

INGSA MANIFESTO FOR 2030: Scientific Advice for the Global Goals

The preparation of the manifesto, “Scientific Advice for the Global Goals” (INGSA, 2018b), by the International Network for Government Science Advice (INGSA), resulted from a resolution (World Science Forum, 2015) adopted following the World Science Forum in November 2015, aimed at strengthening informed decision-making using science in order to meet the 17 Sustainable Development Goals (SDGs) of the United Nations (UN) (United Nations, 2018).

INGSA, led by a committee of scientists who advise governments, established an extensive consultation process that invited organizations and individuals motivated by the importance of taking science into account when drafting public policy to make suggestions to improve the manifesto being prepared (INGSA, 2018a). The manifesto will serve as a foundation for INGSA’s work with UN agencies and international organizations, but also with the various governments of the countries that are members of the network.

By participating in this consultation, the Fédération québécoise des professeures et professeurs d’université (FQPPU) hopes to express its enthusiasm with regard to the development of tools aimed at promoting informed decision-making using science. It hopes, in passing, to make its own small contribution to the reflections made by international bodies and to make several suggestions inspired by practices that occur in Quebec and Canada.

What is missing from the Manifesto that you would like to see included?

The FQPPU is very supportive of the idea that public policy, as well as the practices of public and private organizations, should be built on science. In an ideal world, decision makers would have the courage to rise above electoral politics and partisan differences, and implement policies aimed at improving human life and preserving the environment. Unfortunately, these aspirations are too often dismissed as utopian or unrealistic.

Nevertheless, the FQPPU welcomes INGSA's initiative, which we hope will raise awareness among decision makers about the importance of acting in the present so that the SDGs endorsed by UN member states are no longer relegated to wishing thinking. We are also convinced that university professors, through their research, but also given that they engage in public speaking, have a role to play in the success of this effort.

Reading the consultation document prepared by INGSA leads to an understanding of the many areas of action to cover and, as a result, the magnitude of the challenges that must be faced in order to achieve the goals. In this respect, in our opinion, the document seems quite comprehensive. However, we would like to insist on the contribution of university research in all fields that advance scientific knowledge and that are susceptible to being mobilized when searching for solutions to the complex problems faced by humanity.

In addition, while excessive importance should not be attributed to certain SDGs at the expense of others, we cannot overstate the critical value of developing quality public education systems, from early childhood education to universities. A more highly educated public will be better equipped to face the challenges of the future, at the local, national, and international levels. The implementation of the ambitious goals that drive us can only be carried out if all of our talent and individual expertise reinforces our collective resolve to do things differently.

How can the Manifesto be improved, and made more relevant to your priorities and needs?

As previously noted, the FQPPU's primary field of action is universities, and in particular, teaching, research, and service. As a result, our priorities are defined by matters that drive us on a daily basis, and our responses are based on such a perspective, despite the fact that we are aware of challenges in other areas. The goals of the manifesto that resonate with us the most are those related to establishing quality education (Goal 4) and partnerships to meet the goals (Goal 17).

That being said, in what we discuss here, there will be certain points that have already been raised in the INGSA consultation document. We are mentioning them again in order to add certain elements that we feel are essential. They are as follows:

Adequate funding of higher education and research

While research is also carried out outside universities, in public agencies or businesses for example, universities continue to be privileged spaces where reflection and documentation of natural and human phenomena occur. Universities have a quasi-monopoly on free basic research, because they remain one of the rare places where it is still legitimate to carry out research that is not oriented toward achieving specific results and that does not lead to discoveries that are "profitable in the short term" from an economic or political standpoint. For university researchers to carry out this essential mission of disinterested advancement of knowledge, they must be able to obtain adequate funding for such research. However, with rare exceptions, they are increasingly forced to work with insufficient resources, which also affects the education of the next generation of researchers. This is particularly true in the humanities and social sciences.

In our opinion, adequate research funding, or funding that is recurring, stable, and balanced between fields and types of research (targeted and free), is a way to meet INGSA goals. In addition to regular funding from government granting agencies, the FQPPU is calling for an annual basic research grant to be awarded to each university professor (FQPPU 2016). This measure would revitalize basic research in all fields, reduce the bureaucracy related to grant applications, improve the education of the next generation of researchers, and reassert the value of basic research.

