



Science and Diplomacy: Case of the Algerian Space programme

Introduction



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Science Diplomacy is not a new concept but a tool needed for growing number of countries. It developed its first form in the US in the early 1960 and has mainly spread across Northern Europe and among English-speaking countries. As a concept, the theme “Science Diplomacy” is still unknown within French-speaking countries¹

I-Diplomacy: Art and practice of conducting negotiation between nations and application of foreign policy of a state or a government.

II- Science: Organization of the knowledge related to different categories of facts, objects or phenomena seen as:

- obeying to natural or social laws and/or verified by experimental methods and
- giving to this knowledge the format of testable explanations and predictions.

Its scope is extended (but no more restricted) in religious communities to some non-verifiable elements of cognizance, inherited from Elders.

These two types of knowledge can intermingle, as in the case of the “ancestral knowledge”, presently exposed essentially through the medical interest of some plants, from which active molecules are extracted by pharmaceutical laboratories, or in the case of hygienic importance of some traditional practices, like yoga.

“Science Diplomacy” is the name given to an international, interdisciplinary and inclusive process involving integration to balance national and global interests. For developing countries, like Algeria, it involves two major areas of focus:

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education and research, while in most advanced communities, a third area has emerged, i.e. “leadership”. In the Algerian context, the concept of “Science Diplomacy” aims mainly to educate next generation of diplomats to sciences and technologies handling; to facilitate research that reveals evidence and options that contribute to informed decision-making; but in other countries it can also provide leadership with networks that build common shared interests across the world. But as well-defined in Wikipedia, even if “*many experts and groups use a variety of definitions for science diplomacy (...), science diplomacy has become an umbrella term to describe a number of formal or informal technical, research-based, academic or engineering exchanges*”.

In the present Algerian interpretation, the term “science” covers a number of areas apparently restricted to:

- Engineering Sciences;
- Fundamental Research;
- Knowledge linked to Agronomy, Nature and Environment;
- Medical sciences;
- Physics and Mathematics; and
- Social Science.

Algeria, among most other developing countries, recognizes the role and importance of science in socio-economic development and its impact in the reinforcement of international relations and interactions (mainly through what is designated as “technology transfers”, and which essentially means “knowledge sharing”). In consequence, its Foreign Affairs department is progressively considering inclusion of scientific component in the international negotiations and discussions and in its internal normative organization and charts.

Conceptual Framework of Science And Diplomacy

Science diplomacy is at the crossover of two disciplines, diplomacy and science (foreign policy, negotiation, research and knowledge), and can be defined as “*the use and application of scientific cooperation to help establish links and strengthen*

relations between societies, especially in areas where there may be no other means of official level approach”.

The need of SD is increasingly growing. Indeed, modern world requires effective partnerships among scientific policy-makers and diplomats to face global challenges of climate change, food safety, nuclear risks, continuous access to affordable and safe energy, water shortage and apparition of new diseases, and so on.

Hence the importance of integrating scientific discourse into diplomatic negotiations and including scientific discoveries among parameters aiming at proposing solutions to the global challenges and to achieve SDGs.

So, diplomats have to ensure that their approach focuses not only on science, but also on technology, and that it builds synergies with both the “economic diplomacy” and with other aspects of the global processes of integration of world economies to give life to a world in which all human beings and all peoples benefit from equal chances and closer levels of co-prosperity.

Moreover, because of its neutral and non-ideological nature, “*Science diplomacy*” should be demarked from “*cultural diplomacy*” and given an autonomous status and a tool of confluence and cooperation in the diplomatic system/apparatus. To reach this goal, we have to raise the personal interest of the diplomats on the issues relating to science, technology and general knowledge.

Algerian Involvement In Science Diplomacy

As in the majority of the developing countries, in Algeria, even if the concept of SD in itself is more or less new, it was present in the activities of the diplomats since many decades.

National action was essentially based on:

- the creation of a large cooperation between the Ministry of Foreign Affairs and the other governmental departments to make them aware of the potential of benefitting from information and experiences related to research in science, technology and innovation

in countries linked to Algeria by afferent agreements;

- the training of the diplomats themselves, through participation in workshops, conferences, symposiums, etc., relating to the new technologies or sources of knowledge, relating to SD;
- creation of networks of exchanges with foreign diplomats;
- annual offering of thousands of loans to African and Arab youngsters to benefit from the universities, academies and training facilities in Algeria.

