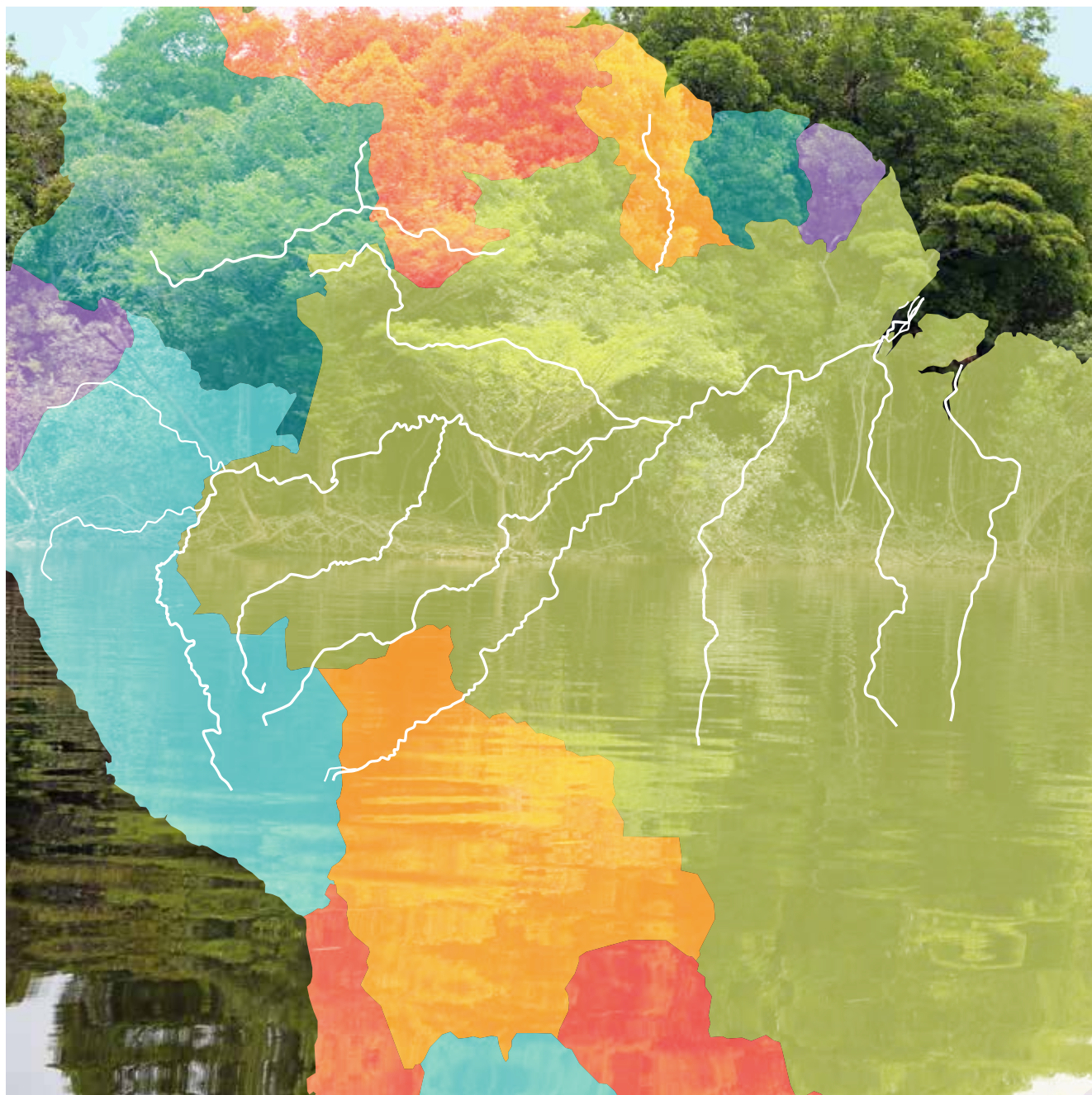


Meeting Report - Panama City (Panama), 21 and 22 October 2019

# An Integrated Approach to Trachoma, other Neglected Infectious Diseases, and Eye Diseases that Can Cause Blindness in Remote Amazon Populations



**PAHO**



Pan American  
Health  
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Washington, D.C. 2020

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## Acronyms

<b>NGO</b>	Nongovernmental organization
<b>NIDs</b>	Neglected infectious diseases
<b>PAHO</b>	Pan American Health Organization
<b>WASH</b>	Water, Sanitation, and Hygiene
<b>WHO</b>	World Health Organization



# Introduction

The elimination of trachoma as a public health problem was made a priority by Member States of the Pan American Health Organization (PAHO) in the *Plan of Action for the Elimination of Neglected Infectious Diseases and Post-elimination Actions 2016-2022* (Resolution CD55.R9) (1, 2) and it is included in the targets of the Sustainable Development Goals (3).

In 2018, an estimated that five million people in the Region of the Americas lived in areas where trachoma is a public health problem, mainly in Brazil, Colombia, Guatemala, and Peru (4). In 2017 the World Health Organization validated trachoma elimination as a public health problem in Mexico (4). Among activities aimed at establishing the situation of trachoma in the Region of the Americas, PAHO has promoted a search for populations affected by this disease in other countries (e.g., Paraguay and Venezuela), primarily those living in conditions of vulnerability (remote areas rural with little or no access to basic water, sanitation, education, and health services, etc.) and in areas bordering countries where trachoma is endemic (5).

