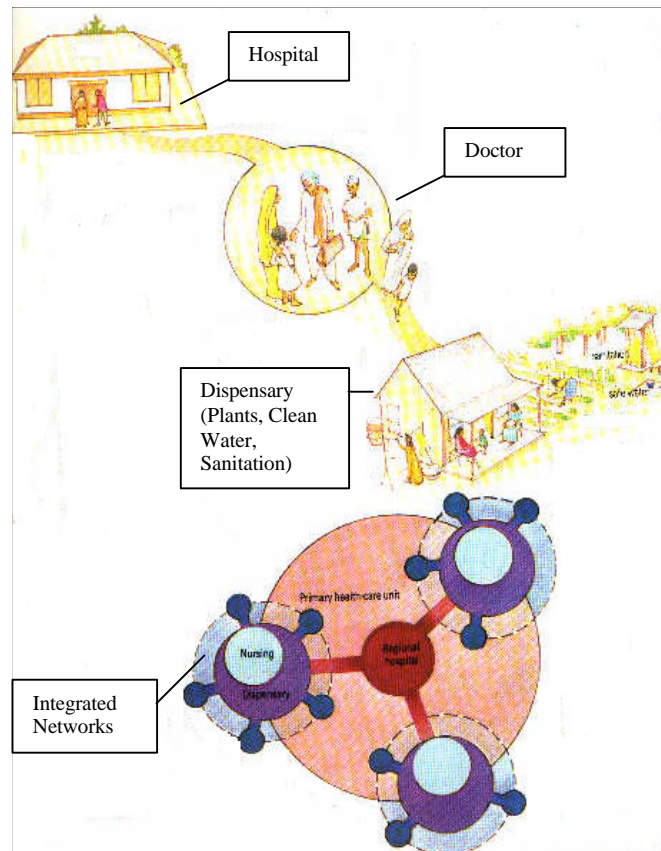


Complex-City

Health/Municipalities/Mutual Gains



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The Key Ideas of This Paper are:

- A. Community building is a necessity to prevent and face disasters.
- B. Interdisciplinary areas must be integrated and work together
- C. Communication is a key factor in finding win-win solutions to any given situation.
- D. The role of health officers must lean toward encouraging open channels of communication between what seems to be contradictory and isolated fields.
- E. We must give people the possibility to achieve economic development using local and international resources.
- F. Coalitions could also be developed in a global sense among sectors and countries facing similar problems.

Table of Contents

	page
<u>Introduction</u>	1
<u>Public Doctor</u> <i>Stressed by low wages, lack of qualified nurses and staff and lack of equipment, the public doctor is looked to for care throughout the community – disaster imposes a further stretch on thin resources and shoes that are too large to be filled by one profession.</i>	2
<u>Politician</u> <i>A country's government needs to prepare itself and its population to take effective actions during and after a disaster. There are two broad questions that government officials need to answer: What actions need to be taken to better prepare a country in case of a natural disaster? What actions need to be taken after a disaster hits?</i>	4
<u>Planner</u> <ul style="list-style-type: none">• <i>Planning goes beyond a top-down exercise</i>• <i>Collaboration of all stake-holders is critical</i>• <i>Strengthen community ability to command the events that affect their lives</i>	6
<u>Journalist</u> <ul style="list-style-type: none">• <i>The journalist needs to speak to people with diverse perspectives in order to obtain a comprehensive picture.</i>• <i>The journalist can serve as a communication link between various community-level actors to assist collaborative projects</i>• <i>The journalist can help community collaboration by offering a new perspective, insight, or an opinion</i>	8
<u>Community Organizer</u> <i>Community organizing leads to:</i> <ul style="list-style-type: none">• <i>Empowerment and increased self worth hence increase responsibility for community</i>• <i>Decrease in violence hence an increase in feeling safety and satisfaction in environment</i>• <i>Increase in votes and political action hence decreases government effort</i>	10
<u>Families</u> <i>Developing countries can minimize property damage and loss of life during a natural disaster by taking a systemic interdisciplinary approach to forming a strong and healthy community that can withstand adverse situations. Family concerns and perspectives encompass a wide variety of topics ranging from insurance to building standards. It is incumbent upon city officials to build coalitions that are in a political and financial position to respond to family concerns with far-sighted action and not rhetoric.</i>	12
<u>Migrant Worker</u> <i>The example of the migrant worker from the rural areas highlights how multiple issues are interwoven and are all related to health outcomes:</i> <ul style="list-style-type: none">• <i>Social inequalities, human rights and education</i>• <i>Balanced planning in and around the municipalities</i>• <i>Working together across disciplines in the appropriate approach</i>	14

Educator 16

- *Education has a vital role in empowering the community and fosters the building of social capital. More attention should be paid particularly to the education of women, which is crucial in context of the family unit and its ties within the community.*
- *Health education provides short-term solutions to immediate health issues where mass media has become one of the most effective ways in dispersing health information.*
- *In times of a disaster, education and health education will lead to a coordinated response due to community mobilization as well as prevention and effective dispersion of health information throughout the community.*

Environmentalist 18

In these examples multiple benefits arise from these approaches like the reduced cost of food, improved community lifestyle, cleaner cities, conservation of fuel by avoiding transport and cooling of goods, building community self reliance, all of which translates into stronger cities able to cope better with disaster.

Media 20

- *The media helps develop and maintain interdisciplinary collaborations*
- *The media can be used to educate the community about healthier practices*
- *The media is a resource that can produce more non-material resources*

Conclusion 21

Resources 22

Introduction

We all want to improve the quality of our lives and secure our well being. Part of this involves improving our communities because the quality of our communities has such an effect on the quality of our own lives. Issues of clean water, violence, education, and the environment are community problems that affect the quality of our lives in big ways. There are diarrheal diseases that maintain a steady hold on segments of the community because there little or no sanitation to treat or prevent human contact with contaminated water. The issue of overcrowding in municipalities brings about more problems that puts stress on the community. As we think about ways to lessen some of these problems, a whole flood of factors, situation, and obstacles come to mind. Or perhaps, our minds may draw a blank because there is so much to consider. Where do we begin? Sometimes these situations are frustrating and even discouraging. We see that we lack the economic support to implement big projects. Unless speaking about epidemics, health is not considered a matter of national security and so falls in importance at the national level. But we must not lose hope for moving towards sustainable solutions because they are possible. Some communities are living success stories.

Municipalities have adequate resources to create and sustain programs to make the community healthier. Searching beyond material resources, if we look towards community members, we will see skills that can help make up for any deficiency in material resources. However, just as resource management is needed to use resources in effective ways, managing relationships with each other is important to making projects work starting from the very beginning to the sustainable state. That way, we can work together to build a healthy community environment, and thus improve the health of the community as a whole. We won't see big benefits right away. But we can be committed to work together for a healthy community. If we are motivated and committed, we can get there.

We also need a common way of understanding health so that we may see how each of our roles can contribute to improving health. Dialogues are good ways to listen to each other's perspectives so that we can better understand factors that affect health. In this way, we can think about the ways we can act, knowing that though we are contributing in each of our own way, we are working together for a common vision of a healthy community. This framework of working inter-relationships will strengthen our efforts because everyone will be working towards the same health goals.

This paper presents a disaster scenario because it is at times of crisis that people become highly motivated to create working relationships. It is also here that the common goal to maintain health is clear to the community-level actors. However, the relationships that are built in crisis can also be built during other times. The disaster shows that sustaining the health of a community goes beyond medical care. Health is also a matter of public health educators, city planners, the media, environmentalists, and other community-level actors. But these factors also affect health everyday, not only in a disaster.

The different perspectives presented in this paper will illustrate how their decisions and actions can enhance the health of the community. This is why dialogue between community members with different backgrounds is important. We will also see that there are common intersections between the community members. One community member may need information or the support from one or more community-level actors in order for them to implement their idea. Dialogues also clear up the nature of the relationships between different community interests. There does not necessarily have to be a zero-sum relationship between health and other interests such as development. Dialogues will help reveal common interests that can be the basis of a win-win situation.

The paper ultimately points out that an open mind and a willingness to build communication links are necessary to obtain a comprehensive understanding of the factors that affect health. Building relationships also enable us to offer and obtain the support each of us needs to carry out our health projects. In the end, the health of a community is the product of many win-win partnerships.

The Public Doctor

Stressed by low wages, lack of qualified nurses and staff and lack of equipment, the public doctor is looked to for care throughout the community – disaster imposes a further stretch on thin resources and shoes that are too large to be filled by one profession.

Issues to Address:

Immediate Trauma/Emergency Care

Is clinical infrastructure adequate to meet the needs of a systemic stress on the city? (Trauma, Infectious Disease, War) Are there enough trained personnel to meet the needs of the ill and injured?

