

# Harmonized Perspectives

*Study for the harmonization of knowledge and experience from the indigenous/local, technical and scientific spheres for Disaster Risk Reduction (DRR) and Climate Change (CC) programming*



*“When Mother Nature reacts, it will not only be the Indigenous peoples or Westerners the ones to be affected by it, but all of us who will all be affected. It is time to recognize that we all live in the same house and we must all take care of it, as it has always been known by the wise men and women in the world, Mother Earth will continue its cycles with or without humans in it”.*

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## ***Executive Summary***

Central America is a region of contrasts. Its multiculturalism, pluriethnicity and its mega diversity by concentrating 9% of the planet's biological wealth) as well as their conditions of vulnerability to disasters make it an interesting region for objects of this Study. It also occupies the 10th place of vulnerability due to climate change that equally affects all Central American countries; therefore, there is a need to have a unique position as a region in the face of threats and effects of CC.

Also, the priority number three (3) of the Hyogo Framework for Action (2005) addresses the need to promote the involvement and active participation of indigenous and local communities to fulfill the objectives. Therefore, indigenous and local communities have ancestrally acquired knowledge and wisdom but also have adapted to new contexts and have become an important pillar in aspects of their worldview. Among them is to be highlighted the basic principles of respect and harmonious coexistence with nature and Mother Earth, cultivation of their own seeds, preservation of protected areas rich in biodiversity, conservation and sustainable management, as well as a comprehensive or holistic models and thematic development of the Study: Disaster Risk Reduction (DRR), Climate Change (CC) and Biodiversity.

Therefore, it is necessary to reassess and apply their knowledge and wisdom such as practices and experiences of indigenous and local communities such as growing their own seeds, interpretation of indicators of nature and other aspects of their worldview. Therefore, to avoid losing them, it is necessary to systematize their knowledge and wisdom, and deepen in studies and contributions of indigenous and local knowledge

Furthermore, due to processes of social exclusion and racial discrimination, it would be vital that indigenous and local communities are considered not as objects of projects, policies and programmes but as subjects as active stakeholders involved in making decisions in the development processes that concern them. These indigenous and local communities promote and participate in management of local issues that concern them and could contribute with community-based adaptation strategies. Therefore, it could contribute to increase its community resilience to reduce vulnerability through the contribution of their knowledge and wisdom in DRR and CCA matters.

In order to achieve this, is vitally important the mutual strengthening and recognition to the different types of knowledge as complementary. That is, to achieve a multidimensional and integrated approach, not reductionist, as the best way to deal with risk, disaster and climate change through a symbiosis of local and indigenous knowledge with the scientific and technical, and private initiative. It is therefore necessary to promote the synergy model for harmonization of knowledge and wisdom of indigenous and local issues on DRR and CCA.

Likewise, for the harmonization issues to transcend and a culture of resilience at all levels be effectively achieved, it must also be involve governmental, non-governmental and academic organizations to achieve a harmonized vision of the subjects without thematic or conceptual separation in matters of DRR, CCA and Biodiversity, in addition to a holistic approach to its institutional practices, projects, programmes and plans.

## **General Introduction**

The Study for the harmonization of knowledge and experience from the indigenous / local, technical and scientific spheres for Disaster Risk Reduction (DRR) and Climate Change (CC) programming is part of the methodology of some of the sub-programmes of the learning programme on the subject of DRR that CARE Nederland has started from July 2010 and is funded by PSO.

This sub-programme, called "Integration of knowledge and experience from the indigenous / local, technical, and scientific spheres", comes from the observation that the knowledge and experiences of the different spheres are not sufficiently integrated into the programming of DRR and CC. Therefore, the objective of the sub-programme is to develop guidance on the integration of scientific projections, experiences of civil society organizations and knowledge, experiences and traditional practices in DRR and CC.

The aim of the Study is to visualize the current situation on the harmonization of scientific projections, experiences of civil society organizations and knowledge, experiences and practices related to DRR and CC, and create a basis for the guidance material, the set of indicators and training/instruction programme materials that are part of the methodology of the sub-programme.

The Study was a dynamic document that over time has been enriched by inputs from different learning workshops and capacity building in Central America and other parts of the world.

### **Geographical context**

The geographic approach of the Study is Central America, particularly the countries of Guatemala, El Salvador, Honduras, and Nicaragua. However, to sustain the synthesis of the Study the experiences of other parts of the world related to indigenous knowledge/local have used. Therefore, the intrinsic relationship of the region with the global system is not denied.

Central America, also known as Central-America, is located between North and South America, and consists of the following countries: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama<sup>1</sup>.



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<sup>1</sup> Pag. 5, Comparative analysis of frameworks and strategic plans of CDERA, CEPREDENAC and CAPRADE, REDLAC, June 2009.

Central is located in the "Ring of Fire" of the Pacific circuit with narrow land mass between the Pacific Ocean to the west and the Caribbean Sea to the east. It also presents a diverse morphology consisting of high mountains, rivers and volcanoes, valleys and floodplains and large coastal areas. Its geography predisposes to the occurrence of a large number of natural hazards such as hurricanes earthquakes, floods, droughts, landslides, volcanic eruptions, among others<sup>2</sup>. It has been said that Central America is multi-hazard scenario, given the complexity of hazards associated with phenomena of different origins come together in the Isthmian territory<sup>3</sup>.

Similarly, with some regularity is affected by major events and numerous small and medium-scale recurring events, suffering significant delays in their processes of economic and social development due to the impact of these events in society, its population, infrastructure and ecosystems<sup>4</sup>.

Far from diminishing, disasters in Central America have increased steadily over the past three decades. This increase is linked to the dynamics of construction taking place in the social environment, leading in turn:

- The concentration of most vulnerable social groups on risk areas, with low economic capacity to absorb the impact of disasters and recover from its effects;
- Improper use of land and human settlements in hazard-prone areas such as hillsides of rivers and wetlands, combined with living conditions, fragile and insecure, with poor social and services infrastructure;
- The impoverishment of rural areas and the gradual increase in threat levels through the processes of environmental degradation; and
- A weak capacity for risk reduction and risk management into the development process, by public and private institutions, and national and local governments<sup>5</sup>.

Additionally, a factor that influences the occurrence of disasters is the depletion characterizing important rural fringes of the Central American population, whose living conditions have been deteriorating and depend on complex livelihood strategies such as seasonal migration<sup>6</sup>.

Central America has always been a multicultural region, nevertheless in the last ten years processes of constitutional and legal recognition of this condition have been initiated. The constitutional recognition of the multiethnic and multicultural nature of societies is one of aspect in Central America that has advanced the most. That is the preamble of five of the seven constitutions in the region. There has also been progress with the signing of the ILO Convention 169. For example, to date, several countries (Honduras, Guatemala, Nicaragua and Costa Rica) have ratified the international convention, which represents the most important legal instrument for the protection of the rights of indigenous and African descent. However, in some constitutions and other legal instruments it is recognize or differently outlined cultural, territorial and self-management rights to indigenous peoples or nations<sup>7</sup>.

In 2000, the indigenous people of Central America have been estimated at between 6 and 7 million people. Mesoamerican languages and cultures extend from Yucatan and Chiapas (Mexico) to Matambú in the peninsula of Nicoya (Costa Rica). Their presence is massive in the highlands and the lowlands of Peten, Guatemala, and dispersing as it descends into Honduras, El Salvador and Nicaragua. Indigenous peoples inhabit the southeastern lowlands of the Caribbean slope in the mountains of Talamanca (Costa Rica) and in several enclaves of central Honduras. On the one hand, the Lenca culture, located in the mountains of western Honduras and eastern El Salvador, is set in a transitional space between indigenous Mesoamerican cultures and the Central American southeast. On the other hand, the African descendants are living on the coasts of Belize, Guatemala and Honduras, and Laguna de Perlas, in the Mosquitia in Nicaragua. The African descendants who speak Creole English are located along the

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<sup>2</sup> Ibid, Pag. 5.

<sup>3</sup> Overview of trends in disaster risk management in Central America 10 years after Hurricane Mitch, REDLAC, Pag. 22.

<sup>4</sup> Op. cit. Pag. 5.

<sup>5</sup> Ibid. Pag. 6.

<sup>6</sup> Ibid. Pag. 6.

<sup>7</sup> Summary of Chapter 8: The challenge of multiculturalism in the Second Report on Human Development in Central America and Panama, 2003, <http://www.estadonacion.or.cr>

Caribbean coast of the region, including the small islands near the coast in the central and southeast of the Isthmus of Panama<sup>8</sup>.

### **Conceptual context**

Besides the geographical context and vulnerability to disaster risks and climate change in the countries considered for the Study, there is a wealth of indigenous knowledge that has been divulged for generations, that has been internalized by the communities through a socialization process and it is part of their lifestyle. Such indigenous knowledge is a valuable national resource that can facilitate the process of prevention, preparedness and response to disasters and phenomena related to climate change in an economical, sustainable and participatory way. In addition, there is also the presence of local knowledge that refers to the knowledge of the practices and beliefs of people living in vulnerable areas.

Therefore, it is worth noting the importance of methodological approaches and scientific techniques with those of the indigenous/local knowledge that could open pathways to greater resilience of communities living in high risk disasters areas, and be better prepared for climate changes.

In addition, in priority number 3 of the Hyogo Framework for Action, it is outlined the importance of such indigenous/local knowledge. Therefore, several international platforms in DRR<sup>9</sup> have emphasized the need to include indigenous/local knowledge in DRR and CC programming. However, despite the advocacy carried out for the use of indigenous/local knowledge with scientific knowledge, so far, there have been few initiatives<sup>10</sup> that demonstrate how they could link the two types of knowledge to achieve greater resilience to natural and anthropogenic phenomena.

This Study will focus on building community resilience to vulnerabilities caused by the disaster risks, they in turn are increased by climate change and taking into account the added value of indigenous and local knowledge. In the same manner, it will demonstrate a clear link with the themes of DRR, CC and Biodiversity.

On the other hand, the issue of indigenous and local knowledge is heading towards a global ascent, as several international organizations have included the importance of indigenous and local knowledge in their programming, dialogues and agreements.

For purposes of this Study the indigenous and local knowledge is defined as: "It refers to the accumulation and complexity of knowledge, skills, practices and representations that are maintained and developed by people over an extended history of interactions with the natural environment. These cognitive systems are part of a complex that also includes language, attachment to context or place, spirituality and worldview"<sup>11</sup>. Also, it has been noted that in many cultures, the "rational" or "objective" cannot be separated from the "sacred" or "intuitive." Nature and culture are not opposed and have no defined limits. The knowledge, practices and representations are intertwined and mutually dependent<sup>12</sup>. The definition of indigenous and local knowledge will be explored in more detail in the chapter: Worldview of indigenous peoples in DRR, CC and Biodiversity/Ecosystems.

