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Cooperation potentials with Cuba.
Projection of Cuba-Japan triangular experiences
in Sub-Saharan Africa in the education sector and capacity building.

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Cooperation potentials with Cuba. Projection of Cuba-Japan triangular experiences in Sub-Saharan Africa in the education sector and capacity building.

Abstract

The experiences and projections of Japan and Cuba in cooperation with sub-Saharan Africa, especially in the field of education and capacity building, provide arguments from which it is possible to identify strengths and limitations of various cooperation undertakings, especially in the field of triangular cooperation. Japan has much to contribute on this type of experience and Cuba has much to learn in this regard. However, there are number of examples that point to Cuba's relevance in international cooperation in areas such as health, education, biopharmaceuticals and biotechnology, which represent high potential for capacity building and the promotion of endogenous development. Therefore, it is possible to identify a series of potentialities for the advancement of this type of undertakings between Cuba and Japan in the region.

Introduction

Cuba and Japan are two very different actors, but at the same time compatible in their approaches to international cooperation and collaboration. This is manifested, for example, in a common scenario of action: sub-Saharan Africa. Currently, the Cuban and Japanese presence on the African continent and their conceptions of development aid make them important references.

The experiences and projections of both actors in the field of cooperation and particularly in that region provide essential arguments from which it is possible to identify strengths and limitations of various cooperation undertakings. In this regard, the area of education and capacity building stands out. With these elements in mind, the study *Potentialities of Cuba-Japan triangular cooperation in Sub-Saharan Africa in the field of education and capacity building* (2022) was developed, the results of which gave rise to this article, as a critical essay.

The article presents a series of antecedents that point to Cuba's relevance in international cooperation as a sphere in itself, as well as in others such as health, education, biopharmaceutical and biotechnological industries, which represent potentialities for capacity building.

The experiences and projections of Cuban experiences attest that this is not an unknown path for Cuba, although it is still little exploited from an optimal-efficient perspective. A preliminary study of the subject identified among the limitations that still exist in this regard: 1) the need to develop a structured approach to cooperation itself as an exercise in education and capacity building; 2) the absence of a more articulated cooperation policy with respect to counterparts; this directly influences 3) better use of cooperation both for the recipient countries and for the development and effectiveness of cooperation as a sphere in itself and therefore for the country or countries involved in the process. In contrast to these limitations, Cuba's potential, given its track record in international cooperation in the field of education and capacity building, is high, in addition to the experiences acquired in recent years in different contexts. Therefore, as a starting point, this fact becomes an important opportunity in the face of emergencies, new scenarios, national, regional and global challenges.

Taking these challenges into account, it was possible to develop an analysis of the opportunities offered by triangular cooperation to enhance the effectiveness of the cooperation activity itself, as well as the benefits for both the recipient African countries and for Cuba and Japan. The aim is to promote sustainable development to the extent that installed capacities are left in place and synergies are created or reinforced within the cooperation activity itself, so as to enhance capacities to transfer knowledge from one country to another and thus promote the endogenous development of societies.

1-Cuba's cooperation experiences in the world. Background and development.

The history of Cuban international cooperation has gone through several stages, diverse spheres and modalities. In this sense, its central place in the country's foreign policy, distinguished by internationalism, solidarity and respect for the sovereignty of peoples, should be taken into account. It is not possible in this work to cover this great topic, however, there are several publications that refer to it in depth. Among the most recent ones, to cite just a few examples, are *Official Development Assistance of Cuba in the world*, by Henry Morales (2017), or *Beyond*

Borders: International map of Cuban medical cooperation (Collective of Authors) a book based on the research and subsequent compilation of works by a collective of authors from the Center for International Policy Research (CIPI). It is also illustrative to consult several issues of the *MEDICC Review*. In all cases it is possible to find sufficient arguments that demonstrate the role of scientific-technical development in the internal logic of the Cuban Revolution and its external projection.

1.1-Brief approach to Cuban cooperation experiences in different regions.

In terms of international cooperation, Cuba is a reference to be taken into account. Its achievements in the areas of health, education and the biopharmaceutical industry have historically been placed at the service of many countries that have required it. It is important to point out that these spheres should not be conceived independently in the Cuban case, especially in the area of international cooperation. There is a close relationship, which is in itself an expression of the logic of scientific development of the Caribbean nation, oriented towards capacity building and scientific sovereignty.

The history of Cuban medical cooperation began on May 23, 1963, when the first group of Cuban internationalist doctors left for Algeria. Thus began the first official Cuban medical solidarity mission in the history of the Revolution. However, before that date, Cuban doctors had helped the Chilean population in 1960 after one of the largest earthquakes ever recorded.

Between the 1960s and 1980s, this aid was understood as an "internationalist mission" based on the principle of solidarity and included other scientific and professional areas. It was not strictly an export of services, since neither the country nor the physicians received any income from it. This type of aid, in countries of the so-called Third World, was considered a Cuban contribution to the liberation and development of the peoples. The decade of the 1990s was marked by external events that greatly affected the Cuban economy, including the disintegration of the Union of Soviet Socialist Republics (USSR), the disappearance of the Socialist Camp, Cuba's main market, and the beginning of the so-called Special Period in Cuba.

This situation led to the emergence of a new form of cooperation: Compensated Technical Assistance or Direct Contract, the essence of which is that an agreement is established whereby the contracted physician receives remuneration for the services rendered and, on the other hand, the National Health System receives a contribution to maintain the rest of the medical collaboration, which, due to the economic situation that existed, the country could not afford.

At the end of the 90's, natural events occurred in Central America and the Caribbean (hurricanes George and Mitch) that modified everything that had been done up to that time. The Internationalist Mission modality diminished, the Compensated Technical Assistance was gradually reduced and the Integral Health Program (PIS) appeared on November 3, 1998, initially in Central America and the Caribbean and later extended to Africa and the Pacific. During this period, the Latin American School of Medicine (ELAM) was created as a basic element of continuity and sustainability of this Program. The essence of the PIS was to send Medical Brigades to remote places, difficult to access, where there was no presence of national doctors and to which only an amount of money is provided to cover basic needs." (Marimón, 2019) Other programs and modalities have also been developed according to the emergencies that have arisen (Morales, 2017).

One of the most important examples of Cuban medical collaboration was the creation of the Henry Reeve¹ International Contingent of Doctors Specialized in Situations of Disasters and Serious Epidemics. This Contingent was created by Fidel Castro in 2005, with the intention of assisting the victims of Hurricane Katrina in the United States. The Cuban medical aid never reached the proposed destination, because President George W. Bush did not give them permission to enter the country. The tragedy left more than 1,800 dead. Since then, the Henry Reeve Contingent has responded to earthquakes (Pakistan, 2005; Indonesia, 2006; Peru, 2007, China, 2008; Haiti, 2010; Chile, 2010; Nepal, 2015; Ecuador, 2016), heavy rains (Guatemala, 2005; Bolivia, 2006; Mexico, 2007; El Salvador, 2009; Chile, 2015; Venezuela, 2015), medical emergencies (cholera in Haiti, 2010; Ebola in Sierra Leone, Guinea, Liberia, 2014) and hurricanes (Dominican, 2015; Fiji Islands, 2016; Haiti, 2016). (Cobas, 2020).

