

### 3.14 SPAIN

**S**pain is the second largest country in Western Europe whose major urban areas are Madrid, Barcelona, Valencia, Sevilla and Bilbao. GDP has been growing at 5% per annum. In real terms, the population is 38,996,000. ● ●

Key industrial sectors are automotive, capital equipment, steelmaking, mining, food processing, electric power, electronics and computers, engineering and construction, petrochemicals and textiles.

In 1988, expenditures on R&D equalled 311.800 million Pesetas (0.8 per cent of GDP). The Spanish government is aiming at an increase in R&D equivalent to 0.1% of GNP annually in order to reach a total of 1.2% of GNP in 1991.

Distribution of expenditure by type of research is approximately as follows: 20% on basic research; 35% on applied research and 45% on technological development.

#### TECHNOLOGY TRENDS/STRENGTHS

In 1987, the Spanish government announced the first national plan for scientific research and technological development (1988-1991). The Spanish government targets under the plan are implemented by means of national programs which interact with the sectoral and regional programs. Priority areas are:

- Horizontal Programs: Training of R&D Staff, interconnection of information networks, communications and production technologies, micro-electronics, new materials, robotics, information and communication technologies, space.
- Natural Resources, Agricultural and Food Technologies: agriculture, stockbreeding, aquaculture and marine resources, geological resources, food technologies, environmental, forest systems and their preservation.
- Quality of Life: biotechnology, health, pharmaceutical research, social aspects of science and technology, special programs, high energy physics.

#### KEY ORGANIZATIONS

These include:

- *The General Secretariat of the R&D National Plan.* Its objectives are: co-ordination of the programs and activities of the National Plan, technical and budgetary management; Administration of the Plan. It is also responsible for monitoring and co-ordinating the initial R&D programs in which Spain participates. It collaborates with the Spanish organizations involved in scientific co-operation with other countries and co-ordinates Spanish participation in important European research programs.