Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE Americas

EXECUTIVE SUMMARY

WORKSHOP TOWARD THE ELIMINATION OF THE USE OF SOLID FUELS AND KEROSENE IN URBAN HOMES IN THE AMERICAS

11th -13th September 2018,

Mexico City, Mexico

List of Abbreviations & Acronyms

CCAC	Climate and Clean Air Coalition
CHEST	Clean Household Energy Solutions Toolkit
ECLAC	Economic Commission for Latin America and the Carribean
FISE	Fund of Social Inclusion for Energy
GLPGP	The Global LPG Partnership
HEART	Household Energy Assessment Rapid Tool
IDB	Interamerican Development Bank
INECC	National Institute of Climate Change of Mexico
IT	Interim Target
LMIC	Low and middle-income countries
LPG	Liquefied petroleum gas
PAHO	Pan-American Health Organization
PEC	Program for energy efficient cooking
$PM_{2.5}$	Particulate matter that have a diameter of less than 2.5 micrometers
SDG	Sustainable Development Goals
SFU	Solid fuel use
SLCPs	short-lived climate pollutants
UNAM	National Autonomous University of Mexico
WHO	World Health Organization

EXECUTIVE SUMMARY

Introduction

Household air pollution is one of the principal causes of disease and premature death in low and middle-income countries (LMIC) and is an avoidable health risk. In the Americas, the World Health Organization (WHO) estimated that approximately 82,000 deaths in these countries were attributale to cooking, heating, and lighting with polluting fuels and technologies in 2016. Accelerating the transition to clean energy for all is an urgent and necessary public health intervention in the region of the Americas, to reduce the health risks that primarily affect socially and economically vulnerable populations, to achieve a continent healthier, more equitable and with sustainable development, contributing to the worldwide efforts to achieve the Sustainable Development Goals (SDGs) by 2030.

To achieve this result, the health sector should be involved in the design of policy interventions to reduce exposure to indoor air pollution and its effects on health, as well as social inequities. In line with the WHO Indoor Air Quality Guidelines launched in November 2014, the PAHO Strategic Plan 2014-2019 has set itself the objective of helping Member States to reduce the percentage of population by 5% that depends on solid fuels for cooking in countries with a percentage of users equal to or greater than 10% of the population (priority countries). To measure progress, one indicator is the number of countries that are implementing large-scale programs to reduce solid fuel use (SFU) in the home, and a outcome indicator measures progress in the use of energy and clean technology for cooking at home.

Evaluating the progress of the countries in the indicator of the Strategic Plan, some of its member states have successfully reduced solid fuel use (SFU) in the households by 5% and have implemented large-scale programs to transition to clean fuels. Nevertheless, in other countries in the region, progress has been almost non-existent.

Following the first workshop carried out in Tegucigalpa (Honduras) in 2015, where new indoor air pollution guidelines were launched by the WHO, the workshop "Toward the elimination of solid fuels and kerosene in urban homes in the Americas" was organized and carried out in Mexico City (Mexico) from September 11 to 13, 2018. The workshop consisted of an informal meeting of academic experts in this area, as well as actors involved in technical aspects and the decision-making process within different sectors (Ministry of Health, Environment, and Energy or the equivalent) in countries where more than 5% of the urban population currently use solid fuels or kerosene. During this workshop, we discussed the elimination of SFU and polluting technologies for cooking in urban households of the Americas as a health objective, and as part of the strategy to increase access to clean energy for all by 2030 as outlined in the Sustainable Development Goals (SDGs).

Objectives

1. Examine the evidence base for the proposal (the evidence of the effects and successes of large-scale plans and programs that have been implemented and duly evaluated).
2. Examine the political conditions for its implementation – including the possibility of national support and established commitment under the agenda for sustainable development, and the support of national bodies and academic institutions or other relevant actors from the affected countries.
3. Examine the costs and technical and technological possibilities for its sustainability – including the identification of needs, barriers, and opportunities for the implementation of different types of policies, as well as the identification of priority stakeholders committed to moving toward the full energy transition (clean energy for all), and in particular, the identification of potential donors.

Workshop development

During the workshop, there were presentations by the WHO and PAHO, and representatives from different countries and organizations, including academia; in addition, there were group sessions and plenary discussions related to different topics.

Presentation summaries

Drs. Agnes Soares, Marcelo Korc, Karin Troncoso (PAHO) and Dr. Heather Adair-Rohani (WHO) outlined the background, evidence context and tools for policy development for the proposal toward the elimination of solid fuel and kerosene use in urban households in the Americas.