In recent years Cuba has been forced to diversify its funding sources to ensure its collaboration and the survival of the Cuban health system itself, one of the great social conquests of the Revolution. In this field, it has reached important collaboration agreements with several countries with which it has assumed to share economic responsibility, especially in the area of medical assistance, as in the specific case of Venezuela and Brazil. On specific issues, it has signed co-financing agreements to promote plans or accompaniment, such as the Ebola emergency in Africa, or emergency care in Haiti, among others. In this regard, Antonio Romero states:

"Regarding the financing scheme of Cuban cooperation, different options are observed: in some cases all costs have been assumed by the Cuban part (especially that directed to very poor or vulnerable countries); in other cases programs and projects have had financing from funds coming from third actors (other countries as part of triangular cooperation schemes, and/or from international organizations); but there are also actions for which the budget was assumed and shared by Cuba and by the beneficiary country." (Morales, 2017).

The level of collaboration that Cuba has managed to maintain has been mostly on a pro bono or shared basis. The island's efforts to maintain more than 50 thousand professionals abroad, to grant thousands of scholarships to students from all over the world, to guarantee all surgical operations performed, as well as materials and equipment, stand out. All this represents an extraordinary expense for the Cuban government.

On the other hand, it must be said that in the case of Cuban medical collaboration, the medical brigades are qualified to carry out teaching activities and thus contribute to professional training; in fact, Cuban medical practice itself is characterized by direct contact with the patient, a differentiated treatment that is not the case in other parts of the world. In the case of Cuba, this practice is part of the integral health system. From such interaction arises a relationship with the entire medical team in their consultations and exchanges, transmitting teachings to other local professionals. In this sense, it is worth remembering that the model of the public health system in Cuba is based on three main elements: primary, secondary and tertiary care, focused first of all on disease prevention, then medical treatment - reduction of morbidity and mortality - and later on patient rehabilitation. To this end, there is a structure that goes from the community doctor, health areas, polyclinics and specialized hospitals, in addition to specific programs such as women's care,

¹Henry Reeve was a Cuban patriot of U.S. nationality and fought alongside the Cubans in the struggle for independence against Spain in the 19th century.

which seek to guarantee the population the medical-health conditions that improve their quality of life and life expectancy.

Cuba's trajectory in the training of health professionals is well known, from which many students from different countries have benefited, trained at the aforementioned Latin American School of Medicine (ELAM), founded on the Caribbean Island in 1999. In addition, Cuba has been a reference for the application of the literacy method "*Yes, I can*" in the region. According to specialists, the application of this method allows literacy in seven weeks and would eradicate the scourge of not knowing how to read and write in the world with only one third of the United Nations Educational, Scientific and Cultural Organization (UNESCO) fund for this purpose. Work is currently underway to implement "Yo Sí Puedo" on mobile devices and social networks, in a bid for digital literacy. Another program implemented by Cuba is "*Yes, I can go*" a post-literacy alternative. It is an audiovisual program for the development of skills, understanding and acquisition of knowledge at the elementary basic level for young people and adults, in accordance with the educational systems of the country where it is implemented. The training enables the beneficiary population to undertake higher studies for job training or greater access to different sources of work in the communities where they live.

The context of Covid-19 marked an important moment for Cuban medical cooperation. This difficult context gave rise to the presence of Cuban medical brigades in Europe. The case of Italy is the most relevant, as well as Andorra and European overseas territories in the Caribbean. In addition to sending health professionals to various regions of the world, Cuba developed strategies for dealing with the disease, as well as the biopharmaceutical and biotechnological industry, developing drugs that were part of international protocols for the management of the health crisis, such as recombinant human Interferon Alpha-2b.

It should also be noted that Cuba was the only country in the Latin American and Caribbean region with the capacity to develop so far three vaccines of its own (Abdala, Soberana 02 and Soberana Plus) and two candidate vaccines (Soberana 01 and Mambisa). In addition to Cuba, the vaccines are already being used in Mexico, Nicaragua, Venezuela, St. Vincent and the Grenadines, Vietnam, Western Sahara, Syria and Iran. As regards the process of recognition by the World Health Organization (WHO), the procedures for the recognition of Abdala as a vaccine began in January 2022. Among them, the inspection of the production site, which will be located in the Mariel Special Development Zone. This institution, known as CIGB-Mariel or Industrial Tecnológico Mariel, is considered the most modern in Cuba and one of the most advanced in Latin America and the Caribbean. Work is already underway there on the validation, qualification and start-up of vaccine production. It is also planned to increase the development of other CIGB products such as new formulations of the drug Heberprot-P for the treatment of diabetic foot ulcer, as well as the Cuban vaccine CIMAvax-EGF for the prevention of lung cancer. In the case of the latter, it is worth mentioning that the Roswell Park Institute in the United States recently opened a clinical trial in that country with the therapeutic immunogen and immunostimulant agent with recombinant human EGF, currently produced by the Center for Molecular Immunology of Cuba.

An important point to take into account in this analysis is also how in recent years the Caribbean Island has had the challenge of inserting itself in certain cooperation scenarios together with actors whose relationship has been marked by various conjunctures ranging from confrontation to dialogue. On December 17, 2014, Cuba and the United States began a process of normalization of relations, thus opening opportunities in an almost virgin market, although not unknown, and

close in sectors of trade, science and technology such as agriculture, finance, aviation, tourism, manufacturing, health and others. For its part, the European Union (EU), also began a rapprochement with Havana by eliminating the Common Position while establishing the Political Dialogue and Cooperation Agreement (ADPC), on December 12, 2016. Both processes are experiences that despite their diverse natures and scopes have validated the relevance of a different relationship model, based on common or shared fields of interest despite differences.

In the case of relations between Japan and Cuba, it should be noted that Havana and Tokyo have a historical relationship of 400 years and 92 years of diplomatic relations. It is also important to note that between 1970 and 1985, Japan was Cuba's second most important trading partner. Today, Japanese assistance and cooperation is one of the most important for Cuba. During the last few years, relations between Cuba and Japan have become closer as part of this context of greater openness and revival of relations between Cuba and the world. It should be noted that Japanese Prime Minister Shinzo Abe, in 2016, became the first head of government of that country to visit Cuba, which marked a new chapter in relations between the two countries as a result of a qualitatively different political context.

For its part, the Japan International Cooperation Agency (JICA), opened in 2018 an Office in Cuba, despite the fact that since long before JICA has been cooperating in Cuba mainly in food production, cleaning the port of Havana, sewage and waste treatment in the capital.

Among many examples that could be cited, among the most recent is the signing of the Memorandum of Cooperation between the Ministry of Health, Labor and Welfare of Japan and the Ministry of Public Health of Cuba, with the aim of collaborating to strengthen the public health and medical assistance system, in addition to sharing experience in the treatment of the elderly. This memorandum is the first to be signed between Cuba and Japan in the field of health.

In general terms, it is possible to identify in this period a revival of Cuba's relations with Asia and especially with Japan between 2020 and 2021, as well as with other important international actors. This scenario constitutes an important precedent to delve into Cuba's potentialities in terms of international cooperation through the relationship experiences it has been acquiring in the diversification of its relations, taking into consideration various relationship schemes.

1.2- The case of Sub-Saharan Africa.

One of the regions where there has been more Cuban presence in terms of collaboration is Sub-Saharan Africa. The history of Africa has been especially and unfortunately linked to the colonial history of Latin America and the Caribbean. The footprint of slavery marked the passage of the black continent across the Atlantic. In the particular case of Cuba, it is important to point out certain elements of Cuban history. The arrival of the Spaniards to the Island meant the "discovery" and later the process of conquest and colonization. The disappearance of the Cuban Indians was conditioned by diverse factors that marked this encounter or cultural clash. To solve the problems of the work force, from the first decade of colonization the Spaniards introduced Africans, much more resistant than the Indians to the rigors of exploitation. The "blacks" arrived in Cuba very early incorporating themselves to the process of miscegenation, which thus included Indians, whites and

blacks. At the same time, they brought their cultural universes, which also began to mix, giving rise to the foundations of a national identity: the Cuban being.