Food Distribution

Once the immediate care needs are addressed, famine and malnutrition must be dealt with. Do adequate resources exist? Are distribution systems in place? Are there barriers to existing systems (corruption, war, damaged infrastructure)?

Shelter

As time passes, lack of adequate shelter persists as an ever-increasing risk to physical and mental health. Homelessness, whether caused by an earthquake, flooding, or poverty, contributes to chronic and infectious disease, preventing participation in the workforce and leading to further poverty.

Sanitation

What pathways to disease are proliferated through a disaster? Following an earthquake and subsequent flooding, access to clean water is compromised, and systems of sanitation are disrupted. Can systems be replaced or modified to reduce the toll of this tragedy? Poverty has a similar effect on communities, through the initial lack of such mechanisms. Should new systems be implemented, and how can we show this implementation to be cost-effective and mutually beneficial to the entire community?

Time and Resource Availability

Given the constant, overwhelming demands placed upon medical practitioners, how much of the community's health can the doctors realistically responsible for in the extenuating circumstances of a disaster?

Infectious Disease Control - Leptospirosis

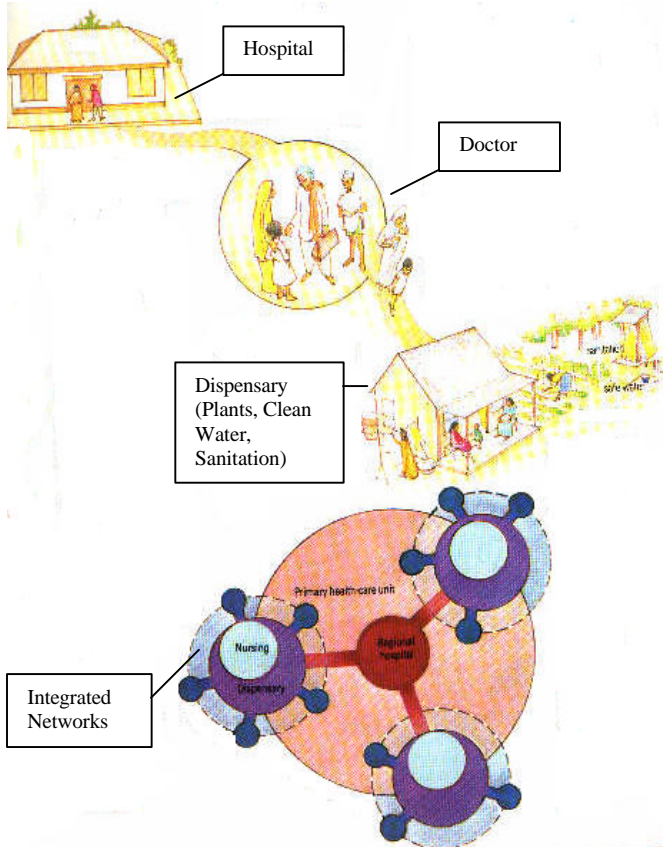
A multinational group of researchers recently published an article in Lancet concerning the incidence of leptospirosis in Salvador, Brazil. This disease is transmitted through rat urine, exhibiting a 15% mortality rate and peaking at times of high rainfall (as people walk through flooded water). Although traditionally a rural disease, leptospirosis has become an urban infectious disease as houses of the poor are built on or near estuaries. Researchers note that leptospirosis in this manner is a model disease of the favelas, and that by addressing the factors that contribute to the emergence of leptospirosis in cities, other significant problems prevented.

In response to research in Salvador, the city has implemented flood control and rat control. Studies determined that the treatment of one case of leptospirosis has a cost of \$30,000, and the preventive measures taken should prove to be highly cost-effective. In addition, flood and rate controls greatly diminish the risk of diseases such as diarrhea, dengue and others. Through effective research that is committed to the well-being of a community, health promotion efforts often prove to be both cost-saving and providing gains to the community beyond the scope of the problem being addressed.

Integrative Solutions

Designing Community Structures for Promotion and Preparedness.

Health Promotion



The Context of Integrated Networks

Education: Health education levels, cultural competency and systems knowledge determine how communities and health networks complement each other.

Employment: Quality and presence of employment determines self-sufficiency and corruption level – factoring into the viability of social systems.

Housing: Access to stable shelter necessarily precedes success in employment, health, education, and other aspects of community.

Media: Health care utilization and proper hygiene are tied in to media portrayal of popular culture.

Politics: Healthy, well-run, communities are essential for long-term political support.

Economics: Employers and communities will find mutual benefit from a healthy, educated workforce.

International Agencies: Research and aid has the potential to support model communities, which in turn promote the healthy development of neighborhoods.

Managed Care: Preventive and localized care follows the managed care comprehensive care.

Lack of shelter, food and basic care contribute to the ill health of a community. Through the integration of regional hospitals safe water, sanitation, and localized clinics, a holistic approach to health care can be envisioned. Several countries have made enormous strides in community health, increasing life expectancy, banishing endemic diseases such as smallpox, and reducing child mortality. WHO research has shown that a trained local health worker, equipped with only 15-20 drugs, can effectively treat the majority of common illnesses. By designing clinical networks to bring together nutrition, family planning, sanitation, immunization and medical care on a regional basis, communities will have the framework to train individuals to fill unmet needs and remove the burden of comprehensive care for all from the physician alone.

The Politician

Natural disasters can occur at any moment. A country's government needs to prepare itself and its population to take effective actions during and after a disaster. There are two broad questions that government officials need to seek answers to:

- *What actions need to be taken to better prepare a country in case of a natural disaster?*
- *What actions need to be taken after a disaster hits?*

What actions need to be taken to better prepare a country in case of a natural disaster?

Planning ahead is always good for a country economically. It tends to maximize outcome and minimize costs, creating a win win situation. For example if we start building homes that are earth quake proof then we won't have to worry about numerous casualties resulting from home wrecks. There needs to be attempts made both on the national and micro-level, increasing the importance of partnership between civil society, local government, and the private sector. The state as a result has to become more decentralized to increase this relationship between the various sectors.

As we target policies to increase this relationship between the various sectors, we are creating a sense of community with in our country. We open communication lines between various sectors allowing each sector to familiarize it self with one another. This is very helpful in case of a disaster because now that the various sectors have become acquainted they will be more willing to help each other out. For example if the local government runs short of money, in a disaster or preparing for a disaster, and they have good relations with the private sectors in the area, they can ask for financial assistance, like a contribution of money to the local government for preventive activities (i.e. building earthquake proof houses, providing maps showing area that may experience liquefaction or landslides).

Communities:

There needs to be greater emphasis placed upon community health centers and posts as opposed to larger hospitals. One reason is because larger hospitals already have most of the resources they need and the second reason is that most of the big injuries occur in suburban areas where housing constructions poor and big hospitals are far. By placing greater emphasis on community health centers and bringing together nutrition, family planning, sanitation and immunization we be one step closer to a healthier community. We need to make sure that everyone in the community has enough knowledge of how to handle disaster if it were to occur in their neighborhood. Having a healthy and well run community will in return guarantee a stronger political support. To create awareness in a community, we need to improve local communications through community newspapers and or newsletters and also create disaster-training programs, which will teach individual about specific precautions, to make us more prepared and as a result healthier.

Communities:

We need to educate the communities on health care hygiene. Need to provide them with enough resources to help themselves and not be so dependent on the government to live healthy. A healthier community will guarantee strong political support.

Planners:

As a necessary precaution we need to talk with the city planners in regards to where or where not to build infrastructures and buildings. Our decisions may highly depend on the geography of the country. Building roads or houses on land that is a settle on volcanoes and landslides, will make a city more susceptible to disasters. Where housing quality is poor there will be a higher degree of damage and injuries. Our ultimate goal is to minimize the fact of communities being dependent on use but rather maximize and foster their growth to aid themselves.

Planner:

Need to make sure that housing and infrastructures are built in safe areas to preserve a better and healthier environment.

Education and Private enterprises:

We need to plan how to deal with the issue of urbanization. We need to provide incentives for people to stay in rural areas. We can start by providing the rural population with a better school system in which will yield in higher education and as a result will make people more capable of achieving more complex tasks. We can also provide them with an incentive of going to school and getting educated by creating more jobs around their living area and therefore making them more economically stable.

As a result of attempting to solve this problem of urbanization we will eliminate the problem of unhealthy municipalities. Now people will not have an incentive to live in city areas where housing structures are poor and as a result of over population and poor housing they have to also worry about sanitary problems as well.

What actions need to be taken by the government after a natural disaster?

One of the most essential needs of a community is the distribution of food and shelter. Lack of food and shelter contribute to the ill health of the community. Clean water is the most essential resource and is highly needed. It is estimated that each individual needs about 1 gallon of water. We need to make sure that every community is fully equipped with these two commodities. One way to do this is to send mobile military resources. These military groups can distribute food clean water and help with organizing shelter homes.