Estimates regarding the burden of disease demonstrate that air pollution caused by the incomplete combustion of solid fuels inside the home is one of the principal environmental risk factors to health at the regional and global levels. These emissions also contribute to global warming and are one of the main sources of black carbon, a short-lived climate pollutan (SLCP). As such, it is necessary to approach this problem intersectorally to move toward its gradual elimination, both as a public health objective and as a way to achieve the SDGs. The WHO has compiled abundant evidence regarding the health aspects of air quality in developing its technical recommendations. It has also developed different tools such as the Household Energy Assessment Rapid Tool (HEART)[1], and the Clean Household Energy Solutions Toolkit (CHEST)[2], to promote access to clean energy solutions in the home.

In the Workshop, Honduras, Mexico, Peru, and Paraguay presented their experience working with the HEART tool, emphasizing the importance of intersectoral action in understanding of the problem from different institutional perspectives, as well as the joint creation of a roadmap.

Professor Kirk Smith (University of California,Berkeley) gave a masterful presentation in which he shared the program to promote liquefied petroleum gas (LPG) in India. Through a targeted subsidy, India has managed to give access to this fuel to more than 50 million households. Nevertheless, as mentioned by Dr. Smith in his presentation, we should not only speak of "subsidies," since in reality these programs represent a "social investment" of interest to all. Guaranteeing the distribution and economic sustainability in the long-term and targeting the benefits toward the most vulnerable populations, with effective behavior change strategies in the sustained use of LPG and other clean fuel technologies, are part of a group of social investment strategies and challenges to achieving greater benefits in health, prosperity, and sustainable development in these countries.

Suzanne Pollard (Johns Hopkins University) summarised an evaluation of the government program "Fund for Social Inclusion for Energy" (FISE, in Spanish) to promote access to LPG in Peru. Results demonstrated a fast increase in the consumption of LPG at the national level, although the mixed fuel use (clean fuels mixed with solid fuels) and stove stacking remains high.

Carlos Gould (Columbia University) presented an evaluation of the government program in Ecuador to replace the use of LPG with electricity. The Ecuadorian goverment has launched the Program for energy efficient cooking (PEC), which is built around incentives to install and use induction stoves. Although 20% of the population has made the substitution, the high subsidy to LPG has limited the scope of the induction stove program (PEC).

Rodrigo Dittborn (Environment Ministry of Chile) provided the experience with the substitution of the use of firewood with modern systems for heating. Although the replacement has been successful, the high cost of the heating systems promoted has meant a very slow turnover.

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[1] World Health Organization. (2018). Opportunities for transition to clean household energy: application of the household energy assessment rapid tool (HEART): Ghana. World Health Organization. http://www.who.int/iris/handle/10665/274281.
World Health Organization. (2018). Opportunities for transition to clean household energy: application of the household energy assessment rapid tool (HEART): India. World Health Organization. http://www.who.int/iris/handle/10665/274280.

[2] Clean Household Energy Solutions Toolkit (CHEST). Disponible. http://www.who.int/airpollution/household/chest/en/

Abraham Ortinez (National Institute of Climate Change of Mexico-INECC), presented the National Plan of Action to mitigate the effects of short-lived climate pollutants (SLCPs), given the contribution that black carbon emissions from SFU has on pollution levels in the home. Through the identification, modeling and evaluation of the impact of the synergies of the different sectoral policies on climate change, human health, air quality and the environment, scenarios can be generated for different types of intervention. Also, Professor Omar Massera (National Autonomous University of Mexico -UNAM) summarised the results of a research project that evaluated the impact of fugitive emissions of four wood chimney stove models on indoor and outdoor air pollution. In accordance with a study modeling different scenarios for the movement of the contaminant plumes, efficient wood-burning chimney stoves could be a viable option for meeting the interin target (IT)-1 for particulate matter that have a diameter of less than 2.5 micrometers ($PM_{2.5}$) of the WHO household air quality guidelines for sparsely populated rural areas. In urban contexts, there would be an accumulation of pollutants in the outside environment, with the possibility of re-entry into the homes, reducing the health benefits of an improved biomass stove.

