SCIENCE DIASPORA NETWORKS

A Report on their Goals, Functions, and Future

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Background

Scientists and researchers increasingly pursue educational and professional opportunities abroad, and since the turn of the 21st century, countries and fellow émigrés increasingly develop science diaspora networks to support them. These networks connect diaspora scientists to each other and to their country of origin, ostensibly easing mobility and strengthening research collaborations and science diplomacy between nations. For any given network, there is usually an underlying organization that administers the communication channels, activities, member recruitment, finances, and other logistical details required to operate a network.

Many kinds of stakeholders care about the operation and evaluation of networks and their underlying organizations. A few kinds include network funders, intergovernmental organizations, countries that host diaspora networks, countries that originate researchers in networks abroad, network members, network managers, and diaspora scientists, to name a few. These stakeholders use knowledge about networks and their organizations to inform their uses, investments, evaluations, and interactions with networks.

Within the growing academic and gray literatures about science diaspora networks, there is little robust and systematically developed knowledge about these networks or their underlying organizations. There are several reasons for this shortage. First, science diaspora networks are a relatively new and specialized phenomenon, and the very concept of science diaspora networks remains ambiguous and is often imprecisely operationalized. Relatedly, science diaspora networks vary widely in their characteristics and functions, leading to differences in how they define success, overcome challenges, and plan for the future. As a result, meaningful studies to canvass, characterize, and compare networks can be difficult to design and execute.

This Report

This report documents the results of an empirical study to characterize science diaspora networks and their underlying organizations and to document how network managers characterize operational successes, challenges, future plans, and relations to science diplomacy.

This is the first mid-scale interview study of managers for science diaspora networks for which the total pool of networks represents scientists from a

sizable set of countries. It employs an explicit conceptual framework for science diaspora networks and organizations, and it characterizes variability in structure and management across 21 networks.

In brief, the study shows that managers characterize **success** according to at least nine criteria, with nearly all managers tracking connections made and events held, and with managers using many different metrics within any given criterion, metrics that are often not present across all organizations. For **challenges** a majority of managers describe an increasing scarcity of resources—financial, personnel, or otherwise—that hindered the activities and potential of their organizations.

For **future plans**, nearly all network managers plan to make more connections with extant and prospective members and other stakeholders, and a majority plan to expand the network into new geographic areas, scientific disciplines, and other sectors. For **diplomacy**, managers discuss the capacity of networks to international collaborative research and promote foreign policy dialogue. Managers for networks connected to governments especially see their networks as means to advance diplomatic goals.

Several results were common across those themes.

- We find potentially important misalignments between the prevalence with which managers discuss particular challenges, for instance scarcity of resources, and the prevalence or lack thereof with which they discuss plans to address those challenges or design success criteria informed by those plans.

- Managers are especially focused on how the COVID-19 pandemic and resulting public health measures are changing nearly every aspect of the operation, planning, and conceptualization of the networks.

- Managers discuss the importance in nearly every facet of the organization of helping researchers move internationally, manage emigration processes, and acclimate to local cultures.

The full report can be found at

scipolnetwork.org/science-diaspora-networks

Recommendations

Based on those results, this report makes the following recommendations.

For leaders or managers of network organizations

- Track a Broader Range of *Service* Accomplishments.
- Characterize and Track *Organizational* Accomplishments.
- Prepare Future Organization Leaders.
- Develop and Strengthen Cross-network Connections.
- Align Criteria of Success with Challenges and Future Goals.
- Continue to Think about Science Diplomacy.
- Publish Accomplishments.

For external organizations that support networks

- Governments, funding agencies, and philanthropies should support network organizations both materially and non-materially.
- Governments should explore creating or sponsoring diaspora networks if their countries do not have diaspora networks and if they are interested in remaining connected to their scientists abroad.
- Organizations interested in soft science diplomacy should seek out science diplomacy networks and their managers.

This report is descriptive and exploratory. We suggest an agenda of questions for further research into science diaspora network organizations.

- How do networks and network organizations affect their stakeholders?
- How do networks and network organizations influence science diplomacy and foreign policy?
- How are networks and network organizations evolving since the COVID-19 pandemic?