Media:

Media is our number one source of distributing information and communicating, which can be often times save lives in an even of a disaster. We can cooperate with the media through their resources of newspapers, radios, televisions, to increase awareness within our population.

Environment:

In a municipality with a high population and urbanization still underway, sanitation, shortage of food and space will quickly become major problems for the people. Widespread diarrhea and other epidemic from unsanitary conditions such as collection of waste and an unclean water supply can lead to unhealthy communities. We need to communicate with environmentalist and figure a cost effective but yet effective way to use our resources wisely. We can for example come up with ideas such as turning waste into compost which then keeps them out of water supply, making the water cleaner for usage, which then can be used to fertilize urban gardens which then can be used to make more food.

Educator:
We need organize better school system. Education equals self-sufficiency, which leads to better jobs, which leads to better and healthier living situations.
Private enterprises:
We need to communicate and increase the sense on partnership between the public and private sectors achieving a more decentralized system of government, which at the end is more efficient economically and politically.

Media:
Through the use of TV shows radios and newspapers, we could portray the processes of being healthy.

Environment:
We can take advantage of the environmentalist to show us how to best take advantage of our resources or assets.

The Chilean constitution of 1980, initiated under the dictatorship of General Augusto Pinochet, permitted the diversion of government health care and social-security funds to privatized managed care institutions, which could then be bought by multinational insurance companies. Access to privatized social-security funds recently termed "the manana pension bonanza" in a trade journal, creates multimillion-dollar capital pools that are available for reinvestment by participating corporations.

Doctors:

Adapting the managed care system will help our countries' health care immensely. It is also economically efficient: It is an effort at cost containment by the corporate purchasers of health care.

Managed care just gives the population more choice as far as just have the public programs. We need to set up public organization to check and make sure the hospitals are operating at the proper level: clinical infrastructures being satisfactory, there being enough trained personnel to meet the need of the ill, etc.

The Planner

- *Planning goes beyond a top-down exercise*
- *Collaboration of all stake-holders is critical*
- *Strengthen community ability to command the events that affect their lives*

The basic premise of this section is that the health of population groups cannot be viewed separated from each other. A second notion is that although natural disasters may not be preventable, the extent of their damage can be minimized through preventive planning and coordination among a variety of society's actors. Planning is often seen as a technical and top-down exercise that focuses more on the elaboration of written documents than on the process to which these relate. In the context of this document the word "planner" refers to anyone person or group that recognizes the need for a concerted effort to increase people's capacity to respond to crisis more effectively in both the short and long term.

In order to minimize the extend of possible damage to their living environment, planners whether government officials, NGOs, CBOs, or individuals, need to explore three basic questions:

1. *What makes our city or living environment vulnerable to disasters?*
2. *How can we make our city or living environment safer...before disaster strikes?*
3. *How can we aid recovery... after disaster strikes*

The answers to these questions will invariably depend on an array of factors. For example, the political and economic conditions, the nature of the state's role, the regulatory system, the disaster management system, and the system of finance for housing repairs are all key determinants of disaster prevention and recovery. As a result, the policies and structures of different countries will determine a community's capacity to successfully respond to crises.

The idea is to foster the growth of communities in such a way that their dependency on government is minimized. During a crisis it is not uncommon for affected communities to rely on government to "take care of them" and their problems. However, when resource limitations cause basic needs to go unmet, then resentment and desperation can build up. The outcome may be protest, repression and violence. (Agerbak, in Eade 1996b:27). A way to avoid 'dependency' is to maximize the area within which people are able to make decisions for themselves. This means emphasizing their strengths rather than their needs." This also means working together across disciplines to increase people's capacity to command the events that affect their lives rather than asking them what they would like others to do for, or to, them.

What kinds of factors make cities vulnerable to disasters?

...the concept of vulnerability is the starting point—and an important guide—for programming [and planning]. As we identify certain groups as vulnerable and needing assistance, we must also identify the sources of their vulnerability. Why are these people in this context vulnerable? What decisions and choices have been made—and by whom—that have created the circumstances and put them at risk? (Anderson, 1994:331).

Some experts argue that crisis may exacerbate existing inequalities, and reinforce top-down or authoritarian power and decision-making structures. On the other hand a response to crisis may also be to provide mutual support and solidarity, or to cooperate across previous divides. A planner's role is to promote such activities. Examples of vulnerability factors include:

Physical location

- * Settlements on volcano flanks
- * Settlements on river banks
- * Avalanches
- * Mountain valley
- * Illegally occupied land which ignores planning/building codes
- * Historical paths of mud/lava flows
- * Land slides
- * Steep slopes or cliffs
- * River mouths

Housing infrastructure

- *Age of infrastructure
- *Constructions able to withstand ash and lahar

Sanitation facilities

Education: factors into affecting ability to respond

Housing: the most community affected sector

Politics: well-run communities respond better to crisis

Congress: communities' resources are critical to repair or rebuild

Managed Care: preventive care at local level can help cost-effectiveness

Employment: Important to command the events that affect their lives

How can we make our city or living environment safer...before disaster strikes?

In certain situations the planning and preparation process completely fails. It is simply not possible (because of limited time and resources) to have a contingency plan for every conceivable situation. It is however, desirable to have a "process" in place that is capable of figuring out which capacities are needed, by whom, and to do what. Planners should work to complement and strengthen the capacities that already exist in the communities and not to undermine them.

At this point it is important to illustrate the nature of capacity-building by means of four negative examples: Capacity building should not create dependency; increasing dependency and vulnerability are the very opposite of capacity-building. Capacity-building does not mean weakening the state nor does it mean supporting CBOs or intermediary NGOs in ways that weaken the capacity of the state, or citizens' claims on it. Capacity-building is not a separate activity to be done instead of supporting or undertaking health or education programs. Capacity-building is not solely concerned with financial sustainability more important are the less tangible areas of social, political, organizational, and managerial sustainability. (Eade, 1997)

In times of crisis focus on the capacities needed by a range of different people working in the same environment and addressing a common concern. This may mean bringing people together from civil society, business sector, and public sectors together in an attempt to break communication barriers to achieve a common end. These links need not be permanent, and they need not be all-encompassing. They should however, be a part of a short-term strategy to reach a particular goal, or a long-term strategy for information exchange. (Reardon, 1995: 160-161)

However, capacities will not just trickle down through a power structure unless active steps are taken to ensure that they do. As with other resources, if activities intended to build capacities are introduced into a skewed environment of access to skills or opportunities, they may de facto reinforce existing forms of power and exclusion (Stewart and Taylor, 1995). Liking requires time and usually money before a full impact can be felt. It is therefore advisable to begin such relationships and strategies as earliest as possible because you never know when a crisis such an earthquake or flood may ensue.

Post-disaster Reconstruction and Rehabilitation of Rural Areas in Anhui (China)

From May to July of 1991, an unprecedented flooding happened in Anhui. 278,000 houses collapsed, among which 165,000 collapsed to the ground. 43 million people in the province were affected. The direct economic loss incurring from the disaster was nearly 3.4 billion US\$. In the post-disaster reconstruction, the Provincial government carried out a strategy of government support and public participation, improvement of the people's living environment and disaster-proof capability building and multi-lateral cooperation. Most of the disaster-affected people had restored their normal livings by loan from the bank, donations from all parts of China and international agencies and from self-financing. The overall planning was made in the whole affected region and were carried out step by step according to the different situations in different areas. By the end of 1995, 95% of the affected households have newly built their own brick-structure houses with better disaster-proof nature, and completely restored their normal life.

How can we aid recovery after disaster strikes?

When assistance is provided to people "to meet their needs" without regard to their existing capacities, very often the capacities that they possess are undermined and weakened by the overpowering presence of the aid giver. When this occurs, vulnerabilities are often increased rather than reduced by aid (Anderson. 1994:328).

As previously mentioned recovery is predicated not only by public resources, but by those of the local community and the non-governmental organizations that are part of the affected community, including areas receiving displaced populations.

The effects of a disaster may last years or decades. Financial and material resources are frequently depleted in the immediate post-impact phase of a disaster or crisis. Planners must recognize this fact, and prepare ahead if time. Strategies must be put in place that increase people's financial and technological know how, leadership formation, and participation in policy and decision making processes. Social and political processes should provide channels for dialogue, participation, and negotiation.

The Journalist

- *The journalist needs to speak to people with diverse perspectives in order to obtain a comprehensive picture.*
- *The journalist can serve as a communication link between various community-level actors to assist collaborative projects*
- *The journalist can help community collaboration by offering a new perspective, insight, or an opinion*

How can a journalist contribute to the efforts to provide humanitarian relief?

