

# **VOTE** *Research, Science and Technology*

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## Footnote

**Note 1** Appropriation numbers in Part B are inclusive of GST (where applicable).

## *Research, Science and Technology*

VOTE MINISTER: Minister of Research, Science and Technology

ADMINISTERING DEPARTMENT: Ministry of Research, Science and Technology

The Minister of Research, Science and Technology is the Responsible Minister for the Ministry of Research, Science and Technology

### Part B - Statement of Appropriations (see note 1)

#### Summary of 1999/2000 Appropriations

Types of Appropriation	Appropriations to be Used				Total Appropriations \$000
	By the Department Administering the Vote		For Non-Departmental Transactions		
	Annual \$000	Other \$000	Annual \$000	Other \$000	
<b>Operating Flows</b>					
Classes of Outputs to be Supplied	5,861	-	424,443	-	430,304
Benefits and Other Unrequited Expenses	-	-	-	-	-
Borrowing Expenses	-	-	-	-	-
Other Expenses	-	-	86	-	86
<b>Capital Flows</b>					
Capital Contributions	-	-	-	-	-
Purchase or Development of Capital Assets	-	-	-	-	-
Repayment of Debt	-	-	-	-	-
<b>Total Appropriations for 1999/2000</b>	<b>5,861</b>	<b>-</b>	<b>424,529</b>	<b>-</b>	<b>430,390</b>
<b>Total 1999/2000 Main Estimates Appropriations</b>	<b>5,921</b>	<b>-</b>	<b>420,328</b>	<b>-</b>	<b>426,249</b>

## Part B1 - Details of 1999/2000 Appropriations

Appropriations	1999/2000						Purpose of and Reasons for Change in 1999/2000 Appropriations
	Main Estimates		Supplementary Estimates		Cumulative Vote		
	Annual \$000	Other \$000	Annual \$000	Other \$000	Annual \$000	Other \$000	
<b>Departmental Output Classes (Mode B Gross)</b>							
D1 Science and Technology Policy Advice	5,348	-	(60)	-	5,288	-	Provision of research, science and technology policy advice, including the rationale and strategy for the Government's investment, the performance and integration of the total science and technology system, technical scientific advice and the provision of ministerial services. The Supplementary Estimates adjustment provides for the transfer of \$0.060million to Vote Environment to administer the National Science Strategy for Climate Change.
D2 Management of Contracts for Non-Departmental Outputs	573	-	-	-	573	-	Contract negotiation and management for non-departmental outputs, including policy advice, contract management for science and technology outputs, public good science and technology, non-specific output funding, promotion of technology for business growth, the Marsden Fund, promotion of science and technology, science and technology publications, international science and technology linkages, national measurement standards, and human resource development for science and technology, creating innovation opportunities.
<b>Total Appropriations for Departmental Output Classes (Mode B Gross)</b>	5,921	-	(60)	-	5,861	-	

Non-Departmental Output Classes							
O1 Contract Management for Science and Technology	9,111	-	250	-	9,361	-	Contract management for science and technology, including public good science and technology, non-specific output funding, health research, promotion of technology for business growth, the Marsden Fund, promotion of science and technology, human resource development and international science and technology linkages. The Supplementary Estimates adjustment provides for an additional \$0.250 million (transfer of \$0.200 million from Promotion of Science and Technology and \$0.050 million from International Science and Linkages) for increased outputs from Royal Society New Zealand.
O2 Creating Innovation Opportunities	5,625	-	-	-	5,625	-	Purchase of outputs which will generate diverse knowledge and technologies for enabling new knowledge-based business.
O3 Enhancement of Technological Innovation in Enterprises	13,694	-	2,500	-	16,194	-	Promotion of technology for business growth outputs that motivate and enable investment by enterprises in technological innovation. The Supplementary Estimates adjustment provides for an increase of \$2.500 million to meet additional demand in the Technology for Business Growth programmes.
O4 Human Resources Development for Science and Technology	5,235	-	-	-	5,235	-	Enhancement of the human resource base in science and technology to ensure that young researchers of outstanding talent have the opportunity to pursue careers in New Zealand through the provision of post-doctoral fellowships.
O5 International Science and Technology Linkages	1,038	-	(50)	-	988	-	Development and enhancement of international science and technology linkages in support of strategic science and technology objectives or in support of trade and diplomatic objectives. The Supplementary Estimates adjustment reflects savings due to a reduced number of Ministerial overseas science delegations.
O6 Marsden Fund	22,839	-	-	-	22,839	-	Research outputs which broaden and deepen the research skill base and support excellent research in New Zealand, regardless of whether the research contributes to the Government's socioeconomic priorities.
O7 Non-Specific Output Funding for Public Good Science and Technology	26,766	-	-	-	26,766	-	Public good science and technology not bound by the priorities for the Public Good Science and Technology output class.
O8 Policy Advice on Science and Technology	400	-	-	-	400	-	Provision of policy advice at the request of the Minister of RS&T on matters relating to research, science and technology, including science priorities, and the provision of ministerial services.

