



**Global
Challenges
Foundation**

Global Health and Prosperity Collaborative

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The submission is dedicated to institute a technical public health five point plan in a limited region of north east South America, directed towards the region's indigenous community. The plan would be upgradable, first to a community health crisis in northeast Nicaragua, then to other disassociated communities worldwide. The plan is based upon community-based self-assessments for utilizing local knowledge, connecting indigenous communities with the systems of global health governance and upgrading their public health emergency status to a multinational event requiring international response. Short-term relief to marginalized communities would be given by international relief organizations, long-term by financial institutions, international NGOs and concession holders.





1. Abstract

GLOBAL HEALTH GOVERNANCE

This proposal takes a public health approach to the social problems that occur when issues at the interface between community health and economic development are left unresolved. Socially isolated, marginalized communities whose health status is harmed by globalization and land privatization often turn to armed conflict in their search for relief when they are unable to find help from the majority culture.

To address this situation, we propose a five-point multi-state action plan in the Greenstone Belt region of northeast South America (Suriname, French Guiana and northern Brazil). The proposed model of global health governance applies to regions around the World and includes: 1) use of *community-based self-assessments*; 2) Use of *international mediation practices*; 3) access to *global health emergency response mechanisms*; 4) availability of *short-term relief*; and 5) availability of *long-term relief*.

1. Core Values: In this proposal, we will exchange the *Assimilation Model*, which values individualism and is currently used in economic development, in which local communities are involuntarily contracted into projects designed by and for the maximum benefit to international investors with a *Collaborative* model of economic and community development, which values interdependence. This model affirms Westerners as experts and indigenous people as equals.

2. Decision-Making Capacity: Although globalization has lifted millions of people out of poverty worldwide when measured in terms of per capita GDP, indigenous communities are often marginalized by economic development and international investments. Local populations, frustrated with poor governance and lacking meaningful opportunities to improve their lives or provide for their families, are prone to tolerate, if not actively support, extremist groups that challenge government authority or assume the government's role as social-service provider. International terrorist groups take root where there is high poverty and inequality, widespread indignity, and low quality of life for ordinary citizens.

Community health promotion is a useful strategy that international development practitioners and foreign policy experts can use to make the world safer. It engages international financial institutions, governments, nongovernmental organizations and the private sector to employ proactive conflict-prevention strategies that improve community health and that are far less expensive in terms of resources and lives expended than reactive use of Armed Forces.

3. Effectiveness: Our work with indigenous communities undergoing involuntary assimilation at the frontier of economic development has shown that by taking the "Collegiate" or "Participatory" approach, a more rigorous bio-cultural interpretation of economic development will emerge because we will take better advantage of indigenous people's unparalleled knowledge of local issues. By empowering communities based and consolidating the public and environmental health issues, we will yield synergies to the strictly Western approach and create a more integrated approach to economic development.



4. Resources and Financing: Exclusion and desperation lowers the cost of violence. Scarcity intensifies competition over resources. Inequality pits have-not's against have's. States with weak governments are less able to contain conflict when it breaks out. Security is undermined by nations where hope is nonexistent, and where conditions foster radicalism, produce refugees, and provide safe havens for terrorists, criminal gangs, and human traffickers with a global reach.

Fighting extremist groups after they emerge costs more in lives and money than efforts to prevent groups from forming in the first place. In this proposal, we suggest that investing in prevention is less costly and more expeditious than war or post-conflict reconstruction costs.

5. Trust and Insight: In general, Western economists argue against the involvement of indigenous people in the development of economic development policies and the design of economic development projects because the complexity of the issues is 'not discernible by villagers. Indigenous communities argue that the unique cosmology of indigenous people, who do not see a clear-cut distinction between the sphere of nature and the sphere of society, is not discernable to Western economists. The West faces a huge credibility problem with indigenous people because of this position. We have shown that our *Collaborative* model of economic and community development, that treats indigenous people as equals, affirms Westerners as experts and enhances economic development goals and promotes security.

6. Flexibility: The more "collegiate" or "participatory" the democratic process is the more it will be necessary to rely on a cyclical process that includes three sequential steps repeated throughout the governance process: 1) community-based planning, 2) collaborative action, and 3) reflection. This approach relies on horizontal relationships between the various partners in which various types of knowledge are brought together to illuminate issues identified by the community. Relevant actors will be mobilized to create local solutions.

7. Protection against the Abuse of Power: This study will use the outside initiative model (OIM) to expand public health issues, which originate in the civil society sector, and extend them to the public sector and ultimately place them on the formal political agenda for resolution. This project will use the OIM as a guide to search for cooperative solutions across sectors at the policy level and to facilitate more equitable patterns of growth and development leading to measurably improved health outcomes.