The arrival of the African world to Cuba came to conclude the process of conquest and colonization. African cultural resistance must be understood in this context under the lens of syncretism and transculturation on the one hand, and the evolution of the consciousness of slavery on the other. In their efforts to hide their African religion and magical practices, the Lucumís identified their African deities (orishas) with the saints of Catholicism from Spain, resulting in a religious syncretism known today in Cuba as Santería. A Catholic saint and a Lucuman orisha are seen as different manifestations of the same spiritual entity.

At the beginning of the 19th century, the rise of slave smuggling was accompanied by an active evolution and a reaffirmation of religious beliefs, both of those already in Cuba and of those who arrived, as they renewed ritual elements perhaps already lost or on the way to extinction due to the inclemency and inhumane treatment of the Cuban-Spanish landowners. This exchange produced a qualitative leap and allowed them to take a firmer step towards their future identity. The meaning of "Cuban" was defined on the basis of the ideals that were forged during the 19th century, under situations of extreme adversity that allowed a high degree of maturity to the independence sentiment. Thus, in one way or another, the anti-colonial sentiment of rebellion, independence and freedom has been in the forge of Cuban nationality.

So that common colonial past and close cultural ties mark an important precedent in the history of relations between Cuba and African countries. African history and blood not only run through the veins of Cuban men and women, but both share the roots of the same cultural universe that has left its mark not only through skin color, but also through religion, music, dance, and the history of colonialism. Hence, it is not surprising the Cuban presence in Africa since the beginning of the decolonization process that coincided with the triumph of the Cuban Revolution in 1959. Both processes were connected as part of Cuba's foreign policy vision of settling the debt accumulated with the newly independent African countries, especially through support in two fundamental areas: health and education, the two fundamental conquests of the Cuban Revolution, guarantors of freedom, emancipation and a dignified life.

Since then, although Cuba is an actor of lesser economic weight at the international level, it has a long history and prestige in its relations with Africa. Cuban collaboration in Africa, from its beginnings, has been based fundamentally on the development of a relationship of support and assistance to development through the use of the common roots present on both sides of the Atlantic. Cuba contributed through professional training to provide the emancipation processes that were taking place in the region with solid bases for future socioeconomic development and therefore for their sustainability. For these reasons, culture has also been part of the public policies of all these countries. This therefore contributes to generating an environment of trust and empathy.

Since the 1960s, Cuba began to support not only the progressive forces of Latin America but also the national liberation movements of the African continent that were consolidating their path towards decolonization, as well as other progressive governments and political forces in Sub-Saharan Africa: Ghana, Guinea Bissau, Guinea, Mali, Ethiopia, Tanzania, Angola, Zimbabwe, Mozambique, Namibia and South Africa. This support covered a wide number of spheres ranging from political-diplomatic backing in international forums to concrete support in professional

training, transfer of resources and even military aid to anti-colonialist and anti-imperialist movements struggling to achieve or maintain the independence of their countries. (Silverio, 2020)

With the fall of the Socialist Camp, Cuba's cooperation with Africa was substantially modified and has evolved in these last decades towards new methods and scopes, but always maintaining the principle of collaboration, without interference in the internal affairs of the countries. Cuba maintained excellent political-diplomatic relations, at the highest level, with most of the countries of the region and even achieved the status of Observer State within the African Union (AU), a privilege that few countries have. In this way, it continued with its South-South cooperation programs in Africa in areas such as health, education, technology transfer and in the food sector. (Silverio, 2020).

In the case of Sub-Saharan Africa, medical cooperation has focused on the fight against communicable diseases such as malaria, Ebola and more recently against Covid-19. Another of the health programs extended to Africa has been the aforementioned *Operation Miracle*, to restore sight to affected people. In the education sector, Cuba has stood out by offering scholarships for the training of medical personnel in Cuba.

Cuba has also helped with the creation of medical schools to train needed professionals in their own localities. If 1963 marked the beginning of medical cooperation, in 1975 the first medical school abroad was established in the city of Aden (Yemen) with Cuban professors. Since then, several countries have joined this modality. On November 12, 1986, the "Miguel Díaz Argüelles" School of Medicine was inaugurated in Guinea Bissau, with 30 students, which was the beginning of the teaching collaboration with that country. The first graduation of Guinean doctors, in their own country, was on July 24, 1992 (Marimon, 2019). After 2004, a new joint training program with Cuban medical brigades was implemented, where students began to get involved in the health problems of their countries together with the Cubans. With this new projection, the number of faculties abroad was extended to 11 countries, of which 6 were African: Angola, Eritrea, Gambia, Guinea Bissau, Equatorial Guinea, and Tanzania. (Marimon, 2019).

In the case of Guinea Bissau, the civil war that broke out in that country in 1988 affected medical collaboration. It was not until 2006 that the reopening of the Faculty of Medicine in Bissau took place. As a result of the Cuban teaching collaboration, between 2005 and 2017, 445 doctors graduated, 318 in Guinea Bissau and 127 in Cuba. In the 2017-18 academic year, the Raúl Díaz Argüelles School of Medicine, came to have a total of 34 Cuban professors and 390 students, from the first to the sixth year of the career (Marimon, 2019). Also in Equatorial Guinea, local authorities received in Malabo, 19 new professors from Cuba who joined those already teaching at the National University of Equatorial Guinea (UNGE), as part of the cooperation agreement between the two governments. One of the factors in favor of this collaboration is the Spanish language, which facilitates the presence of Cuban professionals.

Education is an important sector in which Cuba has excelled in Africa. Following Angola's independence in 1975, collaboration agreements between Cuba and Africa were implemented in several fields, especially in the area of literacy. It was 1978 when the first group of pedagogues was sent, with the participation of hundreds of young collaborators. As a result, 1.3 million Angolans became literate. It was with Africa that the first educational brigades were implemented, both of Cuban people who traveled to the countries, as well as hundreds of young people who came to Cuba to train as professionals. The first experiences in Cuba were on the Isle of Youth, where the

educational facilities were specially adapted by country to work with the people who came to study, under the direct responsibility of the Cuban Ministry of Education.

Another example is the implementation of the literacy program "Yes, I can" in Angola, with which 86.5 % of the literate population in that country would be literate by 2017 (Silverio, 2020). (Silverio, 2020) The results achieved with the application of the two methods allowed the development of territories free of illiteracy, according to UNESCO requirements, in the countries of Venezuela, Bolivia and Nicaragua. The method has also been applied in Angola, Equatorial Guinea, Guinea Bissau, Namibia, Nigeria, Tanzania (Morales, 2017). But undoubtedly, given the situation of illiteracy that exists in many African countries, especially in rural and remote areas, where access to elementary education is a chimera, the potential for expansion of these programs is very large.

These programs have been joined by others that are part of Cuba's vision of emancipation and complementarity in the close relationship between education and culture. Thus, for example, it is worth mentioning the Sports Collaboration Program and the Emergency Brigade Training Program, teacher training programs, educational campaigns for the prevention of HIV/AIDS and other communicable diseases, as well as technology transfer.

Cuba's achievements in biotechnology and biopharmaceuticals have also been placed at the service of African populations. In particular, in the African continent, due to its structural problems and the lack of medical services, Cuban cooperation in this field has been very well received by African peoples and governments. There have been several actions as part of the provision of medical services, which have not only been the sending of doctors and nursing personnel but also the transfer of technology to deal with preventable diseases, the teaching contribution in medical schools in several of the countries of the region and their training in Cuba.

