



# BLUE HELMETS AND WHITE LAB COATS: SCIENCE AND INNOVATION AS A FOREIGN POLICY PRIORITY FOR CANADA

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## Global Problems and Canada's Role

Fighting disease and improving health in the developing world, where almost ten million children die each year before their fifth birthday and where almost a billion people go hungry every day, poses enormous challenges. Climate change can only make these problems worse, threatening human health, agricultural production, and leading to a greater number of extreme weather events that threaten communities.

At the same time, the emergence of the G20 as the new institution for global governance signifies in a dramatic way the transition from a Western-dominated world to a new global community. It underlines the reality that the world is faced with the urgent need to manage its affairs and solve its problems in an increasingly concerted way. This new world is forcing Canadians to redefine their global role.



Canadians, for their part, are eager to play a role in helping the world deal with its problems; indeed, Canadians are most relevant to the world when they are helping to solve the world's big problems. This capacity for leadership, to articulate a compelling vision and guide its implementation, has ensured our influence in the G7/G8 and will continue to do so in the new forum of world leaders, the G20. At the same time, the Canadian value system embraces a wider Canadian role in the world, employing our wealth, people, and knowledge to solve problems.

Today, many Canadians are looking for ways to reinvigorate Canada's role in making the world a safer, more prosperous, sustainable, and equitable place. By leading the way we can also help ourselves: Canada can only succeed as part of the global community. The threats of SARS and H1N1, and the global spread of HIV/AIDS show how quickly disease can jump from continent to continent. The impact of the global economic crisis on Canada, in lost jobs and failed businesses, shows that, despite our own solid performance since the mid-1990s in restoring fiscal health, balancing budgets, and significantly reducing public debt, as well as ensuring a high quality of domestic financial regulation, we are still vulnerable to events outside our borders. There are no safe havens in the twenty-first century.

In short, Canadian foreign policy is looking for a new vision, an opportunity that will engage Canadians and that reflects our abilities and interests. Canadians have a long history of seeking to make a safer and more equitable world, using their wealth and knowledge to back this up. Fifty years ago, we did this through peacekeeping—recognized by the awarding of the Nobel Peace Prize to Lester Pearson. But that was over half a century ago. We have, of course, had successes since—the Kimberly process on blood diamonds, the international treaty on landmines, our support for the International Criminal Court, our advocacy of the responsibility to protect, and our perseverance in establishing a G20 of global leaders.

But as we head into the next decade of the twenty-first century we need a coherent and compelling new vision for our foreign policy—one that combines our self-interest and our desire to help achieve a better world.

Solutions to global health, food security, energy security, and climate change will require major advances in science and technology and significant innovation in our institutional arrangements. These are areas where Canada can make a significant contribution and, by making these contributions, inspire Canadians and expand our relevance and influence in the wider global community. A compelling proposal is that Canada's contribution to a better world, and our brand identity, should be to help other countries address global challenges using science and innovation.



## Leveraging Canada's Assets and Comparative Advantage

In June 2006, the Council of Canadian Academies produced a report entitled *The State of Science and Technology in Canada*, which identified four clusters of Canadian science and technology strengths as judged against international standards of excellence:

- the natural resource sector;
- information and communications technologies;
- health and related life sciences and technologies;
- environmental science and technology.

The commitment and leadership to utilize these capabilities to support global development could become a new and fundamental focus for Canadian foreign policy. Our value proposition would be that Canada helps solve global challenges using science. We do so both directly and indirectly by helping developing countries solve their problems with science. No other country projects this priority or role as a central plank in foreign policy. This would give Canada a distinctive image in the world. It would be a "cool" brand for a "cool" Canada.

This opportunity to lead is especially relevant in the context of the Millennium Development Goals. These eight big goals, to be achieved by 2015, were adopted at the UN Millennium Summit in September 2000. Five of these goals fit well with Canada's scientific capabilities. These are to:

- eradicate extreme hunger and poverty;
- reduce childhood mortality;
- improve maternal health;
- combat HIV/AIDS, malaria, and other diseases;
- ensure environmental sustainability.

These are challenges that will continue to confront the world for the next several decades.

Mobilizing our scientific and institutional capabilities to help overcome some of the world's most difficult challenges can represent a significant reorientation of Canadian foreign policy, one that can inspire Canadians of all ages, bring real gains to the developing world, and build new bridges between the wealthy North and the global South. This could be a unique niche for Canada, one in which we can lead the way and inspire other nations to join in.



Canada has a credible base of development institutions from which to embark on this new foreign policy. We have the International Development Research Centre (IDRC), not widely known in Canada but respected in the developing world, whose tag line is “science for humanity.” Created in 1970 by Parliament as a Crown corporation, IDRC helps “developing countries use science and technology to find practical, long-term solutions to the social, economic, and environmental problems they face.” With a budget of \$217 million, including an annual appropriation of \$158 million from Parliament, IDRC resembles a US foundation. But it is unique amongst public institutions delivering official development assistance.

More recently, in its 2008 budget, the Government of Canada announced an initial \$50 million to establish a Development Innovation Fund. Its mandate is to “create breakthrough discoveries with the potential to significantly improve the lives of millions in the developing world.” As the budget stated:

When Sir Frederick Banting and Charles Best isolated insulin in 1921, they transformed the lives of Canadians and people around the world. Similarly, today, scientific innovation has the potential to improve the lives of the world’s poor. For example, new vaccines and cures could save millions of lives lost to tropical diseases. Higher-yield, drought-resistant crops could prevent future famines. And lower-emission energy sources could power industrial development and job creation with a minimal carbon footprint....The fund will support the best minds in the world as they search for breakthroughs in global health and other areas that have the potential to bring about enduring changes in the lives of millions of people in poor countries.