8. Accountability: Public health professionals are an underutilized resource for involvement in the prevention of conflict on the basis of their skills in epidemiology; their ability to identify risk and protective factors; planning, developing, monitoring, and evaluating prevention strategies; management of programs and services; policy analysis and development; environmental assessment and remediation; and health advocacy. Public health provides a common ground around which many disciplines are willing to come together to form alliances for the prevention of conflict and war. Like economic development, the voice of public health is often heard as a force for the greater good.



2. Description of the model

PROBLEM STATEMENT

A classic problem in public health is that it exists at a crossroads that leads in two directions: one way addresses the social and political foundations of health at the environmental level, and the other more traditional approach is more narrowly focused on proximal risk factors that are technical in nature (1, 2). Among the Indigenous people there are factors controlling health and well-being that lie outside the health sector and are socially and economically formed. This reality suggests that our fundamental attention in public health policy and prevention should not be directed solely towards a search for technical or behavioral solutions to health problems at the individual level, but rather toward breaking existing social, political and policy barriers to minimizing disease, disability, and premature death.

A major social determinant of health is economic globalization. The consequences of globalization are mixed. Converting land and resources held in common by people living subsistence lifestyles into private ownership reduces poverty when measured in terms of per capita GDP. It also creates a crisis among communities who become disassociated, impoverished and alienated minorities and whose health status is reduced to unacceptable lows when measured in terms of death, disease, disability, and a burgeoning rate of suicide (3-10).

There is ample documented evidence that international investment and globalization routinely disassociates indigenous people and leads to conditions that violate human rights standards and the articles of the U.N. Declaration on the Rights of Indigenous People. These violations are the direct result of economic development projects that follow the assimilation model. Human rights violations include forced displacement, internally displaced refugees, externally displaced refugees, denial of freedom of assembly, denied access to health, and denied access to a livelihood.

Life expectancy in affected communities is reduced approximately 17 years as a result of the assimilation process inherent to economic development (11). This is equivalent to a population decline of approximately 20% per generation, which becomes a slow-moving crisis of death by attrition among marginalized communities living in extreme poverty. This, in turn, creates a fast-moving crisis on a global scale. The reason: physical security and political security go together. The health of minority populations is a requisite for sustained human development and national security. Those who feel insecure about their survival needs have a fundamentally different outlook and political behavior from those who feel secure.

A key task in choosing a solution to these paired crises is defining causes and discerning the difference between the crisis and its aftermath. The health crisis among vulnerable and marginalized people is the aftermath of economic development and the cause of serious social and political problems. Addressing the health crisis as a factor that contributes to political unrest is an essential requirement not only for improving health and sustaining human development but also for enhancing national security (12).

The neoliberal model of globalization that began with the ending of World War II is being replaced with a “multiple-stream” model. The effects of this change



are exemplified by Britain's vote to leave the European Union and the increasing resistance to global and regional trade agreements. The growing populist resistance to globalization is often explained in terms of the influence of supra-national interests over national or local interests. What we have observed is that conflicts are born out of small-scale interests at the community-level interacting with large-scale forces at the international scale.

In the seven decades since WWII, while liberalized trade amplified economic growth, and the benefits of economic growth were monopolized by corporate interests, globalization also created a crisis among communities who became disassociated, impoverished and alienated minorities and whose health status was reduced to unacceptable lows when measured in terms of death, disease, disability, and a burgeoning rate of suicide. In the total of 36 years our team has worked on public health issues affecting indigenous communities at the interface between health, well-being and economic development (including Ecuador, the Guianas, and Nicaragua), we have witnessed the need for the narrower community-level interests to compete with larger international, market-driven concerns.

The implication for globalization is that while it provides a benefit to the majority it is also obligated to promote the health and well-being of minority indigenous communities. Health is a protected human right and economic development should not trump the health of any minority population. Indigenous community leaders have concluded that, historically, there have been just two options available to communities impacted by international investment projects that securitize development loans with indigenous land and natural resources: 'assimilate or else'.

When indigenous communities first encounter economic development projects that include structural adjustment provisions facilitating the privatization of land (passage to international equity lenders) held in common by indigenous people and that contain what is considered to be 'underutilized' natural resources, the communities are encouraged by international financial institutions to assimilate.

Development bank infrastructure, land privatization and resource extraction projects force communities to leave behind a traditional land-based lifestyle outside the moneyed economy in which they had an abundance of what they needed to thrive in exchange for a money-based market driven lifestyle in which society does not value what they have in abundance to offer.