At the Fifth Regional Meeting of Managers of National Programs for the Elimination of Trachoma as a Public Health Problem in the Americas, held in 2018, it was recommended that PAHO support the development of means of monitoring trachoma and other diseases that can cause blindness in populations in remote areas such as the Amazon region (6). The rationale for this recommendation was that: a) the populations affected by trachoma in Brazil, Colombia, and Peru are mainly indigenous communities in the Amazon region; b) the results of a PAHO initiative to establish the criteria for prioritizing municipalities, it was important to gather information to determine the absence or prevalence of trachoma in populations in the Amazon region (5); and c) the populations of the Amazon region are more vulnerable to these diseases because they live in conditions that include poor access or no access to basic services for drinking water, sanitation, education, housing, and health.

In 2017, the PAHO Member States adopted the first *Policy on Ethnicity and Health*, which prioritized work with indigenous, Afro-descendant, and other ethnic groups in order to improve their health situation. This policy is based on recognition of the differences that exist among different groups, as well as their differences in terms of problems, needs, and respective historical contexts. It also acknowledges that an intercultural approach to health is required, with equality and mutual respect, in order to advance toward universal health (7).

This was the context of the meeting held in Panama City, Panama on 21-22 October 2019 to establish a roadmap for addressing trachoma in conjunction with other neglected infectious diseases (NIDs, such as soil-transmitted helminth infection, lymphatic filariasis, ectoparasitic diseases, leprosy, Chagas disease, and yaws, among others) and blinding eye diseases (mature cataract and advanced pterygium) in remote populations in the Amazon region.

The meeting included delegates from: a) the Ministries of Health of Bolivia (Plurinational State of), Brazil, Colombia, Ecuador, Paraguay, Peru, and Venezuela (Bolivarian Republic of); b) partner organizations: the DANA Center for Preventive Ophthalmology of the Johns Hopkins University Medical School (PAHO/WHO

Collaborating Center for the prevention of blindness and visual impairment), Centers for Disease Control and Prevention of the United States of America, Tropical Data, the Task Force for Global Health, the International Coalition for Trachoma Control, and the International Trachoma Initiative; and c) PAHO/WHO departments, units, and programs on Visual Health, Equity, Gender and Cultural Diversity; Climate Change and Environmental Determinants of Health; Health Systems and Services; Neglected, Tropical and Vector-borne Diseases, and the WHO Department of Neglected Tropical Diseases. The list of participants and meeting agenda can be found in Annexes 1 and 2, respectively.

The expected results of the meeting were: a) a thorough knowledge of the obstacles and opportunities for providing health services to populations living in hard-to-reach areas of the Amazon; b) a preliminary list of opportunities and possible methodologies for integrated mapping of trachoma, other NIDs, blinding eye diseases, and respective risk factors; and c) a preliminary list of integrated actions for fighting trachoma and other diseases that countries may include in a roadmap for populations in remote areas of the Amazon. This report presents the conclusions and recommendations for each result, as a first step towards developing and implementing actions for a comprehensive and integrated approach to these public health problems in the participating countries.

Due to physical distancing requirements for the containment of the SARS-CoV-2 (COVID-19) pandemic in the Region of the Americas since early 2020, the recommendations and actions proposed at the meeting have not yet been implemented. PAHO will coordinate with countries and partners to find the most appropriate mechanisms to move forward with the roadmap proposed in this document.



# 1. Addressing trachoma, other neglected infectious diseases, and eye diseases in the Amazon region

The Amazon is a geographical region in the Amazon River basin extending for 7.8 million square kilometers (three million square miles) and covering eight South American countries — Bolivia (Plurinational State of), Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela (Bolivarian Republic of)— and French Guiana. An estimated 34 million people live in the Amazon, the largest tropical rainforest in the world. The Amazon encompasses 2,467 indigenous territories occupying almost one quarter of the region's land (8). According to the Economic Commission for Latin America and the Caribbean (ECLAC), there are 826 indigenous populations in Latin America and 200 more live in voluntary isolation.



In Latin America, trachoma is known to be a public health problem in Brazil, Colombia, Guatemala, and Peru, with nearly five million people living in areas that require interventions to eliminate the disease as a public health problem. In Colombia and Peru the main populations affected are indigenous people in the Amazon region. Although Brazil accounts for more than 90% of the affected population in these four countries, in 2019 Brazil began a reevaluation of the epidemiological situation of trachoma and these figures are expected to change.

In 2018, PAHO developed a methodology to prioritize municipalities in the 22 Latin American countries that require trachoma surveillance with a view to determining the extent of the problem and establishing risk factors (5). As part of this exercise, it was concluded that data must be collected on the absence or prevalence of trachoma in the countries with Amazon populations.