One of the dimensions of Cuban cooperation in the area of health has been the fight against communicable diseases such as malaria, which is the leading cause of death in Africa, and initiatives have been strengthened to reduce its impact. With regard to the fight against malaria, the Economic Community of West African States (ECOWAS) agreed to apply Cuban technology, products and specialists as a demonstration of the effectiveness of the anti-vectorial program in Ghana² and Angola. Among the methods are the application of products such as the biopesticide Bactivec and Cypermethrin, produced by Biocubafarma, which controls, through fumigation, the spread of the *Aedes aegypti* mosquito. The Cuban vector control program has also been applied in Zambia, Equatorial Guinea, Benin, Kenya, and Tanzania (Cubadebate, 2009).

The Biotechnological and Pharmaceutical Industries Group (BioCubaFarma), founded in December 2012 and which integrates the country's scientific pole, has played a fundamental role in these areas. This business group is responsible for manufacturing around 525 different types of medicines and continues its scientific work to develop new medicines and medical equipment. Among the company's main achievements are the implementation of a medicine against diabetes and for the treatment of cancer. In the case of diabetes there is the so-called Heberprot-P. There are also projects for the creation of joint ventures in countries such as South Africa and Algeria. Another of its most important missions is the fight against diseases such as Zika, Chikungunya, dengue and yellow fever, all caused by the *aedes aegypti* mosquito. (Biocubafarma, 2016) All these experiences have been transmitted to the health authorities of different African countries.

²In Ghana's capital, Accra, malaria mortality has been reduced by 71% since the implementation of this program.

As in countries such as Nigeria, Equatorial Guinea and Gabon, Cuba collaborates with Angola in the program to fight the vectors that cause malaria and dengue, among other diseases. In the fight against malaria in Angola, 140 Cuban specialists were collaborating in 98 of the 164 municipalities. The effort in the fight against malaria in Africa includes the construction of biolarvicide factories and the implementation of personnel training actions, training of community agents and educational talks on environmental sanitation. This program has been in place for more than 8 years. The Angolan Ministry of Health acknowledged that in Angola, some 20,000 people used to die every year from malaria, while by 2013, less than 5,000 perished.

These are just some examples of Cuban products applied in African countries. These examples demonstrate Cuba's comprehensive health projection towards the region. There is a close relationship between the areas in which Cuba has demonstrated the greatest strengths in terms of cooperation in sub-Saharan Africa: health, education and the biopharmaceutical and biotechnology industry.

1.3-An approach to some Cuban experiences in the field of triangular cooperation

Based on Cuba's experience in these and other areas of scientific development and its high potential in the country, as well as the significant Cuban presence in international cooperation, it has also been possible to advance in triangular cooperation experiences. Among the most outstanding is the case of the fight against Ebola in Africa between Cuba and the United States. Also with Turkey, a cooperation agreement was signed for medical equipment to fight the pandemic in Equatorial Guinea and this marked an interest on the Turkish side to promote this type of triangular agreements. Turkey also requested a videoconference for triangular projects with Cuba in Africa. In the context of the pandemic, there was also the example of one of the medical brigades of the Henry Reeve Contingent deployed in Cape Verde, which was financed by Luxembourg.

In the case of the Latin American region, it is worth highlighting the cooperation experiences developed within the framework of ALBA-TCP, which allowed the development of policies applied by governments to improve the quality of life of their societies, as well as the implementation of multilateral strategies, especially those related to ALBA-TCP, which made it possible to articulate governmental capacities for the purpose of stimulating international cooperation. The concept of complementarity acquired relevance in this mechanism to the extent that it allowed for integration based on interdependence, but not on power relations. This issue is particularly evident in four fundamental areas: educational programs, health programs, economic and trade exchanges and energy agreements. With regard to the programs related to ALBA-Health, it is important to point out that this is one of the main achievements of ALBA-TCP as a multilateral mechanism, and Cuba's role in this has been fundamental. In general, in the case of ALBA, cooperation was developed on the basis of bilateral endogenous development, in which the same project could be developed in several countries at the same time, which implied joint cooperation among those countries that were integrated. In this regard, it is worth mentioning the aforementioned “*Operation Miracle*” and the literacy program “*Yes, I can*”. Another project to be mentioned in this context was the Petrocaribe experience, which was developed on the basis of preferential prices.

Another important experience in triangular cooperation was the "*More Doctors*" program developed in Brazil between Cuba and the Pan American Health Organization. This program, in addition to distributing professionals to the periphery of large cities and indigenous departments, provided for the creation of new medical schools.

During the Covid-19 pandemic, Cuba strengthened its relations with CARICOM member nations. Since the beginning of the pandemic, several Caribbean countries requested an increased Cuban medical presence. As a result, several brigades left for Suriname, Jamaica, Dominica, Belize, St. Vincent and the Grenadines, St. Kitts and Nevis, Honduras, Anguilla and Martinique and others where they have been progressively incorporated, not to mention their collaboration in other regions. It is important to take into account the articulation of policies that was achieved for the effective management of the crisis, which had in Cuba, as well as in European countries, important actors who managed Cuban collaboration in European overseas territories located in the Caribbean. In that sense, it is important to highlight how France approved the entry of Cuban doctors to its overseas territories, in need of health professionals. This plan dates back to 2019 but came at an opportune moment. On the other hand, the president of France recognized Cuba's participation in the islands of Martinique, Guadeloupe, Guyana and St. Pierre and Miquelon. Also, the British overseas territory of the Virgin Islands received 22 Cuban collaborators to strengthen medical capacity. Similarly, Cuban medical collaborators arrived in the British islands of Turks and Caicos.

Among the most outstanding recent examples of triangular cooperation management that can be implemented through the United Nations Development Program (UNDP) is the experience between Cuba, the EU and UNDP in various projects. Such is the case of the *Local Self-Supply for Sustainable and Healthy Food (ALASS)* project. This project will continue with the participatory approach and the promotion of local development that has characterized more than a decade of tripartite collaboration between MINAG, the EU and UNDP to contribute to food security in Cuba, with very satisfactory results. Likewise, Cuba, the EU and UNDP continue to collaborate in the fight against climate change (*Task Life*).

For his part, the European Union Ambassador to Cuba, Alberto Navarro, commenting on the work of Cuban medicine and doctors in various nations, said in an interview: "it is an example, and we would like, as the European Union, to work with them and explore the possibility of creating a school like the ELAM for Africa, where there is also a great need and where there is a lot of experience on the Cuban side. It would be very nice to create an African ELAM with Cuban know-how and European funds, either in Addis Ababa, where the African Union is located; in Cotonou (Benin), in Algeria... It is one of the projects that we would like to study and make feasible". He also added: "It is a relationship that is growing, as well as in research with the Horizon 2020 program, which is interested in BioCubaFarma, interferon and pandemic issues" (Extremera San Martín; Irene Pérez, 2020).

As can be seen, these experiences constitute some examples of the progress made in triangular cooperation from Cuba. When analyzing those that have been developed at the bilateral level and these, undoubtedly, are important bases for the development of this type of triangular undertakings. However, there are still clear limitations to carry them out due to very narrow notions about cooperation and therefore a better use of it.

2. Triangular cooperation: effective relationships and shared benefits.

When considering triangular cooperation, the first question that arises is how to assume such an experience as an opportunity for capacity building, going beyond the donor country-recipient country scheme and turning all actors into active participants, beneficiaries of the cooperation process. The study of essential theoretical references on the subject provides important notions in this regard. The following section proposes an approach in this sense with the objective of evaluating, through the African case, the possibilities of overcoming these limitations of the cooperation exercise, with Cuba and Japan as two actors capable of participating in the cooperation and integrating themselves into the process.