In this Study the term harmonization will be used rather than integration as it has been noted that during learning workshops on the subject in the region, that "harmonization" includes the understanding that knowledge is complementary and that each provides its own value and therefore better reflects the purpose of the topic. Additionally, using "harmonization" avoids confrontational positions and promotes the use of the best of each perspective.

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<sup>8</sup> Summary of Chapter 8: The challenge of multiculturalism in the Second Report on Human Development in Central America and Panama, 2003, <http://www.estadonacion.or.cr>

<sup>9</sup> The 2007 Provention Forum - Dar es Salaam Tanzania. UNISDR 2008 - Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region. Global Network 2009 - Views from the Frontline report VOICE 2009 - Policy recommendations.

<sup>10</sup> Framework for integrating indigenous and scientific knowledge for disaster risk reduction, J. Mercer, I. Kelman, L. Taranis and S. Suchet-Pearson, 2009.

<sup>11</sup> UNESCO – LINKS: [http://portal.unesco.org/science/en/ev.php-URL\\_ID=2034&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=2034&URL_DO=DO_TOPIC&URL_SECTION=201.html)

<sup>12</sup> UNESCO – LINKS, Ibid.

### Study Content

As an innovative theme, the team of experts found difficulties in visualizing the connections between different subjects for the Study essence to be understood and widely disseminated. Therefore, we sought a smooth construction of the content in order to facilitate a better understanding.

To create a common understanding of the various themes, the Study begins with specific explanations of 1) Indigenous peoples and their perspective to the DRR and CC, 2) Biodiversity, 3) CC viewed as a threat and 4) DRR. This general explanation ends with the organizational and legal context of the thematic at global, regional and national levels.

Later on, through a model of synergy, added value is visualized in the local and indigenous knowledge in actions related to DRR, CC and Biodiversity, followed by an explanation of different success stories of the harmonization of local and indigenous knowledge. Finally, the Study ends with some conclusions and recommendations from the team of experts.

The annexes provide more detailed information on some concepts and issues raised in the Study as well as relevant data on indigenous peoples in countries that are part of the geographic focus of this Study.

### The authors

The team of experts who developed the Study is comprised of the following persons:

Name	Specialization
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Enma Leticia Díaz Lara	Protected areas, biodiversity, environmental impact assessment, and environmental public policy
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## ***Worldview of indigenous peoples in DRR, CC and Biodiversity /Ecosystems***

The following are some thoughts on Worldview of Indigenous Peoples in the climate change, risk management, ecosystems and biodiversity framework. These reflections stem from the wisdom of old men and women of indigenous peoples; in its essence this knowledge contains the essence of the life of indigenous peoples worldwide.

### **What is Worldview for Indigenous Peoples?**

It is based on holistic and harmonious relationship of all elements of Mother Earth<sup>13</sup> and the universe. In which the human being is one of the beings that are part of Mother Earth. It is the practice and lifestyle of its inhabitants to live with respect, understanding, communication, interaction and interconnection with Mother Earth and the Universe<sup>14</sup>. As mentioned by the Indigenous Peoples of South America, is "our Mother Earth or Pachamama, who gives us food, cares for us, protects us and loves us, we belong to her".

### **Meaning of life for indigenous peoples**

For indigenous peoples, the existence is to live in complement with other beings of Mother Earth and the Cosmos. The life of an insect is as important as the life of rivers, and mountains. Life is not just for humans but is all that exists in the Universe. Within the worldview of indigenous peoples all living beings deserve to be respected, respect for the life of each being generates harmony and joy, because in this way no violence is inflicted in the existence of others. All living beings are interrelated. Indigenous peoples in their worldview and lifestyle have respected the existence of mountains, hills, water, air, light and all the forces existing in the Universe and in Mother Earth<sup>15</sup>. "Life is creation while it has point of origin; is a permanent vibrational energy that is materializing in the course of time." "Life is born from a vibrating condensed eclosion/emergence, from this point on it starts to develop into its diverse expressions. Each of the parts that have formed is the representation of the origin"<sup>16 17</sup>. In this sense, the worldview of indigenous peoples is a way of life, whose cultural systems which seeks a profound level of realization of the human being, — personal, family and as a substantial part of the collectivity — plant/crops, animal, mineral and cosmic.

However, today many of these practices have been affected by the lack of attention and care of the same people. Therefore, it is necessary to initiate a process of re evaluation, systematizing this knowledge but above all put them into practice, to assist the States in the affirmative actions in favor of Mother Earth.

### **Risk Management and Climate Change from the reflection of Indigenous Peoples**

From the indigenous peoples cosmo-perception<sup>18</sup> adaptation to climate change is not conceived, because this is the result of the imbalance and fall of humanity, its disconnection from the life of the universe, their lack of awareness that everything that exists is closely related including the human community and everything that happens to any of these interconnected parts, it also affects others. The materialization of humanity has generated the climate change by the imbalance of the different systems

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<sup>13</sup> The Organization of the United Nations assumed the 22 April 2009 to declare the International Day of Mother Earth: "Mother Earth is a common expression used to refer to the planet Earth in a number of countries and regions, which shows the interdependence between human beings, the other living species and the planet that we all inhabit, "According to Resolution 63/278 of the United Nations "Earth and its ecosystems are our home, and (...) to achieve a fair balance between economic, social and environmental needs of present and future generations, it is necessary to promote harmony with nature and the Earth".

<sup>14</sup> Rosenda Camey's own creation. 2010.

<sup>15</sup> Ibid. R. Camey 2010.

<sup>16</sup> UNDP. Mayan Worldview. Fullness of life. P. 31. 2006.

<sup>17</sup> Camey Huz, Donato, Domingo López, Daniel and Camey Huz, Rosenda. Guidelines for the creation and operation of a mental health model for and by indigenous peoples in the institutionalization of the State. 2009, Pag. 20, 22 and 27.

<sup>18</sup> Cosmoperception: Perception of the Universe. The human body is a complex sensor that has 20 sensors, the Mayan people used these 20 sensors understanding how one perceives the universe through them. We do not perceive only with the vision but with a complex sensor that is in permanent connection internally and externally with the universe. Sensors, means, that any organ or part of the body which is perceived by the universe, the energy and movement of the time and space, it is what makes us come into contact with everything.



that coexist in the universe. This imbalance, resulting from the order that mankind has accomplished at its convenience, has generated disharmony in various spheres of the life of living beings<sup>19</sup>.

The process of adaptation to the climatic change is a human reaction upon seeing how destructive the current model of industrial development has been for the planet and Mother Earth. Indigenous peoples of the world reject adaptation to climate change because they always, like peoples have not been consulted on the actions of large multinational companies, who have been the major cause of climate change.

Therefore, continue with this logic of development model, is to condemn humanity and other living beings to total extinction, is to watch Mother Earth agonizing, to know who is killing it and not act; (Camey, Donato) "is to recognize that we are also dying and not seek solutions or take action to save our lives".

Risk management is a practice of the indigenous peoples has been occurring on a daily basis since its beginnings. Observation of the journey of time, the stars; interpretations of the messages of the clouds, air, water, animals, the sacred hills, of the movements of the body, messages received through dreams, into the sacred fire; are some examples that can be mentioned. Through them, predictions have been possible on the different manifestations of Mother Nature, which has prevented disaster in the human dimension; this is called living in connection and communication with other living beings<sup>20</sup>.

"Risk Management is is to re take this vision of becoming one with your body and learn again to walk as brothers and sisters, with profound respect for life, all animals are disappearing due to global warming, for every creature that will come after us, our proposal is to be heard, to bring together government policies from our point of view, not only taking into account the economic interests of enterprises, but also the care through different and urgent measures because the pollution continues to advance, and the damage we will be received by all"<sup>21</sup>.

### **Preventive Actions for climate change and risk management from the knowledge and wisdom of the Indigenous Peoples**

Vivian Camacho, Quechua from Bolivia, indicates that "we as indigenous peoples should continue caring for the natural seeds, seeds that guard life information so we can have good food, genetically modified organisms are poison to life, they poison plants, soil, water with toxic agro used for its cultivation. Rediscovering and applying our ancestral forms of organic production in harmony with Mother Earth can once again regenerate the living tissue of the injured soil. In addition to respecting each cycle again, welcoming the sun and the seasons with songs, music and rituals, as we have always done, because they hear us, they also grieve, and rejoice when we thank them. Mother Earth is happy when we talk to her through our sacred fires, our ancestors celebrate that life is still sacred to our people, so it is important to strengthen this endogenous wisdom of every place, of every culture that knows what is life within life, energy within a larger field of energy. Permanently terminate the use of agro toxics because they contaminate the plants, fruits and vegetables we eat, as well as to poison and kill including underground aquifers, and kill the tiny species that in balance act on the skin of soil to create the required feeding circuitry between land and plants<sup>22</sup>, as well as pollution in human bodies".

In the framework of the Climate Change, from the perspective of the indigenous peoples, it is claimed that preventive actions can be taken, through the connection and communication with the universe. However, those who must urgently act, are the businesses and large industries and countries that have so immoderately exploited the creation and universal formation; its economic logic is destroying life because never before has humanity been as destructive as in the last hundred years since the model of industrial development.

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<sup>19</sup> Donato Camey self reflection. November 2010.

<sup>20</sup> Ibid. D. Camey. 2010.

<sup>21</sup> Vivian Camacho self reflection of Bolivian Indigenous woman. 2010.

<sup>22</sup> Ibid. Vivian Camacho. 2010.

“The great grandmothers and grandfathers have left a wealth of wisdom for humanity to live fully; it provides full knowledge of the manifestations of other living beings, then, if other manifestations of life are known disaster prevention will be achieved in the human collective.”

It is also necessary to feed, communicate, dialogue with these forces that we see and not see, this action is achieved through the sacred fire, which is the means or channel by which we can talk about the fullness of life”<sup>23</sup>.

#### **Added value of ancestral indigenous knowledge**

The indigenous knowledge and wisdom is based on a profound respect for nature and the cosmos Risk management is based on a territorial organization which takes into account the natural course of the rivers for example an area of protection and care of the rivers there are no housing settlements, so as not to cause new vulnerabilities. In this sense, it also means an agreement between man and nature from a perspective of mutual respect. In this manner, it strengthens and awakens the human potential for a harmonious relationship with all living beings living in the natural environment because this knowledge is not alien to their lives. In the communities coexistence there are still many daily practices, but are not recognized as part of the indigenous knowledge; therefore, there is an awakening of this knowledge for the well being and wholeness of life of the communities.

