



Science Diplomacy and Sustainable Development: Suriname-India Bilateral Relations to Improve Livelihoods of Rural Communities



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Bilateral Relation between Suriname and India

The Republic of Suriname is located in South America was until 1975 part of the Kingdom of the Netherlands, and prior to that a Dutch colony. Suriname is one of the most ethnically diverse countries in the world. Dutch is the official language. Suriname and India started their bilateral ties in 1975, the year Suriname gained its independence. Both states are represented at the highest diplomatic level in each other capital. The most important activities within the bilateral relation of Suriname and India in the past 12 months are:

- Suriname became a member of the International Solar Alliance (ISA) in February 2018. ISA aims to make 'scaling up' a reality in the deployment of solar energy in the 121 countries with strong sunshine situated between the Tropics of Cancer and Capricorn. These countries represent 73% of the world's population.
- The Honourable President of India Shri Ram Nath Kovind and First Lady Smt. Savita Kovind paid a visit to Suriname in June 2018. According to the Embassy of India in Paramaribo (Suriname's capital) a total of five MOU's were signed in the areas of Centre for IT Excellence, cooperation between the electoral authorities, National Archives, cooperation between diplomatic institutes and remunerative employment of

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dependents of the diplomatic personnel of the two countries (Embassy of India-Suriname, 2019).

- Under the Indian Technical & Economic Cooperation Programme (ITEC) the slots reserved for Suriname are 50 during the year 2018 - 2019.

An Agreement to set up a Joint Commission was signed in 1992 and six JC meetings have been held so far (the last being held in June 2017). Other areas of (continuous) cooperation are: economy, education and culture.

Culture has a special place in the bilateral relation between Suriname and India. The main reason is the fact that approximately 30% of the Surinamese population is of Indian descent (Censusstatistiek 2012. Algemeen Bureau voor de Statistiek in Suriname (General Statistics Bureau of Suriname). The Indian Cultural Centre in Suriname (ICCR) was opened in 1978 and it actively pursues soft-power diplomacy initiatives and the whole gamut of ICCR's outreach including, Hindi language, Kathak, Yoga and classical music. India provides yearly grants for promotion of Hindi in Suriname. India and Suriname are look alike in many areas. Apart from the scales there are many similarities.

In this paper the focus is on the existence of relatively poor rural communities scattered over different parts of the country. Their livelihoods need sustainable improvement in several areas. In this paper the disadvantages in the areas of health, water and sanitation, energy, education, and agriculture will be touched upon.

This paper is an appeal to broaden the cooperation between the two countries with the area of rural community development through Sustainable Development Diplomacy and Science Diplomacy. First, the emphasis will be on the rural communities in both countries, followed by Sustainable Development Diplomacy and Science Diplomacy. After exploring possible areas of cooperation the paper will end with some recommendations.

Rural Communities in Suriname and India

Suriname

Rural communities are found in villages along rivers in the tropical Amazon rainforest of Suriname. Unlike in the urban area, coastal many rural areas lack basic resources necessary for a sustainable livelihood. The areas are being inhabited by different indigenous Amerindian tribes and different Maroon groups. The Maroons are descendants of enslaved Africans who escaped slavery and established sustainable self-ruled communities in the forests. Following this, the case of access to drinking water will be used to stretch the need for improvement of living conditions in the rural areas of Suriname.

Although 95% of the overall population is obtaining their drinking water from improved sources, large disparities remain between the urban coastal (98.6%), rural coastal (95.9%) and rural interior populations (70.7%). Of great concern is that less than 10 per cent of households using an unimproved drinking water source use an appropriate method of treatment, meaning that the vast majority of those households are at risk from water-borne diseases. While 91% of the overall population has access to improved sanitation facilities the disparity between urban, rural coastal and rural interior areas is even more striking. In the urban coastal area, 98 per cent of households have improved facilities, and in rural coastal areas 94%. However in rural interior households, just 42% of households have access to improved sanitation. Open defecation is still the main practice of nearly half of all households (49.1%) in the rural interior (UNICEF 2014).

This means that in the rural interior, one third of households don't have access to safe drinking water, and fewer than half of all households has access to improved sanitation. According to its multi-year development plan (2017-2021) the main goal of the government of Suriname is to develop rural areas sustainably whereby the quality of life of those living in these areas would be substantially improved (Government of Suriname, 2017)

India

India has the largest population of poor people (Hedge, 2019) and community development has assumed high priority. The initial programme aimed at upliftment of the rural poor, covered agriculture, animal husbandry, roads, health, education and housing.

Though 30% of rural population lives in a chronic condition of poverty in the last three decades some improvement in the number has been seen because of anti-poverty schemes and migration from rural to urban areas.

Science Diplomacy and Sustainable Development Diplomacy

The practice of science diplomacy could be dated back until the early days of diplomacy. According to Linkov *et al.* (2014) the idea of science diplomacy is itself not new, with the literature pointing out that the US was among the first to make use of a science attaché, having representation in Germany as early as 1898 (Linkov *et al.* 2014, as cited by Masters 2016). This practice could be defined as the use of scientific collaborations among international communities to address common scientific challenges and to build constructive global partnerships and cooperation (Saxena, 2017).