2.1-Triangular cooperation as an opportunity for capacity building

Global events, such as climate change, the food crisis or the advance of the Covid-19 pandemic, show that the world needs new integrated dynamic processes. In dealing with the pandemic, exchanges between the scientific community, trained personnel and the training of professionals, as well as the strengthening of local capacities to deal with the health crisis, the sending of health material, medical personnel and financial donations to the health sector have been very useful. However, the lessons learned from this and other crises, and the unexplored potential of cooperation based on shared interests in an increasingly interconnected world, have made it possible to assess the importance of different patterns of relationships and complementarity, ranging from the promotion of new strategies for entrepreneurship and cooperation to the need to leave capacities in place in the countries receiving aid to enable them to self-manage the various crises they face and promote the development of endogenous capacities.

The concept of international development cooperation (IDC) has been defined since the 1970s; but it was not until the 1990s, with the end of the Cold War, when the global market was unified under a capitalist direction, linked to the geopolitical changes brought about by the disappearance of the Soviet Union, that the economic essence of IDC became more complex, because although it had already acquired social and even moral features, it is considered that the only way to develop is through the adoption of the principles that now regulate the world economic system, i.e. globalization; Thus, the best way to promote cooperation for development is to insert countries into globality (Tzili Apango, 2013).

Related to this topic is the idea of Global Public Goods (GPG). Bearing in mind that the market alone is not capable of supplying (securing) such goods necessary for every society, it is therefore important to cooperate in their provision. An international or global public good is a good that can be enjoyed without the need to exclude others from its benefits, and that can be consumed by one actor without being depleted by other actors. In other words, they possess the principles of non-exclusion and non-rivalry, just like local goods. Basically, five sectors of global public goods have been identified: environment, health, knowledge, security, and governance. For the promotion of these goods, Official Development Assistance (ODA) has become a widespread practice by some international actors, most notably Japan. ODA is conceived above all in a scheme of open, flexible and respectful relations based on the understanding of common interests, mutual benefits and capacity building. The linkage between international cooperation for development and global public

goods is therefore complete. ODA and International Development Cooperation are considered a GPG in itself (Tzili Apango, 2013).

Therefore, from this perspective, "international development cooperation" takes on new nuances when it comes to managing the actions carried out by governments and civil society entities, aimed at improving living conditions and boosting development processes in countries with social, economic, or political vulnerability, based on criteria such as equity, international solidarity and mutual interest.

At this point, it is important to analyze the current global challenges, which require concerted interventions between different governments and actors around the world. This situation, to a large extent, challenges the traditional Westphalian conception of the nation-state and pushes the field of international relations into previously unaddressed issues such as the role of science, for example. Solutions to these challenges must be based on the interaction between actors and knowledge, which take advantage of, enhance and promote the strengths of each country, as well as its niches of innovation, talent and competitiveness. Science, technology, and innovation are essential aspects to be taken into account in an approach to education and capacity building, as they represent a necessary means for the adoption of actions that contribute to building sustainable socioeconomic development, which can be supported by international relations to project solutions on a global scale (Ordóñez-Matamoros, Roa González, Centeno; 2021).

These dynamics in turn also generate new problems. This encounter between science, technology and innovation and international relations, of growing relevance, involves a series of logics and tools of power, mainly soft power, which governments have at their disposal to make their national interests viable through interaction with others. In this context, *science diplomacy* emerges, an emerging concept in the field of international relations, which implies new bridges between science, public policy and diplomacy, usually thought of as separate spheres or worlds. This concept involves a new interdisciplinary approach to cooperation and interaction between States to improve policies and public management for socioeconomic development, competitiveness, social inclusion, the consolidation of smart cities, the promotion of new technologies, among other purposes from a development and capacity building approach. Although science diplomacy is a fluid and emerging concept, with diverse interpretations and conceptualizations, most definitions tend to agree on the need for the State to take action to find common ground, synergies and tools to deploy strategies that promote collaboration and global competitiveness. (Ordóñez-Matamoros, Roa González, Centeno; 2021).

Taking into account these elements, it can be said that *international cooperation* is increasingly a field of interactions, open and constantly evolving. In this sense, it is a phenomenon that is part of a global reality, and is manifested in a local space, in which recipients and donors should not be identified, but various actors that converge and act as agents in the field of cooperation. These interactions increasingly describe a potential space for effective transformation, which can be evaluated to the extent that aid implies the development of endogenous transforming skills and capacities not only in the recipient countries, but also among the parties that assist development and manage to incorporate experiences of development of their own capacities in terms of feedback and sustainability of the international cooperation processes themselves.

In this sense, the dynamics of triangular cooperation are an important relationship model to take into account. These dynamics differ from the traditional North-North, North-South or South-

South vision, although triangular cooperation is sometimes considered as a modality within South-South cooperation. *The White Paper on Development Cooperation* (2018) defines South-South cooperation or Triangular Cooperation, as that which is offered by a developing country, relatively advanced, to another developing country, using its experience in terms of development policies and its own capabilities in human resources training, for example. They also argue that in many cases, cooperation, especially technical cooperation, is carried out in countries that have similar economic and cultural conditions or that have faced or are facing similar development challenges. When this cooperation is supported by donors or international organizations, cooperation between developing countries is defined as triangular cooperation.

Triangular cooperation promotes asymmetrical and open relationship schemes between States or multilateral organizations, with the aim of promoting beneficial forms of interaction (whether cooperative or competitive) between them to address various challenges. To this end, it is essential to take advantage of accumulated experiences and common interests while at the same time generating new spaces and areas of cooperation and can therefore be identified as plural and open. This proposal escapes a narrow vision of traditional cooperation that has been the dominant one because it proposes the principles of *aid effectiveness* as a tool for the search for complementarity to build an architecture that allows connecting national, regional and global platforms, interrelating various modalities such as North-South, South-South and triangular cooperation (WG-CSS, 2010).

Triangular cooperation involves learning from all parties and should not be confused with direct support to South-South cooperation, for example, through funding alone. Triangular cooperation implies a huge potential for horizontal partnership. True win-win situations can arise, in which partners learn and benefit from each other, dissolving the boundaries between "donors" and "recipients". Triangular cooperation appears as an avenue with great potential for horizontal partnerships and win-win situations. Hence, it is important to identify complementarities between South-South and North-South cooperation considering the growing interest of traditional donors to become "emerging triangulators" and the increasing number of mechanisms created for that purpose (WG-CSS, 2010).

2.2-Potential for triangular cooperation between Cuba and Japan in Sub-Saharan Africa

Cuba and Japan are two actors that share approaches to cooperation and collaboration. This is manifested, for example, in a common scenario: Africa. The study *Potential for Cuba-Japan Triangular Cooperation in Sub-Saharan Africa in Education and Capacity Building* (2022), has deepened the analysis of the relevance of a triangular cooperation relationship model between Japan and Cuba, in this case in African countries, based on shared interests in sectors that represent high potential for Tokyo and Havana, as well as a great challenge for Africans: health, education and capacity building.

Two fundamental ideas underlie the basis of this research: 1) Cuba and Japan develop the cooperation agenda on the basis of mutual benefit within the framework of the Global South. 2) Therefore, they promote not the comparative advantages they have but the shared advantages especially at times when the global society needs cooperation.

In the case of Japan's projection towards Africa, it is pertinent to point out that the Japanese presence in the continent is related to the interest of developing a quality infrastructure so that the region can effectively insert itself in the dynamism of the Indo-Pacific in order to continue advancing in the development of its relations with Japan, for which knowledge, through technical cooperation and professional training programs, is vital.

Given the new contexts in which the region is immersed, it is essential to develop the capacities of African societies so that they can take advantage of the new scenarios that are beginning to unfold in this context. African countries have managed to achieve a political stability that allows them to begin to develop in better conditions than in the past. This is a new moment in which these societies are able to move from being mere recipients of aid to becoming managers of their own development.