It is therefore, important to conduct a consultation process with stakeholders/actors and participants involved in the definition and decisions of public policies, plans and other aspects specific for human development of the communities. This can be achieved at the community structures level, such as female and male elders, in municipal management, to listen to the existing voices and wisdom that are applies and in the communities. The recommendation arises from the consultations that should be taken into account in the implementation with its due recognition.

The key is to recognize that these skills are important to the fullness of life of communities. Which are recognized by international and national legal frameworks<sup>24</sup>, as part of their rights as indigenous peoples.

#### **Inclusion of Indigenous Peoples in Programmes**

Indigenous peoples are part of the population and the network of they are part of local ancestral, municipal, and national authorities. They are present in all Central American countries, where traditional structures and institutions with their own forms of interaction, are often made invisible by the government institutional structure. However, it is important to empower their participation as key stakeholders in policy making, projects and plans decisions that will be for their benefit. Therefore, it is important to create communication mechanisms in the communities, to listen to them, consult them and above all give them a place in structures and decision making space. For example, through the creation of an Advisory Council to advise this decision-making structure and ensure that recommendations are respected and taken into account, in order to nurture mutual trust, the sustainability of the interrelationship and the positive impact of knowledge and indigenous wisdom on the results and achievements in the programmes and plans.

#### **Example of ancient practice in monitoring and implementation in programmes and projects**

In Prohabitat, a reconstruction program after Hurricane Stan in Guatemala, implemented by the UN System-UNDP, the surviving population of Panabaj, Santiago Atitlan, a town buried by a landslide caused by the tropical storm. Indigenous municipal authorities insisted on consulting the spiritual guides and of the Mayan Tzutujil Peoples to request authorization and recommendation to the grandfathers and grandmothers about where to rebuild their community. Technicians and engineers of the reconstruction program respected their advice and the selected location. During the next tropical storm Agatha in 2010, several surrounding communities were severely damaged; however, the new rebuilt community suffered no damage. Many donors saw this example as a lesson learned, of joint work combining both academic knowledge and indigenous knowledge to build safe, healthy and resilient communities. In the

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<sup>23</sup> Ibid. Donato Camey.

<sup>24</sup> Convention 169. Universal Declaration of the Rights of Indigenous Peoples. Peace Accords, Constitution of the Republic.

Central America level, is the only concrete experience observed, therefore it is important to systematize it as lesson learned, on account of the importance of decision-making in the framework of risk management, taking into account the comments and decisions of female and male elders to decide on different situations that affect their environmental and social surroundings.

### **Indigenous knowledge and its contribution to community resilience**

To address the issue of indigenous knowledge, one must begin with the following general considerations:

- Indigenous peoples are diverse. However, in this Study we will focus on indigenous peoples of the Central America area;
- The issue of knowledge is complex and in the process of understanding;
- The environmental issue is in continuous development and reorientation.

So far there is no single criterion to define "indigenous peoples," among experts. Previously, the general idea of the West was closely related to the "native" in the original sense and nuanced folk tribes, nations and non-Western groups. However, there is now a more accepted definition, more realistic of these societies, such as expressed by José R. Martínez Cobo, the Special Commissioner of the Subcommittee on Prevention of Discrimination and Protection of Minorities of the United Nations: "Indigenous communities, peoples and nations are those that have a history of continuity with pre-invasion and pre-colonial society that have developed in their territories, they consider themselves distinct from other sectors of society now prevailing in their territories or parts of them. These indigenous communities are part of the non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories and their ethnic identity, the basis of *their continued existence as peoples, according to their cultural patterns, social institutions and legal systems*"<sup>25</sup>.

Among the Indigenous Peoples themselves, it is almost unquestionably to adopt the notion of indigenous peoples, to whom who applies the ILO Convention 169, particularly set out in Article 1, Paragraphs 1 and 2, which reads:

- a) tribal peoples in independent countries, whose social, cultural and economic conditions distinguish them from other sectors of the national community, and that are regulated completely or partially by their own customs or special legislation;
- b) peoples in independent countries who are regarded as indigenous on account of their populations living in the country or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state borders and that, whatever their legal status, retain all their own social, economic, cultural and political, or part thereof.

Despite the diversity of indigenous peoples in general, and to those of the Central American region in particular, characteristics of its indigenous knowledge exists with regard to the environment, which can be recognized as a common denominator among them. For example, ecological knowledge, environmental ethics, cultural traditions, and the connection to the place, as they have been analyzed by Jennifer Baumwoll<sup>26</sup>.

It is recognized that at disasters time, all human beings the world are not affected in the same way. National, regional and global inequalities are abysmal, where the poor suffer the worst consequences of disasters, the effects of climate change and the loss of biodiversity and the surrounding ecosystems. Nevertheless, due to historical and social factors, indigenous peoples today are often among the poorest and most vulnerable to cope with these environmental problems.

Although not all indigenous peoples of the Central America region are affected the same way. Many of them live in areas previously unexplored by the outside world. However, today these areas are being exploited by foreign capital companies. This represents a new form of colonization, which means neither progress, much less respectful of the indigenous peoples or their knowledge. Such exploitation

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<sup>25</sup> M. Cobo, "Study of the Problem against Indigenous Populations," vol. v, *Conclusions, Proposals and Recommendations*, UN Doc E/CN.4/Sub.2 1986/7, Add. 4 para 379, (1986/7). Free translation.

<sup>26</sup> Jennifer Baumwoll. The Value of Indigenous Knowledge for Disaster Risk Reduction: A Unique Assessment Tool for Reducing Community Vulnerability to Natural Disasters. Thesis. 2008.

of natural resources are some of the major current problems, as these can often be done within indigenous territories, without prior consultation of the people involved.

However, the effects of degradation and environmental disasters, management of biodiversity and ecosystems are specific areas in which indigenous people can contribute their knowledge to the community resilience. In a brief literature review, indigenous peoples have their own knowledge and have contributed to their own concept of development and sustainability. Given the experience of the region, we can mention that while in the non-Indigenous point of view, nature must be controlled and exploited, the indigenous point of view of nature is that of a mother who is cherished and respected because she provides and maintains life. In general, indigenous knowledge are diverse, mostly of a preventive nature, based on the components of the surrounding nature, constantly developed by its own specialists experts, that tend to be female or male elderly, passed from one generation to the next and with roots in the appreciation of nature, the creation of the world and the spiritual or religious. These bodies of knowledge form a cultural heritage of indigenous wisdom until now little known, understood and valued.

Some studies have thrown light on different aspects of the issue of indigenous knowledge. To begin with, we mention that there is much debate on similar concepts, such as traditional knowledge, folk knowledge, and indigenous knowledge and there is no universal consensus on them. For example, conceptually the distinction is made between "indigenous knowledge" and "local knowledge", noticing that the former is included in the second<sup>27</sup>. It is said that local knowledge includes a greater number of people and communities who live in rural or urban areas. It is knowledge acquired through practice and experience and is aware of their usefulness because it is said that local knowledge *"involves the total of perceptions, beliefs, understandings, and skills that one or more members of a community use or potentially uses to communicate about and manipulate the world. "World" means in this sense the physical environment and constructed and also the social, economic and political conditions affecting the production and consumption at the local level"*<sup>28</sup>.

It is also recognized that local knowledge has dynamic characteristics. Ben Wisner (2009) states that local knowledge is not entirely "traditional" (handed down from generation to generation) because it leads to believe that people have no ability to adapt to new circumstances or contexts. The same author shows that local knowledge is not a "museum of tradition," but is in constant production and the trend is towards increasing hybridization<sup>29</sup>.

Indigenous knowledge is often treated with a short-sighted and superficial approach, which takes away their comprehensiveness. For example, environmental conservation can be identified by the stakeholders/actors collectively in a comprehensive manner including the community and having common sense with the ancient knowledge of the community. In addition, indigenous knowledge is dynamic and is in a differentiated relationship with the outside world, as UNESCO has described, dynamic and evolving - reconstituted, recreated and reviewed by each subsequent generation by the holders of the knowledge<sup>30</sup>.

Similarly, indigenous knowledge also implies a political dimension, in the sense of recognizing the people's own knowledge, as established in ILO Convention 169<sup>31</sup>. In this context, it is an ancestral knowledge, with intergenerational transfer, but this is not unalterable before the changes in time and circumstances. Part of it lies in the philosophical ways of thinking about time, which is not only a linear opposition against the cyclical. For example, the notion of time among the Maya peoples

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<sup>27</sup> Durgadas Mukhopadhyay. Indigenous Knowledge and Construction of Safe School Buildings for Combating Disasters. Theme: Community Preparedness for Disaster Prevention and Response. Sparta Institute of Social Studies. International Conference on School Safety (A Golden Jubilee Initiative) 14-16 May 2008, Islamabad, Pakistan.

<sup>28</sup> Ben Wisner, Dr "Local Knowledge and Disaster Risk Reduction". Keynote. Side Meeting on Indigenous Knowledge Global Platform for Disaster Reduction, Geneva, 17 June 2009. DESTIN, London School of Economics; Aon Benfield Hazard Research Centre, University College London; Environmental Studies Program, Oberlin College, USA. Pag. 1.

<sup>29</sup> Ben Wisner, Dr. Ibid. Pag. 2-3.

<sup>30</sup> UNESCO, "Safeguarding the Transmission of Local and Indigenous Knowledge of Nature". Working document for experts meeting, (Nagoya, Japan, 14-15 April 2005). Free translation.

<sup>31</sup> Convention concerning Indigenous and Tribal Peoples in Independent Countries (Note: Date of entry into force: 05:09:1991.) <http://www.ilo.org/ilolex/spanish/convdisp1.htm>

of Mesoamerica has been explained as follows: "The Maya are always attentive to the assertions of models of the past in the events, but do not expect past to repeat to be repeated exactly the same"<sup>32</sup>. Despite the distinctions of all these types of knowledge, they are essential to be considered in the prevention, mitigation, and response and disaster preparedness.

Therefore, the best way to deal with risk and disasters is to make a symbiosis of local and indigenous knowledge with scientific and private initiative ones. However, part of indigenous knowledge in these thematic have been poorly studied and therefore systematized. This makes it a difficult area to study that requires a change in attitudes and values.