One way would be to provide a comprehensive picture of the disaster and vital information. The journalist can also contribute by offering insights and offer perspectives that may serve to help community-level actors. Thus, the manner in which a disaster is presented has a great affect on the community on many levels.

It can strike in a matter of seconds or a matter of days. We feel the direct impact of the disaster in a very real, and usually painful, way. We see the toll of the disaster on our families. Perhaps it has caused injuries or disease to loved ones. We see the destructive force as we survey our local neighborhood for damages. *What else is going on in the municipality and in the country? How widespread are the effects of the disaster? Will there be enough crops so that we can eat and live? How do we know what to provide for disaster survivors? Where are the heaviest hit areas?*

We rely upon the journalist to fill in the missing information since we cannot know what goes on around us which we have not seen or heard about. We use the information from the media to understand what has happened locally, nationally, and internationally. The community also forms opinions about NGOs, local officials, and national officials based on the media's account on who is helping and the effectiveness of the efforts. This is why the journalist has the ability to shape the perception of and define the meaning of a disaster for millions of people. In this way, the journalist plays a big part in what we think about, our decisions about how to act, and the options available to us.

Beyond presenting data on disaster assessment such as mortality and personal accounts, the journalist could place the personal account within the context of a survey of the damages.

National government:

provide supportive policy environment

Local government: help foster the partnerships and interdisciplinary collaboration by providing resources and recruiting more contributors

Educator: provide health information. Empower the community with education

Community organizer: Help establish communication between community members and help translate these into self-initiated projects

Multinational corporations:

Create partnerships with communities or local organizations. Offer resources to local projects.

Planner: Consider health when planning infrastructure and housing.

NGOs: provide resources and participate in collaborative community efforts

Environmentalist: teach the different ways the community can integrate environmental friendly practices on a daily basis

Doctors: provide medical care and contribute holistic knowledge of disease causation and prevention

“Wearing borrowed clothes—he has nothing left— Hernando Rivera stares at the remnants of his house buried in a sea of mud. He’s convinced his 15-year-old daughter was swept under the mud as well... ‘I am just so very sad,’ he says. ‘I just wish we could find her so I could see her eve if it’s for the last time.’ In this neighborhood alone, 42 homes disappeared within minutes. The houses buried under this mud belonged to working class families that depended on the manufacturing industry for jobs. All they could afford was s small plot of land under the shadow of the town cemetery. One of the cemetery’s walls collapsed in the rain, starting the avalanche that killed dozens. It took over 48 hours for government rescue workers to reach the community. Roads throughout the region had been cut off due to landslides...Hernando Rivera will never be able to see nature in the same way. It caused the mudslides that took away his daughter, and he says, his hopes.”

What environmental triggers lead to the mudslide? Why were the houses built in an area vulnerable to mudslides? Why were there alternative routes to getting help to the community? What survival efforts, if any, were being implemented in the neighborhood before government aid came? Could these neighbors' lives have been saved? How were injured community members taken care until medical help arrived?

By asking these types of questions, the journalist obtains a better understanding of the cause and effect relationships that played out in this neighborhood. The journalist would need to speak to a variety of people including the environmentalist, the city planner, the local official, the community organizer, and the educator. The journalist sees the picture slowly unfolding and begins to see links between diverse disciplines.

Is the damage that we see in a disaster unavoidable? The journalist finds that this is not a necessary condition. There were times when supplies were available but there was no way of getting them to the areas. Other times, resources were not in adequate supply. ***How can we try to sustain health when sometimes there is no way of getting to the site and other times there are not enough resources, especially medical resources?*** There is much demand and little supply—part of the solution lies in decreasing the demand.

“Clearly what we’ve learned is that you have to deal with the issue relating to environment protection, watershed management and the appropriate agricultural cultivation in areas that cannot withstand the normal course of natural disasters...The mudslides that took away people’s houses occurred on the watersheds where you don’t have trees and where you didn’t have any kinds of sustainable agriculture. No terracing, no efforts to create the kinds of crops that hold the land. That’s one key lesson.”

Together, we can work to minimize the damage done to the community and community members. Preventing the extent of damage would have the effect of lessening the stress on our limited resources. The magnitude of damage that we see in a disaster is due to one part nature and another part that is human-made. We see the connections between our daily practices and our contribution to damages. Our every day decisions and actions do have bearing on the impact of a disaster. Stories show us some possible actions out of many that we can adopt or originate.

From thinking about some findings, a journalist may choose to contribute ideas and concerns to the collaborative dialogue. At a basic level, the journalist can begin speaking about defining common goals and identifying community values. The journalist may also illustrate new ways of looking at situations. This would mean that sustaining health does not have to involve win-lose competitions but it can also encompass many win-win partnerships. In this way, a journalist has expressed a viewpoint that has provided a new framework for discussing issues.

Is this the case with our municipalities too? Creating this kind of perception opens up possibilities for new collaborations between community-level actors. But we need to understand each other. So a journalist may choose to serve as a communication link so that we can understand each other’s intentions better, organize people for projects, and learn from each other. Thus, the journalist provides a forum for exchanging ideas and concerns which helps in planning a collaborative strategic disaster response.

“The Mexican Red Cross and The Weather Channel Latin America have launched a partnership whose goal is to provide information about safety measures in time of weather disasters...In exchange for accurate Weather Channel forecasts, the Red Cross will give The Weather Channel educational materials providing viewers with disaster relief safety measures. This will include where to go in case of emergency, how best to protect the home, first aid tips and more.”

By asking these types of questions, the journalist has sought and found underlying factors that explain a disaster in greater depth. The journalist sees that a community can have a supportive network of inter-relationships. Thus, a journalist expresses the need for collaborations to handle a disaster in order to keep incidence of mortality, hunger, and disease down to low rates. In this way, we see that sustaining health in a disaster necessitates a collaborative and interdisciplinary effort on our part. The journalist is integral component of this effort.

The Community Organizer

By increasing the communities' responsibility through organizing committees, utilizing local talents, and resources of the people, this leads to:

- *Empowerment and increased self worth hence increase responsibility for community*
- *Decrease in violence hence an increase in feeling safety and satisfaction in environment*
- *Increase in votes and political action hence decreases government effort*

What are my community's concerns and needs?

The people know best what the concerns and needs are in their community. The main concerns that communities organize for are neighborhood violence, economic issues, and environmental issues. There is a need to create cohesion within communities to make changes can be best facilitated by a community organizer. To move communities forward, people need to develop connections with the government to assist in making local changes, eventually leading to long lasting national change.

How can I organize my community especially when there are diverse interests within the group?

In community organizing, you want to create an environment that supports social justice for all groups including poor, elderly, minorities, women, and children. A good way to bring people together in a community is to build upon existing networks such as families, religion, and organizations. To ensure a diverse group to organize, outreach to women's groups, peasant associations, neighborhood associations, and sports clubs. Allies along with enemies and detractors should be included in discussions. Community organizing should follow strategies of encouraging social action, local development, and social planning; the long-term goal is to create self-efficacy within a community. As to where to bring groups together, community development forums inviting members from the various groups can be held, facilitated by the community organizer.

Diverse environment:
for the good of all people – young, old, man, woman, rich, poor, different ethnic backgrounds – to break barriers and move forward

Who can be a leader? What skills are needed and can they be acquired?

Now that all the groups are together, who can lead the group? Anyone, as long as they have the skill to listen. To listen is to really have an interest in hearing about differences, and to understand where people are coming from. By listening, respect from the various communities is gained. Trust is also created if, as an organizer, you show genuine care. Listening breaks down barriers of miscommunication and misunderstanding especially between diverse groups. By listening, an organizer holds a position of power with insight on the reality of underlying causes of past negligence, conflict and apathy among groups. With this knowledge, an organizer can push for a common goal, encourage participation, and build partnership. Listening is a skill although most might believe otherwise. Anyone, man or woman, young or old, can learn to listen with an accompanying open, patient mind. Listening can occur in formal, forum settings, or in informal, casual conversation settings.

Leaders are good listeners

How can I get my voice heard? Who should I collaborate with?

Politicians have a direct link to the government. To make long lasting change in the community, an alliance needs to be made with politicians, particularly those in the local government. To build a relationship with politicians, a community development forum can be held in a community. A variety of community groups

Politician:
link to make local change in return for :
- more votes
- less apathy
- gained respect and trust
- community support

including young, old, men and women can join provincial and congressional officials, local clergy, political leaders, and community leaders. With facilitation, discussion can ensue to develop a plan based on project proposals developed by community groups. This can lead to administration of public funds allocated by the central government for local use. A line of communication opens and trust is built between the government and the people as a result. While community participation in political processes is encouraged, at the same time, a community is given a sense of empowerment and self-efficacy.

