







ENSURE HEALTHY LIVES
AND PROMOTE WELL-BEING
FOR ALL AT ALL AGES

CASE STUDY: ITAIPU AND SDG 3

Activities by ITAIPU Binacional supporting implementation of the Sustainable Development Goal 3 (SDG 3) of the United Nations 2030 Agenda for Sustainable Development









ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES





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WHERE WE ARE

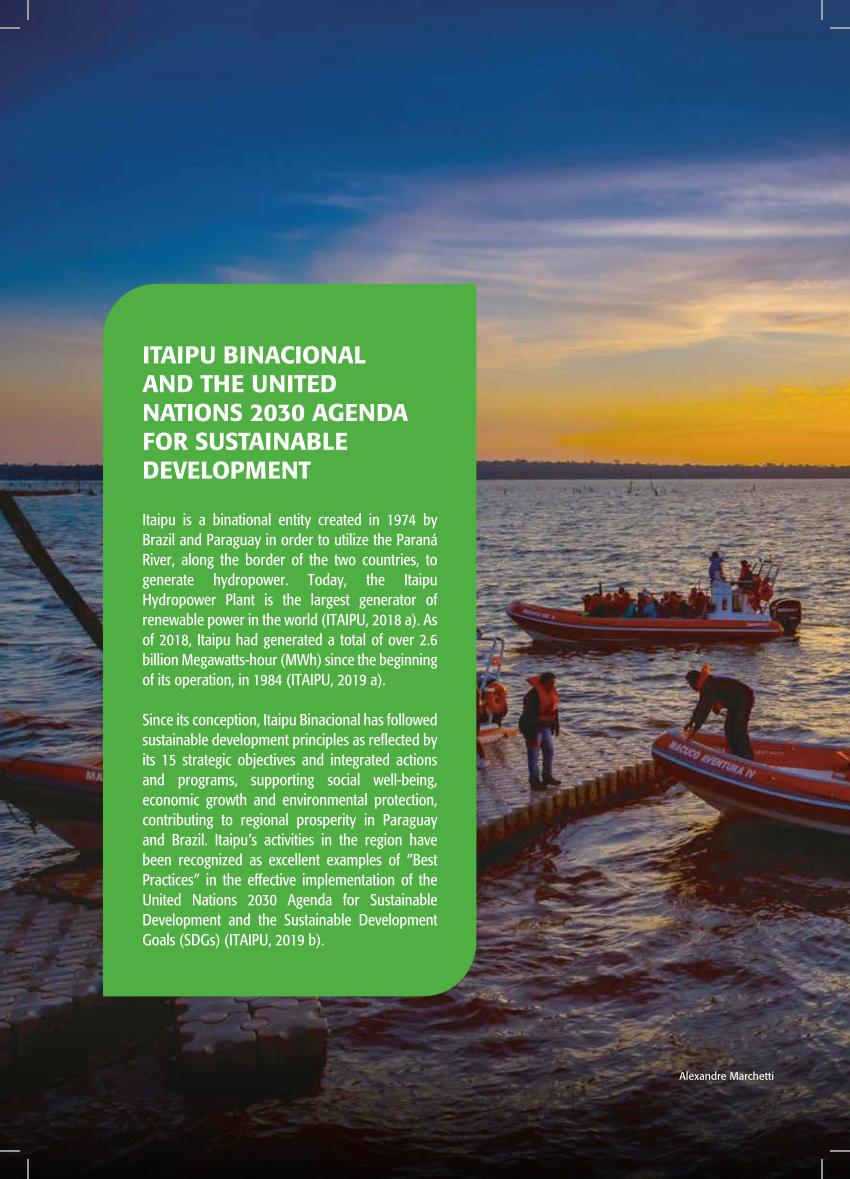












GOOD HEALTH AND WELL-BEING

SDG 3: ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

Target 3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

Target 3.2: By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births

Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Target 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

Target 3.5: Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

Target 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents

Target 3.7: By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

Target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe,

effective, quality and affordable essential medicines and vaccines for all

Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Target: 3.a: Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

Target: 3.b: Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

Target: 3.c: Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

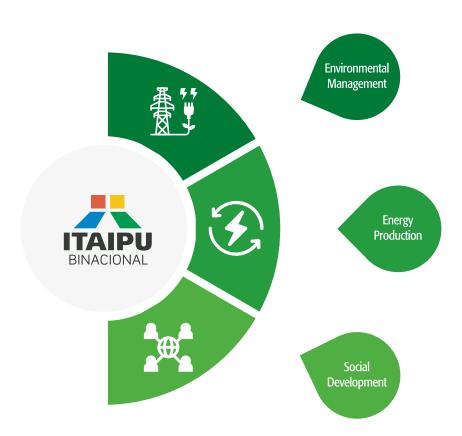
Target: 3.d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

Source: United Nations, 2015.

SUSTAINABLE DEVELOPMENT STRATEGY OF ITAIPU

Itaipu's vision for 2020 is to be "the generator of clean, renewable energy with the best operating performance and the world's best sustainability practices, promoting sustainable development and regional integration" (ITAIPU, 2018 b)

For Itaipu, social responsibility is a major commitment intrinsically linked to its management system, constituting one of its most important missions in its different lines of action. Itaipu follows policies and practices that promote prosperity and contribute to improving the well-being of the population in many communities, in both Paraguay and Brazil. The organization represents a powerful force in the advancement of sustainable regional development, helping to build more responsible, equitable and solidary societies. In Brazil, these actions have taken place mainly in the area of influence of the reservoir and extend to many municipalities in the western region of the state of Paraná. In Paraguay, many of the actions have national coverage and benefit different regions of the country.



Within the social dimension of sustainable development, activities by Itaipu are designed to help reduce poverty, increase food security and enhance nutrition, improve health, foster better education and promote equality, with respect to gender, age, disabilities, race, religion, ethnicity and economic status. They also promote income generation, protection of children and adolescents, respect for human rights, conservation of biodiversity, and sustainable means of production and consumption. These activities are part of the Itaipu's Business Plan, which includes the corresponding programs and actions fully linked to strategic objectives and organizational policies and guidelines (ITAIPU 2018 c).