The promotion of trade relations between Japan and Africa is currently based on adopting a long-term, high-tech investment approach, rewarding African countries with stable, high-quality investments and providing Japanese companies with the new growth needed to take the next step in their globalization. However, in that regard, it has become evident that Japanese companies in general lack the expertise and information to go to Africa, among other reasons, because Japan enjoyed a long historical economic relationship with its neighboring countries. Therefore, they see much more potential still in the Asian region. Hence, Japanese private sector engagement in Africa is so low. This is also sponsored by the perception that investing in Africa has more risks than potentials because of security issues and political instability. (Mizner, 2019).

It is important to note, however, that in Africa there are more politically stable countries than those affected by these problems, and even within these countries classified as "countries at risk" there are regions that are not affected. Hence the need to delve deeper into the political and economic realities of African countries in order to have an objective approach that allows for the construction of mutual capacities in those areas or sectors where there is potential. In this sense, it is timely to change the concept of "country at risk" to "risk areas", taking into account the threats of terrorism and insecurity in general, since many times a country with high levels of insecurity, such as Nigeria (for example), is stigmatized, but where there may be cities or regions that do not have the same situation.

The Tokyo International Conference on African Development (TICAD) has played an important role in this regard. Also, the role of the Japan External Trade Organization (JETRO), which collects trade information, provides it to the private sector, and offers business matchmaking, particularly with companies in third countries, such as the United Kingdom, France or India, that can help Japanese companies in Africa, should also be highlighted.

Africa has a large, young and rapidly growing population, projected to account for a quarter of the world's population by 2050. This means a potential consumer market and a growing need for vocational training for this working-age population. This goes hand in hand with the demand for African infrastructure development, which is an important area for trade development combined with cooperation. Therefore, beyond natural resources, heavy industry and manufacturing, there are areas of particular interest for development that involve ensuring the necessary conditions to create the conditions and especially the aforementioned environments of trust that trade and investment demand.

In this sense, it is particularly important to promote social development and thus take advantage of existing potentialities that often need to be strengthened through the development of endogenous capacities. Thus, for example, the development of health capabilities is an aspect directly related to regional security. Cooperative actions can promote the elimination and prevention of a number of diseases, including malaria, dengue fever, intestinal infectious diseases and tuberculosis, to name but a few. Together, these cause a considerable disease burden in these countries that impede economic growth and constitute serious challenges. These diseases have a high prevalence in the poorest sectors of the population and the cost of the health system, including diagnosis, housing, transportation and medicines is high. All of these directly affect the loss of productivity, while worsening the vulnerable situation of the populations and, as a result, poverty continues. Add to this the impact on agriculture, fisheries and pastoral populations in poor regions, while the flow of people to urban areas (including tourism) increases the risk of disease spread to new areas.

In a general sense, therefore, it is important to foster an enabling environment for investment and trade where the conditions exist, but where there is a lack of development of these conditions and therefore of optimizing them and converting them into real capacities to manage indigenous development.

Major world powers and trading blocs have been aggressively campaigning for trade and influence in Africa in recent years, leading to thinly veiled tensions or even outright competition between various countries. Many traditional and non-traditional powers with a current presence in Africa are accused of "predatory" actions on the continent, particularly due to the former's use of debt as a form of leverage over African nations. Japanese companies can distinguish themselves in this market with their offer of high technology and development assistance leaving installed capacities for indigenous development and sustainability in African countries, from an approach of collaboration and not competition with other countries. In this sense, it is assumed that Japan can benefit from the cultural experience and presence of other partners when doing business in Africa. It is about seeking partnership opportunities, which in itself is part of the approach.

In this case, the study carried out made it possible to identify certain points of contact between Japan and Cuba's international cooperation projection towards sub-Saharan Africa in the areas of education and capacity building.

Thus, for example, in African countries, both Cuba and Japan have an important presence in education and capacity building through various modalities, ranging from direct presence of health personnel, education, offers of scholarships for professional training, etc. An outstanding case, for example, is the possibility of cooperation on disaster issues. Both Cuba and Japan have extensive experience in this field: the former because it is a tropical country hit by hurricanes part of the year, and the latter because it is a country with frequent seismic and tectonic activity. In addition, both have specialized teams for situations of this type: the *Henry Reeve International Medical Brigade* on the Cuban side, and the *Japan Disaster Relief Team (JDR)* on the Japanese side. (Japan's Ministry of Defense, 2019).

Likewise, in the biopharmaceutical and biotechnology industry, an important door is opening in terms of technology transfer. In fact, many products of this Cuban industry have been successfully applied in African countries in various contexts. Japan has also assisted these countries with sanitary material, technology and equipment for hospital and health services in general. In this

sense, it has been possible to explore opportunities through links with regional organizations. For example, the possibility of cooperation with different institutions such as the Pan American Health Organization (PAHO), the African Medicines Agency (AMA) and the African Center for Disease Control and Prevention (Africa CDC) for the exchange of experiences in the management of epidemics is growing.

The analysis of these and other experiences made it possible to identify, in the first place, the development of sectors such as education and capacity building from a knowledge transfer approach. This perspective corresponds to the shared vision of human security centered on people, with the objective of strengthening and leaving installed capacities, on the basis of which it is possible to project triangular cooperation scenarios. The projection of both actors on knowledge management, which implies the development of endogenous transforming skills and capacities in the recipient countries, differs from other international cooperation experiences, which are essentially based on development assistance but do not leave installed capacity for indigenous development and sustainability in the countries where they intervene.

Secondly, it was possible to identify international cooperation in itself as a sector with broad potential, open and expanding. Therefore, international cooperation understood in this sense becomes a global public good and, therefore, forms part of the synergies of development and capacity building that it promotes and articulates globally and locally.

While Japan has a historical trajectory in international cooperation in the form of Official Development Assistance, and Cuba shares in many ways both this approach and the international presence in similar circumstances such as natural disasters, epidemics, pandemics, etc.; it must be said that Havana finds itself at a new historical juncture. The new moment is qualitatively different because it is conditioned by a series of events that have been converging in the socioeconomic and political reality of the Caribbean Island: updating of the economic and social model, significant advances in scientific development, especially in the biotechnology industry, accumulated experience in the international cooperation sector and in general the importance that the country's leadership has given to investment in research, development and innovation (I+D+i) as a national priority.

It is important to take into account the form of feedback in which these advances should be linked to the promotion of science, education and cooperation itself, as part of a process of transition to the knowledge society. It is not enough to create technological poles of excellence from which other countries can benefit through cooperation; it is also necessary to implement development policies in a sustained effort so that they can serve as a platform for local productive sectors in the recipient countries.

In this sense, Cuba still has a long way to go and Japan has a lot of experience to contribute to the Cuban scientific development model in terms of international cooperation. Japan is increasingly active in supporting South-South exchanges through its Third Country Training Program. However, both countries do not exploit the enormous potential that exists for triangulation and the exploitation of the knowledge transfer capabilities that both have.

Therefore, taking into account these elements, multiple models of cooperation between Cuba and Japan could be implemented: from the simplest ones, in which both parties share experiences and know-how from each other's cooperation schemes, to more complex interactions that combine

the strengths and multiply the benefits derived from cooperation, so as to achieve the creation of true development chains in the recipient countries while achieving certain levels of synergy that promote sustainable processes and constitute true experiences of knowledge transfer based on the development and strengthening of endogenous capabilities.

Thus, for example, in the case of Cuban medical collaboration, the function of these brigades is to incorporate teaching in medical sciences with structured teaching programs. So far, the cooperation agreements do not have these elements incorporated, but due to the teaching training of Cuban doctors, in practice, they do. All Cuban health professionals with a high level of specialization are capable of teaching because many of them even have teaching categories. In their consultations and exchanges, surrounded by other local professionals, they indirectly carry out teaching work by transmitting their knowledge and procedures to patients.