The National Association of Mother Centers is a grassroots women's movement. Mother centers claim public attention and space for the interests of neighborhood women and their families.

Mother Centers:

- Create new channels for grassroots female leadership
- Participation in the communities valuing everyday life experience as expertise and qualification
- Recreate neighborhood structures and neighborhood services
- Model how to strengthen civil society and democracy by strengthening the neighborhoods
- Break through the isolation and marginalization of women as mothers
- Create melting pots for women of diverse class and ethnic backgrounds
- Empower women by the experience of motherhood
- Give mothers a political voice
- Consulted regularly by municipal agencies, as well as local, regional and national government
- Impact national legislation to re-channel resources to the grassroots level
- Influenced urban planning and development to be adaptive to the needs of mothers and children

The "success story" of the mother centers is a lesson in transferability and in fruitful partnerships.

Who will fund me in my organizing efforts?

Along with governmental collaboration, working with banks can help fund any organizational efforts. Governments can provide grants or give tax breaks as ways to support community organizing. Laws can also be applied to require, as in Columbia for "community mother" programs, to oblige companies to give 35 of their total wage bill to community organizations. Also in this case, according to a public law, proceeds of money, house, and vehicles seized from drug smugglers are given to help community programs. These are possible alternative funding sources. Bank holding companies, aside from traditional investors, can be of particular interest as a funding source. It is in the bank holders' interest to invest in projects that primarily benefit economically disadvantaged communities. Financial institutions in general provide mortgages, home improvement loans, business and public facilities financing.

Economics:
Banks should invest in communities to stimulate growth of the economy and future likelihood of return on investment

What benefits do others receive in helping me?

The government should have interest in assisting community organizers, for a few reasons. By increasing the community's sense of empowerment, there is an increase in participation in voting. A politician can easily use this to their advantage. By improving the quality of life through community development, there is less apathy and disgruntle against the government, hence more support. Banks and other economically related groups should take an interest in helping community organizers since helping the communities can stimulate economic revitalization of the neighborhoods. Since lack of loans provided by investors creates economic stagnation or decline in some urban neighborhoods and rural areas, creating loans is beneficial to the overall economy. By focusing on housing and commercial revitalization in economically disadvantaged neighborhoods, bank holders benefit in several ways: by a return on investment, development of new market opportunities, gained leadership stature, creating a competitive advantage in a community, and protecting and enhancing the value of assets that exist in a community.

Government:
Encourage investment into community providing tax benefits for community supporters. Leads to a decrease in direct governmental spending

How does my community benefit from organization?

Ultimately, communities benefit from community organizing. One is a lower crime and delinquency rate in an organized community. This is due to the strengthened community who has a sense of responsibility for their physical environment. There is also an increased sense of territoriality for the neighborhood leading to more involvement in local institutions such as neighborhood associations to create change to benefit the community. This leads to political and personal empowerment. The increased participation results in improved social and physical conditions. Local development also is a way of preserving cultural diversity through understanding and collaboration. Communities grow stronger as they take responsibility to care for their own people and interests, yet at the same time create new networks with government and other interest groups that improve their status.

The Family

Developing countries can minimize property damage and loss of life during a natural disaster by taking a systemic interdisciplinary approach to forming a strong and healthy community that can withstand adverse situations. Family concerns and perspectives encompass a wide variety of topics ranging from insurance to building standards. It is incumbent upon city officials to build coalitions that are in a political and financial position to respond to family concerns with far-sighted action and not rhetoric.

How is the government going to protect families from experiencing catastrophic losses? How will families rebuild their homes and their lives?

Since the beginning of time, one of man's deep-seated and most powerful impulses has been to protect himself, his dependents, and his assets from the consequences of accident and disaster. And, toward this end, he has constantly striven to reduce or eliminate risk. If people in the same geographic area will agree to proportionately share the losses of a few, the cost to each will be small, and the threat of disaster will be removed for all in terms of catastrophic property loss.

A strong community that can successfully navigate itself through tumultuous situations needs to have some sort of safety net for its property owners. The collection of premiums from each, which may need to be subsidized in whole or part by the government, will provide the resources for people to rebuild their lives after the occurrence of a natural disaster.

Insurance is a way of protecting families against some of the risks that are always present but almost always unpredictable. Although loss of life is an irreplaceable loss, each person's life does have an economic value. It is this value that can prove instrumental in a family's ability to rebuild their lives. Therefore, it is advantageous to make some kind of life insurance program available to the people.

Coalition Building:

Create a win-win situation by working together with corporations who invest in the community, thereby benefiting the community and

What else can city officials do to prepare families for disastrous situations?

A government should use appropriate modes of communication to disseminate information regarding the steps a family can take to prepare for a natural disaster. These include becoming aware of trends in their area, purchasing insurance, keeping first aid emergency supplies on hand, and securing heavy objects to the walls. Television, radio, newspapers, the Internet, and local community meetings should all be utilized.

Media: portrayal of images and ideas are far reaching. Media can be useful tool to inform

Are the buildings that families occupy safe? If not, where are funds found for necessary retrofitting? What are the minimum standards?

From the family point of view, it is the government's responsibility to see that all future construction meets some minimum standard in terms of strength. Also, it is a good idea to retrofit those structures that are not strong enough to withstand a reasonable amount of force. Coalition building can serve as a useful tool as politicians, health officers, multinational corporations, and local banks can all come together to solve common concerns. It may be that banks, multinational corporations, NGO's, or international agencies, or a combination thereof can provide funding for such worthwhile programs.

After an earthquake of 6.4 on the Richter scale hit near Latur & Osmanabad in 1993, the Government of Maharashtra (GoM) conducted a swift relief and rescue operation along with the Army, NGOs and other voluntary organisations - nationally and internationally. The main task now was rehabilitation of the affected people and preparation of a state level disaster management plan to ensure future preparedness in the event of any calamity. As a result, a multifaceted programme, Maharashtra Emergency Earthquake Rehabilitation Programme (MEERP), was created.

Five major components were included:

- i.** Rescue & relief operations **ii.** Housing and infrastructure
iii. Economic rehabilitation **iv.** Social rehabilitation **v.** Other related programmes

Other features of the project were: partnerships, entrepreneurial development, promotion of community participation, institutional lessons, technical and administrative skills transfer, retention of funds within community, encouraging cultural learning, enhancement of quality of life, and creation of socially diverse neighborhoods

Lessons Learned:

- Different agencies can synchronize their efforts and deliver results through an agreed project implementation plan and budgetary support
- Government and NGOs mutually support and complement each other
- Institutionalizing the project management practices upfront
- Possibility of an efficient management unit within a bureaucracy through delegation of powers to the MEERP leadership
- Community participation as a very reliable instrument for administering all corrections in project implementation and transparent decision-making
- Community dialogue for curbing populist expectations
- New technology regime could be introduced and popularized, through political and administrative support
- Other lessons in public administration, financial accounting

Will shelter, medicine, food, safe drinking water and blankets be provided in the event of a disaster?

Relief workers should anticipate the need for shelter, medicine, food, safe drinking water, and blankets after a natural disaster for its displaced population. How these supplies will reach the affected families and how quickly are crucial factors. In order to quickly meet the needs of families in any emergency situation, rescue and relief workers need proper access to the various locales. This warrants the examination of existing infrastructure and makes it the responsibility of city officials to arrange for the investing in appropriate roads, housing, and other infrastructure.

What communications systems will continue operate? Is there a system to contact separated family members? Extended family members far away?

Secondary to attending to people's physical needs, a group of rescue and relief workers should be concerned with the transfer of news. Information about what is going on in other regions of the country should be made available to those who want it. Relief workers can also work together to re-establish any communications systems that may have been damaged. Although individuals may not reasonably expect to contact extended family members that live far away, it is beneficial for them to at least hear that a particular region has been unaffected by the disaster if that indeed is the case.

Are families able to obtain necessary medical treatment? Are available medical workers able to meet the needs of the community for the short and long-term?

City officials need to have a plan of attack when a disaster strikes. Medical workers and supplies need to be mobilized into affected areas. Furthermore, there need to be an adequate number of relief workers that have been appropriately trained to respond to calamitous situations. Other agencies such as the army can also send members into areas that have been affected. Also, after the immediate response phase, families need long-term follow up care. Either government sponsored or private medical insurance can be made available to families.

The Migrant Worker

The example of the migrant worker from the rural areas highlights how multiple issues are interwoven and are all related to health outcomes:

- *Social inequalities, human rights and education*
- *Balanced planning in and around the municipalities*
- *Working together across disciplines in the appropriate approach*

Starting from the insight that the health of population groups cannot be viewed as separated from each other, the story of this section leads to some possible answers to the questions raised at the beginning of this section. The situation of a migrant worker stands as an example for how using already existing leverage points in a more creative way will help meeting similar challenges even before the situation is getting critical. It also shows, how working together with other professions, sections or people involved is the right way to deal with the challenges the countries of the Americas have to face today.