On the other hand, Mukhopadhyay (2008) provides several examples of the application of local knowledge ranging from generation to generation in places like India, Himalaya, Bangladesh, Afghanistan and Turkey. This indigenous knowledge is broad, based on respect for nature, to prevent or mitigate the ravages of nature by developing a friendly technology with her. In China, the Karez is a type of irrigation system that uses traditional technology but is being strengthened with modern technology<sup>33</sup>.

There are several documented cases of application of indigenous knowledge for DRR<sup>34</sup>, which need to be known by the principal people responsible for public policy relevant to their involvement and funding. *"Indigenous knowledge about the paths of storms and wind patterns allows people to design with plenty of time how to handle disasters, building properly certain types of shelter, structures that break the wind, walls and fences of their house"*<sup>35</sup>. Just as the color of clouds, the height of location of the nests of birds, thunder and lightning of the first rains, are examples to predict and respond to hailstorms, floods or other disasters<sup>36</sup>. The construction of houses using local materials and technology in case of earthquakes in the region of Kashmir in India<sup>37</sup>, in some cases with minimal assistance from modern technology<sup>38</sup> or the planting of bamboo for the conservation of soil and water<sup>39</sup>; to the involvement of legends, rituals and indigenous architecture in the case of Simeulue and other indigenous peoples of Indonesia and the Indian Ocean coast<sup>40</sup>.

To assess this type of knowledge is necessary to create means of access. One is through participatory research with the population itself. This PAR (Participatory Action Research, for its acronym in English) should be done carefully so that they collected the life skills of women and children, as well as the young people. It is also important to involve each and everyone in the process, with trust between people of the communities and those outside them<sup>41</sup>. In the same way, these participatory studies should include a time for feedback for the results study to be validated by all stakeholders.

There are also some efforts to link indigenous knowledge to non-Indians, on topics of DRR, CC, or at the ecosystem level and/or biodiversity. However, the participation of indigenous peoples must be

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<sup>32</sup> Tedlock, Dennis (translator). Popol Vuh. A Touchstone Book. Published by Simon and Schuster, Inc. NY. 1985:64.

<sup>33</sup> Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region. International Strategy for Disaster Reduction. Kyoto University / European Union. Bangkok, July 2008.

<sup>34</sup> Ibid.

<sup>35</sup> Durgadas Mukhopadhyay. Cultural values, indigenous knowledge for climate change adaptations in developing countries. *Delhi University, Economics Department, Noida, India. Climate Change: Global Risks, Challenges and Decisions IOP Publishing IOP Conf. Free Translation.*

<sup>36</sup> Ibid.

<sup>37</sup> Amir Ali Khan. State of Jammu & Kashmir, Northern India Earthquake Safe Traditional House Construction Practices. In *Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region*. Bangkok. 2008. Pp 5-17.

<sup>38</sup> Anshu Sharma and Mihir Joshi. *Barmer, Rajasthan, India. Indigenous Knowledge and Modern Science give Environment Friendly Shelter Solution in Flood Affected Desert Region of India*. SEEDS. In: *Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region*. Bangkok. 2008. Pp.9-21.

<sup>39</sup> Irene Stephen, Rajiv Dutta Chowdhury and Debashish Nath. Nandeswar Village in Goalpara District, Assam, India Soil and Water Conservation through Bamboo Plantation: A Disaster Management Technique Adopted by the People of Nandeswar, Assam. In: *Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region*. Bangkok. 2008. Pp 14-16.

<sup>40</sup> Koen Meyers and Puteri Watson. Simeulue, Nias and Siberut, Indonesia Legend, Ritual and Architecture on the Ring of Fire. In: *Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region*. Bangkok. 2008. Pp. 17-22.

<sup>41</sup> Ben Wisner, Dr. Ibid. Pag. 7. Free Translation.

active and include their needs and interests, who are often opposed to their governments, or the global economies the policies. Paule Gros and Douglas Nakashima (2008), refer the profound knowledge of indigenous Mayangn primarily and to a lesser extent the Miskito, on the nature of its territory. With this knowledge, indigenous people of Nicaragua have not only survived respecting nature, but also preventing and preparing for possible disasters and/or the collapse of it. Mayangna have been actively involved in a synergistic project with scientific knowledge to preserve and value their language and their knowledge of nature. In addition, Mayangnah have taken seriously the custody of their territory granted by the Nicaraguan government since 2005, controlling and safeguarding the agricultural frontier an important biological reserve of America<sup>42</sup>.

The importance of understanding indigenous knowledge and its relation to climate change has initiated several action strategies with international cooperation. The LINKS program of UNESCO is an example, as this program emphasizes the empowerment of indigenous peoples to strengthen and pass on their knowledge generationally<sup>43</sup>. In addition, it makes a reference, that thanks to the knowledge and strategies followed by the indigenous Simeuleu of Indonesia, the earthquake and tsunami that devastated the coasts of the Indian Ocean from Southeast Asia to the East African coast, taking approximately 250,000 lives, the impact of these natural phenomena in them was minimal, with the loss of the lives of 7 people. The program also gathers knowledge about biodiversity in the case of indigenous Mayanga of the Atlantic coast of Nicaragua and Chile's Mapuche on the tree *Araucaria imbricata* that is essential to the ecosystem and its economic and cultural life, among other experiences. This shows that it is possible to establish a dialogue between sciences and indigenous knowledge in order to mitigate and better adapt to the effects of climate change.

On the other hand, some donors have recognized the reduction of global biological diversity, but mostly affecting indigenous peoples. The FAO estimates that between 720-400 of the 900 million people living in rural areas are indigenous, by this reason it has integrated indigenous knowledge into their programs and projects globally. The FAO refers to indigenous knowledge as *"Traditional knowledge is maintained by experts and non-experts and people from local communities, this is proper, owned and developed collectively and individually and is transmitted through written, oral, or other forms among cultures, generations, groups of populations, communities, households and individuals"*<sup>44</sup>.

Climate and climatological change in general are not entirely new and indigenous communities have and are reacting to them. Climate variability and prior climate change have developed knowledge and strategies for mitigation and response in rural communities for their own food security. The importance of this knowledge has social repercussions, because of this, FAO indicates that the loss of this knowledge and resilience results in increased food insecurity, poverty and conflict as livelihoods decline and biodiversity disappears<sup>45</sup>.

### **Harmonization of the different areas is possible and necessary**

While we cannot escape or ignore disasters or the effects of climate change, a contribution can be made in terms of prevention and protection of the beings coexisting with Mother Earth, globally and in specific contexts, including the human being. While scientific knowledge provides tools to deal with these phenomena with technology and advanced studies, these resources are difficult to apply especially in the regions inhabited by poor and/or isolated or marginalized communities.

Indigenous communities have been largely excluded from development processes within a context of human right. This means the decision and active participation in an empowerment process. Indigenous peoples maintain a comprehensive knowledge of nature linked to social, economic and political process that need to be know, understand and incorporate to the universal scientific knowledge to design a better world for all living beings. In this regard, indigenous knowledge entails a sacred sense and

<sup>42</sup> Paule Gros and Douglas Nakashima. "Mayangna knowledge deep in the heart of Mesoamerica". In: A World of SCIENCE, Vol. 6, No. 4, October–December 2008. Pp. 17-19.

<sup>43</sup> Douglas Nakashima. The Local & Indigenous Knowledge Systems programme of UNESCO. LINKS programme, Division of Science Policy for Sustainable Development, UNESCO. UPDATE 76 July / September 2007. Published on 5 November 2007. Pp. 20-23.

<sup>44</sup> FAO and traditional knowledge: the linkages with sustainability, food security and climate change Impacts. [copyright@fao.org](mailto:copyright@fao.org) © FAO 2009. Pag. 3. Free Translation.

<sup>45</sup> Ibid. Pag. 4-5.

possesses effective cultural communication vehicles<sup>46</sup> and a closer and friendly knowledge with nature to contribute to humanity and to the well-being of future generations.

It is therefore necessary to combine approaches of harmonization of respect and application of indigenous knowledge, discipline, communication and immediate cooperation. In the past, despite its advanced technological development, Japan has shown that indigenous knowledge and technology on flood mitigation has been developed and tested over a period of time and has been considered effective in the country<sup>47</sup>.

However, we need more in-depth knowledge of indigenous and local knowledge, to verify their strengths and needs, to carry out comparative studies at different in key global points and undertake joint actions accountable to the effects of change in the climate and climate change; as well as the conservation and management of biodiversity and ecosystems of Central America region.

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<sup>46</sup> This is the case of the art and story-telling tradition among the Simeulue in Indonesian the 2004 tsunami, which preserved many lives, studied by Jennifer Baumwoll, *The Value of IK*.

<sup>47</sup> Yukiko Takeuchi and Rajib Shaw. Gifu Prefecture, Japan Traditional Flood Disaster Reduction Measures in Japan. In: *Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region*. Bangkok. 2008. *Pp.*23-26.

## ***General introduction to the thematic of Biodiversity / Ecosystems***

### **Biodiversity / Ecosystems in general**

From a general way the richness biodiversity is not evenly distributed in the world, it is found only in a few regions, generally located in the tropics. The same dynamic applies to countries considered mega-diverse.

Under these conditions, Central America becomes very relevant and it enjoys these attributes due to its location and its unique shape of the isthmus, which has allowed him to play an important role not only in the region but in the hemisphere. Of the seven countries of Central America they occupy just 0.51% of the territory emerged from the planet, but in these countries are concentrated about 9% of the world's biological wealth. Additionally, two of the nine countries known to be mega-diverse<sup>48</sup> are in the region, these are Costa Rica and Guatemala. On the other hand, the region is a cultural bridge, of an encounter between maya-nahuátl and macro macro chibcha.

The representativeness of species, gives a special importance to Central America in terms of its natural wealth, since it contains about a million different species of organisms, which coexist with about 40 million Central Americans, yet it is regrettable that more half of this population lives in poverty. Paradoxically, Central America ranked tenth in vulnerability in relation to climate change, which makes them more prone to extreme natural events affecting the quality of life of the population<sup>49</sup>, although it is estimated that Central America produces less than 0.5% carbon on the planet<sup>50</sup>.

However, there are opportunities in the region to take benefit of, such as the American System of Protected Areas (SICAP) and the Technical Committee on Biodiversity<sup>51</sup>. Then there is also the initiative of the Mesoamerican Biological Corridor (MBC), a multinational proposal, responsible for the conservation and protection of ecological connectivity in an effort to work through the Central American isthmus, being its core objective to maintain and protect landscape and environment, and provides support for important issues such as biodiversity, communication, environmental economics, policies and legislation in Central America. Similarly, Central America has the Central American Policy for Integrated Risk Management (PCGIR), the Action Plan for Integrated Water Management (PACADIRH), and the Central American Strategy for Integrated Water Resources Management (ECAGIRH) Regional Disaster Reduction Plan (PRRD), among others.