At the level of the Algerian Ministry of Foreign Affairs, the lately programmed objective is to permit the putting on place a body of “scientific attachés” capable to:

- advise the Chiefs of Diplomatic institutions, Ambassadors as well as Ministers, on the political, security and social implications of the scientific and technological issues. The rapid introduction of the changes created from the 1980s by the involvement of new technologies in the method of diffusion and vulgarization of the information is a good example of how quickly changes to work methodologies can happen;
- share scientific and technological vulgarization with other countries seen as “friendly partners”. The further goal is to create positions of “science and technology advisers”, “scientific attachés” and “attachés for scientific and university cooperation” within the Algerian embassies in a series of targeted countries;
- allow each diplomat to represent efficiently Algeria in scientific conferences and to report accurately on the issues raised and on the manner they are dealt with;
- in a later stage, and ideally, it is hoped to create a specific “scientific attachés” service that can contribute in the creation of formal links between researchers and scientists from Algeria with its foreign partners, putting the Embassies at the centre of the scientific exchange initiatives.

It was presumed that monitoring and amalgamating role of the scientific attachés can

be jeopardized by the Internet phenomenon or by increasing number of networks and specific communities it had created. But because the validity and the reliability of these sources often is delusive, the role of scientific attachés is always imperative.

In terms of cost, putting on place a “science diplomacy” not only impacts hugely the budget of the Ministry of Foreign Affairs, but also requires a real human resource policy; with the essential immediate purpose of assuring e-communication between scientists and diplomats and mutual narrowing between usual and scientific language.

Space as an Example of Successful Science Diplomacy Cooperation

As said before, many mechanisms of cooperation in the field of Science Diplomacy have already been put on place by Algeria with foreign partners. However, the most illustrative example is that of the association of more advanced foreign scientific countries and entities to the Algerian Space programme.

Because of the visible hiatus existing between the size of its territory and its demographic resource, Algeria is obliged to use satellite tools to protect its land from negative human interferences and from natural or environmental malfunctions. In this context, and in association with the Ministry of Foreign Affairs organs, the Algerian Space Agency has carried out bilateral and multilateral cooperation actions with capable-space powers and with emerging countries.

Four government cooperation agreements have been signed with Argentina, France, South Africa and Ukraine, as well as a series of memoranda of Understanding and Cooperation have been signed with the space agencies of Russia, India (ISRO), China, the United Kingdom and Germany.

The Algerian space programme plans to put in place before 2020 a space infrastructure consisting of 12 satellites, of which a significant number should be partly or totally integrated into an Algerian center for satellite development objectives to make space tools a powerful instrument in national

prosperity in the fields of meteorology, earth observation, and communications.

In this framework, two Algerian satellites were launched from India in 2010 and 2016, and one from China in 2017. Moreover, Indian and Chinese scientists have been allowed to use Algerian tracking facilities in cooperation with Algerian scientists, who need to be confronted with foreign experiences and knowledge. In parallel, large activities of training have been opened to Algerian scientists in diverse fields, especially Global Positioning system, communications, resource mapping, meteorological services, global tracking system and post-disasters management.

Another more global successful example is given by the *“Pan African e-Network project”*, an information and communications technology programme between India and the African Union that seeks to connect 53 member states of the Union through a satellite and fiber-optic network to India and to each other to enable access and sharing of expertise between India and African states in tele-education, telemedicine, Voice over IP, infotainment, resource mapping, meteorological services, e-governance and e-commerce services. The project is one of the

biggest ever in the ICT sector in Africa, and is expected to extend ICT infrastructure to rural and underserved areas. The project is seen as an example of India furthering its economic and strategic interests in Africa through the use of soft diplomacy, and has been acclaimed as an instance of South-South cooperation, helping overcome digital divide in Africa.

Conclusion

Building relationships with other countries around science helps build trust in political and security areas, and one can use the consequences of science to put on place economic engagements as well. The old nations and States competing for everything negative, especially economic expansion and land grabbing, has to be replaced by development of more positive and open-minded channels of cooperation and sharing, the *“Science Diplomacy”* is being one of them.

Endnote

- ¹ This aspect is illustrated through the absence of any French literature on the theme in the Internet, and through the yet non-translated designation of the concept.