A substantive initiative will also require cooperation between domestic science agencies and international development agencies. In Canada, in the area of health, this has already occurred through the Global Health Research Initiative (GHRI), which is a partnership among Health Canada, the Canadian Institutes of Health Research, the International Development Research Centre, the Canadian International Development Agency (CIDA), and the Public Health Agency of Canada (PHAC). It “promotes Canada-South collaborations—engaging health research and health system stakeholders in partnerships to develop new knowledge to strengthen LMIC [low and middle income countries’] health systems and build global health research capacity in developing countries and in Canada.” GHRI also provides an example of how innovation is not only technological but also extends to social innovation, in this case with its focus on health systems.

In the new foreign policy initiative, the goal would be to utilize Canadian scientific and institutional capabilities, along with those of other nations and foundations such as the Bill & Melinda Gates Foundation, to create global solutions—such as vaccines that do not need refrigeration, drought tolerant crops, and cheap solar energy. In addition, we also want to help developing countries themselves to innovate. A great way to make sure countries stay poor is to ensure that they waste their talent and never turn their domestic ideas into products



and services. Canada's new foreign policy should help researchers and entrepreneurs in the developing world build their own industrial capabilities and successful businesses.

Canadian universities, civil society, and industry also have key roles to play in helping developing countries solve their problems through science. Universities could become involved not only through collaborative research projects, but also by harnessing the incredible energy and interest of Canadian students to address global problems. With respect to civil society, one need only think of examples like Engineers without Borders, Médecins sans Frontières, and Oxfam Canada to understand the potential to engage our young people in a meaningful way.

This approach could also create an exciting opportunity for Canadian companies to partner with their counterparts in developing country economies. Canadian companies often lack the necessary knowledge and skills to market their products and services in emerging market nations and capitalize on their great growth opportunities. Canadian life science entrepreneurs and researchers need help to build the necessary relationships to provide effective humanitarian aid while also building commercial bridges. There are potential synergies between innovative Canadian small and medium enterprises (SMEs) with global research excellence and companies in emerging market nations that can offer ready access to and understanding of critical new global markets. There are also opportunities for Canadian companies to benefit from partnerships with SMEs in these countries that share similar interests.

Another important asset for Canada is our diaspora. Many of Canada's leading scientists and engineers have come to us from developing countries and continue to have family and other connections to their countries of origin. Canada is home to more than 15,000 scientific and health-related professionals from developing countries. These linkages provide an important opportunity to expand our Canadian scientific and trade networks into the developing world. We can help our scientists and engineers give back to the nations from which they have come and with which they still have profound personal and family connections.

Finally, Canada can be the platform for the celebration of success in solving problems using science. The Canada Gairdner Global Health Award provides an excellent example that is readily transferrable to other sectors.



## Benefits of Branding Innovation in Canada's Foreign Policy

What are the benefits of an approach that projects Canada's comparative advantage in science and innovation into its foreign policy?

1. We will help solve important problems plaguing five billion people in the developing world.
2. We will develop solutions that will benefit us domestically, with respect to shared threats like climate change, chronic disease, and H1N1. Some of the solutions will be of particular relevance in our Aboriginal communities.
3. Developing a foreign policy brand related to innovation, whilst originally pursued in development, will also reinforce trade relations in innovative sectors for the commercial benefit of Canada, especially in emerging economies. Canada has signed science agreements with India, China, and Brazil, and is funding research partnerships through ISTPCanada.
4. By helping developing countries solve problems with science, we will help them develop. Arguably, the primary difference between a rich country and a poor one (natural resources and their associated problems aside) is the ability to nurture domestic talent, tap its ideas, and turn those innovations into goods and services that are sold on the domestic market and ultimately exported. Given the widespread questioning of traditional models of international development, stimulated by books such as Dabissa Moyo's *Dead Aid*, it may well be time to try something new.
5. Science fosters diplomacy. When politicians and diplomats are unable to speak, scientists can. Science has a shared language and culture all around the world—it is one culture that is truly universal.

## Opportunities to Promote Canada's New Science and Foreign Policy Focus

What are the opportunities to take this new focus for Canadian foreign policy "to market"? The G7/G8 and G20 summits in Muskoka in June 2010 are the first important opportunity. Canada, as host of the G7/G8 summit and co-host of the G20 summit, has a major opportunity to shape the agenda of both. It is a unique opportunity to exercise leadership. We should raise the role of science and innovation as a theme; showcase the Development Innovation Fund—which can serve as a major proposal to advance global health and agriculture; invite other G8 countries to support the initiative; and invite some G20 members, such as China, India, Saudi Arabia, Brazil, and South Africa, to partner as well.



Another opportunity to underline Canada's new commitment to science and institutional innovation to solve developing world problems could come in the fall of 2010, should Canada continue with its bid for a seat on the UN Security Council. We could build on our work on human security, arguing that there is not only a responsibility to protect displaced civilians in conflict, but also to protect those suffering from disease, hunger, and lack of access to clean energy. As the UN Secretary General advances a new concept of "Twenty-first Century Development," Canada could help define what that means. The Secretary General has launched a biotechnology initiative so is already in the frame of mind to accept the notion that development means helping countries solve problems with science.

Let us not wait for another fifty years to once again punch above our weight. The blue helmets of fifty years ago should also make room for the white lab coats of today.