Science diplomacy is not only conducted at the level of states. With a growing divide between the “haves” and “have nots”, and the prominence given to the role of science, technology and innovation in addressing issues of human security, non-state actors, including civil society, the private sector, academia and research organisations, have been drawn into international debates and scientific collaboration. In the case of India and Suriname, science could be used to bring together expertise in promoting research and the use of innovation for the benefit of rural communities in both nations. This leads to sustainable development. For countries to achieve sustainable development they need to engage in partnerships to develop best policies and practices. Sustainable development diplomacy needs deeper participation of all

relevant stakeholders and could therefore be defined as the engagement of diplomatic and civil society to collaborate on addressing and tackling challenges that avert the creation or preservation of sustainable livelihoods.

Areas of Cooperation

The areas of cooperation are selected based on mutuality. Both countries have the same problems in their rural areas. It will be necessary for both governments to share knowledge, experiences, and technology, by also engaging with NGO's, the private sector, scientists and (all layers of) the rural communities. The current global industrial revolution has an exponential pace of technological change, building on new (mostly) digital technologies and transforms, practices and systems. The both countries could engage in sustainable development diplomacy and science diplomacy to deploy science and technology to enhance livelihoods and thereby guarantee sustainable rural development.

Health

Although rural communities often have access to local healthcare facilities, there are other factors that contribute to how they can access healthcare. Some factors include cost of insurance and specialist services, transport to and from required services, time and confidence in the quality of services. A coordinated approach to healthcare that incorporates technology such as artificial intelligence is an ideal goal for rural communities; for example technologies that can help doctors provide effective video consultation to patients in rural areas (www.orionhealth.com). India and Suriname can pair to tackle healthcare challenges in their rural areas. For example Suriname is very well known in the America's for successfully eliminating malaria within its borders. On the other hand malaria is (according to the World Malaria Report 2017) a main threat for India's health system. In the year 2016, more than half of the population (698 million) was at risk. According to this report, India accounted for 6% of all malaria cases in the world, 6% of the deaths, and 51% of the global *plasmodium vivax* cases. The Report estimates the total cases in India

at 1.31 million and deaths at 23,990. The biggest burden of malaria in India is borne by the most backward, poor and remote parts of the country, with between 90 to 95% of the cases reported from rural areas (WHO, 2017).

Water and Sanitation

Access to clean water and proper sanitation are basic human rights and are critical sustainable development challenges. The causes are in most cases polluting industries, agriculture, households and energy generation. In the rural interior of Suriname, fewer than 15% of households have safe drinking water piped into their households or yards and fewer than half have any improved water source on their premises (UNICEF, 2015). Most villages in the rural interior are built on river systems, and for generations people have used the river for all of their needs, while open defecation is still a common practice. Rural India faces the same problems regarding access to safe water and proper sanitation.

Education

The mission towards ensuring quality of education and promoting lifelong learning demands a range of prerequisites including, primarily, a spirit for knowledge, relevant as well as futuristic curriculum, and well-trained teachers. And, as all these feed each other, they need to be realized in an integrated and holistic way (India CSR, 2018). Both countries could engage in a sustainable cooperation with mutual benefit by sharing knowledge and experience. Both states face the same challenges and technical cooperation in the fields of the development of new curriculum and the use of ICT could play a vital role in improving education in rural areas.

Energy

Energy is central to nearly every major challenge and opportunity the world faces today. Be it for jobs, security, climate change, food production or increasing incomes, access to energy for all is essential. Focusing on universal access to energy, increased energy efficiency and the increased use of renewable energy through new economic and job opportunities is crucial to creating more

sustainable and inclusive communities and resilience to environmental issues like climate change (UN, 2019). Sustainable energy is a boost for economic growth and is essential for creating sustainable livelihoods. Furthermore, access to energy creates health benefits and enables people to study or start a business. India and Suriname could pair in the development and use of renewable energy. Scientists agree on the fact that energy from renewable resources as wind, water, solar and biomass is clean. All of these sources are available in both countries.

Agriculture

According to the FAO achieving food security would require an integrated approach that addresses all forms of malnutrition, the productivity and incomes of small-scale food producers, resilience of food systems and the sustainable use of biodiversity and genetic resources (FAO, 2019). Again both governments could work together with scientists, local farmers and multilateral organisations to guarantee food security, nutrition and sustainable agricultural practices for the rural communities. Because of, among others causes, the use of old technology (if technology is being used at all) the communities stick with low-productivity agriculture.

Barefoot College as a successful model

The success of the Barefoot model in India is widely recognized. Barefoot College demonstrates that illiteracy does not have to be a barrier to poor communities developing themselves and that the most sophisticated technologies can be disseminated by poor rural men and women who can barely read and write. As such, thousands of people are trained each year to be teachers, doctors, midwives, dentists, health workers, solar engineers, water drillers and testers, hand pump mechanics, architects, artisans, designers, masons, communicators, computer programmers, and accountants.

