to develop technologies and standards needed for the future broadband integrated network - with a budget of 550 million ECUS (over \$700 million Canadian) for the 1987-1991 period. It will concentrate on high speed integrated circuits, integrated opto-electronics wideband switching (synchronic/asynchronic). *RACE* has currently 88 projects under way.

3. *Development of Telematic Systems in Areas of General Interest*

This new activity is of prenormative research character. A limited number of experimental development activities concerning the validation of common functional specifications will ensure interoperability of systems, peripherals and telematic networks at trans-European level.

B. *Industrial and Materials Technologies*

The EC has currently one program of 500 million ECUS (1989-1992) called *BRITE-EURAM* which regroups two programs as both had the same objective: to contribute to the rejuvenation of the European manufacturing industry by strengthening its scientific base. This program is a combination of *BRITE* (New Technologies for Manufacturing Industries) which was adopted in 1985 and carried 224 projects, and *EURAM* (European Research in Advanced Materials) adopted in 1986 and financed 84 projects.

The JRC will contribute to this work, especially on the prenormative aspects on advanced materials, the preparation of nuclear and non-nuclear reference materials.

SECOND THEME: MANAGEMENT OF NATURAL RESOURCES

1. *Environment and Marine Sciences and Technologies*

The EC has set up two research programs: *STEP* (Sciences and Technology for Environmental Protection) with a current budget of 75 million ECUS for the 1989-1992 period and; *EPOCH* (Climatology and Natural Hazards) with a budget of 40 million ECUS for the same period. The new Framework Program has more than doubled the current budget for environmental research. The 1990-1994 period budget is 514 million ECUS.

The Environment Institute of the JRC will also contribute to research in the environmental sector. A close cooperation exists between the JRC and the European Space Agency on the application of remote sensing to these environmental problems, as well as with *EUREKA* in the frame of the *EUROTRAC* project.

2. *Life Sciences and Technologies*

The EC has a long-term strategic objective which is to develop European potential for understanding and using the properties and structures of living matter. The programs are as follows:

(a) *Biotechnology*

The *BAP* program (Biotechnology Action Program) came to a close in 1989. The *BRIDGE* program, with a budget of 100 million ECUS for the 1989-1995 period is its successor with very similar objectives. However, it is expected that both budget and goals of the *BRIDGE* program will be expended in light of the new Framework Program with a special concern attached to ethical implications and their relevance to industry.