The countries in which trachoma is a public health problem face multiple challenges to eliminating the disease in hard-to-reach populations, such as indigenous populations in the Amazon. These obstacles primarily consist of difficult geographical access; insufficient access to basic services (health, education, water, sanitation, and housing); cultural diversity; health systems that are unable to offer integrated and comprehensive services appropriate for the population; and the high logistical and operating costs of bringing health care and public health services to these populations.

In an effort to establish a comprehensive approach to trachoma for these populations, the participants at the meeting reviewed and analyzed the general issue of access to health services, experiences in the implementation of integrated interventions to eliminate trachoma and other neglected infectious diseases (NIDs), and experiences in addressing diseases that can cause blindness in Amazon populations. They also discussed and reached a consensus on the main steps for compiling data on these diseases and the key interventions aimed at providing comprehensive health services that meet the identified needs.

## 1.1. Main obstacles in access to health services for Amazon populations

After reviewing the experiences of Brazil and Peru in the delivery of health services to Amazon populations, and after discussing various aspects with the participants, the following problems were identified with respect to access to health services for these populations:

1. Limited data to adequately describe the health needs of Amazon populations, disaggregated by population groups (e.g., by ethnic group); and lack of planning in health services focused on responding to the needs of populations in this geographical area.
2. Inability of health services to offer comprehensive care to Amazon populations from the perspective of universal health; and incipient development of integrated health services networks in this geographical area.

3. Insufficient human resources to provide health services at the local level; high turnover; uneven distribution of professionals and service providers; and insufficient training of human resources in health care centers.
4. Financing for health services in the Amazon region is insufficient and health and public health priorities compete for financing, which affects the organization and supply of services to meet the needs of communities.
5. Health services are poorly adapted to the cultural characteristics of the various Amazon ethnic and population groups in some countries.
6. In some parts of the Amazon the population is highly mobile, making it hard to plan and continuously supply basic services (water, sanitation, education, health, etc.).
7. In some specific areas of the Amazon rainforest there are security issues, particularly related to illegal mining and the presence of illegal groups.
8. Access and communication is difficult because of the Amazon's geography and terrain, making transportation very expensive and complicated. Some communities can be reached only by using multiple modes of transportation (land, air, or water). This also hinders the capacity to establish lasting relationships with the leaders and communities and to build trust and involve them in the design and implementation of integrated health actions.
9. The communities may be isolated during certain seasons, periods of bad weather, and emergencies such as flooding.

Participants stressed the need to understand intercultural factors and to facilitate an understanding of the customs and traditional beliefs of the indigenous populations of the Amazon in relation to processes of health and disease, including environmental determinants. This is essential in order for the health services to embrace cultural diversity and focus on the specific needs of individuals and communities.

It was also concluded that the capacity of national and local actors must be strengthened in order to develop public policies and intersectoral plans to move toward achievement of the Sustainable Development Goals, including universal access to health and universal health coverage for Amazon populations, while leaving no one behind. Some aspects to consider are: understanding the social factors and cultural differences that limit and impose barriers to indigenous populations' access to health systems; determining the interventions that countries have implemented to minimize these barriers; identifying the opportunities, strategies, and tools that countries can use to reach people who may not have access to health services; identifying the solutions that have been developed in countries where hard-to-reach populations have better access to health services; and determining how these solutions can be expanded to other countries.

## 1.2. Key features of an integrated approach to trachoma and other neglected infectious diseases in Amazon populations

Based on the review of experiences where an integrated approach to these diseases has been taken, in Colombia and Venezuela (Bolivarian Republic of), the following key aspects were identified to facilitate the planning and implementation of integrated actions for the elimination of trachoma and other NIDs as a public health problem in Amazon populations:

1. Decision-making at the highest level of the ministries of health is essential in order to design and implement integrated actions to tackle these diseases. This includes mobilizing other sectors to address the environmental determinants associated with these diseases. If these issues are prioritized on the government agenda, it is easier for the different programs to carry out coordinated activities.
2. Experiences with integrated approaches in some countries are useful for other countries and should be shared. For example, Colombia integrated data collection activities with ectoparasitic diseases control (primarily scabies and tungiasis), and also integrated trachoma and soil-transmitted helminth infection control actions for populations in the Amazon region. The Bolivarian Republic of Venezuela integrated health activities into trachoma rapid assessments in indigenous populations of the Amazon region and on the border with Colombia. These two countries not only consider it feasible to integrate activities, they also believe it is the most appropriate, efficient, and effective way to provide comprehensive health care services to hard-to-reach populations.
3. Integrated care packages must be designed to target the needs of individuals and communities, including comprehensive delivery of services ranging from prevention, detection, and diagnosis to referral and rehabilitation. These packages must include actions tailored to the cultural characteristics of the communities.
4. Local capacity (financing, human, logistical, etc.) must be strengthened in order to implement integrated actions. Integrated service networks for Amazon populations should be a priority. Furthermore, local multidisciplinary health teams should be formed and they need supplies, equipment, and materials (including transportation) suitable for the unique characteristics of the Amazon rainforest.
5. Training, continuing education, supervision, and monitoring of local health teams are essential for the implementation of integrated actions.
6. Integrated packages should include monitoring and evaluation of coverage, including water, sanitation, and hygiene (WASH) indicators and community adherence. This should include an impact assessment and the production of evidence to show the importance of prioritizing investments in these government policies.
7. It is necessary to review and adjust the regulatory frameworks that govern countries' health systems in order to facilitate integrated health actions in the Amazon region. For example, standards should be revised

to allow certain technical profiles—such as health promoters and nursing assistants with the required training and education—to participate in basic care and environmental health activities (e.g., diagnosis and treatment of prevalent diseases such as NIDs; identification and intervention in environmental health determinants) in areas where few or no physicians, nurses, or sanitation specialists are available.