The Barefoot College connects rural communities to solar, water, education, professions and advocacy to help communities and individuals take control of their lives and the wellbeing of their communities. In 2016 two

Surinamese women completed the International Solar Training Program of Barefoot College. Currently these two women are skilled enough to share their knowledge and experiences with other local communities in remote villages in the interior of Suriname.

This training program began in 2008 and is being supported by the ITEC Program. According to Barefoot this six-month program, conducted twice a year, is a collaborative effort of Barefoot College, ITEC and the respective Governments and NGO's (ground partners) of the participating countries.

Trainees are often illiterate or semi-literate grandmothers who maintain strong roots in their rural villages and play a major role in community development, bringing sustainable electricity to remote, inaccessible villages (Barefoot College, 2019). Solar electrification reduces CO2 emissions, slow the negative impacts of deforestation and decrease air pollution from burning firewood and kerosene.

Recommendations

Based on the findings of this preliminary study, this paper concludes with the following recommendations:

- Whereas India has developed a policy on science diplomacy, Suriname still needs to engage all stakeholders and develop an inclusive policy on this subject. The Multi-year development does not mention science diplomacy and technological cooperation is ad hoc. The Ministry of Foreign Affairs is yet to install a science diplomacy division.
- Both nations clearly need to do better in engaging with non-state actors who can play a vital role in both Sustainable development diplomacy and Science diplomacy. Improving livelihoods of rural communities requires a broad level of cooperation including (all levels of) government, rural communities, universities and scientists, civil society and private sector.
- Engagement with all layers of the rural communities (including women and youth)

in developing this policy is pivotal to ensure sustainability. Both countries can do better in engaging the communities in policy development and priority setting.

- Both nations can do a better job in sharing knowledge, technology and success stories. Improving livelihoods of rural communities has been on the agenda of both states for decades and it is plausible that successful mechanisms or models in different areas have been developed in the course of the years and that those could be shared.
- In many developing states, there are constraints on capacity. This also limits the options for international engagements. Suriname and India have the structure and infrastructure to enhance their partnership. Apart from de presence in both capitals, the Joint Commission is a suitable environment to further engage in this regard. The frequency and output of the Joint Commission meetings need to be increased accordingly.

References

- Amazon Conservation Team. 2017. Retrieved on January 11, 2019 from <http://www.act-suriname.org/barefoot/>
- Barefoot College website. Retrieved on January 11, 2019 from <https://www.barefootcollege.org/solution/solar/>
- Embassy of India, Suriname website. Retrieved on January 10, 2019 from <http://www.indembassysuriname.gov.in/>
- FAO website. Retrieved on January 19, 2019 from <http://www.fao.org/sustainable-development-goals/goals/goal-2/en/>
- Gould Tasneem. 2018. "How can technology benefit healthcare in rural communities". Orion Health blog. Retrieved on January 10, 2019 from <https://orionhealth.com/ca/knowledge-hub/blogs/how-can-technology-benefit-healthcare-in-rural-communities/>
- Hegde, N. 2019. "Community Development in India: An Overview". Retrieved on January 11, 2019 from http://baif.org.in/doc/scientific_papers_sustainable_rural_dev/Community%20Dev%20in%20India.doc
- Kaur, R. 2013. Causes of rural poverty and Anti-poverty schemes in India. Retrieved on January 10, 2019 from <https://www.mapsofindia.com/my-india/society/causes-of-rural-poverty-and-anti-poverty-schemes>

- Masters, L. 2016. "South Africa's two track approach to science diplomacy". Journal for Contemporary History 41(1) / Joernaal vir Eietydse Geskiedenis, 41(1) pp:169-186 <http://dx.doi.org/10.18820/24150509/jch.v41i1.9>
- Panigrahi, Himashu Sekhar; Kumar Rusen. 2018. "Relook at Education for realizing SDG 4" India CSR Network. Retrieved on January 10, 2019 from <http://indiacsr.in/relook-education-realizing-sdg-4/>
- Saxena, S.K. 2017. "Role of Science in Export Trade". Paper presented at RIS, New Delhi, India
- Schwab Foundation for Social Entrepreneurship website. Retrieved on January 1, 2019 from <https://www.schwabfound.org/awardees/sanjit-bunker-roy>
- Suriname Planning Bureau Foundation. 2017. "201-2021 Policy Development Plan" Retrieved on January 17, 2019 from <http://www.planningofficesuriname.com/wp-content/uploads/2018/02/2017-2021-DEVELOPMENT-PLAN.pdf>
- UN. 2019. Goal 7-Affordable and Clean Energy. Retrieved on January 14, 2019 from <https://www.un.org/sustainabledevelopment/energy>
- United Nations Children's Fund. 2014. "Increasing access to water, sanitation and hygiene in Suriname's rural interior: An Appreciative Inquiry". Retrieved on January 11, 2019 from https://www.unicef.org/evaldatabase/files/Rural_WASH_prog_eval_Surinam_2010-14_-_Unicef_29.01.15.pdf
- World Health Organisation. 2017. "World Malaria Report-2017". Retrieved on January 10, 2019 from <http://www.who.int/malaria/publications/world-malaria-report-2017/en/>