

Science Attachés in a post-COVID-19 World: Taking Stock of the Crisis

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The response to the current COVID-19 crisis has been driven by governments, which have largely focused their policy efforts within their domestic sphere. This national focus has also characterized the mobilization of science to address the pandemic. Governments have mostly relied on their own scientific institutions and experts to inform their internal policies and impose new regulations, albeit not without spectacular failures.^{1,2} However, the pandemic demands international action, being a global issue by definition. Incidentally, for many years, states and regions – especially in Europe, North America and Asia – have established strong anchors in foreign territories via their science diplomacy networks.³ These science attaché networks have many different functions, including but not limited to attracting talent and funding, facilitating bilateral research collaborations, and influencing the policy ecosystem in which they are deployed.^{4,5} While international agencies like the World Health Organization (WHO) and non-state actors such as transnational scientific networks, foundations, and others have sprung into action, in some cases the efforts of states' own international scientific networks have not been up to par.

This article relies on the experience of authors who are part of the science attaché networks of Québec (JCL) and Wallonia-Brussels (MVC) and informal discussions with other networks (JCM). By reflecting on our experiences and those of colleagues, we aim to start a conversation about the roles and responsibilities of science attaché networks during two distinct time frames: the crisis (short-term) and the recovery period (long-term) that follows. Since the analysis and subsequent recommendations are inevitably limited to our own observations, we also argue for the need for a comprehensive analysis that would collate insights from a broader range of science attachés.

Science attaché networks in crisis: preparedness and governance issues

The pandemic caused the cancellation of many events such as forums, conventions, and conferences. Science attachés usually rely heavily on such events to connect with a wide range of stakeholders, exchanging valuable information that feeds the national and international policy of the governments they serve. These events were difficult to replace with online interactions. In addition, the ecosystems

within which science attachés operate were also heavily disrupted by the outbreak,⁶ weakening the links to their local partners (government officials, academia, industry, entrepreneurs, supra-national bodies, international agencies, and others).

In the early phases of the crisis, some networks, such as those of France (Réseau Français des Attachés pour la Science et la Technologie) and the United Kingdom (UK Science & Innovation Network) were mobilized, pivoting away from their original activities to help respond to immediate needs. They supported massive repatriation efforts⁷ and advised their trade colleagues on medical technologies and the potential of COVID-19-related innovations when health systems experienced equipment shortages. Given the logistical disruptions and the reorientation of work, there was also a disconnect between science attachés from different countries operating within the same region, and who usually interact regularly at various occasions and exchange information. Only in a few instances known to the authors did science attachés meet informally online to exchange on the COVID-19 response of their own network.

Logistical difficulties were compounded by a rapid decline of communication with colleagues back home. These colleagues are in departments or agencies for international relations, science, or economics, and generally not those responsible for domestic science policy. Across multiple networks, science attachés around the world reported being left for days or weeks without a clear work agenda.⁸ This lack of preparedness and structural governance issues will need to be addressed in any future global emergencies and the post-COVID recovery.

Policy leaders may have been too occupied directing the domestic scientific response to provide clear guidance to science attaché networks. International science attaché networks are already institutionally separated from the domestic science sphere and may be unfamiliar to policy leaders who think mostly along national lines. But even policy makers who are aware of these networks may not have considered them useful in helping respond to COVID-19, given that the urgency of a public health emergency may have seemed incompatible with the longer time frame of science which is usually the focus of their work. However, political decisions such as the creation of specific funding programs or targeted investments have important long-term consequences; to avoid lock-in effects and inefficiency, it is crucial for the science attachés to be part of the process.

In the wake of such a generalized uncertainty and governance issues, some attachés took the initiative to connect online with their peers posted in different countries to understand how best to reorganize their activities and make their work more relevant to the governments they serve. For example, shortly after the initial COVID-19 outbreak, the six science attachés of Wallonia-Brussels contacted its scientific

diaspora across the globe, both to understand how they had been impacted by the crisis and how they might play a role in the post-COVID recovery. Wallonia-Brussels International then began to publish a series of interviews with such scientists on a weekly basis.⁹ Similarly, the science attachés of Québec organized discussions around key medical technologies with important local actors.

When time allowed, some networks began cataloguing the many initiatives and publications around COVID-19 in the territories covered, as illustrated by the [CORD19 Publications Dashboard](#)¹⁰ developed by the Service for Science and Technology of the Embassy of France in the United States. This in turn informed the domestic crisis response as well as strategies for the recovery phase strategy pertaining to domestic research.

A call to strengthen and reimagine the work of science attachés in the recovery phase

The COVID-19 outbreak is a game changer, impacting the world as it is and as it will be perceived from now on. It has not only demonstrated the need for a better universal response to global challenges, but also that national policy responses cannot be implemented in isolation. In that context, science attachés can be a cornerstone of the recovery process.