After decades of being dispossessed of their traditional lifestyle and not included in the lifestyle of the majority culture, indigenous communities conclude that assimilation is not an option and return to the original choice: "assimilate or else." Now, however, with what they believe is nothing to lose, they ask, "What else is there?" This puts them in opposition to globalization and the economic development strategies it promotes and becomes fertile ground for conflict.

ECONOMIC AND POLITICAL CONTEXT

The governments of developing countries often face the long-term twin problems of capital shortages and high fiscal debts that result from an attempt to modernize state bureaucracies. Throughout recent history, these countries have adopted policies designed to attract foreign investment. These structural adjustment policies create a modernized political superstructure that occur together with



a backward economic infrastructure that cause them to fall into the trap of “modernizing” while leaving the institutional cost to the Indigenous people and the environment, including the indigenous people displaced by economic expansion activities.

In general terms, current structural adjustment and economic development models are failing to fully achieve their goals of Institutional Assimilation for the Indigenous people. Although some ‘Cultural Assimilation’ is taking place as these groups adopt the economic values and norms of mainstream culture, Institutional Assimilation has failed to take place because corresponding rewards in terms of political, social and economic equality are inadequate.

As indigenous people begin to live in larger population centers, they expect better health care, higher life expectancies, inclusion in western education, and literacy. These benefits have not materialized. Furthermore, acculturation has caused dependency on outside manufactured goods, the loss of traditional cultural and ecological knowledge, and the over-extraction of selected natural resources.

EFFECTS OF ETHNOCENTRIC ECONOMIC POLICIES

Prejudice and discrimination often begin as an expression of ethnocentric economic development policies, programs and projects. As a result of prejudicial or discriminatory economic development policies, programs and projects, minority populations become socially disadvantaged and relegated to a low position in the system of social stratification. Their social disadvantage is then interpreted by the majority culture, not as the result of earlier prejudicial and discriminatory economic development policies, but as evidence that the minority is innately inferior, unleashing renewed prejudice and discrimination by which the cycle repeats itself.

ACCULTURATION AND CHANGE

Acculturation takes a heavy toll on indigenous people. As traditional cultural expressions are renounced, succeeding generations are left with less traditional knowledge of their history, life skills, medicinal and healing practices, and forest management. Also, traditional subsistence activities are sustainable for small family groups that relocate periodically. The carrying capacity of territories held by indigenous communities, however, cannot absorb the impacts of hunting, gathering, and planting by the current population concentrations that are fixed in place due to the relocation schemes of the government.

As indigenous families assimilate they must travel much larger distances to find suitable agricultural land and wildlife. The related necessity for outboard motors and gasoline has increased the cost of living. A growing local dependency on western manufactured goods is further accelerating the need to earn cash money. Income generation activities are rare, however, and many families are struggling to maintain a minimally acceptable standard of living let alone the standard of living of their ancestors. With no other choice, many indigenous people have abandoned their villages seeking employment.

THE NEED FOR ACTION

The health and human rights issues caused by international financial institution loans for projects like the *Integration of the Regional Infrastructure in South America* (IIRSA) or the *Suriname Land Management Project* (SLMP) demand



immediate action. The annual release of over 200 tons of mercury from small-scale gold mines in the Guiana region will eventually be recognized as an environmental disaster comparable to other global disasters such as the Minamata Disaster in Japan (mercury contamination in Japan in the 1950s), the Bhopal Tragedy (gas leak in India in 1984), Thalidomide scandal (pharmaceutical birth defects in the 1960's), and the Fukushima Daiichi disaster (nuclear meltdown in 2011).

Also, the continued monitoring of indigenous subjects, who have endured decades of research without benefit, especially pregnant women and newborn children exposed to mercury, is comparable to the notorious Tuskegee Syphilis Study, or to the more recent Baltimore lead-paint study from the 1990's carried out in Baltimore and overseen by Johns Hopkins University. Entire communities, races and ethnic groups are disappearing while policies and procedures have already been developed, but not implemented, to prevent these outcomes (13).

THE FAILURE OF THE ASSIMILATION MODEL

The impact of the West on Indigenous societies generally has been a phased progression from: initial discovery and contact; population decline; acculturation; assimilation; and 'reinvention' as a hybrid, ethnic culture (15). By necessity, Indigenous people are merging into the mainstream society. Although some "acculturation" is taking place as these groups adopt the economic values and norms of mainstream culture, institutional assimilation has failed to take place because corresponding rewards in terms of political, social and economic equality are inadequate (16).

An example of the failure to fully assimilate indigenous communities is the frequency with which they are over-studied in their settings (17-19). As public health practitioners collect data and assess community health, indigenous individuals and communities become frustrated because they are not benefitting from the results. We now face the consequences of this 'intervention pollution' including reticence, despair, mistrust and non-disclosure. Our previous work asked the question, "How can Western practitioners engage traditional Indigenous communities that have been disenfranchised by economic development projects in community health and development projects"? In response, we developed an approach combining participatory methods (2, 20-23) and the methods described by Linda Smith in *Decolonizing Methodologies* (15). The community-led approach employs a framework where 'Westerners' become participating observers in indigenous-led initiatives.