There is no sense of community among the migrant workers or in the shanty-towns, since everyone has left his family behind. How can we all work together?

An answer to these questions lies in the building of competent communities, who are able to exist self-sufficient and self-supporting. Many times such a sense of community is triggered by a common fate, such as being a disaster victim. Yet, building strong communities should become a goal as a preventive measure, since those communities will have the assets and the strengths to respond to an emergency or any challenge in the social or physical environment in a more effective, healthy manner.

Community Organizer:

- * Help to build as sense of community
- * Empowerment for self-help capacity

Furthermore, networks on the community level can contribute directly to the health of populations. Especially in rural areas, where availability and accessibility of basic resources to ensure health are limited. Networked information systems need to be established to ensure fundamental medical and public health knowledge, such as sanitation, nutrition, childbirth etc. gets (cultural) appropriately communicated from the resourceful urban centers to the less well off fringe. On the other hand, the indigenous groups, who predominately live in rural areas, do have a invaluable knowledge of traditional healing. For example, their age-old relationship with nature has given indigenous peoples a thorough understanding of the classification, composition, uses, and protection of plants and their habitats¹. In order to preserve this heritage, or even allow it to benefit the public, networking and information flow has to work from the periphery to the center as well.

I used to send most of my money home, because poverty is the main reason, why I have left for the city. In the rural area is there is growing unemployment, and no incentive to keep on farming, what could be done to make me go back there for work?

Preventing migration to the cities and across borders is one of the major challenges linked to development in the Americas. As the story of the impoverished farmers above shows, new ways to build incentives for staying in the rural areas have to be found. Development therefore needs to be balanced, creating a stable economic environment in the cities as well as in the surroundings, where people can find a future for themselves and their families. Any one-sided progress in this system creates pushing as well as pulling forces, that finally mount to unbearable or disastrous conditions in the cities, affecting everybody's health, as clearly visible each time a disaster strikes an area, worsening those instable conditions.

Planner:

- Balance rural and city development

Where can I go for shelter, safe water or food? I never had any kind of health insurance and there is no hospital or health care unit in the shanty-towns, now I heard there are all kinds of diseases, is there a way to provide health care for all?

Neglected development or wild development of shanty-towns or urban spaces of the poor is a major factor for a disaster to hit those people, respectively their health, especially hard in the first place. A key to finding answer to this kind of questions is in evaluating the infrastructure of a city. Although social inequalities are constantly build up through an ongoing migration to the cities, the municipalities in the Americas can take a step to reduce from being stressed out even before an emergency occurs.

Introducing standards and support knowledge for building housing even in poor neighborhoods so that roads, sewage, water supply do not get neglected over the need for shelter. The “Movement Viva Rio” in Brazil for example successfully formed a group of City Volunteers, creating citizen committees which can rely on their own resources and organizational capabilities to effectively provide support on their own neighborhoods.

Basic health care units at the community level with trained nurses or lay health workers can insure easier access to health care and adequate responses to emerging problems. The city of Betim in Brazil for example has been working towards inverting the public service operations of its health system from an administrative led network towards an orientation of the working process according to the user's needs. Thereby Basic Health Units teams were given the responsibility for their 1,200 to 2000 users in the nearby neighborhood.

**Health care
Manager:**
Decentralize
Services

These kinds of actions will help to ease the stress of the city's infrastructure as a whole, so the system is not constantly working up to its limit and able to react flexible and creative to unexpected needs, while securing a lower impact of disasters, epidemics or migratory waves through reducing it's population's health risks and promoting its capacities.

We would like to know more, how we can help/protect ourselves, but many of us are illiterate or have no access to information resources, how can we get information spread among all groups? Why not leaving the city to work (undocumented) somewhere else – another city/region/country although this puts in situation, where there are no human rights, trafficking organizations take advantage, violence is prevalent, and bad health a certain outcome?

An answer to these questions certainly lies in taking a broader view of education. In that way education will not only empower the poor and the needy to understand the forces influencing their living situation but gives them the possibility to make changes. The challenge for the education system will be to transmit new policy perspectives to the affected populations – like migrant workers – ***who are trying to reconstruct a new personal and family history, a perspective of the future that will reduce uncertainty and hopelessness: what does sustainable development, transformation, human rights etc. mean to them?*** The need is here for easy to understand messages that touch people's immediate experience in order to have them participate in new programs.

Teacher:
Education for
women and
minority
groups

In some cases campaigning information against criminal groups might be the choice of educational outreach e.g. to combat migrant trafficking. This would include informing the population about the risk of utilizing this practice, especially for women and children and providing information about the requirements and benefits of regular migration.

Exactly 113 Dollars per month is the amount of money that fifty members of a community near Chincheros in the Peruvian highlands earned altogether by selling their potatoes. Until July last year, when they went on the internet. Since then a New York grocery store is importing “organic grown potatoes from Peru” and meanwhile the Campesinos make some 1300 Dollars per month.

José Soriano, executive director and founder of the Red Científica Peruana (Peruvian Science Web) a non-profit internet provider says, a major point on RCP's agenda is to provide internet access also to the provinces, thus decentralizing the information supply. In the long run, Soriano hopes, the news produced in and spread from the countries backland should become equal to the news from so far dominating capital Lima. That is why in the next four years RCP plans to set up thousand community centers with web access. They will be located in schools, universities development organizations and government agencies. At present in each capital of the 24 departamentos these “Peruvian Internet-Cafés” are put up, additional to the 27 already existing.

RCP is providing several services, which are hardly found anywhere else in Latin America: for example some part of the 1200 web sites get currently translated into Quechua, the most important indigenous language. The Amazon peoples of Asháninka, grinded by the guerrilla war, publish a regular information bulletin. Human rights groups announce their activities as well as the top representative of the Peruvian Parliament does. Since beginning of September the development organization Cepes sends a daily news cast in Quechua via internet, which is already broadcasted by twenty radio stations in Lima and some areas of the highlands.

This extraordinary success of Red Científica Peruana would certainly be unthinkable without its founder and executive director José Soriano. The journalist who lived twenty years abroad, who wrote for the New York Times as well as for Argentina's Clarín, has networking experience in Latin America since 1987. From the many projects he pioneered and their failures he has learned one important lesson: without a broad basis in society success is just impossible. A key factor in RCP's success story was that from the beginning universities, government and business corporations were involved in a jointly designed concept. Therefore it became, in his opinion, a non-profit initiative in Latin America that makes a difference.

The Educator

- *Education has a vital role in empowering the community and fosters the building of social capital. More attention should be paid particularly to the education of women, which is crucial in context of the family unit and its ties within the community.*
- *Health education provides short-term solutions to immediate health issues where mass media has become one of the most effective ways in dispersing health information.*
- *In times of a disaster, education and health education will lead to a coordinated response due to community mobilization as well as prevention and effective dispersion of health information throughout the community.*

Why is education an important tool in improving health of a population?

Education can lead to the empowerment of the individual for behavior modification and a sense of personal responsibility as well as empowerment, bringing many long-term health benefits. By increasing individual knowledge, education has a profound effect on health where higher education levels are strongly associated with higher health status.

Education also fosters the building of social capital within the community, where the community acquires the skills and competencies to take collective responsibility and subsequently action in improving health. Broad community participation achieved through empowerment from education often leads to the improvement of living conditions, community services and facilities and therefore resulting in a positive impact on health.

Education:
leads to
personal
responsibility
and the
building of
competencies
of a community

What are some other benefits of education?

Though the results and benefits of education might take several years to materialize, education is capable of producing profound long-term effects not only on health, but also on poverty. The far-reaching scope of education therefore is very cost-effective and health departments, education departments and economic departments should work together as a coordinated system in improving the lives of people.

What specific group should be targeted for the most effective results?

The education of women is particularly important due to the central role a woman plays in the family unit, as well as their influence on reproductive behavior, family planning, and children health. The “Kerala model” from India is one of the best examples of the effect of education on women’s empowerment. Despite of their importance, gender inequalities in Latin America continue to exist where 73% of rural women of childbearing age are illiterate. This is particularly unfortunate since education of women is strongly associated with decreased infant mortality, increased vaccination and children nutritional status and use of family planning.

Are there any short-term methods for dealing with the immediate health problems within a community?

Formal education yields many long-term benefits on general population health, while health education and promotion are short-term solutions to improving health status of a population by raising the awareness of the community to specific health issues as well as promoting prevention. Successful health education programs usually take comparatively less time to produce noticeable results, but the scope is usually limited to the specific health issues in the community.

