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Priority Areas Of Research

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PRIORITY AREAS OF RESEARCH ON SDE

PROBLEMS ADDRESSED BY THE SDE AREA

1. Principle I of the Rio Declaration on Environment and Development states that “[h]uman beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.” The Area of Sustainable Development and Environmental Health addresses precisely those aspects of the health of human beings that derive from the harmony or lack thereof in their relationships with the various environments in which their social activity takes place: as workers, as consumers, and as community beings who modify their physical and psychosocial environment in order to improve their living conditions.
2. A necessary condition for improving the quality of life is to do so with equity, as embodied in the Declaration of Mexico that affirms the principles and strategic areas of the International Conferences on Health Promotion (from the 1986 Ottawa Charter) and calls on the member countries to implement plans of action. These plans require a greater ability for establishing healthy environments and systems of information and surveillance and the capacity for evaluation that contribute to the decision-making process.
3. The creation of healthy environments is especially urgent for children, as established in the World Summit on Sustainable Development (2002), emphasizing the actions necessary to reduce environmental risks, for example intentional and unintentional injuries, traffic injuries, drowning, violence, food insecurity, lack of water and sanitation, and lack of child-rearing skills.
4. The recent celebration of PAHO’s centennial has revealed major progress in health in the Americas. However, despite the major advances that doubtless have been achieved, development is hindered by new and old problems, among which are the following.
5. As workers, human beings face damages caused by their work environment.
 - More than one million human beings die each year of occupational diseases and injuries; around 250 million accidents occur annually around the world, and 160 million people contract work-related diseases. In the Americas, 36 work-related accidents occur each minute, representing 5 million injured per year, of which 90,000 die as a result of their accident. Only 30% of workers receive some type of occupational health service.
 - There are an estimated 351 million workers in the Americas. Despite having work, 20% of them live in extreme poverty. The situation is worse for the 52% of all workers who are employed in the informal sector of the economy, the largest and least protected. This sector is comprised mainly of women, migrants, the indigenous population, and children. It is worth noting that 24 million children work in the Americas.

- It is estimated that the costs of work-related injuries, diseases, and deaths represent 4% of the world's gross national product (GNP), while that percentage ranges between 9 and 12% in the Americas.
6. As consumers, they face damages caused by the use of unhealthful but legal products, such as tobacco and alcohol, whose commercial promotion has been expanded aggressively, accompanied by a greater supply and availability of these products. An important group of public health problems has worsened due to the globalization of trade and the world markets, and is emerging as a relatively new and significant threat to sustainable development. These health problems are essentially related to the consumption of legal products such as tobacco and alcohol.
- Smoking is one of principal causes of avoidable premature mortality in the Americas. It kills 5 million people each year worldwide, 1.1 million in the Americas, 600,000 of these in Latin America. The proportion of young people who are habitual smokers at such early ages as 13 to 15 years old ranges between 30 and 40% in many countries of the region. This prevalence is growing especially among women. In the majority of countries, smoking is more prevalent among the poor than among the rich.
 - Tobacco is an environmental problem that affects sustainable development. The cultivation of tobacco, practiced by most of the countries of Latin America to a greater or lesser extent, while having displaced the cultivation of basic food products that the country must import using foreign exchange, ruins soil quality and requires the intensive use of pesticides that affects workers' health in the field. In Brazil alone, more than one million farm workers are exposed to these harmful chemical products. Finally, the curing of each carton of cigarettes requires the wood of one tree, contributing to the deforestation of one of the environmentally richest areas of the world. In short, the use of tobacco is more than a health hazard; it is a challenge par excellence to sustainable development, with consequences for the environment, trade, taxes, social policy, direct and indirect healthcare costs, and power, gender, and work relationships in the social and household environment.
 - Nearly 300,000 deaths attributable to alcohol consumption occur annually in the Americas, three fourths of them among Latin American and Caribbean men. The burden of disease caused by alcohol consumption ranges between 8 and 14% among men. Throughout the Region, the cause of death that contributes most to male mortality by alcohol are injuries, both unintentional and intentional. These deaths occur especially among young people of reproductive age. In the countries of the Americas, per capita consumption of alcohol is the highest in the less-developed world. The two principal facilitators of high consumption are the availability of alcoholic products and the massive exposure to incentives to drink provided by the commercial promotion of these products.
7. As community beings, human beings share their lives with those closest to them within the framework of the local settlements in which they live. Within this framework, they face

problems related to their physical and psychosocial environment. They also face social relationship problems rooted in the community structure and poverty that often lead to violence.