Itaipu and the SDG 3

Itaipu has multiple initiatives in place with the aim of ensuring healthy lives and promoting the well-being for all. The most important activities in Itaipu's Sustainable Development Strategy linked to SDG 3 are related to a variety of effective health programs, benefitting communities in Paraguay and Brazil, including: Itaipu's Health Work Group, the reduction of maternal, newborn and children mortality program, the Alliances with foundations working in public health and welfare, the strengthening of surveillance and controlling Arbovirosis in Alto Paraná, Project Rescue, the SUS Patient Care at Ministro Costa Cavalcanti Hospital, the Regional

Program of Medicinal and Phytotherapeutic Plants, and Education in Health for Sustainable Development. As a result of these coordinated health-related initiatives, Itaipu has been able to effectively improve the health of the lives of many people living in the region of influence of Itaipu, as well as providing valuable support for significantly lowering the mortality rates from tropical diseases.

ITAIPU HEALTH WORK GROUP "HEALTH WG"

Objective and description

The Itaipu Health Work Group (Health WG) aims to contribute to the strengthening of public health policies in the tri-border region (Brazil, Paraguay and Argentina), coordinate governmental and non-governmental institutions, and bring together efforts to promote priority impact actions for the health of the population of the Itaipu's area of influence. It also aims to support Itaipu in the formulation and implementation of its policies and initiatives of social and environmental responsibility, including cooperation, integration, and compliance with the guidelines of national health systems, emphasizing primary care and the pursuit of equity in dealing with health issues.

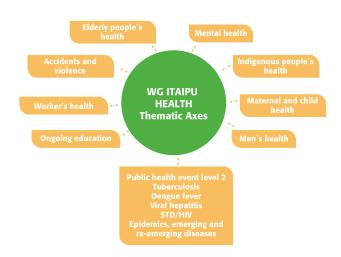
In general, the initiatives approved in the Health WG are tri-national, with the province of Misiones in Argentina participating as a guest, and contain a component of integration and innovation with a space to share experiences. Another component focuses on local execution and implementation, attending to the policies, priorities, possibilities, and realities of the health systems of each country. The Health WG, which has a permanent and advisory status and is coordinated by Itaipu, is composed of

eighteen members representing Itaipu, public health institutions of all levels and areas of the government, institutions representing public health managers, and health foundations established by Itaipu. Participation in the activities of the Health WG is open to all interested parties from Brazil, Paraguay and Argentina, with both members and non-members being free to speak.

The highest decision-making forum is the monthly meeting, where members evaluate the proposals made in plenary from the perspective of public health policy in the three countries. The political scope of action is limited to the public health policies in force in the three countries and the institutional policy of Itaipu.

Strategically, the focus of the Health WG's actions has been divided into pillars, covering nine themes or thematic axes. To assist in the conception and drafting of the projects, Technical Commissions were established, which include experts and health professionals from other areas designated by the institutions that participate in the Health WG activities as full members or as guests.





Health Care Subsystem, coordinated with the decentralized SUS (SasiSUS), with administrative, budgetary, financial and sanitary autonomy of the 34 Special Indigenous Health Districts (DSEIs). SESAI'S responsibilities include developing actions of integral attention to indigenous health and health education, in line with SUS policies and programs and observing traditional indigenous health practices, carrying out actions of sanitation and fostering of indigenous health. Since 2001, the village Health Post has been operated by SESAI, with nurses, a doctor (present three times a week), and an indigenous person as a health agent. In partnership with SESAI, Itaipu supports the provision of food for monthly care to children aged 0 to 6 through the Infant Nutrition Program, which has contributed to zeroing the mortality of infants and children at risk of malnutrition in the Ava Guarani communities supported by Itaipu. Currently, the Border Health WG is coordinating all actions related to indigenous health in the tri-border Region.

The different projects and initiatives that are carried out in the Health WG were developed within the framework of the Strategic Plans of the Health WG 2013-2017 and 2018-2022, as well as the Cooperation Agreement between Itaipu and the health ministries of the countries. In Paraguay, the initiatives of the Health WG are conducted in the departments of Alto Paraná, Caaguazú, and Canindeyú. Some of them, however, are of a national scope. In Brazil, activities cover the 9th Health Regional of Foz do Iguaçu and 20th Health Regional of Toledo, State of Paraná. The Health WG also includes other territorial units of interest in the area of influence of Itaipu.

Health and Indigenous People

In order to take care of the issue of indigenous health in the tri-border region of Brazil-Paraguay-Argentina, the Border Health Work Group was created, aiming at the adoption of joint and coordinated actions in the three countries.

The Special Secretariat for Indigenous Health (SESAI) in Brazil is responsible for coordinating and executing the National Policy for Health Care of Indigenous Peoples and the entire management process of the Indigenous Health Care Subsystem (SasiSUS) in the Unified Health System (SUS). The Secretariat's mission is to implement a new management and care model within the Indigenous



Maternal and Infant Mortality Reduction

Since its inception, the Health WG has designed and implemented 16 projects aimed at promoting continuing education for health professionals involved in care services related to pregnant women, childbirth, postpartum, and puerperium. The Health WG assigned a high value to permanent health education in topics such as breastfeeding, reception of pregnant women in health services, obstetrical emergencies, high-risk pregnancies, early identification and treatment of health problems in children under one year of age, prevention and treatment of breast and cervical cancer, clinical management of breastfeeding, the implantation of a human milk bank in Paraguay, male pre-natal care, sharing data and information on maternal and infant mortality, the qualification of obstetric gynecologists in advanced life support in obstetrics (ALSO), and pre-natal interdisciplinary support in primary health care and its consequences.

Communicable Diseases

The constant flow of people and products in the tri-border region makes communicable diseases much easier to spread. In addition, the region suffers from indigenous transmission of arbovirosis and other neglected tropical diseases (such as Dengue, the Zika Virus, Chikungunya, and Human and Canine Visceral Leishmaniasis). Considering these risk factors, the Health WG set up a unique health laboratory that uses molecular biology to identify viral circulation in mosquitoes, humans and animals with diagnosis within 24 hours, and - in partnership with professionals from the Municipal Health Secretariat at Foz do Iguaçu – developed a software called Integrated Surveillance, which is able to gather data and support relevant information analysis for evidence-based decision-making, with the emphasis on detection of viral circulation via laboratory diagnosis.

The Health WG also conducted a project strengthening patient care for leprosy in the tri-border region. Over 500 people, including health professionals and health career students, were trained in the diagnosis, treatment and prevention of leprosy.

Mental Health

Despite the prevalence and magnitude of mental disorders, many countries do not offer mental health systems and services appropriate to the needs of the population.