Some of the countries presented their progress in promoting access to clean energy. In the last decade, Nicaragua was able to improve its energy access through a national program of sustainable electrification, as well as the promotion of improved wood stoves to reduce the use of solid fuels. Cuba demonstrated a reduction in the use of kerosene as a cooking fuel through the open sale of LPG and the commercialization of induction stoves in the home. These interventions are part of integrated and intersectoral development policies to combat poverty and develop renewable energy sources.

In Guatemala, they have created an intersectoral roundtable to mitigate SFU in urban and rural areas, incentivizing efficient stove programs in rural communities using international financing. In addition, Guyana commented that there is political will to increase access to clean fuel technologies within the home, as well as to generate evidence for the impact on health in these countries. Nevertheless, in other countries such as Haiti, despite the existence of improved cookstove initiatives, in addition to indoor air pollution from SFU and other sources, there exist economic barriers, an insufficient supply of electrical energy, and a lack of specific laws permitting access to cleaner fuels and technologies.

The invited organizations had different focuses with respect to their approach to the proposal. Jose Manuel Arroyo (Economic Commission for Latin America and the Carribean-ECLAC) reported on the large percentage of household SFU (wood) for several countries in Central America, suggesting the combination of efficient wood stoves with LPG as a transitional strategy to achieve the specific SDG goals in the region, especially considering the persistence of poverty. Principal barriers to the use of renewable energy in the region include the presence of monopolies and a lack of distribution channels needed to guarantee an accessible and reliable supply.

Renzo Bee (Global Alliance for LPG-GLPGP) presented a project "Scaling up demand for LPG in Guatemala," where they found that there is a need for a master plan for LPG that includes reforms in regulations, targeted subsidies, sources of financing, and monitoring and evaluation by external entities. Yekbun Gurgoz (Climate and Clean Air Coalition-CCAC) began with an introduction on CCAC, a voluntary partnership of goverments and different actors commited to improving air quality and protecting the climate through actions to reduce SLCPs. CCAC Solution centre is a place where policy makers and civil servants can find resources, training materials and expert advice on a range of measures and policies to help reduce emissions of SLCPs. The expert assistance provides guidance in technological options, mitigation measures, funding opportunities and policy development through extensive network of professionals for consultation. Ms Gurgoz described some succesful experiences of assistance to countries in different regions including Latin America.

Lastly, Juan Urteaga (Interamerican Development Bank-IDB) presented the Program for Energy Efficiency of LPG exchange for induction stoves in Ecuador, motivated by a subsidy for energy generation. IDB support focused on strengthening electricity transmission and distribution lines to provide the electricity service of the quality required for induction stoves. However, the government has not been able to eliminate the LGP subsidy, reducing the benefit and impact of the program, and increasing the cost to the PEC users that must invest in stoves and pots. Both programs, the LPG subsidy and the PEC,

place a heavy burden on state resources; indeed, despite the fact that the majority of electrical energy produced in Ecuador is from renewable resources, LPG is imported.

Group work – general discussion

As a result of the plenary discussion to analyze the current situation, causes, and resources in these countries to confront the challenge of eliminating household SFU in the Americas, we concluded that countries should focus on generating viable policies that promote the gradual reduction of its use and increased access to safe and clean fuels in the most vulnerable households (urban and rural) in the medium- to long-term. Although we recognize the importance of distinguishing between urban and rural households, it was decided to not focus these policies solely on urban households so as not to exacerbate inequities.

According to the social, political, and economic context of each country, the group suggested the creation of a central roundtable/decision-making body at the national level, led by the energy sector or other sector, in conjunction with the environment and health sectors. This approach will allow for intersectoral coordination and the gradual involvement of other actors in the decision-making process and development of effective solutions. This national roundtable would be responsible for developing a common language, to facilitate understanding regarding the work and priorities for all of the sectors involved, with the objective of identifying common and/or complementary aspects important for fostering a joint collaborative effort, which should be articulated with institutions and civil groups at the local and regional levels.

Principal barriers identified in the transition to cleaner energy in countries in the region: the cost of clean energies, limited of political will, absence or limited experience of the countries in intersectoral collaboration, geographical barriers and barriers related to electrical infrastructure, insufficient financing, and a lack of specific laws and regulations related to the topic.

Facilitators described included: the existence of social action programs, subsidies for electricity and LPG targeted toward vulnerable populations, the presence of national policies related to the issue, the existence of infrastructure for the supply of natural gas to households, as well as induction stove programs in some countries in the region. The importance of participation of the health sector was also discussed as a facilitator for the formulation of policies and the adoption of new technologies and fuels, although this has not occurred in the majority of the large-scale interventions presented as examples.