In that sense, it is important to use these instruments and highlight the importance of biodiversity in the provision of goods and services necessary for the survival of humanity. But we also must recognize that biodiversity has intrinsic value, which also requires conservation. At the same dimension it should be noted, the contribution that biodiversity for disaster risk reduction and climate change is today one of the greatest challenges to be solved.

Under these conditions an agenda must be elaborated with binding and integrated initiatives for the conservation of biodiversity through the management of protected areas, this as an opportunity for improved disaster risk management with greater intensities and increased by climate change. This approach will substantially benefit the sustainable development of Central America; otherwise it would become a growing threat.

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<sup>48</sup> The countries with the greatest biodiversity index of the Earth are called Megadiverse, nine of these are found in America (Mexico, Guatemala, Costa Rica, Brazil, Colombia, Ecuador, Peru, Bolivia and Venezuela), four in Africa and six in Asia. It is estimated that as a whole they harbor more than 70% of the biodiversity of the planet, assuming their territories are 10% of the surface of the planet.

<sup>49</sup> Rajendra Pachauri, Nobel Prize 2007.

<sup>50</sup> <http://www.eclac.org/mexico/cambioclimatico/estudio.html>

<sup>51</sup> CCAD: Technical committees have been established in compliance with Article IX of the Convention Establishing the Commission on Environment and Development, CCAD (1989), which creates and Technical Committees to which they are entitled to advise the Commission and carry out specific tasks are conferred by it; they will be coordinated by a Secretary.



Additionally, to succeed and achieve this task requires a wide and effective participation of indigenous and local communities in managing protected areas and biodiversity management, as well as taking into consideration their knowledge and ancestral wisdom. Cultural ecosystem services are increasingly recognized as critical factors in human welfare, through the maintenance of cultural traditions, cultural identity and spirituality<sup>52</sup>.

### **Biodiversity concept**

Biological Diversity or Biodiversity is part of the Convention on Biological Diversity which became effective on December 29, 1993. This is a general global agreement on all aspects of biodiversity: Genetic resources, species and ecosystems, therefore, its definition will be under this framework<sup>53</sup>.

Biological Diversity means the variability among living organisms from all sources, including genes, diversity, species diversity, ecosystems, diversity (terrestrial, marine and other aquatic ecosystems) and the ecological complexes of which they are part; comprising diversity within species, between species and ecosystems. Ecosystems are understood as a dynamic complex of plant communities, animals and micro-organisms communities and their non-living environment interacting as a functional unit<sup>54</sup>.

Biodiversity is the term used to describe these broad life forms that inhabit the earth, which includes human and cultural diversity. This is the variety of ecosystems<sup>55</sup>, species and genes that are on the earth, the result of an evolutionary process of four thousand five hundred million years. It is combination of life forms that interacts with each other and their environment, which has allowed the earth to be livable and also unique, offering a wide range of goods and services that sustain life<sup>56</sup>.

To ensure that biodiversity is preserved, the Convention itself requires member countries to develop comprehensive and sustainable strategies for the conservation of Biological Diversity and a one of the major means of reaching them is through the establishment of protected areas<sup>57</sup>, who provide a range of environmental goods and services while preserving natural and cultural heritage, that contribute to the eradication of poverty and are an excellent strategy to reduce the effects of extreme events.

### **Goods and services of Biodiversity<sup>58</sup>**

To speak about the contribution of Biodiversity is a broad topic, but despite that people depend on biodiversity in their daily lives, is not visible its importance for survival. Biodiversity has multipurpose and covers for different areas: environmental, social, economic, political, and spiritual - cultural. Given this versatility, the conservation of biodiversity is becoming the core strategy for disaster risk reduction and climate change.

Biodiversity is the natural capital of nations and the maintenance of this wealth is the guarantee for the plant crop varieties (agro biodiversity)<sup>59</sup> and animals, production of medicines and other wood products, fuel and fiber, housing and construction materials, air purification and decomposition of wastes, stabilization and moderation of the Earth's climate, moderating floods, droughts, extreme temperatures and wind strength, generation and renewal of soil fertility, including nutrient cycling,

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<sup>52</sup> GEO4.

<sup>53</sup> CDB 1992; IPCC 2008.

<sup>54</sup> DBD 1992/CONAP 2010.

<sup>55</sup> Systems that make up, such as forests, wetlands, mountains, deserts, lakes, rivers and landscapes, which has been achieved through billions of years of evolution, through a natural process which has been transformed through the intervention human intervention.

<sup>56</sup> Secretariat of the Convention on Biological Diversity, 2000/CONAMA/CONAP/OTECBIO, 2001.

<sup>57</sup> The Convention on Biological Diversity (CBD) defines a protected area as "a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives" / a clearly defined geographical area, recognized, dedicated and managed, through legal or other effective means to achieve long-term conservation of nature and its ecosystem services and cultural values. CDB/IUCN.

<sup>58</sup> From the Indigenous Peoples conceptualization, biodiversity is not a good or service, but the harmonious relationship with Mother Earth, which means respect.

<sup>59</sup> ADRS.2007: The present and future capacity of the world to feed a growing population and strengthen the resistance to climate change depends on agrobiodiversity.

pollination of plants, including many crops, the contribution to the hydrological cycle, and also spiritual, cultural and aesthetic benefits<sup>60</sup>.

All these benefits are unique and irreplaceable but it is worth highlighting the fact that biodiversity contributes to climate because, as indicated aids stabilization and climate moderation, extreme temperatures, as well as to events extreme hydrometeorological (floods and droughts).

An example for disaster risk reduction is the conservation of mangroves<sup>61</sup> which help reduce or prevent impacts from extreme events. Mangroves play a vital role in protecting against coastal storms (hurricanes, typhoons) and tsunamis (stabilization of coastal areas), it helps to prevent erosion, are systems of early protection against the rise average sea level. Indeed, the maintenance of these coastal wetlands is vital to prevent the flooding of ports and cities to be an effective way to reduce the risk of flood disasters<sup>62</sup>.

Another important strategy to reduce the risk of drought disaster is through the conservation of agricultural biodiversity. It is therefore important to promote opportunities for indigenous and local communities to participate in the development, implementation and local management of national biodiversity strategies, action plans and programmes on agricultural biodiversity<sup>63</sup>.

There are examples of local species that adapt to the changing environment and also have a high nutritional value, are species that do not require inputs which means that it reduces impacts by pollutants into the atmosphere and soil; they are accessible, easy to reproduce, and further strengthens its identity with social groups in the region, rescuing cultural values.

The CBD recognizes the close and traditional dependence of indigenous and local biological resources and the need to ensure that these communities will receive part of the benefits derived from the recognition and respect of their knowledge and traditional practices with regard to the conservation and sustainable use of biological biodiversity. Currently, biodiversity also includes human diversity (cultural) which influences its use and therefore the impact of its effects<sup>64</sup>. Central America being rich in biological and cultural diversity has a great opportunity to link these particularities in compliance with the objectives of the Convention on Biological Diversity<sup>65</sup>.

Finally, we want to highlight the importance of basins, for the conservation of Biodiversity, and also water provisions for different uses of the various stakeholders and sectors of society. However, nowadays, the basins are also conducive of pollution solids and solids drag due to the lack of watershed management, extending these problems to the sea, creating a potential disaster risks. Disasters as manifestations of risk from its impacts are defined territorial boundaries. Many times, the "territory of causality" tends to differ substantially from the "impact area" even though when compared with other unique factors they may coincide. This becomes important especially when it comes to administrative units or even to different national territories such as water basins<sup>66</sup>.

In that sense, it is important to consider the Integrated Water Resources Management (IWRM)<sup>67</sup> as a strategy for adaptation and for disaster risk reduction. In the basins large impacts are provoked due to deforestation and washing of sediments causing flooding downstream. Therefore another strategy to reduce vulnerability must be initiated through the integrated watershed management, where

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<sup>60</sup> GEO4 2007.

<sup>61</sup> Mangroves are also the core of the food chain for most of the commercial species; also add nutrients that go to the continental platform by supporting the feeding of other species are of value as feeding sites for migratory birds among others. In this regard its hydrobiological importance is immeasurable.

<sup>62</sup> JICA/TNC 2009.

<sup>63</sup> Von Humboldt. 2009.

<sup>64</sup> CDB 2,010 GEO4 2007.

<sup>65</sup> Convention on Biological Diversity (CBD) has three main goals: the conservation of biodiversity, sustainable use of components of biodiversity and the fair and equitable sharing of benefits arising from the use of genetic resources.

<sup>66</sup> Central American Policy on Integral Risk Management, 2010.

<sup>67</sup> GIWRM: A process that promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

reforestation, hydrological planning, hydrological governance, comprehensive view must be taken into consideration<sup>68</sup>.

### **Loss of Biodiversity**

Biodiversity loss is due to different pressures, within these the changing use of the land, fragmentation of ecosystems, habitat degradation, the overexploitation of species, the illegal trafficking of wildlife specimens is considered one of the illicit activities that mobilizes large sums of money at an international level, causing serious impacts on Biodiversity<sup>69</sup>.

Concern about the consequences of this loss and change of biodiversity has increased, to the extent that we have more disasters and populations become more vulnerable to these losses. Nowadays water pollution is another concern mainly due to the discharge of wastewater to receiving bodies, as well as solid waste, which is causing water problems in these hydro ecosystems.

Pollution is considered an element of risk to human health and ecosystem health as it provokes eutrophication<sup>70</sup> which alters the food chain. That is why in addition to reforestation efforts to protect water, forests, land and related resources, also drinking water and sanitation are essential to achieving the Millennium Development Goals that are the most cost-effective measures to reduce poverty, chronic malnutrition, rates of morbidity and infant and maternal mortality and school dropout rate, as expressed in various international reports. Sanitation is definitely a key element in ensuring the health of ecosystems which will have a positive impact on human health, the economy and also reduces the risk of disasters<sup>71</sup>.

### **Modalities for the conservation of biodiversity**

One of the main ways to reduce the risk of biodiversity loss is through the establishment and management of protected areas in different categories<sup>72</sup> which provide a range of goods and ecological services while retaining the cultural and natural heritage<sup>73</sup>.

An important modality that ensures the success of the conservation of protected areas is the co-administration or participatory co-management<sup>74</sup> of protected areas in conjunction with indigenous peoples and local groups. There are already Central America co-administration initiatives that have created alliances between government and civil society, which impacts positively on the management of conservation areas. This relationship between the parties should be done from the time of the planning of the area, and in the development of the management plan. Of equal importance is receiving benefits from these areas, which transcend the rest of the community.