Access to data

While scientists are mandated with informing decision-making and improving practices in a variety of sectors, they must also, in return, be able to easily access data that allows them to carry out their work. Some research projects require their own data collection, of course, but when researchers have reliable, verified data available from their governments, it greatly facilitates their research. In Quebec and Canada, there are recognized, credible agencies, such as Statistics Canada and the Institut de la statistique du Québec (statistics institute of Quebec), which publicly report data from censuses and large population-based

surveys. While we are able to count on these agencies that are considered to be exemplary by some, there are still areas of research where researchers quickly reach the limits of the so-called transparency of the government and have difficulty obtaining the data necessary for their research to progress. In other words, we can imagine how much work must be accomplished in certain countries that do not have reliable statistics that would allow for a more accurate picture of the population and of the medium- and long-term effects of public policies.

In our opinion, support for the establishment of independent, transparent, and rigorous government agencies that compile reliable data and provide researchers with access to such data is a way to deliver quality education.

Academic freedom and freedom of expression

Scientists must have the freedom of expression necessary to disseminate their research findings. Whether they are employed by universities—in which case, academic freedom is the concept that applies—or by governments, the nature of the work of scientists gives them the duty to report their research findings to the public and to decision makers. This freedom should not be restricted under any circumstances, as long as the “truths” they are providing are supported by credible and rigorous research.

In our opinion, research carried out by university researchers in partnership with private companies, civil society organizations, or governments must be governed by strict protocols that acknowledge the full academic freedom of researchers with regard to dissemination and publication of their findings, even if, in doing so, they are likely to hurt their sponsors, those in power, or interest groups.

Protecting sources used in research

In the past year, there have been two cases in Quebec (FQPPU, 2017b; Djukic, 2017) in which researchers had to defend the necessity of maintaining the confidentiality of the sources of their research in court. In both cases, private companies wanted to obtain raw data and participants’ names in studies with results that could undermine their business. While this issue specifically concerns researchers who carry out interview-based, qualitative research, it has not been widely discussed in the scientific community and merits special attention.

In our opinion, it is of the utmost importance for clear clauses about protecting sources used in research to be added to research protocols currently in force in universities. The ability to recruit participants will be compromised if confidentiality agreements between researchers and their sources can be undone by the courts.

Are there examples of institutional good practice in scientific advice for global goals that you would like us to include?

Chief Scientist and scientific diplomacy

Quebec is fortunate to be able to rely on a Chief Scientist (Government of Québec, 2018), whose mandate is to inform decision makers with regard to scientific matters and ensure that the research ecosystem has enough resources by chairing the boards of directors of the Fonds de recherche du Québec (FRQ; Quebec research funds). He is also responsible for engaging in scientific diplomacy (Allard, 2017) and taking part in missions abroad to develop new partnerships, for example, or to support the work of Quebec's representatives following negotiations of international agreements. While, in actual fact, his power is quite limited—he mainly plays an advisory role and he reports to the Minister of Economy, Science and Innovation—we feel that simply creating a position dedicated to scientific advice within the government has demonstrated a willingness on its part to take science into account in decision-making. We also believe that Quebec's example is likely to inspire practices within other governments at the international level.

Knowledge brokers at the crossroads of research and practice

The consultation document also referred to a new category of players called knowledge brokers, who are called on to act at the crossroads of research and practice. We believe that this proposal is interesting and has value that is unrecognized at a time in which it is crucial that bridges are built between the development of knowledge through research and those called on to put such research into practice. Users' ability to participate in the process of creation of knowledge itself through co-construction or mobilization of formal, tacit knowledge is also at that heart of this new model. In this respect, we feel that several local initiatives deserve better recognition, because they may inspire what happens elsewhere. For example, the service office at Université du Québec à Montréal (UQAM) (UQAM, 2018), which has a mandate of connecting professors and community organizations or civil society groups facing challenges that could likely be resolved through research beginning at the local population level. Similarly, until 2009, the Social Sciences and Humanities Research Council (SSHRC) offered funding entitled "Community-University Research Alliances" (Government of Canada, 2013), which aimed to support researchers who wanted to begin research projects in partnership with civil society groups, to help them develop their practices. Finally, the DIALOG network (DIALOG, 2018), based at the Institut national de la recherche scientifique (INRS; national institute of scientific research), connects over 150 people from academia and Indigenous communities to promote exchange leading to co-construction of knowledge that respects the traditions and unique way of life of Indigenous peoples.