- 8.** It is critical to address the environmental determinants of health in Amazon populations in order to achieve and maintain the elimination of communicable diseases, including NIDs. This includes: a) planning, implementation, and evaluation of programs with input from the WASH sector, health sector, and NID stakeholders at all levels; b) promoting the improvement of water and sanitation conditions, including low-cost technologies adapted to the environment and practices that help maintain health and prevent disease transmission (e.g., hand washing with soap or other agents, food hygiene, and general personal hygiene, including clothes washing and environmental clean-up); and c) taking action at health facilities to improve hygiene (e.g., disinfection and safe disposal of waste, etc.).
- 9.** Community participation in the planning and implementation of integrated actions (situation analysis, designing interventions, development, monitoring, and evaluation), relying on community leaders and organizations to help ensure that the actions taken suit the needs and characteristics of the communities. Intercultural dialogue is an essential tool for determining a population's needs and designing integrated actions. Tools such as participatory local assessment (9) should be used to address the various problems faced by hard-to-reach populations such as those in the Amazon. It is also important to create permanent spaces for coordination and knowledge exchange.
- 10.** It is important to understand the unique realities, characteristics, and living conditions of the indigenous Amazon populations in order to help improve their health. Some relevant aspects are: a) being considerate of the traditional medicines of Amazon peoples and encouraging joint efforts between traditional and complementary medicine; b) acknowledging the different realities of Amazon indigenous populations, including the unique aspects of populations in voluntary isolation or initial contact; c) becoming familiar with the problems they face, such as environmental pollution and how it affects their lives, personal integrity, and cultural identity; d) understanding the important relationship between land, food, and cultural identity for these communities; and e) ensuring the cultural relevance of health services through inclusive consultation processes.
- 11.** Develop innovative ways to offer packages of integrated actions, such as the use of digital platforms to improve data collection and analysis for the development of evidence-based public policies, and the use of surveillance tools for multiple diseases. These should include integrated serological surveillance of communicable diseases, using techniques to study multiple diseases with a single blood or serum sample. Such innovative approaches save financial resources and time.
- 12.** Strengthen national and local capacity for planning and microplanning of activities. This includes preparing cost analyses and addressing the financial challenges of implementing integrated health service packages.
- 13.** Engage, communicate, and coordinate with partners and stakeholders, including donor agencies, for the planning and implementation of integrated actions to address NIDs.

## 1.3. Key aspects of addressing eye diseases in Amazon populations

The delegates of Colombia, Ecuador, and Peru presented their countries' experiences in addressing potentially blinding health conditions in remote Amazon populations. After reviewing and discussing these experiences, the following key aspects of planning and implementation were identified:

1. In general, there is little information indicating which eye diseases are most prevalent in remote Amazon populations. Furthermore, there is not enough managerial or implementational capacity for actions in eye health. This makes it very hard to plan integrated health services for these populations.
2. Eye health actions for remote populations, such as those in the Amazon region, must be properly planned. Planning should focus on the needs of the communities, be realistic, and focus on quality.
3. Coordination between private and public entities at the local level—and especially with local governments—is an opportunity to strengthen the capacity to expand quality eye health services for remote populations.
4. In order to offer quality care for hard-to-reach populations, it is essential to have the participation of trained physicians and surgeons with experience in the care of eye diseases.
5. It is also key to involve traditional doctors, community leaders, and health promoters, among others, starting with the planning stage.
6. Solutions-focused research should be incorporated into integrated eye health interventions and other public health services for hard-to-reach populations. It is necessary to compile information on which interventions work and their outcomes, in order to expand coverage and access to integrated health services for Amazon populations.
7. Based on their discussion of these experiences, the participants felt that it is feasible to have integrated planning of health care services for trachomatous trichiasis, cataract, advanced pterygium that can cause blindness, and refractive errors for populations in which these problems coexist. Planning requires the participation of health professionals and specialized experts to meticulously plan how these services will operate in coordination with the health services network in each area.
8. Incorporating eye disease screenings into trachoma rapid assessments or population-based surveys is a way to collect data on the existence of eye diseases and refractive errors. For example, trachoma screening could be combined with tests of visual acuity. It is essential to establish a clearly defined path for individual care before screening for these diseases in the communities.

## 2. Roadmap

The following section discussed the main recommendations on two components, namely : a) opportunities and possible methodologies for the integrated mapping of trachoma, other NIDs, blinding eye diseases, and related factors, including the health conditions of local residents; and b) integrated actions against trachoma and other diseases that countries could include in a roadmap for remote Amazon populations.