The CBD recognizes the close and traditional dependence of indigenous and local communities with regard to biological resources and the need to ensure that these communities receive a share of the profits arising from the use of their knowledge and practices in relation to the conservation and sustainable use of biodiversity. Currently, biodiversity also includes human diversity (cultural) which influences the use of biodiversity also and the result of its effects<sup>75</sup>.

In the case of this unique and vulnerable region, Central America should consider the management of protected areas and sub-systems, this to avoid islands of conservation, which helps to reduce fragmentation. This can be done at the level of landscaping patterns that promote connectivity for

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<sup>68</sup> GWP 2000.

<sup>69</sup> USAID/CCAD 2007.

<sup>70</sup> Eutrophication or nutrient enrichment of water produces an overgrowth of algae and other aquatic plants, which when they die they sink to the bottom of rivers, reservoirs or lakes, generating organic waste, they decompose, they consume much of the oxygen dissolved and thus can affect aquatic life and cause death by suffocation of wildlife and make the body of water in a swamp.

<sup>71</sup> SEGEPLAN. 2006.

<sup>72</sup> Management categories: protected areas for optimal management and administration are classified into different categories, which define their primary conservation objectives.

<sup>73</sup> UNEP/CBD/COP/21.

<sup>74</sup> Co-management is formalized through the signing of an agreement, where the administration of a protected area is transferred to a legal non-profit organization.

<sup>75</sup> CDB 2,010 GEO4 2007.

species, communities and ecological processes that are a key element to the conservation of biodiversity, especially in areas where human activities have changed ecosystems.

### **Biodiversity and Adaptation to Climate Change based on ecosystems**

Linking climate change and biological diversity is a topic of great importance since they are mutually interrelated. On the one hand it is important to consider the influence of climate change on biodiversity and how biodiversity changes affect climate change. Reducing the impacts of climate change on biodiversity is a key factor. The resilience of biodiversity to climate change can be improved by working to decrease the climatic stresses (pollution, loss and fragmentation of habitats, etc.) combined with conservation strategies, restoration and sustainable management.

Currently, it has been proposed the ecosystem-based adaptation as a strategy to climate change that can be accomplished, among other ways, through conservation and ecosystem management, using the "multiple" services and functions that are offered to humans.

The Ecosystem-based Adaptation (EbA) is the use of biodiversity and ecosystem services, as part of an overall adaptation strategy to help people adapt to the adverse impacts of climate change<sup>76</sup>.

Equally important is to consider the adverse impact of climate change on marine and coastal biological diversity, for example, rising sea levels, oceans acidification and coral bleaching<sup>77</sup>. This makes us reflect that biodiversity both terrestrial and marine are an important tool for adapting to climate change and especially Central America that is located between the Atlantic and Pacific oceans. In this regard, it becomes urgent use protected areas as a conservation strategy and strengthen them under the modalities of conservation indicated above.

In order to achieve this great challenge as Central American region to promote the highest level decision to incorporate in the political agenda with regard to significantly reduce the current rate of biodiversity loss. Also, the region should assess the costs of no-integration to find an overall approach that allows a better adaptation to Climate Change based on the ecosystems. These agreements must be initiated by: Reducing pollution, controlling the inappropriate use of biological diversity, prevents losses and fragmentation of ecosystems<sup>78</sup>, with particular emphasis on forests<sup>79</sup>.

At last, it is important to strengthen the systems and subsystems of protected areas and promote its connectivity<sup>80</sup>, this can be through ecological or biological corridors or landscape linkages, greenbelts and other forms of connectivity elements, restoration of degraded habitats and landscapes and to consider between marine and terrestrial landscapes and of course social participation<sup>81</sup>.

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<sup>76</sup> UICN, 2009.

<sup>77</sup> The Conference of the Parties to the CBD adopted the Programme of Work on Protected Areas in order to establish and maintain in 2010 for land areas, and in 2012, for the sea, "complete national and regional systems, effectively managed and ecologically representative protected areas" that collectively, inter alia, contribute to achieving the objectives of the Convention and the 2010 target to significantly reduce the current rate of biodiversity loss.

<sup>78</sup> Ecosystems provide a wide range of provisioning services (food, medicine, and fiber, adjustment to climate change and flooding, soil formation, providing human welfare, including health, livelihood and others.

<sup>79</sup> Forest fragmentation is one of the biggest problems facing the forests. (INAB/MARN). Identification and prioritization of forest corridors in Guatemala. 2005. P. 92.

<sup>80</sup> Landscape patterns that promote connectivity for species, biological communities and ecological processes are a key element in the conservation of nature in environments that have been modified due to human impacts. (Bennett, A. 2004).

<sup>81</sup> CDB/Biodiversity and Climate Change. 2009) / Secretariat of the Convention on Biological Diversity. (2009 / Bennett, A. (2004).

## **General thematic introduction on Climate Change Adaptation**

*"An agreement on climate in Copenhagen this year is an unequivocal requirement to prevent climate change to be left uncontrolled." - Yvo de Boer, Executive Secretary of the United Nations Framework Convention on Climate Change, August 2009*

During 2009, the issue of climate change has grown in interest, as the date approached for the COP 15<sup>82</sup>, COP is now approaching 16 in Cancun, Mexico - many analysts, politicians, international experts, media, international leaders, groups and social movements express their expectations and views on what should be expected of these conferences and meetings<sup>83</sup>. In Denmark it was developed the most important conference for the future of Mother Earth- Pacha Mama for Central American and Caribbean peoples-where you will find large populations of people and livelihoods that are highly vulnerable to climate change<sup>84</sup>. There were great expectations about the results of the conference<sup>85</sup>. U.S. president, Barack Obama made his presentation, demonstrating the government's interest and concern on the issue. The countries of the European Union also presented their letters and also China - major agreements: the United States will reduce its emissions by 7%<sup>86</sup>, the European Union committed to a 20-20-20<sup>87</sup> and China with a commitment to a 40% emissions reduction that will be achieved due to better energy efficiency<sup>88</sup>. For all these efforts to have a positive impact on future climate concentration it should not raise over the 350 ppm<sup>89</sup> established level and should maintain the commitment not to reach a temperature higher than 1.5 C°.

In this XV United Nations Conference on Climate Change, it is expected to conclude an agreement to take effect when the first phase of the Kyoto Protocol in 2012 finished. The meeting would be the culmination of a process that began in 2007 when the governments meeting at the United Nations conference on climate change held in Bali (Indonesia), launched the Bali Roadmap, a two-year negotiation process to prepare an ambitious and efficient international instrument on climate change that would give continuity to the first stage of the Kyoto Protocol. This process was carried out in two negotiation directions to establish the post-2012<sup>90</sup> commitments:

- 1) negotiations on the Framework Convention of the United Nations on Climate Change (UNFCCC) on the basis of the Bali Action Plan, and
- 2), negotiations under the Kyoto Protocol, in which the United States, has not participated, the largest emitter of greenhouse gases, due to the fact that it has not ratified the Protocol. The countries agreed that negotiations would conclude in the United Nations Conference on Climate Change to be held in Copenhagen.

The conclusions of scientific reports gave great impetus to the deliberations, in particular the Fourth Assessment Report of the 2007 of the Intergovernmental Panel on Climate Change (IPCC), which

<sup>82</sup> United Nations conference call relating to Climate Change Conference of the Parties or its acronym in English COP, the number indicates how many were made, the year 2010 COP 16 will be held in Cancun, Mexico. Note A. Ponce. Estelí. September 2010.

<sup>83</sup> Now the hope is COP 16 in Cancun, Mexico. Is the COP 16 more of the same? What role will be that each country must take especially those most affected by climate change and the poor? Note Ponce, A. October 2010.

<sup>84</sup> IPCC reports, IAACC, UNDP Human Development Report. 2008, Ehrhart et. to 2009, Angie Daze, CVCA Manual et.al 2010.

<sup>85</sup> Now hopes for a path towards a climate neutral and a joint vision for the future to address the issue of climate change are set on Cancun, Mexico. Only one irresponsible, and will have climate change anywhere in the World President of Guatemala- Álvaro Colom-reading lesson on Maya worldview and climate change at the United Nations University of Japan. October 2010.

<sup>86</sup> According to analysts at COP this corresponds to a 4% reduction is taken into account the parameters of the Kyoto Protocol.

<sup>87</sup> 20% reduction of GHG emissions from energy efficiency, 20% compliance with emissions reduction and 20% through project financing climate change mitigation. Source: Agreements COP 15. Copenhagen, Denmark. December 2009.

<sup>88</sup> Commitments by the U.S., Europe and China at COP 15, the intricacy of this commitment to China analysts say the COP is the verification of compliance. Copenhagen, Denmark. December 2009.

<sup>89</sup> Position of the Countries of Central American Integration System. November 2009. Central America on Climate Change. Presentation by Javier Perez. June 26, 2010.

<sup>90</sup> This is expected to remain active and enthusiastically set at COP 16 in Cancun Mexico now. This document is "live" and builds on the progress of a subject equal to or more dynamic than the same human actions that deserves the same brisk pace as climate change, many issues have yet to be clarified will be reflected in this document, but will be an entry point for raising awareness on the effects of climate change, measures to cope and the effects on indigenous peoples. Note A. Ponce. Estelí, November 2010.

confirmed that the average temperature of the Earth is warming, due primarily to human activities<sup>91</sup>. An accelerated negotiation process was instituted in 2008. A Conference on climate change was held in Poznan (Poland) in December of that year to take stock of the progress made. In 2009, three rounds of negotiations were held in relation to the Bali action plan in Bonn (Germany) from March 29 to April 8, from 1 to June 12 and 10 to 14 August. Before Copenhagen two meetings were held in Bangkok (Thailand), Barcelona (Spain), Berlin, China, Bonn, among many other actions and activities that have taken great strength during this period, say Post-Denmark in 2010<sup>92</sup>.

#### **The Five-Year Nairobi Work Programme<sup>93</sup>**

Following consideration of the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) and the recognition that adaptation was necessary in all countries, the Parties agreed in 2003 to begin work on the scientific, technical and socio-economic adaptation to climate change (decision 10/CP.9) specific aspects. In 2004, the tenth session of the Conference of the Parties (COP), the Parties decided to develop a five year work program under the SBSTA<sup>94</sup> (decision 1/CP.10)<sup>95</sup>. Having held further discussions at COP 11, the Parties adopted the five year work program of the SBSTA on impacts, vulnerability and adaptation to climate change and specify its purpose, expected results and scope of activities (decision 2 /COP 11).