First, science attachés have direct access to a large pool of expertise via their professional network of contacts and their physical posting in research- and innovation-intensive hubs. These include academics, professional researchers, engineers, and entrepreneurs whose work has been impacted by the pandemic and who have had to pivot their professional activities towards addressing this global challenge. They represent a reservoir of expertise and inspiration for decision-makers back home. Similarly, science attachés are typically well connected to the local scientific diaspora originating from their home country or region, which can be helpful in accessing local know-how and decision-makers. In the recovery phase, these pre-existing links may allow science attachés to connect with potential partners, as those in Québec, Wallonia-Brussels, and elsewhere have.

Secondly, science attachés are usually well informed of existing programs, available funding, and other ongoing initiatives in the local or domestic ecosystems. Thanks to this unique vantage point, science attachés may be able to accelerate research collaborations between domestic and foreign research institutions, as well as suggest the possible orientation (or re-orientation) of such programs. For example, science attachés aware of international programs targeting particular aspects of the socio-

economic landscape of participating countries can link in their own country or region, saving the time and funding that would otherwise go to developing home-grown programs from scratch.

Third, science attachés can be a strategic asset for universities, research centers, and tech companies. Considering that the recovery will be shaped by innovation, knowledge transfers, and internationalization of research, science attachés are well positioned to seek out human capital to fill the knowledge gaps in the job market back home. In addition, now that some companies and research institutions are being backed by their governments in the fight against COVID-19, the science attachés can help them map complementary technologies elsewhere and find synergies.

Finally, science, technology, and innovation are highlighted in the recovery plans of many countries and the European Union, as they will be mobilized to strengthen the life science sector and foster a green recovery. It is important that those plans not only target the domestic science ecosystem, but also make use of the many opportunities offered by these existing international networks.

Beyond COVID-19: future-casting the work of science attachés and key recommendations

The adaptation and reorganization that have occurred so far have left untapped a large part of existing governmental science diplomacy potential. In order to better leverage the science attaché networks in future emergency situations, the post-COVID recovery period, and any other such crises and recoveries in the future, we put forward the five recommendations below for policy-makers to consider.

1. Train science attachés in crisis management. So that all networks (science attachés, their support teams, and the broader domestic science policy community) are integrated into the collective response, decision-makers could hold annual simulated emergency exercises¹¹ to ensure that the interlinkages and channels of communication are functioning properly as well as to stress-test the resilience of science attaché networks. The information gathered during such exercises could help the networks be activated more quickly and efficiently when crises do arise. In addition, the science attaché networks of multiple governments could also generate agreed upon shared norms and procedures, a “global crisis clause” enabling better emergency response capacities.
2. Increase collaboration between the science policy community and the science attaché networks. Early, seamless coordination and information exchange between domestic policy makers and science diplomats could help identify valuable opportunities for collaboration and develop appropriate funding schemes. The policy makers need to better inform the science attachés of the

needs of the domestic research ecosystem, highlighting and funding the projects that could most benefit from international collaboration, while the science attachés can provide feedback regarding potential opportunities and report back on the science policy responses in their territories. Joint activities, such as the emergency exercises suggested above, and more direct communication lines among the science attaché networks, their support team and the science policy decision-makers could increase collaboration.

3. Strategically coordinate the different services of the diplomatic missions. During a crisis and in the recovery phase, the roles of the scientific, trade, attraction of investment, and public affairs divisions can overlap significantly. Properly coordinating efforts then becomes even more important. In diplomatic missions, the science attachés answer to two hierarchical lines: the head of mission and the headquarters. On the ground, synergies between embassy services depend to a large extent on the head of the missions' ability to promote them. A lesson from the COVID-19 crisis is that the response of the scientific attachés must also involve optimal coordination in the field with all the other components of the post.
4. Broaden geographic reach and functions. Science attachés are usually deployed in cities that are instrumental to the home government that they serve, but their geographic coverage could be temporarily expanded during crises to other cities, regions, or even countries. Their functions could also be broadened to interface with aid and development agencies, relevant NGOs, and other charitable organizations. In addition, in emergencies, they could provide information to nations that do not have science attaché networks (e.g., activating the “global crisis clause”). Indeed, research results and technologies that could be crucial to a particular subset of other countries should be shared quickly through such collaborative networks.¹²
5. Increase cross-country collaboration and communication across networks. This does not have to take away the competitive, nationally driven nature of these networks, but sharing important information about science and technology and best practices across the networks of multiple countries may lead to opportunities that would have been otherwise missed. Such collaborative behavior has been illustrated by the “science & technology diplomatic circles” that already exist in several cities. These need to be expanded. The government offices of Québec and Wallonia-Brussels in New York launched the “Science & Technology Diplomatic Circle New York” during the lockdown, a joint initiative which will benefit all of the city's diplomatic missions.

When governments face major emergency situations like the COVID-19 crisis, the range of acceptable public policies, the so-called “Overton window,” broadens.¹³ The unprecedented challenge that the

world is facing with the COVID-19 crisis is providing a unique opportunity to rethink science attaché networks, helping decision-makers leverage them better in future crises so they can better help the subsequent economic recovery in ways that serve both national and international interests. We hope that this article will act as a stepping stone for a more comprehensive empirical study of the response of the many different science attaché networks, taking into account their differences in size and operations, to analyze and put forward best practices in the post-COVID-19 recovery and future emergencies.

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Endnotes

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