For mental health care to be effective, it is necessary to reorganize and strengthen primary care, establishing new health practices and care models focused on the needs of the population. This situation justifies the need for technical improvement to minimize this situation through the use of new social techniques aimed at promoting health and quality of life for both users and health professionals. Considering the importance of mental health, the Health WG's mental health technical committee implemented 13 interdisciplinary projects for the prevention of drug addiction, alcoholism and suicide. These activities strengthened the technical competence of professionals in the area, particularly in the diagnosis and monitoring of people with mental disorders such as depression, anxiety disorders, acute psychotic crisis, schizophrenia, and bipolar disorder. Professionals also were trained in the prevention of alcohol and drug consumption, intra-familiar and domestic violence, early childhood development, and the management of juvenile psychiatric disorders. These professionals also participated in awareness activities on self-care and suicide prevention.

Reduction of Road Accidents and Injuries

The Health WG implemented a Traffic Mini-city, or "ECO-VILA" an educational project designed to create awareness about the need to prevent road accidents and injuries. The project provided a space where children could learn, in a playful manner, the rules of safe traffic in addition to good life habits and citizenship, respect for cultural differences, and ecological and planetary awareness.



Sexual and Reproductive Health

The Health WG carried out a project in partnership with the United Nations Population Fund (UNFPA) which aims to serve adolescents (ages 11-19) and educational, health and social service professionals working with adolescents in 51 municipalities of Western Paraná State in Brazil. The project included public health actions and life skills, communication strategies, data collection and analysis that contribute to the development of public policies aimed at adolescents, especially in the prevention of unintended pregnancy.

Coverage of essential health services

The Health WG has implemented many projects for strengthening the health information system in the tri-border region. Professionals have been trained in information systems and some participated in local management controls for analysis and evaluation of health indicators.

Scholarships for Inter-Institutional Doctorates

Through the Health WG, Itaipu finances scholarships for Inter-institutional Doctorates, made possible by the partnership between Itaipu, the State University of Western Paraná (UNIOESTE) and the University of São Paulo (USP). The topics being addressed refer to the aid of children and adolescents, women's healthcare over their life cycles, health practices including knowledge and policies, health-disease processes and epidemiology, environmental health, genomics and immunobiology applied to public health, and educational technology, pedagogical education, health and nursing.

Public Health Emergencies of International Interest

The Technical Commission for Endemic Diseases of the Health WG prepared and carried out ten specific projects for the reduction and management of national and global health risks, which were attended by professionals via the perfecting of basic capacities recommended by the World Health Organization (WHO). This was done with the intention to implement the International Health Regulations and to construct an Integrated Pandemic Risk Communication Operative at the tri-border region in order to respond promptly and effectively to the public health risks and emergencies of international importance (ESPII). A project for strengthening of health surveillance at the border was conducted that supported the Action Plan for

the Strengthening of Basic Capacities and Application of International Health Regulations. Monitoring and follow-up of the actions were implemented in the border crossing of Ciudad del Este with special priority for the prevention of the reintroduction of yellow fever in Paraguay.

Related Targets

The activities of the Health WG are directly linked to seven targets of the SDG 3 in five main areas. Maternal and infant mortality reduction relates to Targets 3.1 and 3.2. The communicable diseases area is linked to Target 3.3. Mental health relates to Targets 3.4 and 3.5. The reduction of road accident deaths and injuries area relates to Target 3.6. The sexual and reproductive health area relates to Target 3.7. The effort is additionally linked to Target 3.C given the scholarship program for inter-institutional doctorates, and to Target 3.D since the Health WG is involved in public health emergencies of international interest.

Challenges

One of the biggest challenges in the implementation of this action was the limitation regarding the non-financial contribution that Itaipu could make in the framework of the Health WG. However, this ultimately resulted in a strength, by allowing general managers and health managers to identify and strengthen – in their own work teams – human resources with the talents and skills necessary to design, adjust, implement, and monitor, in collaboration with the Itaipu team, training activities and their results.

Other challenges included asymmetries and different health systems, the different government structures, customs regimes and inefficient policies that do not cover cross-border territories. Additionally, there were challenges related to climate, cultural, touristic, economic, and environmental particularities that contribute to the formation of an atypical territory, aggravated by the high circulation of people and products among the three countries.

Lessons learned

One of the main lessons learned from this action – and which has become a work strategy for the team – has been to strengthen the work with local healthcare teams, under the stewardship of the central management. Given the limitation to hire external trainers or facilitators, the constant and systematic training of local and regional facilitators in the different strategies has been successfully managed. The regional teams have not only been part of the identification of the main public health problems and challenges but also have been participating in finding the solution to these problems. The visibility of the results and the perception of capacity and sufficiency have provided local teams with the confidence to set challenging goals, monitor the progress of these goals, and sustain them. The effort also generated a positive synergy both at the level of health regions and at the level of countries that participate in the Health WG. The perception of a common territory with common problems has hugely strengthened the spirit of cooperation and teamwork.

Alternative communication channels – which are vital in health monitoring and response time – and support networks have been created based on territorial proximity, so that the facilitators of one region contribute to the training of other healthcare providers, without the need for the central management or the capital centers to be the only alternatives managing support of this type. Thus, the exchange of knowledge and experience strengthens learning and technical improvement. This has provided a tremendous reinforcement of the equity of work processes, resembling a large and open health school for municipalities and countries in the region. The recommendation when implementing this action is to respect and strengthen the public policies of the countries involved.

Results

The main results of this action include:

- Over 3,650 health professionals received continuous education in issues related to pregnancy, childbirth, pre-natal, postpartum, and puerperium supporting reduction of maternal and infant mortality;
- The eradication of canine rabies in Paraguay, which then prevented the spread of the disease to Brazil, Argentina and Bolivia;
- The training of 70 Community Therapists for the use of social technology to support mental health cases in health care networks;
- The implementation of the Public Policy on Men's Health, Mental Health and Indigenous Health in Paraguay;
- The implementation of the DOTS or Directly Observed Treatment Short-Course strategy in the tri-border area, to control tuberculosis and follow-up of patients under treatment;
- The carrying out of research on the quality of life of the elderly in the tri-border region, as an instrument to support their well-being;
- 100% improvement in the quality of data records in health units in the Department of Canindeyu -Paraguay;
- Implementation of the 1st Human Milk Bank, in Asunción, Paraguay;
- Implementation of the Tri-Border Tropical Medicine Center, in Foz do Iguaçu;
- Protection and promotion of health and well-being of home caregivers;
- Interdisciplinary efforts in mental health in the tri-border region;
- Training of 218 Indigenous Health Agents in first aid, healthy eating, prevention of alcoholism, and sustainable agriculture, in support of the manifold needs of the Guarani people.
- 304 health professional and 207 students trained in the diagnosis, treatment and prevention of leprosy. Additionally, over 1,000 patients attended community dermatological conferences;

- Over 1,470 professionals trained in mental health issues. About 300 were trained in the care, diagnosis and monitoring of people with depression, anxiety disorders, acute psychotic crisis, schizophrenia, and bipolar disorder;
- About 971 health professionals and 91 tutors were trained in sexual and reproductive health, and 35 professionals were trained in the prevention of child abuse;
- A total of about 5,000 professionals were trained in information systems and 1,464 participated in local management controls for analysis and evaluation of health indicators;
- 38 doctoral candidates received scholarships for research in the themes: aid of children and adolescents; women's health-care in the life cycle;

- health practices, knowledge and policies; health-disease process and epidemiology; environmental health; genomics and immunobiology applied to public health; education, educational technology, pedagogical education, health and nursing;
- 582 professionals trained in global and national health risks.