An interesting issue is that Cuban medical practice includes direct contact with the patient, which is not the case in other countries. Cuba has much to contribute from the very conception of the health-disease process, as well as in terms of effectively incorporating the critical thinking of an integral approach to health in practice, from preventive medicine in primary health care to the development of public health systems in these host communities, in order to adopt effective public health policies.

The model of the public health system in Cuba is based on three main elements: primary, secondary and tertiary care, focused first of all on disease prevention, then medical treatment - reduction of morbidity and mortality - and later on patient rehabilitation. To this end, there is a structure that goes from the community doctor, health areas, polyclinics and specialized hospitals, in addition to specific programs such as the women's care program, or the mother and child program, which seek to guarantee the population the medical-health conditions that improve their quality of life and life expectancy.

Under these principles, Cuba has become one of the most experienced international actors in the field of health, supported by the structure of its comprehensive public health system and the activation of health protocols in epidemiological situations, for example. This has also been fostered by its contributions in biotechnology, a sector with great potential in the area of international cooperation, as well as by an effective professional training system. All these elements point to the relevance and effectiveness of the health system in Cuba, marked not only by the proven success of the health protocols implemented by the Caribbean country, but this is also linked to the progress of scientific research, the biopharmaceutical and biotechnological industry, which has favored endogenous development in times of a complex financial situation, highlighting the principle of developing our own in order not to depend on international suppliers.

Therefore, how to prevent, mitigate, guide the population and provide medical follow-up are crucial issues for a systemic and global approach to this problem. These goals involve fundamental processes associated with the intellectual and material training of these populations. In many cases, these conditions have not been created or, in the best of cases, experiences exist but are disconnected from each other, which limits their effectiveness and prevents progress in one direction or another towards a higher stage of development of these societies. Thus, for example, the effectiveness of a preventive approach to health in practice depends on the confluence of a set of conditions such as access to drinking water, the existence of the necessary infrastructure for the development of these processes, connectivity including logistics and quality infrastructure,

development of human resources for global leaders, disaster risk management, climate change, food security, urban planning, etc.

All these, among many others, are areas that Japan has developed extensively in its ODA programs. Therefore, structuring these efforts in a systemic manner in communities receiving international cooperation is a challenge that involves in-depth field studies, specialized training, exchange of experiences in the field of complementarity and capacity building. It is a large system that must be seen in an integral manner, as a whole, in whose gear lies its main effectiveness. In this idea lies one of the main opportunities for triangular cooperation with Cuba: through the international cooperation it develops, it is a matter of training in the development of endogenous capacities in a systemic manner in order to be able to enhance them effectively. Such effectiveness depends on connecting efforts to understand and undertake that path that goes from access to primary education (literacy) to the necessary training to assume a healthy lifestyle, which goes through having both human and material resources, and at the same time has to do with the sustainability of self-management and therefore staggering of those processes.

Conclusions:

The relevance of studying a relationship model of triangular cooperation between Japan and Cuba in African countries opens a propitious space for relationship and construction of dialogue, empathy and development in spaces of common interest and mutual benefit, not explored so far and where there are many potentialities in the current context.

This is part of the policy of relations that Cuba has developed with important actors in the international arena, including the U.S. and the EU, so they are applicable to the Japanese case given the excellent level of bilateral Cuban-Nipponese relations.

At the same time, the opportunities for Cuba to project its country image linked to the I+D+i sector, as a reference actor in that sense, and associated with other important development poles and think tanks at the international level are evident; which not only positively influences the promotion of scientific sovereignty, aimed at sustainable development, but also means an opportunity for developing countries and at the same time begins to awaken interest in other actors to participate in that opportunity.

The fact that Cuba and Japan have not cooperated together in certain contexts, such as Africa, is due to several factors ranging from mutual ignorance about the potentialities in this regard, to the fact that bilateral relations between the two countries, and fundamentally, cooperation, are still interpreted under the North-South paradigm ("donor" country and "recipient" country), which prevents new paradigms such as triangulation from developing.

This type of conception, especially in the Japanese experience, is conceived from an approach of assistance to the programs of other countries, only to transmit Japanese forms of assistance from a second country to a third. This is an issue still pending to be incorporated and above all to be taken advantage of by the Cuban side to optimize its own capacities to assist development.

Taking into account the horizons of triangular cooperation, the Cuban and Japanese references open up an important field of opportunities. Among the main opportunities identified, the following stand out: Training and capacity building in the field of human security, within which issues related to the broad spectrum of integral health, assistance in emergency situations, technology transfer (pharmaceutical and biotechnological industry) has a prominent place.

In a general sense, it is important to promote these areas in order to foster a favorable environment for development (investment and trade), where the capacities exist, but where there is a lack of development of these capacities and, therefore, of optimizing them and converting them into true managers of endogenous development.

This study constitutes an important precedent for academia to think about new models of relations between the parties and external projection towards the African region, but also to call attention to other regions such as Latin America and the Caribbean where there are also similar challenges and potential for implementing such experiences.

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ANNEXES

Table 1-Type of Cuban Medical Cooperation in African countries

Type of Cooperation	Globally	In Africa	Countries
Comprehensive Health Programme (PIS)	8	5	Guinea, Lesotho, Niger, Sahrawi Arab Democratic Republic (RASD) and Swaziland.
PIS and Operation Miracle (OM)	21	10	Burkina Faso, Chad, Congo, Eritrea, Ethiopia, the Gambia, Guinea-Bissau, São Tomé and Príncipe, Tanzania and Zimbabwe.
Cuban Medical Services (SMC)	16	4	Algeria, Botswana, Equatorial Guinea and Namibia.
Compensated Technical Assistance (ATC)	16	9	Angola, Cape Verde, Djibouti, Gabon, Ghana, Mozambique and Seychelles, South Africa and Uganda.

Source: Silverio, 2020. Elaboration with information data from the Central Medical Cooperation Unit (UCCM). Yearbook 2016. MINSAP, Volume 6, No 1, p. 131.

Table 2-Medical students graduated from the Latin American School of Medicine (ELAM) between 2005-2016

Regiones	Año 2005	Año 2006	Año 2007	Año 2008	Año 2009	Año 2010	Año 2011	Año 2012	Año 2013	Año 2014	Año 2015	Año 2016	Periodo 1999-2016
África		89	186	73	34	20	129	30	25	317	197	233	1,333
Sur América	494	582	689	741	760	834	791	4,864	2,853	141	725	330	13,804
Centro América	779	575	502	379	285	222	308	1,210	718	1,456	436	155	7,025
Caribe	222	159	101	246	129	135	201	145	180	397	175	111	2,201
Norteamérica													
EEUU/Méx	1	38	69	100	98	84	75	78	458	142	126	55	1,324
Oceanía									16	33	50	28	127
Eurasia					6	26	65	412	318	332	606	51	1,816
Total anual graduados	1,496	1,443	1,547	1,539	1,312	1,321	1,569	6,739	4,568	2,818	2,315	963	27,630

Source: Morales, Henry (2017). Official Development Assistance of Cuba in the world. Guatemala. ISBN 978-9929-764-08-8.

Table 3-Countries with the highest number of graduates in Cuba (1999-2015)

Sub-Saharan Africa (10 out of 47 countries)		North Africa and the Middle East (10 out of 18 countries)	
Country	Total	Country	Total
Angola	7,890	Sahrawi Arab Democratic Republic	2,032
Mozambique	3,197	Yemen	433
Ethiopia	2,949	Syria	244
Zimbabwe	1,892	Palestine	238
Republic of the Congo	1,615	Jordan	174
Guinea-Bissau	1,562	Lebanon	97
Namibia	1,097	Morocco	25
Ghana	1,063	Oman	17
Guinea	828	Algeria	15
South Africa	739	Mauritania	13
Total	27,685	Total	3,334

Source: Morales, Henry (2017). Official Development Assistance of Cuba in the world. Guatemala. ISBN 978-9929-764-08-8.