SOCIAL JUSTICE RESPONSE

Among Indigenous communities, health issues turn out to be problems related to the distribution of wealth, opportunities for personal activity and social privileges based on ethnic origin, gender, possessions, and religion. Egalitarian political theory argues that solutions require the state to redistribute wealth to the poor. This model requires that public health intervention strategies support system-level changes that address social, economic and political causes of health and well-being.

COMMUNITY-LED INTERVENTION MODEL

The complexity of the social context of indigenous communities makes it difficult to isolate technical or behavioral solutions to health problems at the individual level. In this proposal, we will address the underlying mechanisms responsible for events and processes that we have observed in the field.



Within the sphere of community-based models there are different interventions acting on a system of multiple-layers that interact with one another, each of which has different objectives and methods (see *Governance* model, attached). In general, multiple models can be used to inform the design of community-based implementation interventions. There are multiple theories and frameworks that describe behavioral change for both individuals and organizations. There is currently no systematic basis for determining which among the various models predicts a desired outcome.

Understanding how problems are solved in a field setting requires a strategy for action based firmly on theory (see *Theories*, attached). We have identified 10 intervention theories that can be used as models to understand and change the conditions for health in settings where traditional indigenous cultures are undergoing assimilation due to economic development. This proposal draws on these 10 intervention models that are grounded in diverse disciplines and worldviews that have relevance to public health advocacy and policy change efforts:

1) Systems Model (24, 25). Describes a nested structure of factors affecting health including physical, social and cultural. What emerges is a nested structure of environments that allows for multiple influences both vertically across levels and horizontally within level. This complex web or system of causation is a rich context for intervention. This model is used to provide framework for mapping relationships between stakeholders, reduce complexity and look for the most effective leverage points within this web in order to develop effective multilevel interventions.

2) Social Network Model (26). Describes social networks that consist of nodes (individuals, groups, or organizations) and are joined by ties (relationships among nodes). A community is a network of networks in which the nodes of the larger network comprise smaller-scale networks.

This model is used to engage stakeholders based on their potential to secure benefits by virtue of membership in social networks or other social structures. The Social Network approach also reduces complexity and looks for effective leverage points within this web of causation to develop opportunities for effective multilevel interventions.

3) Stakeholder Model (27). Acknowledges stakeholders who differ in their social, political, and ethical characteristics; goals, interests; and types and amounts of power. Health promoters, their organizations, and the communities with which they work are frequently external stakeholders and exist outside the “focal organization” but have a direct interest in what that organization does.

This model is used to identify, map, and bring together stakeholders who differ from each other in their social, political, and economic goals and interests and types and amounts of power.

4) Empowerment Model (28). Describes how to transfer power (a process) and the consequences of that process (an outcome). This model assumes that health problems revolve around relational power processes and who holds power and how it is exercised can be used to guide health intervention strategies.



This model is used to create a new social contract between health and other sectors to advance human development, sustainability, and equity, as well as improve health outcomes and reduce inequalities and social gradients to improve health and well-being for everyone.

5) Community Participation Model (20, 29-31). Describes a context specific approach that seeks to maximize the benefits of social relationships and the efficient use of social capital. Social capital can be placed at the individual level, the community level or societal level.

This model is used to engage and include marginalized and disadvantaged populations, empower people, mobilize resources and energy; to develop holistic and integrated approaches to public health problems; and achieve better decisions and more effective services and ensure the ownership and sustainability of programs.

6) Grassroots or Community Organizing Model (32). Describes an approach to policy change made through collective action by community members addressing problems affecting their lives. Leadership is provided by a distinct group of individuals directly affected by an issue. Public health practitioners act as “conveners” or in a “capacity-builder” role rather than the “driver” role.

This model is used to strengthen democracy as it applies to health; combat exclusion of marginalized and disadvantaged populations; empower people; mobilize resources and energy; develop holistic and integrated approaches to public health problems; achieve better decisions and more effective services; and ensure the ownership and sustainability of programs.

7) Advocacy Model (33). Describes actions taken to bring about change on behalf of another population. Public health advocacy, often confused with activism, is rooted in democratic principles and practices and includes cooperation as well as confrontation.

Advocacy ensures that the rights of disenfranchised individuals are protected, that institutions work the way they should, and that legislation and policy reflect the interests of the people.

8) Media Advocacy Model (34, 35). Describes a set of tactics and the strategic use of the media to support community organizers’ efforts to advance social or public health policies.