With respect to the contextual evidence for technical and political support for the proposal, we recommend using the SDG 2030 as a temporary framework, along with goals and commitments signed by the countries, including those related to access to clean energy and the reduction of mortality attributable to air pollution. Other guiding frameworks include the WHO roadmap for air pollution, which has already been committed to and signed by the countries, and as a technical framework, the WHO household air quality guidelines, emphasizing that there is sufficient evidence for the health benefits to support a proposal for the elimination of household SFU and use of polluting technologies. Nevertheless, it was noted that to better evaluate the success of projects for the acceleration of the energy transition, more research is required into the behavioral factors associated with adoption and use of cleaner fuels, in addition to comprehensive monitoring and evaluation efforts following the interventions, and evaluations of the externalities of the subsidies and economic incentives that support these programs and policies at the environmental, social, and health levels.

In addition, it is fundamental to identify the principal sources of information and institutions responsible for conducting situational analyses of SFU and its effects in each country. This would facilitate the formulation of public policies with a focus on social inclusion and reduction of inequities. Carrying out impact evaluations of the programs, using both qualitative and quantiative methods, and carried out by external entities, is an important tool to provide feedback and innovation to the programs.

PAHO is a facilitator in this entire process and it is necessary that each country explore the international and multi-lateral bodies that current exist in the region and globally for financing and development of proposals.

Conclusions and recommendations

- There is sufficient evidence for the health benefits of using clean fuel technologies in households, warranting the creating of programs to promote access to cleaner fuels and technologies for cooking in the region.
- Experiences from programs promoting the transition to cleaner fuels and technologies have shown that the use of a new technology or fuel does not necessarily imply full displacement of polluting fuels. What normally occurs is that households continue using a several different technologies and fuels to cover their total energy needs. It is necessary to understand the causes of this "stove stacking" and address them according to each context, which can vary from economic and logistical challenges to cultural and social factors.
- The methodology used in this workshop promoted discussion among the participants, taking into account the relevant priorities of each discipline and sector (health, energy, environment, financers, partners, NGOs, academic, etc.), which permitted us to prioritize this issue in the countries and reach a consensus.
- The experience in trans-disciplinary and intersectoral discussion, which has been carried out in Honduras, Mexico, Peru, and Paraguay with the help of the HEART tool, should be replicated in priority countries for the development of national programs with the same objective.
- Access to cleaner energy and technologies in the household has been approached as an issue related to energy, the environment, or poverty reduction. Nevertheless, it is important to approach it also as a health issue. This discussion developed out of the idea that while progressive elimination of SFU and kerosene for cooking may not improve the economic conditions of the household, it does make them healthier, reduces mortality, and improves quality of life, particularly for women and children and populations with high socioconomic, ethnic, environmental and cultural vulnerability.
- Depending on the context in each country, it is necessary to evaluate the availability of renewable energy sources (e.g. hydroelectricity) to strengthen access and increase the reliability and efficiency of the fuel supply in all households. In this way, we would also be addressing the objective of sustainability, contributing to the fulfillment of the Sustainable Development Goals specific in the region.
- The group consensus is that **PAHO has an important role to play with respect to technical assistance and advocacy in accelerating the transition to clean energy, and that there should be a call to action** in priority countries that have not yet achieved a reduction of at least 5% in the prevalence of SFU and kerosene for cooking. The sector that will lead this process will depend on the context in each country, but the health sector should be called upon to support the fulfillment of the SDG for providing clean energy to all in the framework of development, social justice, and health.
- The concept document that will be produced to generate this **call to action** for the different actors (decision makers, private sector, civil society, among others)**,** should include specific, easy-to-understand language for all sectors involved in this issue. Clear messages should also be produced for the general population with the goal of facilitating understanding and achieving development and implementation of the proposal. In addition, positive messaging should be used, such as "toward access to clean energy…," and the proposal should include a goal to move toward "gradual and sustained elimination."
- We recommend that countries generate large-scale and long-term national programs to achieve rapid adoption and maintenance of the use of cleaner fuels and technologies in homes. These programs will be part of different social investment strategies to increase the welfare of the population and create healthier environments. To improve the investment of resources and their results, the financing mechanisms and donors, as well as non-governmental and social organizations, should act in accordance with the health objectives and respecting the strategies defined by the national program, avoiding in practice, duplicity or antagonism in the formulation and implementation these solutions.