Funding that takes environment impact of research into account

Finally, during a consultation carried out by the Fonds de recherche du Québec, the FQPPU recently supported the idea of explicit consideration by research granting agencies of the repercussions of research projects on natural and human environments (FQPPU, 2017a).

While certain grey zones remain with regard to implementing these new criteria, it is important for us that researchers themselves are more aware and better equipped to minimize the social and environmental impacts associated with carrying out their research, as well as with its outcomes. Ultimately, the SDGs can only be met through awareness and better support from the scientific community in this regard.

What specific recommendations could we add – and directed to which actors at local, regional, national or international levels?

Global funding of research: A real challenge

The idea that UN member states would fund, at a percentage determined by their GDP, research related to meeting SDGs through a shared global fund is commendable. The creation of a network of researchers and the implementation of research partnerships on a global scale is desirable if we hope to make significant advances before the deadline to meet the SDGs in 2030. However, it is important to recognize that it will be difficult to determine the best structure to collect the funds and coordinate such a global funding effort so that it has the legitimacy and credibility it would require, particularly at a time when the United States, for example, is questioning the work of the UN and preparing to scale down their financial commitments to its structures (Radio-Canada, Agence France-Presse, and Reuters, 2017).

Open data and collaborations

While healthy competition between researchers often leads to excellence and surpassing limits, chances are that truly collaborative work at the international level would lead to even more significant advances for humanity. The issues of open data and free publication are based on such a philosophy of sharing. Being able to rely on data from a researcher on the other side of the world and add the results of our own research will likely lead to more innovation, given that teams can build on the discoveries of those that preceded them.

Although new technology may favour increased sharing of knowledge and research data, the main obstacle to better collaboration and sharing of data in a global network is the way in which scientific work is structured, since career advancement opportunities for researchers are linked to individual excellence and publications in prestigious journals. The same principle applies to governments, which are quick to take some of the credit for scientific discoveries they had funded for political purposes. Under these conditions, pooling resources and data and collectivizing credit for particularly important discoveries is hard to “sell” at the political level. Nevertheless, it is undeniable that it would be a major step forward for humanity. Ultimately, governments must find a way to optimize resources dedicated to research and promote efficiency in achieving results. These are the arguments that we feel must be focused on in order to convince them.

Misinformation and skepticism toward science

At a time when 62% of Americans get their information mainly from social media (Gottfried and Shearer, 2016) and when traditional media is experiencing a crisis of legitimacy around the world, it is of the utmost importance to restore the bond of trust between scientists and the public. Skepticism toward science, which is embodied by the denial of established scientific consensus, such as the impact of human action on climate change or the power of immunization to eradicate certain infectious diseases, is not only harmful, but is also a

major obstacle to the improvement of humane living conditions and to the preservation of natural environments. While misinformation is openly used by certain governments to strengthen their political capital, an increasing number of people propagate, with good intentions, false information in their networks. It is important to take action in order to fight against this major problem that undermines health and public safety, as well as compromises the reach of scientific work. While the solutions are not easy, certain actions are likely to lead to advances: establishing an education system that leads to developing critical thinking at a young age; developing applications that allow social media users to differentiate between real and fake news; and adopting legislation that would require social media companies (e.g., Facebook) to provide its users with warnings about fake news and alternative facts.

**Would you like to become more involved in INGSA's work in this area?
What could you bring to the Network as it strengthens and grows?**

As previously noted, the FQPPU's primary field of action and expertise is academia. Under these circumstances, during campaigns, actions, and forums for reflection that are focused on universities, scientific research, and post-secondary education, it would be our pleasure to participate, in accordance with the limited resources at our disposal. We would also like to be kept up to date on the progress of INGSA's projects with regard to the manifesto and the SDGs.

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