This model is used as a forum to surface issues, identify topics for discussion, and set the agenda for policymakers and the public.

9) Agenda Building Model (36). Defines issues that merit active and serious consideration by political decision and policy makers. Agenda building is the process of moving an issue to the systemic and institutional agenda for action.

This model is used to develop strong high-level policy processes at the interface between health, well-being and economic development.



10) Multiple Streams Model (37).The Multiple Streams model distinguishes between separate discourses that determine global health, e.g. biomedicine, public health, economism, human rights, security.

This model is used to create a new social contract between health and other sectors to advance human development, sustainability, and equity, as well as improve health outcomes. Reduce inequalities and social gradients to improve health and well-being for everyone.

OUR PROPOSAL

An American Public Health Association statement declares that public health professionals are uniquely qualified for involvement in the prevention of war on the basis of their skills in epidemiology; their ability to identify risk and protective factors; planning, developing, monitoring, and evaluating prevention strategies; management of programs and services; policy analysis and development; environmental assessment and remediation; and health advocacy.

Public health also provides a common ground around which many disciplines are willing to come together to form alliances for the prevention of conflict and war. Like economic development, the voice of public health is often heard as a force for the greater good.

This proposal takes a public health approach to the problem of radicalization and conflict, emphasizes community engagement and builds trust between marginalized communities living in extreme poverty, the public health community, and institutions of international governance.

Socially isolated, marginalized communities whose community health status is harmed by globalization and land privatization, end up defending themselves against extremism, violence, conflict and war in their search for relief when they are unable to find help from the majority culture. This is a model that applies to regions around the World. To address this situation, we propose scaling-up a 14-year old health assessment pilot project to a five-point multi-state action plan:

Support ‘*COMMUNITY-BASED SELF-ASSESSMENTS*’ to measure the needs of at-risk communities. This approach will allow us to take better advantage of local people’s unparalleled knowledge of the context in which they live. Use international mediation practices to build a portfolio that consolidates the interests of isolated communities and connects them to existing democratic systems of economic and global health governance. Upgrade the public health emergency status of countries with disassociated communities in crisis from ‘Ungraded’ (an event that requires no international response) to Grade 3 (a multiple country event with substantial public health consequences that requires a substantial international response); Provide short-term relief by mobilizing and directing the resources of appropriate international relief organizations to communities in crisis; Provide long-term relief by working with international financial institutions, with other international NGOs, and powerful concession holders to help marginalized communities undergoing assimilation join the market economy and transform their land assets into sustainable livelihoods.



INTERVENTION PLAN

We propose redirecting a 14-year old assessment project to a program that combines community-based self-assessment so that global health mediation can represent the mutual interests of communities sidelined by globalization and to improve the health of minority communities by aiding their participation in global networks of democracy.

Using international mediation practices, this project will address the need for joined-up leadership across sectors of civil society and between levels of government. It will also highlight the contribution of global health sector in resolving complex problems at the interface between community health and economic development.

This proposal assumes that social action plans that use non-military methods and emphasize reconciliation should accompany all development projects involving the privatization of indigenous lands. Also, social action plans should be included in all structural adjustment programs that are integral parts of indigenous land privatization projects when they are funded by international financial institutions like the Inter-American Development Bank.

Ethical Considerations: In the past, community engagement projects to improve community health was reviewed by institutional review boards. They were deemed to represent a non-research service in global health governance. Consequently, the work was not considered to be within the purview of institutional review. As such, insights may be obtained that are of generalizable value, merit dissemination and can be the subjects of peer-reviewed publications.

RATIONALE FOR COMMUNITY-LED INTERVENTION STRATEGIES

Although little has been published that specifically operationalizes community-led development in indigenous settings, specific guidelines for working with indigenous peoples have been adopted by several institutions that achieve the same end. The “Principles for Community-based Intervention Planning,” produced by the University of Washington (Seattle, Washington, United States of America), provides guidelines for mutually beneficial relationships between global health practitioners and community members (38).

Additional guidelines (39, 40) for working with communities of indigenous peoples which describe the ethical principles that promote cooperation and mutual respect between global health practitioners and communities of Indigenous Peoples identified core principles for community-based work that serve as a starting point for defining the relationship between practitioners and community members:

- (1) Community partners should be involved at the earliest stages of the project, helping to define objectives and having input into how projects will be organized;
- (2) Community partners should have real influence on project direction, that is, enough leverage to ensure that the original goals, mission, and methods of the project are adhered to;
- (3) Project processes and outcomes should benefit the community. Community members should be trained whenever possible and appropriate, and the research should help build and enhance community assets;



(4) Community members should be part of the analysis and interpretation of project progress and should have input into how the outcomes are distributed. This does not imply censorship of project evaluation results, but rather, the opportunity to make clear the community's views about project outcomes versus objectives;

(5) Productive partnerships between practitioners and community members should be encouraged to last beyond the life of the project. This will make it more likely that development projects will provide the greatest possible benefit to the community; and,

(6) Community members should be empowered to initiate their own development projects that address needs they identify themselves.