Health Education:
targeted
means for
dealing with
specific health
issues

Guided by the principles of self-determination, empowerment, and sustainable development, both education and health are seen as critical components to the community development process in the favela of Cachoeira in Campina Grande, Brazil. The challenges regarding education stem largely from the problems of illiteracy and low-enrollment. In Cachoeira, 33% of the population is enrolled in elementary education, however 65% of the population is illiterate. From this arises a sense of powerlessness within Cachoeira from not knowing how to change social, economic, or political circumstances. Taking into consideration the socio-economic situation of the people, a major concern is the creation of programs, which are not only attractive to community members, but also how they can be integrated into their daily schedules.

It is apparent that the public school system within Campina Grande is not a sufficient means by which both children and adults within the community of Cachoeira can be educated. As an alternative, a grassroots education system is established in the Cachoeira community. This community-driven program resulted in greater autonomy and eliminated many of the negative perceptions associated with programs over which they have little control (i.e. public school system). This program also alleviated the problems of children commuting to schools outside the community. In tandem with the grassroots education system, a great deal of awareness was raised in the community to promote sustainability, proper sanitation, and health. The establishment of a health program is already on its way and with more education, trained volunteers, and resources, significant improvements in the community can be made.

Health education programs must effectively convey the urgency of the health issue as well as teach the practical means the community can deal with the health problem. Formal education of the population however, is necessary for the long-term sustainability of the community and population health.

What is the most effective way in dispersing health information?

Mass media is an excellent means of reaching the population to disperse health information and raise awareness to the public health issues, by promoting prevention and healthy behavior. It is especially effective when the health issues are incorporated into entertainment programs such as television and radio programs. People are more likely to relate when the health issues are dealt with in real-life situations. As people become receptive to the health issues, their awareness is increased and their perception to the issues is shaped. The media can affect not only health-related behaviors, but also social and cultural attitudes towards certain diseases through sympathy and increased knowledge and understanding. The role of the media also helps to foster discussion on public health issues.

Can populations adequately prepare for a disaster? How do formal education and health education play a role in disaster preparedness?

Formal education and health education in the community play crucial roles in effectively preparing for and dealing with the aftermath of a man-made or natural disaster. Since education leads to the building of social capital within the community, resources within the community will be organized and can then be effectively mobilized in the event of a disaster. With careful planning and practice, many of the effects of a disaster can be alleviated where a community is more likely to recover from a disaster and can do so in less time than as individuals.

Health education is also very important in disaster preparedness. By educating the population about warning signs, basic survival skills training, as well as the available resources within the community during a crisis, a coordinated disaster response system for the community can be set up and the effects of the disaster will be much less severe. Though the disaster itself is not preventable, but community organization and mobilization will enable the community to engage in preventive efforts against the devastating effects of a disaster.

Community Mobilization:

* Vital to disease response

* Can be achieved through formal education and health education

The Environmentalist

As we see the possibilities for agriculture and aquaculture are multiple and can be a source of economic growth for both cities and rural areas. The increase of local enterprises allows communities to create their own jobs and revenues by facilitating the process of collaboration between disciplines. Poverty and exclusion are urgent political, economic and social issues that governments need to address. The allocation of funds to the poor does not necessarily leads to less poverty; access to credit and education is a sustainable approach.

In these examples multiple benefits arise from these approaches like the reduced cost of food, improved community lifestyle, cleaner cities, conservation of fuel by avoiding transport and cooling of goods, building community self reliance, all of which translates into stronger cities able to cope better with disaster.

How do you foster urban agriculture?

Community gardens and school gardens.

- One example is urban food production in Montreal, Canada that is an official and permitted land use with 75 community garden sites totaling 6654 plots.
- In Costa Rica, the Food and Nutritional Division of Ministry of Education supports 1,500 gardens country wide which supply food to school cafeterias feeding 1/2 a million students.
- In Argentina, the Institute Nacionalde Tecnologia Agropecuaria, in conjunction with the Ministry of Health cooperates with several institutions to support gardens that reportedly directly benefit 430,000 people.
- In Lima, a hospital lends testing facilities to NGO's supporting some 252 produce gardens (household, communal, and school based).
- High school gardens are a way of, not only providing open space for water absorption in urban communities, but also creates a fundamentally unique learning process both experiential and cooperative. By learning important lessons about the environment they foster and strengthen their communities.

Community building:

supported by official policies in the use of land

Social

entrepreneurs: associated with the school system

Family coalition: working together within the neighborhood

**Bring women into the economic development using their own assets*

**Intensive use of hospital facilities if collaborate with NGO's*

An example of compost in Ethiopia and Uganda

"Where waste is collected and composted jointly in 4-6 households. Each household then takes a share of the compost produced and each household (woman) produces and sells her own food products. After one season, all of the women had earned a profit and many more families were making plans to enter the industry."

Composting

One way to prevent the pollution of rivers from waste is to turn garbage into compost. The compost can then be used to fertilize urban gardens. The rapid and unplanned growth of cities leads to difficulties in the disposal of waste. Often these waste ends up in rivers. One way of dealing with this problem in an environmentally sound manner is by turning some of this waste into compost. By preventing improper disposal we generate employment and prevent pollution. This newly created compost can be used to fertilize the urban gardens.

Another approach that deals with waste is the one taken by the Municipality of the San Juan Miraflores District in Lima, which operates a waste water treatment plant coupled to fish tanks yielding 40tons/year of Algae-fed Nile tilapia which are in great demand on Lima markets.

Discovering nature's assets

How do you prevent rural migration to the cities?

By encouraging and supporting the development of rural areas we will prevent migration to the cities. If people are able to find economic stability in their homeland they won't be forced to migrate to cities adding to unplanned settlements in risk areas such as riverbanks and deltas, making them more vulnerable when natural disasters strike.

First we should assess the needs and resources of each specific geographic area finding the natural strengths to exploit in a sustainable manner. There is a need for collaboration between the scientific academic world and the communities. An example of this is the study conducted in the use of the Moringa Oleifera which is a multi-provider tree (i.e. leaves and flowers used as a relish, oil for cooking, soap manufactured as a cosmetic base and to provide illumination). It grows in India, and in many countries of Asia, Africa, and South America. The seeds are used as a natural alternative coagulant for water and waste water treatment.

Academic settings working with agriculture workers

Another example of how to accomplish environmentally safe economic growth in rural areas will be the approach of 300 fishermen in El Llanito, Colombia (supported by the United Nations Development Program). They are removing the flooded islands of swamp vegetation that are clogging up the river's fishing area and restocking it with baby fish. Contributing to the 60% of total world fish production that comes from aquaculture. This will provide food security, employment and prevent urban migration.

Turning nature waste into economic growth in a healthy way

The Municipality of San Juan de Miraflores District, in agreement with the Pan-American Center of Sanitary Engineering and Environmental Science operates a waste treatment plant coupled to fish tanks yielding 4 tons/year of algae fed Nile Tilapia which are consumed in Lima, Peru in great demand. In an example of intense use of resources the plant also irrigates 60 ha of field crops and 290 ha of forestland.

Collaboration between continents

An U.S. based company; Indian Rock Produce Inc. distributes produce from urban agriculture to over 1000 restaurants and hotels. It sells over 800 different items with \$40,000 worth of produce passing through their doors daily.

The Media

- *The media helps develop and maintain interdisciplinary collaborations*
- *The media can be used to educate the community about healthier practices*
- *The media is a resource that can produce more non-material resources*

The media is a powerful, multi-purpose tool. It can serve as a forum to hold discussions and to develop collaborations. The media is also a useful component to sustaining health-improving projects in communities. Most importantly, it takes on a critical role when projects are first implemented in communities. It helps foster the cooperation and commitment gained through educating the community. These help to create a prepared community, and thus a healthier community whose well being is better secured.

“We found that persons between the ages of 12 and 64 in Latin America spend an average of 3.9 hours per day listening to radio. Another way of looking at this is that 16.3% of persons 12-64 in Latin America are listening to radio in a typical moment. In another note, we found that these listening levels are fairly constant over time.”
And radio is only one form of media. The media encompasses radio, TV, newspapers, journals, and others including pamphlets.

It is astounding to think about the number of people reached by the media. In much of the same way journalists use media, others can also use the media for their purposes. The partnership between The Weather Channel and the American Red Cross illustrates medical and public health workers' use of the media to educate the community about disaster preparedness and first aid.

If we believe that interdisciplinary collaborations are valuable, how would we go about beginning them?

The media can be used to enable interdisciplinary collaborations between community-level actors. It can serve to present ideas to people and thus get people thinking about the need for and value of collaborations. Once there is interest, the media can also be used as a forum where ideas are exchanged between people of diverse disciplines. This is important because it is often difficult to gather many people in one geographical place at compatible times. Similarly, the media can be used to advertise a formal meeting in which discussion will take place.