In order to monitor the results of this action, each project of the Health WG has a central manager and an Itaipu manager and focal points for each Health Region. The Health WG, in partnership with the ministries of health of the participating countries, is always strengthening the Health Information System, which allows the team to have firsthand information related to the different regional health indicators.



REDUCTION OF MATERNAL, NEWBORN AND CHILDREN MORTALITY

Objective and description

The main objective of this initiative, which is being implemented by Itaipu in Paraguay, is to reduce the number of avoidable deaths to zero in relation to maternal, newborn and children mortality by improving the healthcare capacity of the region. The program includes the following specific objectives:

- Boost primary health care and improve the installed capacity of district hospitals, in order to reach zero avoidable deaths.
- Improve primary care by reaching out to pregnant women to reduce maternal and newborn mortality rates, through the Family Health Units (USF), which are considered the citizens' first point of contact with the Public Health System. The program is also improving the installed capacity already available through building shelters, upgrading physical installations and providing essential equipment for safe motherhood and childbirth.
- Expand the coverage and improvement of public healthcare in order to reduce maternal, newborn, and infant mortality rates through infrastructure work that ensures adequate hospitals available for early medical emergency care.
- Provide modern equipment to hospital centers, and medicines in order to strengthen the primary healthcare to the most vulnerable sectors of the country. The program is expanding and renovating existing infrastructure in several hospital units located in different parts of the country under the Ministry of Public Health and Social Welfare of Paraguay.
- Work towards the reduction of preventable maternal and neonatal deaths in the different national regions via the implementation of a new model of healthcare and organizational culture, which recognizes parents and family along with the healthcare team as being central to the care of pregnant women, mothers, and the newborn, and seeing the guarantee of healthcare as one of its priorities. This way, the initiative aims to foment respect and protection of women and newborn rights.

The program also supports training of the Ministry of Public Health personnel and delivers technologically advanced equipment to deprived areas. There are several service contracts and agreements in place with different institutions to achieve these objectives.

This action has been carried out since 2014 in different areas within the Paraguayan territory. Within the area of influence of Itaipu, the program covers the Departments of Alto Paraná, Caaguazú and Canindeyu. The action is also carried out in the country's capital Asunción, and other departments including Central, Amambay, Concepción and San Pedro.

Related Targets

The targets most directly related to this initiative in SDG 3 are Targets 3.1 and 3.2. The program supports Target 3.1 since it reduces maternal mortality in Paraguay through its healthcare improvement initiative, infrastructure upgrades and training. It is also closely linked to Target 3.2 because it aims to end preventable deaths of newborns and children under five years of age.

Challenges

The main challenges to implement this program are related to the following issues: coordination in implementing the correct planning of the works and its subsequent inspection; regulatory changes that are made by the regulatory entity, which could affect the execution of works that are already underway such as changing of minimum standards; and a tendency for greater use of the services in department capitals than in small communities.

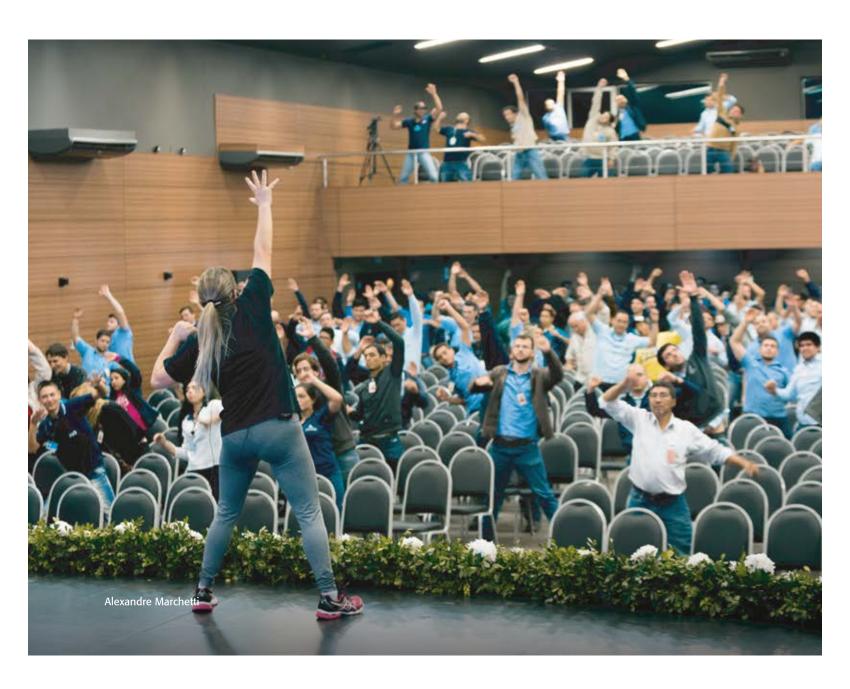
Lessons Learned

Some lessons have been learned from implementing this action. For example, the investment in the healthcare sector, whether in physical or human capital, is always insufficient due to continuous increasing demand for quality medical services. As a result, long-term planning must be continuously revised.

Results

Another lesson learned was that the differences in hospital equipment in departmental capitals and Family Health Units of the same departments need to be taken into consideration while defining the appropriate support activities. In addition, there is a need to increase training programs for mothers regarding prenatal checkups. Finally, without the contribution of Itaipu, the project would not be self-sufficient.

The implementation of the program since 2014 has resulted in a considerable improvement in the reduction of maternal, newborn and children mortality. The program has effectively supported improvements in infrastructure and equipment in hospital, health facilities and Family Health Units improving the health services in many places in Paraguay. The implementation of educational programs for pregnant women as well as capacity building for health personnel has also been very valuable with very positive results.