THE CASE

We will explore the case of Indigenous Peoples in Suriname, French Guiana and northern Brazil (The Guianas) who are experiencing adverse health impacts resulting from economic development processes, including both small and large-scale mineral extraction.

THE SETTING

There is little that distinguishes the Indigenous people in Southeast Suriname, French Guiana and northern Brazil, from the other Indigenous peoples in the Amazon region. They live in small communities, fish daily, hunt, and rely on subsistence farming. Also, the Indigenous people in the Guiana region are gravely affected by economic development projects that follow an assimilation model leading to indirect forced relocation, environmental degradation, and the deterioration of community health.

Since the mid-1980's, the mineral-rich watersheds in the Guiana region have attracted large numbers of artisanal and small-scale gold miners (41). These gold miners use mercury, which amalgamates with gold, to separate gold particles from the soil and waste materials. The process is simple and cheap. Most of the mercury used ends up in creeks and rivers where the inorganic form used by miners is taken in by micro-organisms and transformed into the toxic organic form. Indigenous people are vulnerable to mercury contamination due to their high levels of fish consumption: Most indigenous families leading traditional lifestyles consume fresh fish daily and they prefer eating top predator fish in which mercury has become concentrated at levels many times greater than it occurs when it entered the food chain.

Many community-directed risk and health assessment studies have been performed since 2004 (42-44). These studies, which combined clinical examinations and scoring of individual performance on a battery of neurological tests in conjunction with hair mercury data, conclusively showed that the participating individuals exhibited neurologic dysfunction consistent with mercury poisoning. Exposure to mercury causes serious health problems and it especially threatens the development of children *in utero* and early in life. For everybody who is exposed to toxic levels, mercury affects the nervous, digestive and immune systems and has effects on the lungs, kidneys, skin and eyes. For fetuses, infants, and children, the primary health effect of methylmercury is impaired neurological development (45).



The main focus of this proposal is on problem solving and the criteria for success are defined in terms of the problem rather than the model. For that reason, the problem-driven approach requires that the program is either informed by or applies multiple models to assess and intervene on behalf of the indigenous people in the Guiana region.

Since our first collaboration with Indigenous communities on public health projects in Ecuador in 1980, Suriname in 2004, and most recently in Nicaragua in 2012, we have encountered a growing state of turmoil brought about by Indigenous peoples' reactions to economic development and public health intervention programs conducted by practitioners from outside their society. According to Daniel Sarewitz (53), the idea that curiosity-driven programs should be carried out in isolation from society is not justified on the grounds that it is necessary to protect practitioners from the whims of politicians and the public. Instead, it is a rationale for preserving the existing power structure and priorities. In accordance with Sarewitz' assertions, unfettered development of science-based intervention programs by Western practitioners is being scorned by non-Western indigenous communities in developing countries (17-19).

This dynamic of distrust has created problems within the global health and economic development community. The difficulty, imposed by a lack of consent or engagement by disenfranchised communities, has the effect of discouraging progress in neglected areas of public health thereby concentrating new efforts and expenditures on areas that are already generously supported. This situation further stifles democratic discourse over community development and health priorities, and insulates the global health system.

Under these circumstances, while Westerners describe the serial demise of specific indigenous cultures (13), existing Indigenous peoples are having their lands and resources systematically stripped by the state on behalf of international investors. The failure to address the real social issues of Indigenous people makes Western experts appear to be detached and insensitive. This failure is responsible for the confrontations between indigenous people and Westerners and could lead to broader social consequences if the polarization process continues. At the same time, indigenous communities are becoming more politicized and sophisticated. While many practitioners adopt a participatory model of community development for ethical reasons, we have adopted it for very pragmatic reasons to overcome the inadequacies of conventional community health programs in the indigenous setting.

TEAM STRUCTURE

Management: The Director of the proposed GHPC, with support from an Executive Advisory Board, will be responsible for management on a day-to-day basis.

Scope: The scope of collaboration is set by the Director in consultation with the Executive Advisory Board.

Desired outcome: The Director will provide high-level requirements for envisioned outcomes, such as a measurable increase in health, well-being and prosperity for partner communities and an increase in security at the national level. Other goals and objectives will be defined at the community level and desired outcomes of specific goals and objectives may vary between communities depending on local circumstances and needs.