## Part B1 - Details of 1999/2000 Appropriations (continued)

Appropriations	1999/2000						Purpose of and Reasons for Change in 1999/2000 Appropriations
	Main Estimates		Supplementary Estimates		Cumulative Vote		
	Annual \$000	Other \$000	Annual \$000	Other \$000	Annual \$000	Other \$000	
<b>Non-Departmental Output Classes - cont'd</b>							
O9 Promotion of Science and Technology	3,511	-	1,515	-	5,026	-	Promotion of values and attitudes supportive of science and technology through promotion activities, provision of fellowships, targeted initiatives, the contestable funding of projects, the provision of public astronomy services, and education outputs. The Supplementary Estimates adjustment provides for an increase of \$1.701 million from Vote Education to fund an increased number of Science, Mathematics and Technology Teacher Fellowships, transfer of savings from Convention du Metre of \$0.014 million, and offset by a transfer of \$0.200 million to Contract Management for Science and Technology.
O10 Provision of National Measurement Standards	4,557	-	-	-	4,557	-	Provision of specified standards to satisfy the needs for traceable physical measurement in New Zealand.
O11 Public Good Science and Technology	326,985	-	-	-	326,985	-	Public good science and technology, which is subject to priorities set by the Government.
O12 Science and Technology Publications	467	-	-	-	467	-	Publication of the results of publicly-funded science and technology.
<b>Total Appropriations for Non-Departmental Output Classes</b>	420,228	-	4,215	-	424,443	-	

<b>Other Expenses to be Incurred by the Crown</b>							
Convention Du Metre	100	-	(14)	-	86	-	Payment of New Zealand's assessed subscription to the Convention du Metre in accordance with Cabinet directives. The Supplementary Estimates adjustment reflects savings due to a favourable exchange rate.
<b>Total Appropriations for Other Expenses to be Incurred by the Crown</b>	100	-	(14)	-	86	-	
<b>Total Appropriations</b>	426,249	-	4,141	-	430,390	-	

## Part C - Explanation of Appropriations for Output Classes

### Part C2 - Non-Departmental Output Classes

#### *Output Class O3 - Enhancement of Technological Innovation in Enterprises*

The Scheme comprises three sets of programmes - TechLink, Technology for Business Growth and Graduates in Industry Fellowships - recognising distinct rationales for government investment. Overall the intended outcome of the Technology New Zealand scheme is an increased ability by enterprises to adopt new technology and apply technological learning and innovation for business growth.

The programmes are:

- TechLink - this programme creates awareness of new technology by enterprises by providing a range of promotion and technology guidance services.
- Technology for Business Growth - this programme fosters research and development, technological learning and technological innovation by part-funding projects designed to motivate and enable enterprises to undertake a technology-based project.
- Graduates in Industry Fellowships - this programme supports science and technology based projects carried out by senior undergraduates to post-doctoral fellows within enterprises.

#### **Providers**

Organisations involved in delivery or administration of technology-related services to firms.

#### **Quantity, quality, timeliness and cost**

##### Quantity

Outputs will be in accordance with the relevant ministerial instructions, terms of reference and/or purchase agreements relating to schemes. Indicative numbers of contracts for key schemes are:

Programme	Estimated Number of Contracts	
	1999/00	1998/99
TBG	up to 300	up to 150
Graduates in Industry Fellowships	up to 75	up to 75
TechLink	up to 175	up to 175



### Quality and Timeliness

An increase in the level of technological capability of enterprises will be measured annually and demonstrated by:

- their level of awareness and understanding of the role of technological innovation,
- the acquisition of and intent to apply technology,
- the enterprise investment in technology-based human resources.

### Cost

1999/00	Total output class to be provided within (GST inclusive)	\$16,194,000
1998/99	Total output class to be provided within (GST inclusive)	\$15,472,000

## *Output Class O9 - Promotion of Science and Technology*

### **Description**

The Minister will purchase from providers, projects and activities aimed at promoting values and attitudes supportive of science and technology as critical to future prosperity, and of science as having cultural value in its own right. This includes ongoing development of strategies to coordinate science and technology promotion activities, including those within the non-departmental output class. For 1999/2000 new activities will include application of media-related resources by science and technology communicators to increase awareness of their own activities and coordinate with related activities and events.

Outputs within this output class will comprise:

- ongoing development of coordination and resources for the promotion of science and technology,
- fellowships awarded to researchers who are recognised leaders in their respective fields, one of which shall be in the social sciences (James Cook Fellowships),
- programmes aimed at improving science and technology education and careers advice (including the Science, Mathematics and Technology Teachers Fellowships),
- masterate and doctoral research projects by Māori students, to create positive role models for Māori at school and undergraduate levels (Māori Science and Technology Fellowships),
- public lectures and debates on scientific and technological topics (Science Promotion through the Royal Society of New Zealand),
- public astronomy information services, and maintenance and display of astronomical heritage material, including the provision of access to selected archives to researchers (Science Promotion through the Carter Observatory).

### **Providers**

The Foundation for Research, Science and Technology, the Royal Society of New Zealand, Carter Observatory Board and individuals and organisations involved in science and technology promotion and education.

## Quantity, quality, timeliness and cost

### Quantity

The number of contracts for significant programmes is estimated as follows:

Programme	Estimated Number of Contracts	
	1999/00	1998/99
James Cook Fellowships	5 - 7	approximately 6
Science, Mathematics and Technology Teacher Fellowships	up to 45	up to 25
Tuapapa Putaio Māori Fellowships	up to 20	up to 20
Science and technology promotion projects	up to 25	up to 25

### Quality and timeliness

Performance indicators will include:

- an increase in public awareness about science and technology in general, but particularly amongst programme target groups - students making career choices, parents, teachers, Māori, enterprise managers,
- an increase in the number of students choosing science and technology subjects, and science and technology-related careers,
- an increase in investment in science and technology skills by firms, and in science and technology promotion, by science and technology enterprises and institutions.

### Cost

1999/00	Total output class to be provided within (GST inclusive)	\$5,026,000
1998/99	Total output class to be provided within (GST inclusive)	\$3,711,000