ALLIANCES WITH PUBLIC HEALTHCARE AND WELFARE FOUNDATIONS



Objective and description

taipu has key alliances and partnerships with healthcare and welfare foundations in Paraguay, which have been established in order to strengthen the public healthcare program of the country. The support from these alliances allows hospitals and health centers to benefit from infrastructure projects, medicine supply programs and training activities directed to healthcare personnel. The support aims to provide comprehensive quality services particularly to the most vulnerable areas of the country. The support also includes technically advanced medical equipment and ambulances equipped with all necessary medical supplies and health monitoring systems. These alliances are helping hospitals with their goals on disease prevention and early detection. Comprehensive training and educational programs are also conducted for the promotion of good health throughout the country.

Itaipu has health alliances with the Ministry of Public Health and Social Welfare of Paraguay, UNICEF and the Tesãi Foundation, among others. The alliance with the Ministry of Public Health and Social Welfare is strengthening public health through the construction, renovation and expansion of the Family Health Units (USF). This alliance also supports enhancing the interconnexion among public hospitals of the country. The alliance with UNICEF allows the implementation of

the Zero Maternal and Newborn Deaths campaign.

The alliance with the Tesãi Foundation allows Itaipu to provide financial assistance to cover health services at no cost to communities in need located in the area of influence of Itaipu, particularly in the departments of Concepción and San Pedro. The free health services to families with limited economic resources include surgeries, births, diagnosis, hospitalizations, medical visits and ambulance transport to satellite hospitals of the Foundation. On average, about 18,000 people receive monthly health care through this alliance, at no cost. The beneficiaries are mainly families from rural, urban and suburban districts of Alto Paraná, Caaguazú and Canindeyu. In addition, Itaipu has provided ambulances with vital support equipment for intensive therapy to hospital units located in different regions of Paraguay.

These important health alliances are being implemented through several services, contracts, and agreements that have been in place with different institutions since 2015. The alliances benefit different areas of Paraguay, including the departments of Alto Paraná, Caaguazú and Canindeyu, in Itaipu's area of influence, the capital, Asunción, and other departments, such as Central, Amambay, Concepción and San Pedro.

Related Targets

The targets directly linked to this action are Target 3.8, which is to achieve universal health coverage, and Target 3.5, to strengthen the prevention and treatment of substance abuse. The action is additionally linked to Target 3.C, to substantially increase financing of health issues, including infrastructure, and the development and training of the health workforce. It is also linked to Target 3.D, to strengthen the capacity for early warning, risk reduction, and management of national and global health risks.

Challenges

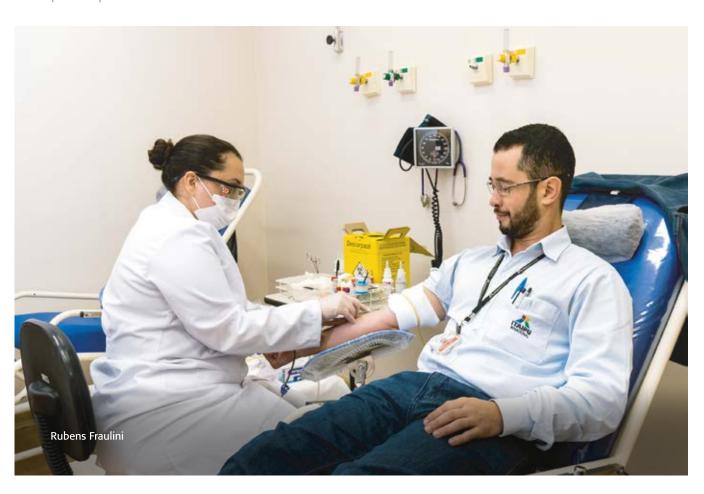
One of the main challenges for Itaipu's effort in partnership with these healthcare and welfare foundations is related to coordinating and implementing the correct planning of the works and its subsequent inspection.

Lessons Learned

One of the important lessons learned is related to the fact that, in general, investment in the healthcare sector, whether in physical or human capital, is always insufficient due to continuous increasing demand for quality medical services. As a result, long-term planning must be continuously revised.

Results

Itaipu's alliances have effectively supported improvements in infrastructure and equipment in hospital, health facilities and Family Health Units, improving the health services in many places in Paraguay. The implementation of educational programs for the public as well as capacity building for health personnel have also been very valuable, with very positive results.





STRENGTHENING SURVEILLANCE AND CONTROLLING ARBOVIROSIS IN ALTO PARANÁ REGION

Objective and description

The main objective of this action is to contribute towards the reduction in the morbidity of vector-borne diseases through prevention and containment actions, effective health promotion, and vector control strategies that help reduce the incidence of arbovirosis (related to Dengue, Zika and Chikungunya) in the department of Alto Paraná, in Paraguay.

More specific objectives include:

- Intensify the entomological surveillance and vector control system in an efficient and timely manner.
 Strengthen the capacity of local response, incorporating human resources as well as theoretical and practical knowledge for the development of activities.
- Decrease the rates of larval infestation of Aedes Aegypti – the main vector of Dengue, Zika, Chikungunya, and Yellow Fever virus – in the high and very high risk municipalities of the department of Alto Paraná.
- Intensify health promotion activities for the prevention of arbovirosis in communities.

This action is being implemented through an agreement between the Tesãi Foundation and Itaipu. It is being performed in the department of Alto Paraná, which is part of the area of direct influence of Itaipu and is being implemented for six months, starting in April 2019, which corresponds to the duration of the agreement.

Related Targets

The target most directly linked to this action from SDG 3 is Target 3.3. This pertains, in particular, to all types of interventions against neglected tropical diseases.

Challenges

One of the biggest challenges in the implementation of this action is the necessary involvement and education of the population to be able to carry out effective activities for the sustained prevention and containment of the vectors. This is particularly related to the need of creating the common habit of eliminating mosquito breeding sites.

Lessons Learned

There are several lessons that have been learned from this action. First of all, the participation and empowerment of the Alto Paraná communities and the participation of relevant organizations, such as the National Malaria Eradication Service (SENEPA), are indeed essential to ensuring success. It is also necessary to have additional resources and efforts from relevant institutions at national, departmental, and municipal levels. The action should be a united effort towards a common objective, using an appropriate and timely communication strategy

Results

The main results of this action and its impact were achieved with the intervention of the Pará-Na Campaign in the department of Alto Paraná, and were reported in the Epistemological Report prepared by SENEPA. The comparative analysis of the main epidemiological indicators demonstrates the positive impact that the Project has had, from its beginning, in Epidemiological Week (EW) 17 to EW 20, between April 22nd and May 24th of 2019. This positive impact is related to the elimination of a large number of breeding sites during this period.