Duration: The duration of this structured collaboration, defined by the Director and the Executive Advisory Board, will span an indefinite period of time. The duration will span at least five years and will be extended as necessary to fully implement a successful solution.

Participants' roles: Participants' specific roles and, by extension, their related tasks are assigned by team leaders who make-up the Executive Advisory Board.

Participants' relationships: Typical team structures include hierarchical relationships, but teams may also be structured as peer groups (i.e. a cross-functional team of managers).

Leadership: Team leaders are self-selected by group members after the team has formed.

Supranational Advisors

Executive Advisory Board members will maintain a consulting relationship with the United Nations Special Rapporteur on the Rights of Indigenous Peoples; Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Waste on the Enjoyment of Human Rights; UN Committee on the Elimination of Racial Discrimination (UNOG-OHCHR); and the IACHR Executive Secretary Inter-American Commission on Human Rights; WHO Health in All Policies Framework for Country Action Team.

To overcome obstacles to progress, this proposal will build on the experience gained by the management team and its experience advising the US State Department on questions related to global health governance and on existing relationships developed after performing 14-years of community-led risk- and health-assessment studies in Indigenous communities in the Guiana region. By combining mediation methods and modern communication network technology, we will create an intervention strategy for Indigenous people that will address the complexity of modern economic and global health governance.

3. Motivation

ASSIMILATION

Between 1980 and the present, we have observed that many indigenous people in the Americas, and around the world, have tried to adopt the Western way of life. Most notably, this is accompanied by dramatic shift in behavior. People who have excess food are selling it to their neighbors for money. Sharing is no longer taken for granted. This shift in values is responsible for the increasing incidence of hunger and a declining sense of security among women, children, and the elderly.

The idealized goal of the assimilation model used as a basis for economic development projects that privatize indigenous held land and resources is to move people affected by development to a state of sustainable livelihood. It is assumed that assimilation will be successful if indigenous people are 1) able, 2) have access to knowledge, and 3) can find new and sustainable livelihoods for their people.

In the Guianas, Suriname, French Guiana and Brazil are just three of 74 countries world-wide in which the small-scale mining sector uses and discharges a total of



over 1600 tons of mercury annually. In order to address the risks posed by mercury exposure, the Minamata Convention on Mercury was negotiated. The Convention calls for a multisectoral approach and encourages relevant parties to cooperate and exchange information with the World Health Organization (WHO). The WHO is considered key to providing guidance in adopting health-based policies. The WHO encourages parties to focus on the ‘proximal’ causes and effects of mercury exposure and promote programs that identify at-risk populations, adopt science-based health guidelines, set targets for mercury exposure reduction, and implement public health education programs.

A CLASSIC PROBLEM IN PUBLIC HEALTH

The Minamata Convention and the WHO are now operating at a crossroads that leads public health planners in two directions (30): a broad direction, addressing the sociocultural foundations of health, and a narrow direction, focusing on more proximal risk factors. A problem with this situation is that instead of addressing fundamental social causes, the Minamata Convention highlights individual characteristics that obscure rather than illuminate the social and economic causes (47, 48).

There is a long history linking social justice and human rights to public health. Social justice has even been described as the field’s core value (49). The recognition that the causes of health and well-being lie outside the health sector and are socially and economically formed can be traced back to the formative period of modern public health and the Chadwick-Farr Controversy in the 1830’s in Great Britain (1). This conflict concerned causes-of-death data, which began to be collected in 1837 and focused on what kinds of information should be collected, what to do with the information once it was collected, what such information indicated about the state of society, and ultimately, how “social” public health should be. The story of the Chadwick-Farr controversy illustrates how difficult it is to reduce complicated health information and circumstances to a single category and the ways in which political, legal, and moral decisions can rely on public health data.

The national registration of deaths began in England in 1837. Sir Edwin Chadwick, noted for his work to reform the Poor Laws and improve sanitary conditions and public health, hired Farr to include cause of death, occupation and age on English death records. This opened-up the potential to classify variation in the risk of death in different population subgroups. Over the forty years that followed, Farr developed different methods for studying mortality; he was also the first to use standardized mortality rates that adjusted for differences in age distributions in different subgroups. These methods are essentially unchanged to this day (50).

For more than a century since then, public health has drawn on Farr’s work to address the social inequalities of health as a major challenge facing the field of public health. Whereas it is the mandate of clinical practitioners to improve the health of individuals, for over 100 years, the field of contemporary public health has existed to improve the health of communities and populations. Callahan and Jennings (51) locate contemporary public health practice within social, political, economic and historical contexts.