- Although universal subsidies have facilitated the transition to cleaner technologies in some countries, there is evidence that these subsidies should be targeted to the most vulnerable populations using clearly defined criteria, benefiting those in most need and reducing the economic cost to governments, and promoting efficiency and sustainability in the long term. It was suggested to explore public-private collaborations, without compromising the focus on public health and the reduction of socioeconomic and health inqualities.
- The national program must consider the development of a multiple strategy of differentiated access to all alternative technologies and clean fuels, to supply the energy needs of households (cooking, heating, lighting, etc.) in different contexts (urban, suburban , rural households, with and without abiliity to pay, etc.). The alternatives of this strategy must comply with at least the IT-1 for $PM_{2.5}$ of the WHO Air Quality Guidelines, reducing health inequalities caused by exposure to environmental risks. It is important to mention that in accordance with the recommendations in these guidelines, no technology that uses unprocessed coal should be included, and kerosene is not recommended as a household fuel.
- Monitoring and comprehensive external evaluations (process, outcomes and impact) of programs to reduce SFU should be carried out by the goverments. These studies represent important tools to determine not only the existing gaps in context-specific factors (social, economic, cultural, etc.), but also allow for an understanding of the principal motivating factors that may guarantee adoption and sustained use of cleaner alternatives in these communities.

Appendix I - Agenda

Day 1 (Tuesday, 11 september)

13:00h Lunch
PAHO Mexico office

Part 1 - Objectives of the workshop, Background and Current Situation of the Use of Solid Fuels and Kerosene in the Americas. Moderator: Patricia Segurado

14:30h
Group photo
Opening ceremony (15 min)
The Objectives, the scope, the agenda, and the expected products of the workshop (15 min) (Agnes Soares-PAHO WDC)
Presentation of the participants (25 min)

15:30h – 16:30
WHO air quality guidelines (15 min) (Heather Adair-Rohani-WHO Geneve)
PAHO air quality roadmap (10 min) (Marcelo Korc PAHO WDC)
The regional situation vis-à-vis the goals of the strategic plan of PAHO 2014-19 (15 min) (Karin Troncoso PAHO WDC)
Discusión (25 min)

16:30-17:00 – Break

Part 2 – Estudios de situación de acceso a energía limpia
Moderator: Karin Troncoso; Reporter: Marcelo Korc

17:00 – 18:30h - Case studies developed by Mexico, Honduras, and Peru
Objective*:* to present situational analysis efforts and proposal of intervention at national level based on the application of the HEART tool: access to clean energy for cooking, heating and lighting in homes.
Methodology: The session will have an initial presentation of the HEART tool by the moderator and to follow, the format of a round table. The moderator should facilitate the flow of debate and the exchange of information.
- Each participant will make an initial presentation of 10 minutes to introduce the topic, talk about their work experience with the HEART tool and the lessons learned - 40 min;
- Round of questions of 40 minutes conducted by the moderator of the session. The moderator of the session will accept questions and comments from all the workshop participants, and will promote discussion oriented to the topics of the working groups.
- Closing of the session by the moderator, who emphasizes the highlights of the session (2-3 minutes)

19:00- 20:00 – Reception

Day 2 – wednesday, 12 de september

Part 3 – Evidence for the formulation of policies towards the transition to clean energy in urban households
Moderator: Agnes Soares; Reporter: Heather Adair-Rohani

9:00- 10:00 – The global experience of accelerating the transition to clean fuels and technologies– Lecture, Kirk Smith. (40 min)

Discussion, questions and answers (20 min)

Objective: To present a historical and critical analysis of the processes of formulation of long-range public policies in countries of Africa and Asia, the challenges and opportunities for their implementation, and the impact of national programs and policies. Present the relationship between reducing emissions and mitigating the effects of climate change.

10:00- 11:00 – Resultados de la implementación de cocinas limpias: experiencias de Ecuador y Perú
Carlos Gould / Darby Jack, Columbia University (Ecuador) – 20 min
Suzanne Pollard / Kendra Williams, Johns Hopkins (Peru) – 20 min
Questions and answers (20 min)

Objective: To present the results of two case studies carried out in Ecuador and Peru, countries that have implemented and continue to implement national programs for the adoption of fuels and clean cooking technologies. The studies on the impact of subsidy policies on the use of LPG and on the most recent program to support the use of induction stoves (PEC) in Ecuador, and the distribution program of gas vouchers to low-income families in Peru will be presented.