How do we implement projects in the community?

Because the media is a way of communicating, community-level actors can use it to help shape the way people think about issues and to educate them. Through this education, other community-level actors may see value in the project and so participate in the effort. By first changing the way people perceive health promoting activities, people will gain an open mind. In this way, the media can also be used to educate community members in hopes of influencing their daily practices towards healthier practices. The media can serve to cultivate working relationships in the community.

The media can also help to sustain efforts in interdisciplinary collaborations. This is because the media is a resource that can produce more non-material resources, which are needed to sustain health projects. Because the end products of community projects are slow to realize, hope and enthusiasm may wane especially in light of the sacrifice and efforts on part of the community. However, by updating people about the progression of a project and re-iterating the purpose and values behind the project, the media serves to show people that their efforts are making a difference towards an ultimate goal. Pointing out the progress can make the reality of progress actually felt. In this way, the media has maintained a valuable asset: human social capital. Through these efforts, interdisciplinary relationships may develop over time into a strong support network that works to sustain and improve health in the community.

Conclusion

Natural disasters create situations that we want to believe are fortuitous and once in a lifetime events. We face them with a sense of community, collaborating and bringing resources from all disciplines. The responses begin locally, and then become national and international. We think this is too much to be dealt with in a linear fashion; too much to be faced alone. We need each other and we have a common goal. During times of disaster it is important to see how everything is related. We understand that when one area of a city is afflicted the other parts suffer as well. We are pressed to identify the breeding sites of mosquitoes that carry dengue in neighborhoods stricken by disaster aware of the vulnerability of other neighborhoods to the disease. We worry about the spread of disease through contaminated water from broken sewer lines. We get a glimpse from television images of the nightmare of shelter and overcrowding. We understand how difficult the housing conditions are in certain area and how the non-compliance of building codes relates to the death toll. We are presented with the fact of buildings collapsing and wonder how corruption played a leading role in those deaths. We pool resources from various areas to include engineers, environmentalists, garbage collectors, doctors, the community and politicians to work together. We understand the need for a nation to incur debt to overcome the problem of a natural disaster and how that debt affects us all. We are also learning how more capable sustainable communities prevent and plan, coordinating response to minimize the damage of a disaster.

We live in a complex situation that resembles a community stricken by disaster. In this paper we wanted to emphasize the importance of structuring our daily responses to resemble those put into effect when a disaster strikes. We have assembled examples of responses from various communities each with elements in common that made them successful; necessary elements that must be fostered to strengthen our capabilities to face daily disasters and build healthier communities. We also wanted to show how these solutions can be done with a low budget and how they reflect the trend of sustainability and efficacy that the international community is looking to support and finance. These solutions come from as many sources as there are problems. We challenge you to explore your surroundings, your resources and come up with your own examples, in the hope that you come to the same conclusion we have:

- A. Community building is a necessity to prevent and face disasters.
- B. Interdisciplinary areas must be integrated and work together
- C. Communication is a key factor in finding win-win solutions to any given situation.
- D. The role of health officers must lean toward encouraging open channels of communication between what seems to be contradictory and isolated fields.
- E. We must give people the possibility to achieve economic development using local and international resources.
- F. Coalitions could also be developed in a global sense among sectors and countries facing similar problems.

As health officers we cannot know how to retrofit a house but we must know whom to ask. We cannot know where open dump-site is located but we must ask community members who may know. We cannot resolve all those problems with our budget constraints but we must know where to direct those in need. We must learn to translate efficacy not only as the number of vaccines given in a community but also the number of community gardens to fight malnutrition as health measure. The combination of strategies from interdisciplinary areas will be an effective way of preventing the infinite situations that cannot and should not be addressed only from the traditional medical care approach.

Resources

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3. Eade, Deborah. Capacity Building, An Approach to People-Centered Development, Oxfam Oxfam UK and Ireland 1997.
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10. www.bestpractices.org
11. *The National Association of Mother Centers Germany was founded 1989 in Hamburg to create a network for mother centers which had sprung up as a grassroots women's movement in Germany in the early eighties, following a format that was developed out of a research project at the German Youth Institute in Munich and spreading from three original centers to 400 in a decade. Mother centers claim public attention and space for the interests of neighborhood women and their families and create new channels for grassroots female leadership and participation in the communities valuing everyday life experience as expertise and qualification. They recreate neighborhood structures and neighborhood services that industrialization and modernization in the West and totalitarian structures in the East have dried out. They are an innovative model of how to strengthen civil society and democracy by strengthening the neighborhoods. Mother centers are places that break through the isolation and marginalization of women as mothers, creating melting pots in the community for women of diverse class and ethnic backgrounds where they are empowered by the experience of motherhood and own it on their own terms. They give mothers a political voice. Mother centers are a factor to be reckoned with in the communities and are consulted regularly by municipal agencies, as well as local, regional and national government. They have had impact on national legislation to re-channel resources to the grassroots level and have influenced urban planning and development to be more adaptive to the needs of mothers and children (family friendly housing, safe and child friendly infrastructure and environment). On national level a "mother's movement" as a necessary addition to the feminist movement has been established and recognized, conducting regular political campaigns on issues relevant to the situation of families and neighborhood women. The "success story" of the mother centers is a lesson in transferability and in fruitful partnerships.*

The Family

1. www.bestpractices.org
2. *An earthquake of 6.4 on the Richter scale hit the districts of Latur & Osmanabad and 11 surrounding districts of Maharashtra on 30th September 1993. The damages were far and wide covering over 2000 villages with property loss estimated at over Rs.1100 crores. (\$310 million USD) The Government of Maharashtra (GoM) conducted swift relief and rescue operation along with the Army, NGOs and other voluntary organisations - nationally and internationally. The main task now was rehabilitation of the affected people and preparation of a state level disaster management plan to ensure future preparedness in the event of any calamity.*

The Maharashtra Emergency Earthquake Rehabilitation Programme (MEERP) which commenced on July 01, 1994, is a multi-partnership programme of key stakeholders. The primary objective of the programme was to strengthen the capacity of the local government and ensure effective, comprehensive and satisfactory resettlement and rehabilitation of affected people and villages and to mitigate the effects of the disaster.

Five major components were included to reach their priorities:

- i. *Rescue & relief operations*
- ii. *Housing and infrastructure*
- iii. *Economic rehabilitation*
- iv. *Social rehabilitation*
- v. *Other related programmes*

In addition, issues relating to land acquisition, seismic problems, reconstruction, psychological effects and safety were also addressed.

The quantitative achievement is demonstrated by rehabilitation of over 167,000 houses, which have been strengthened, 25,700 new houses in relocated sites, 445 amenity buildings and restoration of livestock, water supply, social forestry, etc. The tangible impact of this project which is multi-faceted, complex and long lasting is demonstrated by a positive and structured relationship between the local authority (GoM), support agency (World Bank & other agencies), technical and programme management agency (TCS and other consultants) and various CBOs; who came together for the mutual benefit of each other.

Other features were:

- *Partnerships*
- *Entrepreneurial development*
- *Promotion of community participation*
- *Institutional lessons*
- *Technical and administrative skills transfer*
- *Retention of funds within community*
- *Encouraging cultural learning*
- *Enhancement of quality of life*
- *Creation of socially diverse neighborhoods*

Lessons Learned

- *Different agencies can synchronize their efforts and deliver results through an agreed project implementation plan and budgetary support*
- *Government and NGOs mutually support and complement each other*
- *Institutionalizing the project management practices upfront*
- *Possibility of an efficient management unit within a bureaucracy through delegation of powers to the MEERP leadership*
- *Community participation as a very reliable instrument for administering all corrections in project implementation and transparent decision-making*
- *Community dialogue for curbing populist expectations*
- *New technology regime could be introduced and popularized, through political and administrative support*
- *Other lessons in public administration, financial accounting*

The Migrant Worker

1. PAHO (1998): Health in the Americas, Health of Indigenous People, pp. 91 – 101.
2. *For example: because of unemployment and under-employment, the scant coverage and importance of social security, the high proportion of informally employed persons, the ambiguity of their basic skills, the high proportion of young unattached persons and the common language and culture of broad areas of the Andean region, there is an available*

labor mass in the countries of the Andean Group which moves at any sign of temporary attraction or rejection.

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6. Source: Best Practices Database: Housing Project of Rio das Flores and Rio Novo – Partner in Construction. Internet-URL www.bestpractices.org
7. Source: Best Practices Database: Integral Health Team. Internet-URL www.bestpractices.org

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Web Resources:

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<http://www.fao.org>

<http://www.cityfarmer.org>

<http://www.idre.ca>