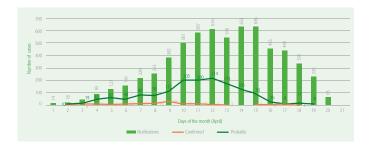
At the start of the Pará-Na Campaign, during the year 2019, a total of 6,345 notifications for Arbovirosis (Dengue, Zika, and Chikungunya) were registered in the department of Alto Paraná, of which 122 cases were confirmed for Dengue and 1,481 were probable for Dengue, ten probable for Chikungunya, and zero cases for Zika, leaving 4,371 as suspects for these pathologies; this situation puts the department of Alto Paraná at the head of the list, with the most cases nationwide.

From EW 1 to EW 15, there was a marked increase in notifications of Arbovirosis in the department of Alto

Paraná, reaching a total of 630 notifications, a lower number when compared to the year 2018 for the same period.

The SENEPA Epidemiological Report indicates that the reversal of the situation in the department of Alto Paraná is directly associated with the intervention of the Pará-Na Campaign, whereby it has been possible to intensify the operational field activities and double the SENEPA workforce with the incorporation of human resources, efficiently providing the logistical support required in relation to mobility, machinery, equipment, materials, supplies, and training. This has also strengthened the implementation of the effective actions of the communication campaign and education of the Alto Paraná population.

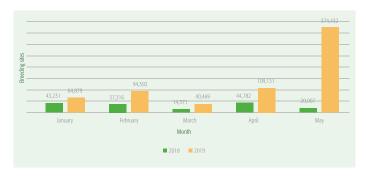
Notifications, confirmed and probable cases in Alto Paraná 2019



Observation: Start of the PARÁ-NA EW 17 CAMPAIGN (April 2019)

Source: General Directorate of Health Surveillance, MSPyBS

Comparison of breeding sites eliminated in Alto Paraná 2018-2019



Source: National Malaria Eradication Service (SENEPA)

Additionally, the project has an educational and health promotion component that is undertaken jointly with the Ministry of Education and Science (MEC) of Paraguay, and basically consists of an inter-school contest for systematic elimination of breeding sites, which involves the educational community. About 100 schools of Alto Paraná have participated.

The Alto Paraná community accompanies and monitors the implementation of this project through the local media. There is also monitoring through the Social Responsibility Advisory team of Itaipu that supervises each stage of the project implementation.





PROJECT RESCUE

Objective and Description

The purpose of this action is to provide care services to men between the ages of 18 and 59 who are users of psychoactive substances. People of ages 60 and over fall under the Elderly Statute, which requires other service priorities. There is the intent to expand care to women as well, but in a separate venue. This action has been active since 2010 and is currently being performed in the Brazilian municipality of Foz do Iguaçu, which has a population of almost 260,000 inhabitants.

The initiative takes into consideration the social protection, citizenship rights and human and social development of the beneficiaries. The activities ensure the full protection of individuals who use psychoactive substances, recognizing the conflict processes, the inherent difficulties, and the possibilities for developing their full personal capabilities. Activities with family members aim at rescuing affective ties and overcoming traumatic disruptions among family members, including monitoring accompanying relatives and possible referrals to the municipal social assistance network.

The 24-hour in-residence assistance model (full housing) for a period of nine months is used in this action. The technical team makes a complete assessment of the patient at the time of the intake, in order to ensure reflection and maturation processes to overcome the violence that was experienced by the patient, as well as any rights violated, degradation experienced from living on the street, any stigma of drug addiction, and issues of poverty, social inclusion, and family fragmentation, among others.

The project develops the following actions: social service attendance, individual psychological care, referrals to the social assistance network, access to the public social protection system (such as legal, health, benefits etc.), a reflection/thematic group, work therapy, spirituality, operational and organizational groups, family groups, a relapse prevention group, and a social reintegration group.

The Sagrada Família Community is a non-governmental, civil, welfare, and charitable non-profit organization that operates as a safety net, providing care services in residency rehabilitation modalities to male individuals with chemical dependencies. The service provided by this organization is the only one in the municipality that complies with the relevant Ministry of Health resolution of 2011.

Related Targets

This action is most directly linked to Target 3.5, which is to strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and the harmful use of alcohol.

Challenges

The greatest challenges involved in implementing this action are related to raising funds for sustaining the project, which has considerably large expenses, as well as the multidisciplinary team of specialized professionals involved in patient therapy. The limited budget does not take into account maintenance of the institution's buildings, purchasing equipment for groups or many other materials indispensable for its full operation. The ongoing training of the professionals and the specific hiring necessary to strengthen the actions are often postponed. The turnover of the intake is constant, which leads to disruption in treatment and of the maintenance of processes for social assistance. As a result, the orientation and awareness activities with family members has become an essential tool that must be added to the other strategies used in the treatment plan.

Lessons learned

The main lessons learned from implementing this action are that networking strengthens the competencies of each agency involved and the efficacy of its working tools, especially the communication with the municipality's social assistance network and its partnerships for fundraising.

Results

The partnership with Itaipu began in 2010. Twice a year, a treatment completion ceremony is held, with an average of eight participants graduating from therapy each time. The average of voluntary check-out

or administrative dismissals (such as breaking the rules while functioning in the community) is of four participants. The Sagrada Família Community has determined that it is having the most effective results in promoting access to health, citizenship, and social rights through the guidance of family members and the accompaniment of those taken in during the treatment process. After this stage, the continued strengthening of family and community bonds and the social reintegration of these individuals can be achieved. In order to monitor the continuity of these results, Itaipu uses the entity's accountability protocols and its monitoring and development records.





UNIFIED HEALTH
SYSTEM (SUS)
PATIENT CARE AT
MINISTRO COSTA
CAVALCANTI
HOSPITAL (HMCC)



Objective and Description

The purpose of this action is to subsidize the attendance of users of the Unified Health System (SUS) of Paraná, Brazil. The inclusion of social and environmental responsibility in Itaipu's mission reinforced the business desirability of acting as an agent of social integration and regional development, contributing to the mitigation of the health care system problems of the 9th Paraná Health Region, which includes nine municipalities.