- Despite advances in water service coverage, conditions of risk to the health of an important part of the population persist. Indeed, 77 million people (15%) have no access to any drinking water service and another 54 million (11%) are supplied by means of systems defined as "easy access."
- In 1998, sanitation coverage reached 86.9% in the Region of the Americas (93.6% urban and 69.1% rural) and 79.2% in Latin America and the Caribbean (89.9% urban and 49.6% rural). Despite these advances in sanitation coverage, 103 million inhabitants (21%) lack wastewater and excreta disposal systems and only 14% of the wastewater collected by sewerage is treated before discharge.
- In 1998, the percentage of solid waste collection coverage for the urban population was over 90% in Chile, Cuba, and Trinidad and Tobago; between 70% and 90% in Antigua, Brazil, Mexico, Peru, Uruguay, and Venezuela; between 50% and 70% in Bolivia, Costa Rica, Dominica, and Granada; and below 50% in Haiti, Honduras, and Paraguay.
- In view of the fact that human beings spend most of their lives at home, adequate conditions in the household environment are as important to guaranteeing good health as adequate conditions in the work environment. Inadequate housing and environments are a problem in the countries of the Region, particularly in rural and marginal urban areas inhabited by the most vulnerable populations and in the endemic areas of diseases transmitted by insect vectors, such as Chagas' disease, malaria, dengue, and yellow fever; furthermore, those populations are exposed to other gastrointestinal and infectious respiratory diseases.
- Violence is a challenge to public health in the Americas. After Sub-Saharan Africa, it is the most violent region in the world. Nearly 120,000 murders are registered each year, most of them among men from 15 to 34 years of age; there are nearly 55,000 suicides, with an increased tendency in young people, in developing countries. Violence against women, children, and the elderly is detected in 20-60% of homes, figures that vary according to survey quality. Juvenile gangs have grown in many countries of the region as a result of negative social, economic, and familial factors. Thousands of young people of both sexes join gangs each year. On the roads and highways, nearly 125,000 people lose their lives as a result of motor vehicle crashes or collisions and millions more suffer injuries and traumas of varying severity. The health sector invests astronomical amounts on the care of victims of violence and injuries on the roadways.
- Poverty and inequity also affect institutions; the social sector has been the most affected by budgetary cuts and macro structural adjustments in recent decades. Growing decentralization in the region necessitates the development and

strengthening of democratic governance infrastructures and good management at the local level. The Declaration of Mexico makes an appeal for the development and strengthening of infrastructures for promoting health in all sectors and at all levels. Only 30% of the countries had national health promotion plans, most of which did not contain sanitary goals and objectives. Only 10% of these plans were developed with the participation of civil society and/or other sectors. Local plans are prepared in almost all the countries and with increasing frequency include personnel who are prepared and capable of integrating health into the public agenda, especially the local development agenda.

- The Region has a population of over 220 million children and young people between 5 and 18 years of age. On average, 85% of the children in this age group are enrolled in elementary school; however, disparities exist within the countries with respect to the rural, indigenous, and urban marginalized population. For example, 93% of children in Uruguay finish fifth grade, compared with only 14% in the Dominican Republic. Although enrollment in secondary education has improved in the majority of countries, in 1970 only 4 out of 10 children had access to secondary education, while today 8 out of 10 have this opportunity. Gender differences in access to education have also declined, preschool enrollment has increased by 23% from 1996 to date, and illiteracy has decreased by 14%. External factors are the leading cause of disease and death among school children; 25% of deaths are caused by traffic injuries, 28% by violence, and 19% by other injuries.

RESEARCH PRIORITIES TO IMPROVE TECHNICAL COOPERATION

General considerations

1. SDE has not yet prepared a policy on research needs to improve its technical cooperation. However, some subjects of interest may be indicated. Of general note is the need to improve comprehension of the relationship that exists between health and the driving social, economic, and environmental forces.
2. Social, economic, and environmental factors have always had a marked influence on human health. Nevertheless, while in the past those factors were determined to a great extent by driving forces at the local level, those forces are today local and global in character. Despite continuous studies, our comprehension of those forces is still not very advanced. Ignorance of the various ways in which those driving forces, especially the economic ones, influence health and health policy decision-making may be one of the reasons for the isolation of the health sector and its limited influence on policymaking at the national and global levels.
3. In order to be able to provide technical cooperation that is effective in promoting healthy spaces that guarantee sustainable development, the research agenda should focus on the relationship between human health and the guidelines and determinants of consumption and production, including trade, employment, and sustainable means of subsistence, as well as the capacity for democratic management and health planning. The use of information in decision-making is still limited in the region, especially at the municipal level, partly due to weakness in the surveillance systems and partly to the lack of evidence on the effectiveness of strategies.