11:00 11:30 Break

11:30- 12:00 – Implications of pollutant dispersion models and the distribution of sources of air pollution in cities in the formulation of public policies.
Omar Masera, Universidad Autónoma Nacional de México (15 min)
Comments and discussion (Kirk Smith);

Part 4 – Support tools for the formulation of public policies
12:00 – 13:00. Moderator: Marcelo Korc; Reporter: Karin Troncoso

Presentation on the role of WHO in access to clean energy for all and presentation of the WHO tool CHEST (30 min) (Heather Adair-Rohani)
Modeling presentation of scenarios (INECC Abraham Ortinez) – (15 min)
Questions and answers (15 min)

13:00-14:30h – Lunch

14:30- 16:00 – Work group session (4 groups)
Summary of the key messages of the previous sessions and topics that will be discussed in the working groups (5 min) (Agnes Soares)

There will be a moderator and a reporter for each group that will be assigned previously. The group will designate an assistant moderator and a second reporter. Each group will receive a guidance sheet with questions for discussion. The result of the discussions will be presented by the reporter appointed by the group.

16:00- 16:30 Presentation of the conclusions of the group work and discussion

16:30-17:00 – Break

Part 5 – Evidence of context for the formulation of the proposal to eliminate the use of solid fuels and kerosene in urban homes in the Americas. Moderator: Ricardo Torres; Reporter: Karin Troncoso

17:00- 18:30 – Mesa redonda con participantes de los países meta: Cuba, Guatemala, Guyana, Honduras, México, Nicaragua, Paraguay y Perú.

Objective: Examine the political conditions for the implementation of the proposed elimination of the use of solid fuels and kerosene. Participants should use the best available evidence to make their analysis and present their initial opinion (not necessarily definitive), focusing on opportunities, risks and challenges for their implementation in their countries.

***Methodology*:** This session should have the format of a round table. The moderator should facilitate the flow of debate and the exchange of information.
- Each participant will make an initial presentation of 3-5 minutes to introduce the topic with an initial analysis of the situation in their country - 30-35 min.
- Round of questions of 25-30 minutes conducted by the moderator of the session.
- Round of comments and questions from all workshop participants 25 min.
- Closing of the session by the moderator, who emphasizes the highlights of the session (3-5 minutes).

Day 3 (Thursday 13 de sept)

Part 6– Evidence of feasibility and sustainability of the proposal
Moderator: Heather Adair-Rohani; Rapporteur: Horacio Riojas

9:00- 10:45 – Partners and Collaborators (15 minutes by presentation, 30 minutes by discussion)
Coalition for Climate and Clean Air (CCAC), Coordinator, Finance & Energy in homes, **Yekbun Gurgoz.**
Ministry of Environment of Chile, Focal point of the Coalition for Climate and Clean Air (CCAC). The SNAP project, **Rodrigo Dittborn Cabello**.
Inter-American Development Bank (IDB), IDB experience supporting the transition in Ecuador, **José Antonio Urteaga**.
Economic Commission for Latin America and the Caribbean (ECLAC) and observer of the General Secretariat of the Central American Integration System (SICA), **José Manuel Arroyo Sánchez**
Global LPG Partnership (GLPGP), **Renzo Bee**.

Objective: Examine the work of international cooperation agencies, the costs and technical possibilities for the sustainability of the proposals - including identifying needs, barriers and facilitators for the implementation of different types of public policies, priority partners and potential donors.

10:45 11:15 Break

11:15- 11:30 Presentation of the components of the conceptual note and of the work methodology in groups. (Agnes Soares)

11:30- 13:00 Work group session.

Each group will receive a guidance sheet with questions for discussion.

13:00-14:30h – Lunch

14:30 – 16:00h – Second work group session.

16:00- 16:40h – Presentation of the results of the group discussions– 40 min.