### 2.1. Integrated mapping of trachoma, other neglected infectious diseases, blinding eye diseases, and related factors

1. There is a need to explore ways of mapping eye health problems such as refractive errors and advanced pterygium that can cause blindness, in hard-to-reach populations such as those in the Am-



azon, within the framework of trachoma surveys. This will provide information on the distribution and magnitude of these diseases in remote populations.

- 2.** While better mapping methods are developed, data on eye health can be collected (e.g., number of cases of refractive errors, cataract, and advanced pterygium that can cause blindness) through scheduled trachoma surveys in countries that wish to implement this in Amazon communities. Then statistical analyses can be conducted to ensure that the methodologies ultimately used are appropriate.
- 3.** Population-based surveys for trachoma can be useful for estimating the prevalence of other neglected infectious diseases depending on the characteristics, needs, and questions asked (age group and expected prevalence, etc.). For example, surveys on trachoma and soil-transmitted helminth infection can be integrated in geographical areas where the latter are very prevalent. The objective of measuring the prevalence of several diseases in a single survey for a single population group should be clearly described in the protocol (baseline, impact, interruption of transmission, etc.). It is recommended that each country select the diseases it wants to include in the surveys, including the prioritization criteria (for example, diseases in the process of elimination).
- 4.** The integrated intervention package to be developed as part of the integrated surveys and subsequent to them should be clearly established. Surveys should not be conducted unless it is clear that the integrated response actions will address the problems identified in the communities.
- 5.** Coordination should be encouraged among countries in the same geographical area, such as the Amazon, so that joint mapping can be done. Multi-country maps can be prepared by incorporating data on these diseases from different countries.
- 6.** The following aspects should be considered when conducting integrated surveys on trachoma, other NIDs, and eye diseases:
  - a)** political commitment and an enabling legal framework;
  - b)** intersectoral and inter-programmatic coordination, backed by national committees or groups for disease control and elimination;
  - c)** integrated protocols based on standardized methodologies and within the framework of ethical aspects concerning remote populations; it should include all manner of experts from the outset;
  - d)** independent financing and promotion of coordination with partners, allies, and donors for effective implementation;
  - e)** the necessary laboratory support;
  - f)** local technical capacity and strengthening of existing local capacities;
  - g)** proper data management and standardized platforms for quality data collection (for example, digital platforms that allow monitoring of data in real time);



- h) identifying access barriers to integrated health services; design and implementation of interventions to respond to local problems;
- i) intercultural dialogue from planning and design through implementation, delivery of results, and implementation of interventions;
- j) new technologies to reduce costs and gain efficiency.

## 2.2. Integrated actions for trachoma, other NIDs, and eye diseases in Amazon populations

1. Provide integrated actions to respond to these public health problems in the populations of the Amazon region as part of universal health. This means clearly defining a set of intersectoral interventions and health services based on the needs of the population that are people-centered and take an approach based on intercultural health networks.
2. Strengthen governance and leadership at the different administrative levels in the Amazon countries so that there is capacity to organize and manage an integrated State response to ensure the right to health, which is related to other fundamental rights in the framework of the Sustainable Development Goals.
3. Work at the highest political level to ensure that health services are organized and brought as close as possible to remote communities. The absence of such services constitutes an institutional barrier to the right to health. Integrated responses to trachoma, other NIDs, and eye diseases offer an opportunity to strengthen the organization of service networks and health service delivery centered on the needs of the population.
4. Each country should establish the criteria for its own package of integrated interventions. These criteria should include the needs of the population, a life-course approach, prevalent diseases, etc. Once the criteria are established, they should identify the needs for logistics, local capacity, human resources, materials, inputs, and drugs, etc.
5. The integrated intervention packages should be based on standardized methodologies and ensure service quality. It is necessary to guarantee that services will be provided to complement the adopted strategy. Examples of integrated service packages include those that combine mass drug administration for trachoma, or population-based surveys, or rapid assessments, with vision screening and the detection of advanced blinding pterygium in the population over age 50 and referral to specialized care, promotion and education, vaccination of the population, and the identification and treatment of other prevalent diseases (e.g. malaria, leprosy, leishmaniasis, etc.), among others.

6. Identify alternatives for organizing trachoma or pterygium surgeries together with cataract surgeries, provided that the health services infrastructure are able to do so, while ensuring surgical quality and patient safety. This means that criteria must be set for each country, logistical needs must be determined, and the standards and regulations of each country must be upheld. There must be community acceptance and postsurgical monitoring should be part of the monitoring and evaluation component.
7. Ensure that integrated services for trachoma, other NIDs, and eye health problems are designed with an intercultural approach that is tailored to each community in order to enhance acceptance, coverage, and adherence. Synergies between education and health promotion are essential when addressing these problems in indigenous populations and attempting to change the behaviors and practices associated with these public health problems.
8. Include social and environmental determinants in the design and implementation of integrated actions for the control and elimination of these diseases in remote Amazon populations.
9. In each country and cultural environment, identify the specific barriers to access and use of water, sanitation, and housing, and conduct joint planning with the sectors responsible for the actions needed to address these determinants. This includes identifying culturally appropriate technology for different population groups, such as the indigenous population. Tools exist to facilitate joint action by the water, sanitation, hygiene, and health sectors, such as *WASH and Health working together*, published by WHO in 2019 (10).
10. Mobilize and manage national resources (national governments, health ministries, ministries of water and sanitation, housing ministries, private sector, etc.) and international resources to finance integrated actions to address trachoma, other NIDs, and eye diseases. These interventions must be incorporated into stable financing mechanisms in each country.
11. Engage and empower people and communities in the planning, development, adaptation, and evaluation of intercultural integrated actions for trachoma, other NIDs, and eye health problems. This entails a multidisciplinary approach supported by professionals and workers in such areas as anthropology and sociology, and empowerment of the national authorities to ensure the approach is correct and effective.
12. Monitor and evaluate the impact of integrated interventions for the control and elimination of trachoma, other NIDs, and eye health problems, with an intercultural approach and community participation. Technology and innovation must be included in monitoring and evaluation, as well as sufficient and continuous financing.