Itaipu established the Itaiguapy Health Foundation for the purpose of running the Ministro Costa Cavalcanti Hospital, which opened in 1979. This hospital provides medical and hospital care to Itaipu employees and their dependents, as well as community members in the region. The hospital also provides a large number of care services to patients of the Unified Health System. It is the only establishment for the 9th Paraná Health Region in the areas of oncology, cardiology, high and intermediate pregnancy, and neonatology, in addition to providing 100% of the usual risk obstetric care for the municipalities of Foz do Iguaçu and Santa Terezinha de Itaipu. This

provision of services is central to the SUS users in the 9th Paraná Health Region, covering a population of approximately 400,000 inhabitants.

The financial results obtained from the services provided by the Foundation to insured users and individuals are not sufficient to cover the deficit generated by SUS care and for the investments necessary to maintain its quality of services. Itaipu provides financial resources as a social cost so that the hospital can continue to provide the same volume of care to SUS while maintaining the same level of quality.

The initiative has been active since 1996 in the following nine Brazilian municipalities: Foz do Iguaçu, Santa Terezinha de Itaipu, São Miguel do Iguaçu, Itaipulândia, Missal, Ramilândia, Medianeira, Matelândia and Serranópolis do Iguaçu.

Related Targets

This action is related to Targets 3.1 through 3.7, as well as Targets 3.C and 3.D. However, it is most directly related to Target 3.1, which relates to maternal and infant mortality reduction. Through the Maternal and Infant Death Analysis Commission of the Itaiguapy Health Foundation, 100% of deaths are evaluated. A multidisciplinary team conducts the analysis through electronic medical records.

With regards to Target 3.C, which relates to increased health financing and the recruitment, development, training and retention of the health workforce, Itaipu contributes through its social subsidy. This action ensures that care for patients of the SUS continues in the same volume and with the required quality, maintaining the various health professionals in the region.

With regards to Target 3.D related to strengthening the capacity for early warning, risk reduction and management of national and global health risks, this action by Itaipu on risk management in health services provides the basis for new policies and regulations within the SUS. These new policies and regulations define risk management as the systemic and continuous application of policies, procedures, conduct and resources in the identification, analysis, assessment, communication, and control of risks and adverse events affecting safety, human health, professional integrity, the environment and the institutional image. The Patient Safety Center was established at the Itaiguapy Health Foundation in 2014, which has, as its main objective, the analysis and management of adverse events related to patient care.

Challenges

One of the biggest challenges in implementing this action is the remuneration practiced by SUS, since it is insufficient to cover the provided service and has resulted in the Foundation having considerable

financing deficit. Since 2008, the procedure that sets the remuneration for services provided to SUS has not been adjusted, which has resulted in increasing the gap between the remunerated amount and the cost to perform the services.

Lessons Learned

A main lesson learned is related to the need to coordinate and plan activities with all the involved stakeholders taking into consideration the specific and limited resources available to continue providing quality health services. This action allows users of the SUS to have access to quality services in addition to ensuring the maintenance of a hospital with excellence services in the region. Despite the challenges of remuneration, it is an effective and valuable service center.

Results

The resulting health services from this action that SUS was able to provide are listed below. These results are monitored by Itaipu and SUS through monthly reports and strategic indicators.

Annual average numbers:

	SUS	TOTAL
Available beds	126	202
Hospitalizations	7,548	13,561
Day Patients	33,079	51,396
Surgeries	2,046	6,762
Childbirths	3,416	4,421
Catheterization	731	931
Angioplasty	491	625
Chemotherapy - Sessions	10,809	12,387
Radiotherapy - sessions	8,742	10,616
Laboratory tests	294,914	950,458
Imaging Exams	48,422	170,647
Ambulatory consultations	42,767	253,658
Consultations Urg. and Emerg.	25,242	89,573

6.

REGIONAL
PROGRAM OF
MEDICINAL AND
PHYTOTHERAPEUTIC
PLANTS

Objective and Description

The objective of this program is to promote and recognize the use of medicinal plants in improving and restoring health. The program includes educational activities in the community, training of professionals, technical and scientific research carried out by universities and implementation of corresponding public policies at the municipal level. Itaipu plays an important role in the implementation of these activities that also promote the preservation of genetic heritage, traditional health-related knowledge and regional biodiversity with respect to medicinal plants.

Itaipu participates in the growing and conservation in situ of medicinal plants in medicinal gardens. Through the donation of seedlings, Itaipu also promotes the formation of other nurseries and medicinal gardens, particularly in municipalities and schools in the region.

Itaipu supports the establishment of cooperation agreements and partnerships with interested stakeholders of the region for the development and promotion of medicinal and phytotherapeutic plants. The program is implemented in the area of influence of Itaipu since 2005 and includes cooperation agreements with institutions located beyond this region, especially in relation to research activities.

Through the years, the guidelines, strategies and projects have been modified in accordance with the institutional requirements, demand and regulations.

Related Targets

The program supports the overall objectives of healthy lives and well-being of the population of the SDG 3 given the extensive use of medicinal and phytoterapeutic plants in many different health areas.

This action supports particularly Target 3.4, since it promotes the prevention and treatment of many non-communicable diseases.

Challenges

There are many challenges related to the promotion, development and use of medicinal and phytotherapeutic plants. There are too many different areas in the chain of activities from the production to the use of these plants for Itaipu cover. Therefore, different types of support need to be designed, planned and prioritized by Itaipu depending on the particular area of interest.

Another challenge is related to the difficulty in adapting the traditional practices of the producers in terms of the processing of medicinal plants (harvest, drying and packaging), so constant training is necessary in order to successfully carry out this activity.

Lessons learned

An important lesson learned is the need to recognize the importance of projects that focus on valuing production, particularly as an economic solution for farmers. The possible destinations of products and the potential remuneration of their production are important factors determining production sizing, and distribution and consumption chains.

Results

More than 500,000 seedlings have been donated for planting in productive areas, educational gardens and scientific work. Education about medicinal plants is integral to this activity. More than 16,000 people, including health professionals, technicians and

farmers, have been trained in relation to the use and planting of medicinal plants and phytotherapeutics. The Itaipu medicinal plant nurseries also serve as a school for the public, receiving guided technical visits from students, groups linked to the productive sector (farmers), or groups linked to popular knowledge (pastoral groups, groups of retired people, and groups of professionals from the Brazilian Health System). It is important to note that, since 2015, the medicinal

garden on the Brazilian margin no longer delivers dehydrated plants, in compliance with new policies adopted by the Ministry of Health regarding the incentive for phytotherapy in the country, and due to new sanitary requirements demanded for the production process. However, small industries have been implemented in the region and have supplied phytotherapics for the health care municipal systems.



7.