Figure 1- Cuba in Africa

AFRICAN COUNTRIES RECEIVING CUBAN MEDICAL COOPERATION



AFRICAN COUNTRIES WITH MEDICAL SCHOOLS FOUNDED WITH CUBAN COOPERATION



Source: <https://www.google.com/amp/s/www.telesur.tv.net/amp/telesuragenda/Cuba-Africa-20140915-00300.html>

Table 4- Examples of Cuban assistance in emergency situations around the world from 1960

Year	Country	Event
1960	Chile	Earthquake
1963	Argelia	First cuban medical missio
1970	Perú	Earthquake
1972	Nicaragua	Earthquake
1974	Honduras	Hurricane
1985	México	Earthquake
1986	Ucrania, Bielorrusia, F Moldavia, Armeni	Chernobyl nuclear power p accident.
1988	Nicaragua	Hurricane
1988	Armenia	Earthquake
1990	Irán	Earthquake
1998	Honduras	Hurricane (Mitch)
1998	Guatemala	Hurricane (Mitch)
1998	Nicaragua	Hurricane (Mitch)
1999	Venezuela	Floods
2000-2003	El Salvador	Dengue Epidemic
2000-2003	Honduras	Dengue Epidemic
2000-2003	Ecuador	Dengue Epidemic
2003	Argelia	Earthquake
2005	Sri Lanka	Tsunami
2005	Indonesia	Tsunami
2005	Guyana	Floods
2005 ^{1**}	EE.UU. ^{***}	Hurricane (Katrina)
2005	Guatemala	Hurricane (Stan)
2005	Pakistán	Earthquake
2006	Bolivia	Floods
2006	Indonesia	Earthquake
2007-2008	Perú	Earthquake
2007	Belice	Heavy rains
2007	México	Floods
2008	China	Earthquake
2009	El Salvador	Floods
2010	Haití	Earthquake
2010	Chile	Earthquake
2010	Haití	Cholera Epidemic
2011	Japón ^{****}	Tsunami
2014	Sierra León	Ebola Epidemic

* Although not an emergency situation per se, this mission is highlighted because of its importance. This type of collaboration has since spread to many countries around the world.

** The Henry Reeve emergency brigade was created from this moment onwards.

*** The Henry Reeve emergency brigade was created to assist the American people after the impact of Katrina hurricane. However the aid provide by Cuba was not accepted.

**** Cuba offered its help to the Japanese government. Although the aid was not carried out, the Japanese government was grateful for the Cuban support.

2014	Guinea	Ebola Epidemic
2014	Liberia	Ebola Epidemic
2015	Chile	Heavy rains
2015	Nepal	Earthquake
2015	Venezuela	Heavy rains
2015	Dominica	Tropical storm (Erika)
2015	RASD: R. Saharaui	Heavy rains
2016	Islas Fiji	Cyclone (Winston)
2016	Ecuador	Earthquake
2016	Haití	Hurricane (Matthew)
2017	Perú	Heavy rains

Source: Authors' elaboration with information data from Morales, Henry (2017). Official Development Assistance of Cuba in the world. Guatemala. ISBN 978-9929-764-08-8.

Table 5-Scholarships granted by Cuba to foreign students

1961-2001			2001-2002	
Regiones	No. países	Total de becados	Regiones	Cantidad de becas
América Latina y el Caribe	35	7,832	América Latina	5,809
África Subsahariana	39	28,132	El Caribe	2,423
África Norte y Medio O.	14	2,876	África Subsahariana	1,960
Asia y Oceanía	12	876	África Norte y Medio Oriente	941
América del Norte	2	19	Asia y Oceanía	209
Europa	21	154	Europa	6
Totales	123	39,889	América del Norte	18
			Total general	11,366

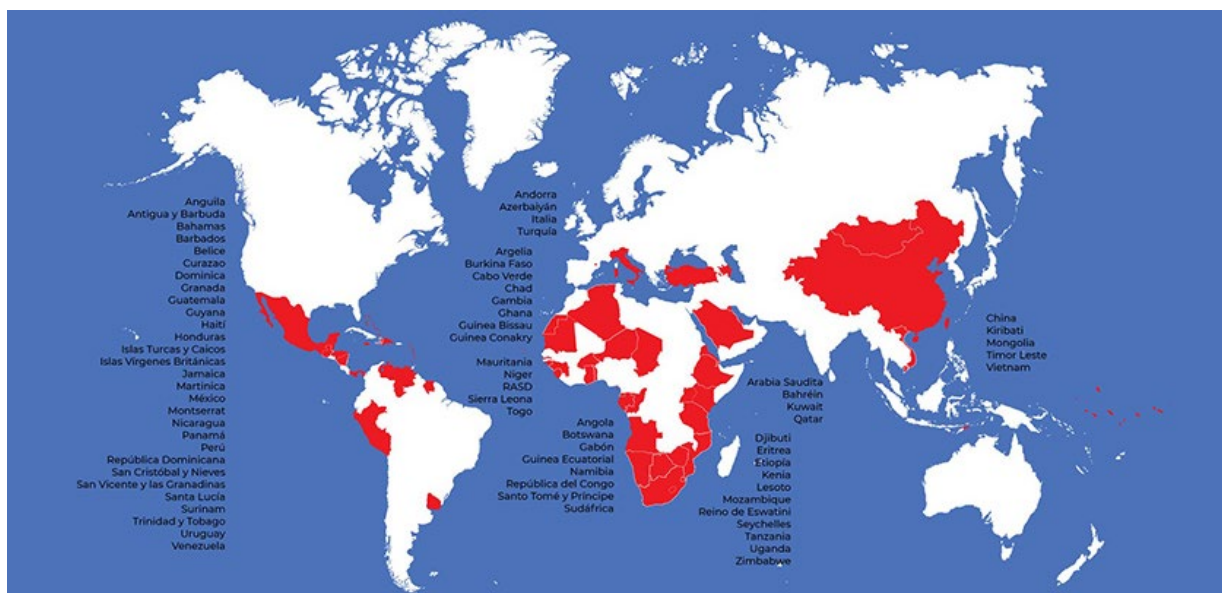
Source: Morales, Henry (2017). *Official Development Assistance of Cuba in the world. Guatemala*. ISBN 978-9929-764-08-8.

Table 6-ELAM: Persons by región and number of graduates in the period 2005-2016

Regiones	Año 2005	Año 2006	Año 2007	Año 2008	Año 2009	Año 2010	Año 2011	Año 2012	Año 2013	Año 2014	Año 2015	Año 2016	Periodo 1999-2016
África		89	186	73	34	20	129	30	25	317	197	233	1,333
Sur América	494	582	689	741	760	834	791	4,864	2,853	141	725	330	13,804
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Total anual graduados	1,496	1,443	1,547	1,539	1,312	1,321	1,569	6,739	4,568	2,818	2,315	963	27,630

Source: Morales, Henry (2017). *Official Development Assistance of Cuba in the world. Guatemala*. ISBN 978-9929-764-08-8.

Figure 2-Map of Cuban medical cooperation in the world in the context of the Covid-19 pandemic (until January, 2021)



Source: Cubaminrex. <http://www.acn.cu/cuba//75438-medicos-cubanos-han-ayudado-a-combatir-la-covid-19-en-cuarenta-paises>

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