The overall objective of the five year work program is to assist all Parties, particularly developing countries, including least developed countries and small island developing States, to improve their understanding and assessment of impacts, vulnerability and adaptation, and make informed decisions on practical measures and activities to address adaptation to climate change on a sound scientific, technical and socio-economical, taking into account climate variability and climate change, present and future<sup>96</sup>. The general approach taken to implement the Nairobi work programme primarily consisted in catalyzing the adoption of adaptation measures and to ensure that the activities and concrete results were directed to direct stakeholders at all levels and all sectors<sup>97</sup>.

#### **Implementation of the Nairobi work programme had three components:**

- a) **The implementation of specific activities mandated by the SBSTA.** These activities included the exchange of information and experiences through the submissions by the Parties and relevant organizations<sup>98</sup> (see Chapter II Progress Report Working Group Plan Nairobi 2008 and 2010).
- b) **The catalyzing of adaptation measures new and innovative in support of the Nairobi work programme.** These measures were promoted by integrating a wide range of organizations in the activities of the Nairobi work program. Also encouraged organizations and all who work in adapting to make their own activities and achieve the objective and expected outcomes of the Nairobi work program (see Chapter II Progress Report Work Plan 2008 and Nairobi Group 2010).
- c) **The spread of the concrete outcomes of the Nairobi work programme.** This component included the wide dissemination of the concrete results of the Nairobi work program. (See Chapter II Progress Report Working Group plan Nairobi 2008 and 2010).

<sup>91</sup> Although there are still others ways of thinking, and opinions about causes, the consensus is the one mentioned in this document. There are opinions that these changes are attributed to nature, a normal cycle of the earth or even sunspots. The reality is that human development over the past 70 years has contributed to this "normality" of global warming and has pushed beyond the limits that our mother earth can withstand and protect us and auto protects herself. Note A. Ponce Estelí, November 2010.

<sup>92</sup> Published by the Department of Public Information United Nations -DPI/2543C - September 2009.

<sup>93</sup> Nairobi Work Programme on impacts, vulnerability and adaptation to climate change.

<sup>94</sup> The SBSTA Subsidiary Body for Scientific and Technological Framework Convention United Nations Convention on Climate Change.

<sup>95</sup> 29<sup>th</sup> session Poznan from 1 to December 10, 2008: Summary of results of the implementation of the Nairobi work program on impacts, vulnerability and adaptation to climate change to the 28th session of the Subsidiary Body Scientific and Technological Advice.

<sup>96</sup> Decision 2/CP.11, annex, para. 1. Summary of results of implementation of the Nairobi Work Programme on impacts, vulnerability and adaptation to climate change to the 28th session of the Subsidiary Body for Scientific and Technological Advice. Page 4 para. 2, point 6.

<sup>97</sup> FCCC/SBSTA/2008/12 pag 4, paragraph. 6. Point 10.

<sup>98</sup> All of the recommendations contained in the reports of the meetings of experts and the workshops in the framework of the Nairobi work programme.

Central American Governments should take into account the international context, the main agreements and negotiations in the development of strategic plans, respecting international and human rights, to achieve integration, harmonization, alignment and ownership of their adaptation strategies as sub-region as well as, to each country member of SICA. Also, the articulation of these strategies with local processes of adaptation and risks mitigation within each country. It is necessary to build a complete set of gears that allows the articulation of these efforts, in reality; the different areas mentioned in the section of DRR are turning with everyone at their own pace, with different agendas and priorities. The question is: Who takes the role and the effort to articulate and be the shaft that engages all of these circles and spheres that have their own dynamics?, Who will assume it, and does so in the context of the sub- region and who within each country? Local governments can play an important role, but have neither sufficient expertise in the subject of adaptation and CCA nor the resources, if they had the resources to articulate these and other efforts in the territories, communities would be in a favorable position compared to current and future risks.

### **The Bali Action Plan<sup>99</sup>**

The Bali Action Plan focuses on four key issues: mitigation, adaptation, technology and financing, and includes a discussion of a "shared vision" regarding long-term cooperation and long-term global goal to reduce emissions<sup>100</sup>.

### Mitigation

In the context of international negotiations on climate change, the term "mitigation" is understood as the reduction of greenhouse gases emissions. The questions have focused on how much mitigation is needed to occur at a worldwide level? Which countries have to achieve it and how much will it cost? To agree on actions that are "measurable, reportable and verifiable" are a fundamental feature of the Bali Action Plan. For industrialized countries, the analysis has focused on the commitments to achieve legally binding emission reductions. For developing countries, the key was to determine "appropriate mitigation plans at a national level" and establish a process to record and support national actions.

### Emission Trends<sup>101</sup>

- Between 1972 and 2004, emissions of greenhouse gases increased by 70% and CO<sub>2</sub> as the major portion of Greenhouse Gases (77% of total emissions of greenhouse gases) increased by about 80%.
- If additional policies are not implemented, the projected global emissions of greenhouse gases will increase by 25 to 90% for 2030, compared with the year 2000.
- CO<sub>2</sub> emissions from energy use are likely to increase by 40 to 110% in that period.
- Mitigation costs in 2030 would exceed 3% of world GDP<sup>102</sup>.

In Central America, the effects of climate change have been specifically evident in the pattern of behavior of rainfall, the increase in extreme events such as hurricanes, storms and heavy rains, droughts and rising temperatures. At meetings of the Central American Presidents in Honduras in November 2009 and of the Vice-Presidents in 2010 in Guatemala, as well as sessions led by the Agriculture Ministers have agreed on the need for a unique position as a sub region on climate change<sup>103</sup>. The Central American dry arc will be affected by the reduction of precipitation by up to 37% according to climate scenarios of the IPCC and the elaborate country profiles. It is also likely that targeted sites temperature increase beyond the 3C°. This situation is of concern to the livelihoods of

<sup>99</sup> Report of the COP13, Bali, from 3 to 15 December 2007. Addendum. Part Two: Decisions adopted by the Conference of the Parties) FCCC/CP/2007/6/Add1, 14/03/2008. Quoted in the Position Paper on Adaptation to Climate Change. OILWATCH.

<sup>100</sup> Even if the emissions are reduced to "zero", by the cumulative effect, the effects of global warming will be impossible to stop, by which the adaptation is a reality to which the countries of the world and especially the least developed must be taken very much into account from now on development plans and national and local policies. Note A. Ponce, November 2010.

<sup>101</sup> The future effects of global warming can be reduced only if it can reduce concentrations of greenhouse gases in the Earth's atmosphere, hence a large extent, a large part of the achievements of adaptation actions, reducing disaster risk on the sustainability of livelihoods of people are linked to the efforts of developing countries and emerging contaminants to some extent. If the strategies local, national and sub-regional and disaster mitigation efforts and risk mitigation and adaptation do not have this great effort of GHG emitting countries the lives of vast populations and countries is a high risk of succumbing. The damage will be irreversible. Note A. Ponce, Estelí, March 2011.

<sup>102</sup> Source: IPCC. .

<sup>103</sup> Statement of the Central American Presidents to address climate change, Honduras November 2009.

the population that might live in those times 20 years after finalization of the present study, it is likely that it will occur in less time, the uncertainty of the data is comprehensive and therefore difficult to calculate when and how much. The Central American coast is likely to be the most affected by phenomena such as hurricanes and storms, however it is already evident the reduction of rainfall and the change in the pattern of rainfall<sup>104</sup> in these areas.

### **Throughout every process of negotiation and learning, what is Adaptation?<sup>105</sup>**

..... *"We are dealing with a global problem and therefore we should all be involved, even the so-called mega countries will be affected, which is why efforts should be everyone's and from this convention should all come out with the thought that the problem belongs to all of us, for this reason we should all be included in this process without exception" ....*<sup>106</sup>.

The term "adaptation" used in the context of international negotiations refers to the support to developing countries so that they can adapt to the inevitable effects of climate change caused by greenhouse gases already in the atmosphere. However, it is also understood that all countries have to adapt to climate change. Climate change could turn back the developing countries and fall into the trap of poverty, and to ruin the achievements accomplished to this date in connection with the Millennium Development Goals<sup>107</sup>. Environmental disasters are a reality, and adaptation to climate change - one of the 4 topics in the negotiations (the others are mitigation, technology transfer and financing and investment) - is something that all countries should do. In the case of the most vulnerable countries, such as the Southern countries, is a necessity.

"To adapt" means to make more appropriate (or for a purpose) to alter (or modify). "Adaptation" refers to the process of adaptation and the condition of being adapted. The terms have more specific interpretations in particular disciplines. In climate change literature, numerous definitions have been proposed. Referring only to the social adaptation to the climate, Burton (1992) defines it as "the process through which people reduce the adverse effects of climate on health and wellbeing and takes advantage of opportunities offered by its climatic environment".

Similarly, Smith et al. (1996) argues that "adaptation to climate change includes all adjustments in behavior or economic structure that reduces the vulnerability of society to changes in the climate system". Also referring to human adaptation, Smith (1993) describes "changes, as adjustments to improve the viability of the economic and social activities and reduce its vulnerability to climate change - both to its current variability and extreme events as well as long-term climate change". To Stakhiv (1993), the term adaptation means "any adjustment, whether passive, reactive or anticipatory, proposed as a means to mitigate the adverse consequences associated with climate change." Watson et al. (1996) defines adaptation as "the degree to which adjustments are possible in practices, processes or structures of systems to projected or actual changes of climate"<sup>108</sup> and noting that "adaptation can be spontaneous or planned and can be carried out in response to or in anticipation of changing conditions".

All these definitions refer to the settings in a system in response to (or in light of) climatic stimuli, but also indicate differences in the scope, application and interpretation of adaptation terminology. Any scientific analysis of adaptation needs to specify multiple elements, which are reflected in the questions included in Figure 2. Adaptation may be to climate change; it may also be for climate change and variability, or just for the weather. It may be in response to adverse events or vulnerabilities, but also it may be in response to opportunities. It can be in response to current expected actual, real or

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<sup>104</sup> By integrating adaptation in water and sanitation programmes in Central America, the case of STEPS III. CARE Canada and Care Honduras. April 2010.

<sup>105</sup> It must take into account that the definition of 'adaptation' that varies across different disciplines (Smithers and Smit, 1997) and has come to have a different definition in the speech of the creators of policies and in investigations of climate change, which is being used in the text.