REGIONAL
PROGRAM OF
MEDICINAL AND
PHYTOTHERAPEUTIC
PLANTS

Objective and Description

The purpose of this initiative is to promote sustainability with a focus on health by enabling education professionals and school communities to continuously improve their lifestyles into healthier ones, in order to achieve a high level of environmental, social, economic, and physical well-being.

In order to achieve this, Itaipu conducts ongoing training for the development of competencies (such as knowledge, skills and attitudes) for education professionals in different health-related topics in the municipalities located in the area of influence of Itaipu. Participants are organized in groups depending on their geographical locations. After each in-person meeting, the participants then develop their own activities in their schools and/or family communities. The health capacity development activity has been implemented since 2015 and includes 54 municipalities in Western Paraná and one in Mato Grosso do Sul, in Brazil. Other health capacity development activities are also being implemented in Paraguay.

Before starting this training process, awareness-raising seminars are held for all education professionals in municipal secretariats. These seminars are on education, health and the sustainability of the school, in which members are encouraged to reflect on the health of their families, relationships, and the planet.

In order for this initiative to be successful, it is expected that seminar participants will be able to act as examples and promoters of integrative and planetary health, transforming their schools or communities into a sustainable frame of reference for education and health promotion, for students, parents, neighbors, and friends.

One health campaign in Itaipu was centered on Oral Health Education. With the "Recovering Smiles" campaign, students from about 15 educational institutions in the city of Ypacaraí in Paraguay were educated in preventive oral health. In total, 2,423 school-aged children and adolescents were trained in the prevention of cavities with fluoridation, diagnostics and controls in oral health, and the actions were recorded in individual data sheets. In addition, 9,000 oral hygiene kits were delivered. (ITAIPU, 2018 b)

Related Targets

There are two main targets of SDG 3 related to this action: Target 3.4, as the training seminars help to promote mental health and the well-being of population and in particular students in schools; and Target 3.d, because Itaipu's action helps to create capacities through training of education professionals on health management and reduction of health risks.

Lessons Learned

Some lessons learned from this initiative include:

- The importance of sensitizing all education professionals on the subject, through municipal seminars, before starting the training process.
- Recognizing when people might lack the ability to change lifestyles.
 - Recognizing that defining actions that improve the
- quality of education may presuppose including the full care of professionals, especially teachers, who are themselves directly involved in the pedagogical processes.

Results

As a result, during the 2017-2018 cycle, 360 basic educational professionals have been trained in the process of continuing education in health issues. More than 4,000 professionals of basic education participated in the municipal health seminars and there were clear and measurable changes in the participants' lifestyles. There was also an implementation of sustainable and innovative pedagogical practices on issues related to health. In Paraguay over 2,000 school-aged children and adolescents were trained in the prevention of cavities.

In order to monitor the results of this initiative, Itaipu evaluates reports submitted by the participants of the ongoing trainings at the end of the process and also reports from the participants of the experiences that were incorporated as healthy habits in their lifestyle, and the sustainable actions in their school and family space.

INTERLINKAGES WITH OTHER SDGs

Our actions in the SDGs

Our approach - Integrated actions in the territory

Itaipu activities related to Ensure Healthy Lives and Promote Well-Being for All (SDG 3) are clearly interlinked to other SDGs. One important interlinkage is Education (SDG 4), as Itaipu trains and offers seminars for the communities in its area of influence in order to improve their health and well-being. Health (SDG 3) and environmental quality and conservation (SDG 6, 13, 14 and 15) are strongly interlinked and can be

approached by the concept of planetary health. The Itaipu activities on health are also linked to SDG 17, as multiple partnerships between different countries and across borders are required in order to fully implement effective health initiatives in the region. Finally, the interlinkage between health and poverty (SDG 1) can be recognized, as the health services provided by Itaipu come at reduced or no cost to many patients in the region.

Health Working Group

Training of

Therapists

70 Community



3,650
health professionals





Education in health





More than **4,000 professionals** of basic education participated in the municipal health seminars



Implementation of the **Tri-Border Tropical Medicine Center**, in Foz do Iguaçu

Strengthening surveillance

About **100 schools** of Alto Parana have participated health

EDUCATION



Calvalcanti Hospital



hospitalization over



2,000 school-aged children

and adolescents were trained in the prevention of cavities

Annual surgeries over 6,700



Annual number of day patients around **51,400**



Annual urgent and

around **90,000**

emergency consultations

Annual chemotherapy sessions about 12.400



Arbovirosis

Effective reduction in cases of **Dengue, Zika,** and **Chikungunya** in the region

Zero avoidable deaths



Public health alliances

POVERTY REDUCTION

AND PARTNERSHIPS



Project rescue



A monthly average of **25 people** assisted by this program

CONCLUSIONS



Itaipu's comprehensive program of activities related to ensuring healthy lives and promoting wellbeing provides evidence of Itaipu's commitment to the objectives and targets of SDG 3. Through its Health Work Group and its initiatives on reduction of maternal, newborn and children mortality program and Project Rescue, Itaipu is providing strong support to the health care of the population of the tri-border region. Its effort with foundations such as Tesãi in Paraguay and Itaiguapy in Brazil is allowing many people with limited resources to have the

health services necessary for their well-being. The Alliances with foundations working in public health and welfare and the strengthening of surveillance and controlling Arbovirosis result in positive impacts, reducing health problems and mortality risks in the region. By providing training, financial support, and resources to reduce maternal and infant mortality, and to help fight communicable diseases, Itaipu has been able to ensure progress in critical health issues which represent priorities for the region.

REFERENCES AND ADDITIONAL READING SOURCES

- ITAIPU Binacional. (2018 a). Sustainability Report 2017. Foz do Iguaçu, Paraná: Social Responsibility Advisory Office.
- ITAIPU Binacional. (2018 b). Comunicación de progreso y reporte de sostenibilidad: Itaipu lado Paraguayo.
 Retrieved from https://www.itaipu.gov.br/es/responsabilidad-social/comunicacion-de-progreso-y-reporte-de-sustentabilidad.
- ITAIPU Binacional. (2018 c). Itaipu Binacional. The largest generator of clean and renewable energy on the planet. Itaipu Binacional Social Communication Office (Revista_2018_IB_ING_Digital).

- ITAIPU Binacional. (2019 a). Generación. Retrieved from http://www.itaipu.gov.py/es/energia/generacion
- Ministry of Public Health and Social Welfare of Paraguay, online https://www.mspbs.gov.py/portal/4096/usf-el-primer-punto-de-contacto-de-la-ciudadania-con-la-salud-publica.ht ml
- United Nations (2015), Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1.