## 2.3. Questions of interest

The participants proposed the following questions (including some from operations research) for the design, implementation, and evaluation of initiatives for an integrated approach to trachoma, other NIDs, and eye health problems in the Amazon region:

1. What is the best approach for an intercultural dialogue to prioritize actions in health packages for the indigenous communities in the Amazon basin?
2. Can health professionals and indigenous populations work together to prioritize the health problems to be addressed?
3. What are the sociocultural similarities among different indigenous groups and what are their differences in terms of behavior modification and acceptance of services?
4. Which data collection and intervention methods would be acceptable to the community?
5. Are there new sampling strategies to determine the prevalence of trachoma in these areas and populations?
6. What are the beliefs of indigenous populations regarding eye health?
7. What is the magnitude and distribution of trachoma in the indigenous communities of the Amazon basin? Can trachoma rapid assessments be used to obtain preliminary data in non-endemic countries with populations in the Amazon?
8. Is the removal of eyelashes observed in some indigenous communities a traditional intervention to prevent trachoma?
9. What are the most frequent eye diseases in remote Amazon communities?
10. What are the traditional treatments, methods, and practices used by indigenous populations for trachoma?
11. Is there a way to measure the impact of inter-programmatic work to fight trachoma and other neglected infectious diseases in the Amazon?
12. Is the integrated health program for indigenous communities in some countries sustainable and replicable?

## 3. Next steps

The delegates of the participating countries and the partners proposed the following activities to move toward implementation of an integrated approach to trachoma, other NIDs, and eye health problems in the Amazon region:

### Brazil

1. Review the obstacles and opportunities in coordinating interventions for trachoma and other eye diseases in indigenous populations.
2. Promote joint analysis among representatives of the Special Secretariat for Indigenous Health, the Secretariat for Health Surveillance, and the Secretariat for Primary Health Care in order to establish priorities for integrating trachoma and eye health actions. This includes reviewing information systems in order to collect and analyze the required data.
3. Promote partnerships to provide integrated surgery services for trachoma and other eye diseases to the indigenous population.



## Bolivia (Plurinational State of), Ecuador, and Paraguay

1. Organize the logistics and implementation of integrated actions to address NIDs and other eye diseases in trachoma rapid assessments in communities living in conditions of vulnerability (specific for Paraguay).
2. Identify existing service platforms in the Amazon region and start a dialogue with PAHO to design and implement trachoma rapid assessments that are integrated with screenings for other eye diseases and other NIDs, in accordance with the needs of the population. This includes coordination with private organizations and foundations that provide comprehensive health services to these populations, especially the Divino Niño Jesús Foundation in Peru and the Valle Ophthalmological Foundation in Ecuador.

## Colombia

1. Review the regulatory framework for inter-programmatic and intersectoral collaboration in order to implement integrated actions for indigenous populations of the Amazon.
2. Establish specific roadmaps.

## Peru

1. Establish the regulatory framework (health guidelines) for population-based trachoma interventions, such as mass drug administration.
2. Establish the legal framework (agreement) to develop interventions with international cooperation agencies.
3. Forge strategic partnerships with non-governmental organizations (NGOs).
4. Train primary care health workers in eye health and trachoma.
5. Prepare educational messages targeting the population (printed and audiovisual).
6. Explore the possibility of coordinating trachoma interventions with others in the risk areas, such as malaria.
7. Determine the cost structure of interventions to generate evidence and for prevention and recovery.
8. Strengthen intergovernmental and intersectoral relationships for a comprehensive approach to NIDs, including trachoma.
9. Explore the best way to prepare and develop eye health packages for the Amazon region.

## Bolivarian Republic of Venezuela

1. Promote advocacy between programs at the sectoral and intersectoral level.
2. Convene technical working groups with scientific societies.
3. Identify possible strategic partnerships with cooperation agencies and NGOs.
4. Plan a baseline survey on the prevalence of trachoma and establish an action plan: identify the evaluation units, establish inclusion criteria for the health problems (trachoma, pterygium, visual acuity, and cataracts), and determine the interventions. This includes identifying other communicable diseases, including some NIDs.
5. Form a national working group for NIDs and their determinants.
6. Submit a proposal to the respective ethics committees.
7. Prepare the prior and informed consent forms for the interventions to be presented to the indigenous peoples and communities in the evaluation units.
8. Prepare intercultural health promotion materials.