Sustainable development and workers' health

1. Some progress has already been made toward a regional research agenda in the field. Within the framework of the work agreement established in the Memorandum of Understanding signed by the Pan American Health Organization (PAHO) and the Ibero-American Occupational Safety and Health Foundation (FISO), the need was proposed to establish a research agenda for Latin America and the Caribbean that would seek practical solutions to the health problems of the region's workers.
2. The following general objective has been agreed upon: Contribute to the definition, design, monitoring, and coordination of the Occupational Health Research Agenda for LAC (INSOLAC Agenda), the respective research lines and projects deemed priorities by consensus with the approval of the NIOSH/PAHO/FISO Steering Committee, in which FISO participates as a partner and focal point for Latin America.
3. Some points of discussion and recommendations have been defined to date, including:
4. The participation of all involved social actors from the public and private sectors of the countries, so that they can be grouped by subregion and then on a regional scale.

- Determination of criteria for prioritization, among which should be considered collective exposure, threat to life or chronic disability, high cost or high incidence, that the object of research is susceptible to change, the cost-effectiveness of the interventions, and the existence of research in the same field.
 - Definition of priority research topics.
 - Orientation for research project management.
 - Search for sources of financing for optimization and targeting of resources, and operation through partnerships, whether horizontal, through sister universities, north-south and south-south cooperation, or others.
 - The establishment of efficient lines of communication.
 - Creation of working groups by theme, within which the work agenda and the search for partnerships and financing are defined.
 - Establishment of a monitoring board to monitor the utilization of resources and results.
 - Development of a strategy for sustainability including the construction of databases and systems of information and epidemiological surveillance.
 - Need for developing the response capacity of human talent and institutions simultaneously with the conducting of research, to achieve quality research.
 - Research geared toward the search for practical solutions, without omitting the generation of new knowledge in those entities that are capable of it.
 - Encourage multicenter research and research with tutelages and advisory services of the PAHO/WHO collaborating centers.
5. Based on the work done previously by the working groups of the PAHO collaborating centers, the countries, PAHO, and FISO plan to include at least the following four areas of research on the agenda:
- Work in vulnerable populations: working minors, women and work, emigrating populations, the informal sector.
 - Policies and legislation: systems of protection from occupational hazards, socioeconomic indicators, such as unemployment and absenteeism, and systems of surveillance and follow-up.
 - Occupational injuries: fatal accidents, causes (associated risks), origin, control, violence in the workplace.
 - Occupational diseases: burden of occupational respiratory diseases, occupational dermatoses, hypoacusis, musculoskeletal disorders, occupational cancer, and the new epidemics in occupational health. In this area, the development of indicators and mechanisms for data collection is planned, to enable more specific information to be gathered on the occupational groupings in the Region (statistics according to type of occupation, industry, public-private linkage, educational level etc.), in order to intensify the study of mechanisms that lead to the pathologies of the occupational categories and their measures of intervention.

6. SDE plans to participate immediately in the following activities:
 - Generate a discussion list within the framework of RST-LAC, to:
 - Design a survey to be applied in the countries that will make it possible to identify human and institutional resources available in the region for research, as well as possible sources of financing.
 - Consolidate and promote the Virtual Library of the PAHO workers' health program, through the construction of an inventory of investigators and research in the field of workers' health at the regional level, through the use of the RST-LAC discussion list in Spanish supported by PAHO and the ILO.

Sustainable development and consumer health with emphasis on tobacco control

1. The recent adoption of the Framework Convention on Tobacco Control by the World Health Assembly, the first international treaty on public health, has raised the political profile of tobacco control, which has increased the demand for technical cooperation. To date, 74 countries have signed the treaty--15 in the Americas--and 3 countries have ratified it. Despite the interest generated, there are significant barriers to the application of effective tobacco control policies. Currently, the most important barriers are the myths with regard to the economic impact of these policies. For this reason, we believe that the research agenda should focus particularly on the economic aspects of tobacco.
2. The specific topics of this agenda could include the research indicated below. There are two general subjects of interest: The barriers to and opportunities for tobacco control and the optimal mixture of components of a tobacco control strategy (programs and policies). Furthermore, the research topics by intervention would be the following:

<i>Creation of smoke-free environments</i>	<i>Marketing</i>	<i>Tax policy and control of smuggling</i>
<i>Environmental determinants of tobacco use and their impact on high-risk populations</i>	<i>Effect of direct publicity and sponsorship on tobacco use, particularly among young people and women</i>	<i>Effect of smuggling on tobacco use and tax collection</i>
<i>Exposure to secondhand smoke</i>	<i>Changes in the public perception of advertising and promotion by the tobacco industry</i>	<i>Barriers to and opportunities for price and tax harmonization</i>
	<i>Extent and effects of the promotion of tobacco products through the marketing of non-tobacco products with tobacco brand names (e.g. Marlboro Classics Clothing)</i>	<i>Elasticity of supply and demand to determine the optimal level of taxation</i>
	<i>Effect of international trade agreements on production, trade, and marketing</i>	

