

**139th Assembly of the Inter-Parliamentary Union
Geneva, Switzerland**

General Debate

**Contribution by Senator the Hon Ian Macdonald, Leader of the Australian
Delegation**

*Parliamentary leadership in promoting peace and development in the age of
innovation and technological change*

Madam President, fellow delegates

Australia has a long and proud history of innovative scientific and technological achievements which have benefited not only the citizens of our country, but have made a contribution to the lives of people worldwide.

Australian scientist Howard Florey's joint development of penicillin with Ernest Chain and Alexander Fleming is estimated to have saved over 200 million lives in the 20th Century. Scientists at La Trobe University successfully built and tested the bionic ear in 1978, which has allowed over 200,000 people to hear and speak, and by doing so brought people, and therefore our societies, closer together by removing obstacles for communication and participation.

Indeed, many of Australia's inventions, including wifi, ultrasound scanners and black box flight recorders, have driven positive change in our societies, but today I wish to speak about the role that science and technology must have in the future, to support development and promote peace.

The National Innovation and Science Agenda is the Australian Government's policy which sets out a vision for Australia's future economic prosperity to be driven by embracing innovation in science and industry. As a member of the global community, Australia recognises that there are challenges to developing our nations in ways that are sustainable and that offer the benefits of scientific development and technological advances to all people.

We know that we can promote peace by the continued sharing of innovation and technological change, and a willingness to work together.

Science, technology, engineering and mathematics—what we refer to as STEM skills—are widely expected to play a central role in the future Australian and global economy. It is estimated that approximately 50 per

cent of economic growth in OECD countries can be attributed to innovation, a contribution that is expected to grow.¹

Australia's Parliament recognises that STEM capabilities will be essential as technology becomes more advanced and more complex.

Australia is focusing investment and activity on some specific areas, to boost innovation and science through the national innovation and science agenda, the digital economy, space industry, resources sector, industry growth centres, trade policy, international collaboration, growing northern Australia, simplifying business and advancing the role of women in business, industry, innovation and science.² We know that international collaboration, in particular, is an important part of promoting peace and development.

We are investing \$15 million to enable the Australian Space Agency to partner with international space agencies on strategic projects.³

¹ Innovation and Science Australia (ISA), [Performance review of the Australian innovation, science and research system](#), 2016, p. 104.

² Department of Industry, Innovation and Science (DIIS) website, '[Strategies for the future](#)'.

³ [Australian Government response to the review of Australia's space industry capability](#), 2018.

The Australian Parliament recently passed legislation to provide a regulatory system better suited to future innovations and technological changes in this sector.⁴

Australia supports collaboration in STEM areas in the Asia-Pacific, India and China. These programs aim to boost collaboration on focused areas and promote scientific and technological cooperation with these nations.

Cooperation in research and innovation between Australia and the European Union is strong, with over 150 instances where Australian entities have participated in research projects through the EU's Horizon 2020 Framework Programme.⁵

Australia is working hard to attract more women to careers in STEM—with women making up only about 16 percent of the total STEM workforce.⁶

The Australian Government hosts an Industry Innovation and Science Advisory Roundtable to provide advice on how policies and programs can optimise women's participation and impact, and supports the

⁴ See the [Space Activities Amendment \(Launches and Returns\) Act 2018](#).

⁵ Delegation of the European Union to Australia, '[Horizon 2020 events to strengthen EU-Australia research cooperation](#)', media release, 27 March 2018.

⁶ Office of the Chief Scientist, [Australia's STEM workforce](#), March 2016, p. 10.

Women in STEM and Entrepreneurship grants program for research organisations or education providers to increase participation of girls and women in STEM.

Australia is responding to the continued growing demand for nutritious food in both our domestic and global markets. Of particular concern are the growing constraints in soil and water resources, both in Australia and across the world. This is why Australia supports research to understand drivers of global demand, to increase the efficiency of food supply chains, and tailor agricultural exports to our customers overseas. Further investments have been made in the use of sensors, robotics and real-time data systems to support more efficient food production.

Australia's foreign policy recognises that increasing populations and climate change will place pressure on food demand, and this poses risks to future prosperity and stability.⁷ Australia makes a significant contribution to agriculture and food security through investment in international aid, focusing on strengthening markets; innovating for productivity and sustainable resource use; and promoting effective policy, governance and reform.

⁷. DFAT website, '[Overview of Australia's assistance for agriculture and food security](#)'.

The Australian aid program contributes to APEC Secretariat-managed project funding, targeting supply chain connectivity, structural reform and other high APEC priorities.⁸ Australia has run country-specific programs such as the Australia-Indonesia Partnership for Rural Economic Development; the Cambodia Agriculture Value Chain Program and the Pacific Horticultural and Agricultural Market Access Program.

Australia contributes to alleviation of poverty and hunger by supporting the United Nations and its specialised agencies such as the UN Food and Agriculture Organization and the World Food Programme, as well as the World Bank.

But what can parliamentarians do to ensure that legislation, regulatory frameworks, and policy settings all work in a way that supports the kind of development that we need? Good policies and laws rely on good advice. The Australian Parliament has the benefit of advisory bodies and other resources to ensure that we can base our decisions on sound advice.

⁸ DFAT, '[Asia-Pacific Economic Cooperation \(APEC\)](#)', DFAT website.

The Commonwealth Science Council and Innovation and Science Australia are the government's two major advisory bodies for science policy.⁹

STEM professionals have opportunities to interact directly with parliamentarians and other decision makers through the Science meets Parliament, Science meets Business, and Science meets Policymakers initiatives.

By using the powers that parliamentarians have, in our plenary debates and through our law making powers, through the scrutiny of legislation and in our committee and inquiry work, we must ensure that the decisions we make encourage policies based on evidence, and that our regulatory settings support innovations while at the same time providing adequate protection for our citizens.

⁹. The Commonwealth Science Council, chaired by the Prime Minister, connects academic and business leaders with government ministers, with the Chief Scientist as Executive Officer.