## Delegates of the Partners

The representatives of the partners proposed the following actions to support the regional initiative:

1. They are willing to provide technical assistance to help develop modules for the integrated interventions and to facilitate a combination of surveys and interventions with a more efficient package of materials for all stakeholders.
2. Use Tropical Data to develop a module for the key additional components to be included in the baseline survey to be conducted in countries of the Region of the Americas (soil-transmitted helminth infection).
3. Identify opportunities to consider data collection approaches, share lessons learned, promote equity, and support coordination with other key stakeholders.
4. Adapt the *Trachoma Plan of Action (9)* to support planning for a broader package of services (including indicators of success and how to reach indigenous communities and remote and marginalized communities).
5. Help plan outreach, communications, and key messaging to promote the priorities for trachoma elimination in the Region (including integrated planning and the targeting of statistically invisible communities).
6. Present the research priorities established at this meeting during discussions of the Committee of Experts on Trachoma of the International Trachoma Initiative (held in November 2019), where the list of priorities for trachoma research was reviewed.
7. Provide continuous support for integrated planning of the *WASH and Health working together* workshop planned for 2020 in the Region of the Americas.

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# Glossary

**Elimination as a public health problem** is a term related to both infection and disease. It is defined by achievement of measurable global targets set by WHO in relation to a specific disease. When reached, continued actions are required to maintain the targets and/or to advance the interruption of transmission<sup>1</sup>.

**Integration:** In the context of this document, integration refers to planning, execution, and joint evaluation of activities in all sectors and programs to achieve common objectives.

**Neglected infectious diseases (NIDs)** are a group of diseases caused by parasites, viruses, and bacteria and for which comprehensive, intersectoral control and elimination activities have been recommended. These diseases are considered “neglected” since their occurrence and persistence are associated with communities’ socioeconomic conditions, including poverty and lack of access to or insufficient basic services.

**WASH Strategy (water, sanitation, and hygiene)** is a strategy recommended by WHO and UNICEF that provides a framework to guide integrated actions to improve the supply of drinking water, sanitation, and hygiene.

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<sup>1</sup> World Health Organization. Generic framework for control, elimination and eradication of neglected tropical diseases [Internet]. Geneva: WHO; 2015. Available from: [https://www.who.int/neglected\\_diseases/resources/WHO\\_HTM\\_NTD\\_2016.6/en/](https://www.who.int/neglected_diseases/resources/WHO_HTM_NTD_2016.6/en/)

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## Annex 2. Meeting Agenda

### Roadmap for an integrated approach to trachoma, other neglected infectious diseases, and eye diseases that can cause blindness in remote Amazon populations

#### Objective

Establish a trachoma roadmap that is integrated with other neglected infectious diseases and blinding eye diseases (mature cataract and pterygium that can cause blindness) for hard-to-reach populations in the Amazon basin.



## Expected results

1. Thorough knowledge of the challenges and opportunities in providing health services to populations living in remote areas of the Amazon.
2. A preliminary list of opportunities and possible methodologies for integrated mapping of trachoma, other neglected infectious diseases, blinding eye diseases, and related factors in remote Amazon populations.
3. A preliminary list of integrated actions to combat trachoma and other diseases that the participating countries could incorporate into a roadmap for remote Amazon populations.

## Participants

1. Delegates of the Ministries of Health of Bolivia (Plurinational State of), Brazil, Colombia, Ecuador, Paraguay, Peru, and Venezuela (Bolivarian Republic of)
2. Representatives of organizations, partners, and allies: Dana Center (WHO Collaborating Center for the prevention of blindness); Centers for Disease Control and Prevention of the United States of America; Tropical Data; Task Force for Global Health; International Coalition for Trachoma Control; International Trachoma Initiative.
3. Representatives of the Pan American Health Organization: advisors from the PAHO country offices of the invited countries and from the regional programs on NIDs, Visual Health, Equity, Gender and Cultural Diversity, Climate Change and the Environmental Determinants of Health, Health Systems and Services, and the Department of Neglected Tropical Diseases of the World Health Organization.

## Venue and date

Hotel Intercontinental Miramar Panama, Miramar Plaza, Balboa Avenue, P.O. Box 7336, Panama City (Panama), 21 and 22 October 2019