3. From the standpoint of organization of the research process, the SDE response should consider the following problems
 - Lack of standardized data and comparables on
 - the extent, characteristics, and trends of tobacco use and their consequences for health;
 - existing policies and programs; and
 - research initiatives in progress and completed.
 - Lack of a network for communication of information, data, and best practices. The following should be identified: the parties currently with a direct interest in tobacco control initiatives; the research and investigators currently involved in tobacco control; and the needs and activities of the entire tobacco control community--including investigators, advocates, and policymakers--to harmonize efforts and mechanisms of control.
 - Lack of adequate capacity for research on tobacco control, especially in non-health related areas such as the economy and policy analysis. The shortage of skills and competencies for multidisciplinary research and in tobacco control policy is exacerbated by the failure of donor agencies to be more active in financing the research of subjects that evolve very rapidly.
 - Human and financial resources should be mobilized in a coordinated manner to
 - carry out a comprehensive research agenda
 - create partnerships and
 - promote analytical and comparative research.

Sustainable development and healthy community environments

1. It is necessary to continue promoting research on the health effects of the chemical and physical agents disseminated in the environment by agricultural and industrial processes, as well as on the means to control them. Hygiene in the work environment and workers' health play a very important role in this area. Furthermore, the traditional areas of environmental sanitation, such as water supply, sewerage, solid waste, and control of the pollution of water resources, have undergone significant changes and require the support of research to develop new technologies and modalities of care that respond to the needs of a growing population served with low coverage in many areas of the Region.
2. It is recommended that research be promoted in the countries in the areas of:
 - adaptation of technologies and scientific applications to the situation in each country;
 - effects of the quality of the environment on health;
 - health status of the exposed populations and high-risk groups;
 - control of the biological, physical, and chemical pathogens in the environment;
 - continuous evaluation and improvement of basic and environmental sanitation services;
 - improvement of the procedures, methods, and technologies for environmental management;

- minimization and control of risk situations;
 - hygiene in the work environment and workers' health.
3. For a vast majority of children and adolescents, school is the most positive and constructive environment to which they have access in their formative years. Studies show that school health programs based on information transfer are ineffective; however, evidence on the effectiveness of life skills education is still preliminary, especially with regard to education on healthy behaviors and lifestyles. It is essential to develop a line of research–action to identify the strategies that are most effective, equitable, and respectful of human rights--that is, not only those with the greatest impact on health, but also those that contribute especially to the empowerment of new generations.
 4. From the perspective of the creation of healthy spaces, it is critical to understand better the interface between health and democratic participation, how a good government, transparency, and citizen participation contribute to a better quality of life for citizens and to a sustainable local development. Because the majority of the population in the Region lives in urban communities, it is important to investigate more fully the interrelationship between the characteristics of the urban environment (“the build environment”) and the health of its inhabitants. In our Region, people live increasingly in environments with few green areas and few opportunities for family and community interaction. What is the relationship of these changes to the increase in risk practices, obesity, violence, and other injuries?
 5. From the standpoint of organization of the research process, the SDE response should consider that
 - The information systems on research in health and environment should be strengthened to achieve greater knowledge of other efforts in this field being carried out in the Region of the Americas and other parts of the world, and to facilitate the sharing of experiences and interaction among investigators.
 - Support should be given to the training and strengthening of research groups with scientific and technical merit that have the resources necessary to conceive, prepare, and execute high-quality research projects that facilitate the fulfillment of the countries' goals on health and environment.
 - Networks for the exchange and discussion of information and research findings should be consolidated or created.
 6. The *World Report on Violence and Health*, recently published by WHO, calls especially for further research. For its part, in its session last September, the 44th Directing Council of PAHO resolved to “1. Urge the Member States to: c) take the necessary steps for improving information systems, epidemiological monitoring of the different forms of violence; and monitor the progress of the interventions...; d) promote research on the causes of violence in specific contexts that are useful for its prevention and control;” .

PAHO is collaborating with WHO in the preparation of the World Report on Road Traffic Injury Prevention to be published on World Health Day 2004, which is expected to contribute to the definition of prevention policies. Both with regard to intentional injuries

(violence) and unintentional injuries (accidents), there is a recognized need for applying interventions based on scientific evidence that have been evaluated and can be replicated or adapted in various contexts.

With regard to violence and unintentional injuries, and given the complexity and diversity with which they are manifested, the following subjects will be prioritized:

- Implementation, evaluation, and dissemination of information systems on fatal and non-fatal, intentional and unintentional injuries.
- Research on the causes of juvenile violence, violence against the elderly, and suicides.
- Research on social and cultural determinants, risk factors, environmental factors with regard to the occurrence of road traffic injuries.
- Evaluation of interventions that have been applied in various contexts. This type of research should be promoted with particular interest in developing countries.