16:40 – 17:10h – Break

Part 7 – Conclusions and recommendations
Moderator: Agnes Soares; Reporter: Karin Troncoso

17:10- 18:30 – Final session
Final discussion on the conceptual note - 50 min
Commitments and next steps - 20 min
Evaluation and closing of the workshop - 10 min

Anexo 2 - Agenda para el trabajo en grupo

Fecha y Horario	Actividad	Tema /Foco principal
12 Sep. (Wednesday) 14:30 – 16:00h	G1-G2-G3-G4	G1 - Public policies: processes, costs, advantages and disadvantages
		G2 – Context: actors and specific actions of each sector
		G3 – Context: barriers and facilitators for the transition
		G4 – Scientific evidence for the transition: state of the art and needs
12 sep. 16–16:30h	Plenary Session	Presentation of the group's reporters and discussion
13 Sep. 11:00 – 13:00h 14:30 – 16:00h	G1-G2-G3-G4	G1 - Proposals for effective communication: a) Definition of objectives and strategies for each social actor a. Multisectoral (government, legislative, decision makers) b. Health, environment and energy sector c. General population d. Target population e. Development agencies and promoters of research and public policies etc. F. Academy? NGO? Others? b) How to ensure ethics in research and address the issue of social inclusion and inequalities? c) Proposal, implementation time and associated costs for PAHO and for the countries - others? d) Necessary resources, partners and possible funders
		G2 - Proposals to improve situation analysis: a) Use of tools; b) Sources of necessary information and its custody; c) Partners and actors involved d) Specific recommendations for the health sector; e) Suggestions for other sectors? f) How to measure and monitor exposure inequalities and their effects on health and ensure ethics in research, and in health surveillance and monitoring? g) Proposal, implementation time and associated costs for PAHO and for the countries; h) Necessary resources, partners and possible funders.
		G3- Proposals to strengthen governance towards the transition to clean energy for all with a focus on health: a) Evaluate existing institutions and propose / strengthen mechanisms at the country and regional levels; b) Integration / relationship with global governance mechanisms; c) How to ensure ethics in the use of evidence for the formulation of public policies, and reinforce / create mechanisms of social inclusion and reduction of inequities? d) Actions for PAHO and for the countries and time of implementation; e) Necessary resources, partners and posible funders

		G4 - Proposals for intersectoral action (based on the relationship of the proposal with existing policies at various levels) a) Local (municipal), provincial, national and intergovernmental regional and global governmental agencies. b) Non-governmental and community organizations. c) Urban health, rural health, indigenous health, etc. d) Air quality, transport, urban planning, industry, solid waste, etc. e) Estimated implementation time and needs; f) Specific actions for PAHO and for the countries g) Necessary resources, initial partners and possible funders.
16:00 – 16:40	Plenary Session	Presentation of the groups • Suggest divergent / controversial points for discussion • Proposal of items for recommendations

12 de September

Moderators: Karin Troncoso (G1); Marcelo Korc (G2); Patricia Segurado (G3); Agnes Soares (G4).
Reporters 1: Horacio Riojas (G1); Jesús A. Estevez (G2); Suzanne Pollard (G3); Carlos Gould (G4);
Reporters 2: assigned by group

13 de September

Moderators: Patricia Segurado (G1); Karin Troncoso (G2); Marcelo Korc (G3); Ricardo Torrez (G4).
Reporters 1: Carlos Gould (G1); Astrid Schilman(G2); Suzanne Pollard (G3); Jesús A. Estévez (G4);
Reporters 2: assigned by group

Appendix III –List of Participants

	Name	Surname	Country	Organization	emails
1.	Yekbun	Gurgoz	France	CCAC	Yekbun.gurgoz@un.org
2.	Eugenio	Torijano Navarro	Mexico	CEPAL	eugenio.torijano@cepal.org
3.	José Manuel	Arrollo	Mexico	CEPAL	jose.arroyo@cepal.org
4.	Jacobo	Finkelman	Mexico	Consultant	jacobofinkelman@aol.com
5.	Renzo	Bee	USA	GLPGP	Renzo.bee@glpgp.org
6.	José Antonio	Urteaga	Mexico	IADB	joseur@IADB.ORG
7.	Abraham	Ortinez Alvarez	Mexico	INECC	ccac_senior@inecc.gob.mx
8.	Andrea	Díaz	Mexico	INECC	andrea.diaz.fernandez@gmail.com
9.	Astrid	Schilmann	Mexico	INSP	aschilmann@insp.mx
10.	Horacio	Riojas	Mexico	INSP	hriojas@insp.mx
11.	Jesus Alejandro	Estevez Garcia	Mexico	INSP	jesus.estevez@espm.insp.mx
12.	Suzanne	Pollard	USA	Johns Hopkins University	spollard@jhu.edu
13.	Arthur	Laurent	France	MICROSOL	alaurent@microsol-int.com
14.	Dania	Argudin	Cuba	Ministry of Energy	argudin@minem.gob.cu
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