Day 1		
Time	Item	Presenter or facilitator
<b>Opening session</b>		
8:00 - 8:30	Welcoming remarks	<i>Gerardo Alfaro</i> (PAHO/ WHO Representative in Panama)  <i>Luis Gerardo Castellanos</i> (Unit Chief, Neglected, Tropical and Vector-borne Diseases, PAHO)
	Objectives of the meeting and sessions	<i>Martha Saboyá</i> (PAHO)
<b>Session 1. NIDs, trachoma, and other eye diseases that can cause blindness</b>		
8:30 - 9:00	PAHO disease elimination initiative: a policy framework for a sustainable, integrated approach to communicable diseases in the Americas (15 min presentation and 15 min of questions)	<i>Luis Gerardo Castellanos</i> (PAHO)
9:00 - 9:30	Obstacles to trachoma elimination in hard-to-reach populations of the Region	<i>Martha Saboyá</i> (PAHO)
9:30 - 10:10	Experiences in addressing eye diseases that can cause blindness in the Region of the Americas: mapping and addressing inequities (30 min presentation and 10 min for questions)	<i>Juan Carlos Silva</i> (PAHO)
10:10 - 10:40	Break	
<b>Session 2. What is the Amazon region and how are health services provided to its population?</b>		
<b>Panel 1. Access to health services for remote Amazon populations</b>		
10:40 - 12:20	<b>How do Amazon communities access health services?</b> (20 min/ speaker)  - Health care challenges for the indigenous populations of the Americas - Ministry of Health of Peru - Ministry of Health of Brazil (40 min for general discussion)	<i>Sandra del Pino</i> (PAHO)  Delegates of Brazil and Peru
12:20 - 14:00	Lunch	

### Panel 2. Addressing trachoma and NIDs in remote Amazon populations

14:00 – 15:30	<p><b>How are trachoma and other NIDs addressed in remote Amazon populations?</b> (20 min/ speaker)</p> <ul style="list-style-type: none"> <li>- Ministry of Health of Colombia</li> <li>- Ministry of Health of the Bolivarian Republic of Venezuela</li> <li>- Integrated serological surveillance: a tool to strengthen surveillance in hard-to-reach populations (30 min for general discussion)</li> </ul>	<p>Delegates of Colombia and Venezuela</p> <p><i>Diana Martin</i> (CDC)</p>
15:30 - 16:00	Break	
<h3>Panel 3. Addressing other eye diseases in the Amazon region</h3>		
16:00 - 17:30	<p><b>How are activities carried out for cataract, pterygium, and other eye diseases in remote Amazon populations?</b> (20 min/ speaker)</p> <ul style="list-style-type: none"> <li>- Divino Niño Jesús Foundation (Peru)</li> <li>- El Valle Ophthalmological Foundation (Ecuador)</li> <li>-Advanced School of Ophthalmology, Instituto Barraquer de América (Colombia)</li> </ul> <p>(30 min for general discussion)</p>	<p><i>Alberto Lazo</i> (Perú)</p> <p><i>Felipe Chiriboga</i> (Ecuador)</p> <p><i>Sandra Talero</i> (Colombia)</p>
17:30	Welcome reception	

Day 2		
Time	Item	Presenter or facilitator
<b>Session 3. Amazon Initiative to eliminate trachoma, other NIDs, and other eye diseases that can cause blindness</b>		
8:30 - 10:00	<p><b>How can we collect data and conduct integrated mapping on hard-to-reach populations in the Amazon?</b></p> <ul style="list-style-type: none"> <li>- What do we want to map? Trachoma, soil-transmitted helminth infection, other NIDs, cataract, pterygium, and risk factors, etc.</li> <li>- Which mapping methods are feasible? Literature review, rapid assessments, and population-based surveys, among others. Pluses and minuses.</li> <li>- How can mapping become integrated? What can be included? Protocols, data collection platforms, data analysis, etc.</li> </ul>	Work in groups
10:00 - 10:30	Break	
10:30 - 11:30	Groups present their work on mapping	Plenary
11:30 - 13:00	<p><b>How do we conduct integrated activities for trachoma, other NIDs, and other eye diseases in remote Amazon populations? Surgery, treatment (individual, community), water, sanitation and hygiene, monitoring and evaluation, surveillance.</b></p> <ul style="list-style-type: none"> <li>- Which service platforms can be used?</li> <li>- Which financing mechanisms could be implemented?</li> <li>- Can we establish partnerships? With whom and for what?</li> <li>- What adaptations are required for indigenous, nomadic, seminomadic, and migrant populations, etc.?</li> </ul>	Work in groups
13:00 - 14:00	Lunch	
14:00 - 15:00	Groups report back to plenary	Plenary

15:00 - 16:00	<b>How can these activities move forward in the participating countries?</b>	Trabajo por país
16:00 - 16:20	Break	
16:20 - 17:00	Country groups report back to plenary	
17:00 - 17:30	Next steps	Plenary
17:30	Closing	







In 2018, an estimated five million people in the Region of the Americas lived in areas where trachoma is a public health problem, mainly in Brazil, Colombia, Guatemala, and Peru. In an effort to establish the situation of trachoma in the Region, the Pan American Health Organization (PAHO) has promoted, among other activities, a search for groups affected by this disease in other countries, primarily in populations living in conditions of vulnerability, such as those in the Amazon region.

In October 2019 a meeting was held in Panama City, Panama, to establish a roadmap for addressing trachoma in conjunction with other neglected infectious diseases (such as soil-transmitted helminth infections, lymphatic filariasis, ectoparasitic diseases, leprosy, Chagas disease, and yaws) and other blinding eye diseases (mature cataract and advanced pterygium) in remote populations in the Amazon region.

This report—available in Spanish, English, and Portuguese—presents the recommendations of the meeting’s participants in two areas of work: 1) integrated mapping of the diseases and associated risk factors; and 2) integrated actions for the control and elimination of these diseases.



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