Dan Beauchamp notes that our most intractable public health problems are the results of arrangements that provide benefits and advantages to a powerful



minority at the expense of a powerless minority (52). This suggests that our fundamental attention in public health policy and prevention should be directed toward breaking these existing political and policy barriers to minimizing disease, disability and premature death.

This proposal describes a social and ecological approach that implements intervention programs at three levels: (1) the organization level to ensure that non-indigenous Western experts work in culturally appropriate and non-exploitative ways; (2) the community level using community participation, engagement, capacity and empowerment to overcome difficulties imposed by a lack of consent or engagement by disenfranchised and marginalized communities; and (3) at the supranational level with a focus on academics, policy and human rights that address the causes of disease, disability and premature death that lie outside the public health sector.

Kingdon's Multiple Streams Model (2003) provides a framework that describes how issues can be raised to systemic or governmental agenda status. Most importantly, it acknowledges how the element of chance is responsible for the fluidity of the policymaking process. Kingdon views policy advocacy in terms of three streams: politics, problems, and policies. According to Kingdon, policy can be changed during a window of opportunity when the three streams are joined.

Also, by institutionalizing mercury risk as public health problem an intervention plans develops, followed by the application of the scientific method (e.g., the epidemiologic study of risk factors). This leads to the creation of a large body of literature with its language, common assumptions, methods, and sets of legitimate constructs. Once this category of public health research "i.e., mercury or the Minamata Convention", is constructed and "facts" about risk or health impacts due to mercury exposure become widely accepted, the research question and its method of investigation becomes validated and institutionalized. The body of literature that accumulates creates the need for further research which calls for governmental resources in the form of research grants and contracts. This emphasis on science establishes mercury as a public health research question. Solutions are now sought from within this discourse. This situation reduces the possibility of remedying the problem by limiting the focus to a narrow clinical, individual or biomedical perspective. Technical interventions help but they do not reduce or address directly the overarching social determinants that are the root causes of the public health problem.

A STRUCTURAL SOLUTION TO A STRUCTURAL PROBLEM

A solution to the conundrum may be found in the exploration of the WHO's proposed '*Health in All Policies (HiAP) Framework for Country Action*'. We seek to operationalize HiAP, which is a strategy of the European Union that reflects the close linkages that exist between policy and health. The challenge is to identify specific methods that address the community and social health needs that accompany the economic development and assimilation processes in the Guiana region. Our goal is to use the HiAP as a guide to find cooperative solutions across sectors at the policy level and facilitate more equitable patterns of growth and development leading to measurably improved health outcomes.

The HiAP can be implemented following the policy formation process using John Kingdon's (2003) Multiple Streams Model. The Multiple Streams Model



identifies independent streams and suggests that policy changes occur when the streams align. We will use the Multiple Streams Model to identify the stakeholders relevant to the Guiana case, evaluate whether the streams could be joined, and determine what conditions are necessary to bridge the divide between economic development and public health. We will then recommend enhancements to current structural adjustment programs in the Guiana region that will address the economic and public health challenges encountered in the Guiana region. The use of the assimilation model that results in the demise of an entire ethnic group of indigenous people in the name of economic growth should be adequate evidence of a wrong that needs no further justification for action.

EVALUATION

Monitoring in this context assesses outcomes compared to plan and allows flexibility to reformulate new outcomes and metrics for success identified during the reflection process and implemented during the next planning stage. This cyclic process of planning, action and reflection provides a space for emergent learning to occur. This space is strongly influenced by three main factors: the existence of peer discussions, active two-way communications between the leadership team and coalition members, and the 'collegiate form' of community-based participatory project management.

In complex social systems that are made up of complex systems that include public health and are embedded in other complex systems we recognize the possibility that small causes can have large effects. Although the WHO's Health in All Policies Framework is intended to provide countries with a practical means of addressing public policies with health implications across sectors at the country level it is also suited for application at the supranational level and for governance structures at the international level.

This proposal illustrates an intervention approach that changes public health practice within a complex theoretical framework. While this framework should be iteratively adjusted and refined to suit other contexts and settings, we believe that the process could be maintained as the primary framework to guide other practitioners through a comprehensive intervention development process.

Analyzing policy formation through the Multiple Streams Model is recommended because it provides a flexible framework for considering the processes involved. The Multiple Streams Theory covers a wide range of concepts, some more relevant than others when applied to a public health topic.

While the proposed community-led approach is an effective means for addressing the health crisis affecting the indigenous people in the Guiana region, it does not follow the smooth pathway implied by theoretical writings. Communities do not automatically gain from projects lacking social action plans especially when poor health has its roots in social phenomena. Community-led projects take place in a complex social and political setting and inevitably will bring-up many questions about relating to government officials, the media and communities when there exists a potential that the intervention plan will reflect poorly on government policies.



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