



## 5.5 AUSTRALIA

**A**ustralia's gross domestic product (GDP) in 1987-88 stood at A\$292 billion (C\$260 billion). Real GDP growth in 1987-88 was 3.6 percent. The country spends about 1.2 percent of its GDP on R&D with industry contributing about 37 percent. ● ●

Australia has one of the largest livestock industries and is the world's leading supplier of wool, accounting for about 50 percent of international wool exports. Metal and mineral exports account for more than 28 percent of export earnings. Manufacturing accounts for about 17 percent of GDP.

International trade accounts for about 28 percent of Australia's gross domestic product. On a composition of trade basis, agricultural product exports constitute 25 percent of total export values and minerals another 24 percent.

### TECHNOLOGY TRENDS

The announced priority of the government is to internationalize Australian industry and research. The thrust of its R&D policy is to improve the competitiveness of Australian firms by increasing their productivity. It is promoting strategic alliances, research collaboration, methods to restructure its mature industries (mining, agriculture and heavy manufacturing), and developing new industries in information technologies, aerospace, biotechnology and environment.

### TECHNOLOGY STRENGTHS

Australia is prime supplier of Zirconia powders, rare earths, gallium and silicon metal. There are also developments in ceramics (based on Zirconia). There are 30 university departments and 30 in government doing R&D in new materials. In agriculture, biotechnology is playing a strong role in developing new strains of plant products and in animal virus control. Food processing is also a strong sector for innovation.

In minerals and metals processing, new techniques for smelting are being developed.

In the newer industries, innovation is strongest in the information technology field, particularly in software and communications. Telecom Australia, the Overseas Telecommunications Corporation and several private sector firms and universities are developing capabilities in optoelectronics and integrated services digital networks (ISDN).

### KEY ORGANIZATIONS

These include:

- CSIRO: similar to Canada's NRC, primarily concerned with developing new technologies primarily in Agriculture and Food, Minerals and Energy, and Manufacturing industries.
- DSTO: Primary interest in technology for the defence industry
- DITAC: Industry development - industry patent Office and support program for R&D program and international co-operation
- TELECOM: Large R&D program for Telecommunications research: ISDN, Optical Fibre.
- OTC: Large R&D program in transmission, networks and applications. Strengths in optoelectronics and satellite communication. Latter shared with AUSSAT, the Australian Satellite Organization (public company).