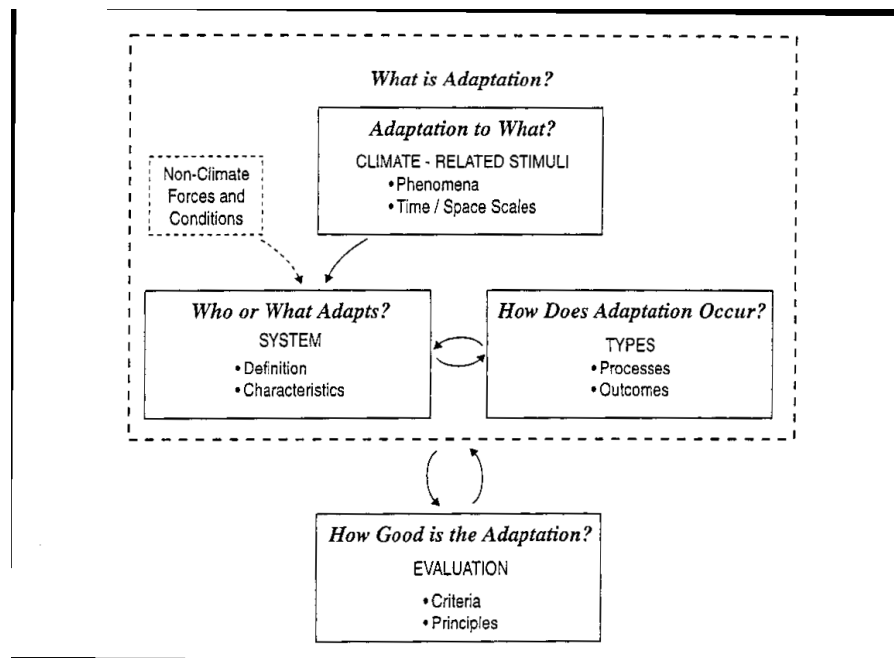
<sup>106</sup> Climate Change Conference of the United Nations. Tiajing, China October 4, 2010.

<sup>107</sup> Oxfam report. Adaptation.

<sup>108</sup> Currently the construction of local scenarios is the challenge in developing countries and local governments. The development of accessible methods, tools and information accessible and understandable to serve local strategic planning for adaptation is a necessity that should be prioritized in order to make more objective measures of real adaptation. Note A. Ponce, Estelí, 2011.



projected<sup>109</sup> conditions, changes or consequences. Therefore, analysis of adaptation must specify the stimulus for adaptive responses that are studying, ie, "adapt to what?" (Figure 2). The system on which the adjustment is made must also specify. "Who or what adapts?" They may be individuals, social and economic sectors and activities, managed or natural or ecological systems or practices, processes or structures of systems. The systems, once specified, can be distinguished by characteristics such as their ability to adaptation or vulnerability. Despite the lack of adaptation indicators it is key factor especially in local ecosystems.



From: Adaptation to Climate Change and variability (Smith et al., 1999).

There are still many questions related to climate change and its impacts on biodiversity, livelihoods and countries, all these are questions in the debate, at local, national and international levels and it is essential to look for answers. Biodiversity, livelihoods and resources have a variety of vulnerabilities, to defined threats of climate change; there are few research efforts at this moment that allows at least, with a certain acceptable level of certainty of impacts on them. Adaptation has its own specific characteristics, needs and requirements, - scientific, economic, and political and so on, that must be taken into account in local adaptation strategies. There are no recipes, while mitigation is taken as a global adaptation, efforts should be based on the local. The unification of different management frameworks has been used to improve institutional<sup>110</sup> management and strategic planning for the fight against poverty. Hazards and disasters that have occurred to this day, especially the impacts on human lives and livelihoods around the world, requires today, even more of this integration, harmonization and unification of approaches in all fields and areas where possible to reduce vulnerability. The actions of DRR - in its four main components - such as the CCA should include in a concrete way the benefits of their procedures clearly and with resources and clear indicators. Annex II presents some of the benefits and "gates" of entry where you can see the complementarities between the different approaches<sup>111</sup>. Existing resources in developing countries are insufficient to make such adjustments and adaptation - is still unknown the exact impact-. To do this, Bali decided to consolidate the Adaptation Fund (Adaptation Fund), whose secretariat will be in the Global Environmental Facility (GEF) and the

<sup>109</sup> Currently local capacity to generate non-physical and meteorological scenarios, but biological and socio-economic impacts of climate change is a significant barrier that must be bypassed in the local level. Economic capacities for these settings are very limited and slow march of global agreements. Note A. Ponce. Estelí. 2011.

<sup>110</sup> For example, a Unified Framework experience is the CARE International Management and its theory of change. Note A. Ponce November 2010.

<sup>111</sup> There are tools such as CRISTAL, CVCA, among others that allow the integration of CCA and DRR programmes and projects. CARE has validated these tools in agriculture and water and sanitation.

World Bank as the holder of the trust. The Adaptation Fund is composed of a group of 16 rotating members<sup>112</sup>.

However, the economic factor is not the main element, adaptation will be achieved when achieve a common understanding from the community based on a bottom-up horizontal and vertical. To the extent that tools such as CRISTAL, PRECIS, Handbook of Analysis and Vulnerability to Climate Change and its methodological<sup>113</sup> tools CARE, among others, become more accessible and handled more widely in the various national and local levels and scenarios transcend local meteorological data and physical and other variables including social, economic, biological, animal husbandry, food security and so on. To that extent the adaptation will be more dynamic and individual. Well, as has been said and is wedged in this study does not exist and "recipes" or unique adaptation, we must build for each region, country or community, which is the main challenge of adaptation.

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<sup>112</sup> Report of the COP13, Bali, from 3 to 15 December 2007. Addendum. Part Two: Decisions adopted by the Conference of the Parties) FCCC/CP/2007/6/Add1, 14/03/2008. Quoted in OILWATCH Position Paper on Adaptation to Climate Change. Pag 1.

<sup>113</sup> The CVCA CARE manual is available in three languages English, Spanish and French; contains several annexes methodological tools that help facilitate the discussion related specifically to climate change and local adaptation.

## General introduction on the thematic of Disaster Risk Reduction (DRR)

### Basic conceptualization<sup>114</sup>

DISASTER RISK REDUCTION (DRR)
Disaster risk reduction (DRR) is a multidimensional conceptual framework, a process whose comprehensive approach includes all actions aimed at reducing risks disaster whose intention is to avoid (prevention) and systematically limit (to prepare for/mitigate) risk in regards to human loss of life and social, economic and environmental equity from the communities and countries. These actions can be political, technical, social or economic. The RRD can assume forms as varied as the advice on the definition of policies, legislation, disaster preparedness plans, agricultural projects, insurance plans or even a swimming lesson. The approach makes it possible for people to reflect and to strive in the whole of society to ensure that everyone - from governments to individuals - make the right decisions to reduce risk and impact of disasters. In doing so, a storm or a flood that is looming may not trigger a disaster. It is crucial to change the approach that is simply a response to disasters to an approach that particularly focuses on prevention and preparedness activities <sup>115</sup> . A modern risk management for disaster reduction focuses on processes and products closer to society as a whole to a progressively larger level of social, economic and structural resilience. It focuses on the roles the different stakeholders would assume to reduce vulnerability and increase resilience of natural and humans ecosystems <sup>116</sup> .

DRR is a concept that has been structured by the Organization of the United Nations and specialized regional organizations, from the World Summits on Sustainable Development and the International Decade for Disaster Reduction 1990-1999 and 2000 - 2009<sup>117</sup>.

In 1995, the DRR is formalized with the Guidelines for the prevention of disasters and disaster preparedness and mitigation, known as the Yokohama Strategy and Action Plan for a safer world. In 2005 it is strengthened the document Building the Resilience of Nations and Communities to Disasters, known as the Hyogo Framework for Action (HFA) 2005-2015. These efforts have clear tendencies to control the causes of disasters, reduce the vulnerability of people and property, and to improve the preparation for the future<sup>118</sup>.

The primary purpose of the HFA for the decade after its adoption is *"the substantial reduction of disaster losses, in lives as in social, economic and environmental assets of communities and countries"*. In particular, the Framework identifies the need to *"promote the integration of risk reduction associated with climate variability and future climate change into strategies for disaster risk reduction and adaptation to climate change...."*<sup>119</sup>.

### Thematic axes of the DRR

#### Identification, analysis and risk assessment

Is the recognition of the territory, ie to have a complete picture of risks generating processes, of the key stakeholders in these processes and areas that may or may not be affected. Therefore, the socio-natural hazards and existing technology (frequencies, magnitudes and intensities, among others) must be identified, assess the social and structural vulnerability, and assess the risk, ie, know the social, economic and, environmental consequences that the materialization of this risk can produce<sup>120</sup>. In addition, in recent year's changes in the risks of disasters caused by climate change, demographic change and ecosystem degradation has been shown.

<sup>114</sup> To broaden the conceptualization and terminology please see Appendix 1: Glossary, CEPREDENAC, UNISDR, predict, and CARE.

<sup>115</sup> Page 4, Disaster Risk Reduction: Focus InfoResources No. 2 / 09, SDC, Switzerland, 2009.

<sup>116</sup> P. 31, National Policy to Disaster Risk Reduction in Guatemala, SE-CONRED, Guatemala, 2009.

<sup>117</sup> Systematization from consultant.

<sup>118</sup> Systematization from consultant. .

<sup>119</sup> Page 9, Climate Change and Disaster Risk Reduction, UN / ISDR, Switzerland, 2008.

<sup>120</sup> Page 17, Incorporating Risk Disaster Management in Planning and Land Management, predict, Peru, 2009.

### Preparedness of capacities and conditions for disaster risk management and disaster

Incorporating a holistic concept preparation of disaster and leave the historical reductionism with which it has been implemented, implies that the process will focus on designing or structuring strategies to manage disaster risks and disaster as two sides of same coin, with the purpose of systematically build resilient communities<sup>121</sup>:

- The organization of peoples and coordination among the various stakeholders;
- Participatory Planning of: Communities - local government – own authorities of the people;
- Design and implementation of Early Warning Systems;
- Communication and information in national languages;
- Tools and instruments;
- Official Rules and Regulations of the peoples "indigenous rights" and
- Strategy and prevention plans, response, early recovery, post disaster recovery<sup>122</sup>.

### Management: Mitigation, transference and adaptation

As a process, risk management should be considered an integral and functional component of the management process of global, sectoral, territorial, urban, local, community or family development; and of the environmental management, in pursuit of sustainability<sup>123</sup>.

### Post-disaster recovery

Whenever the post-disaster recovery phase involves public, private and community, plans must be devising for organized and integrated rebuilding with the local development policy, taking into account the physical, social, political and economic recuperation. It is therefore important not to wait to have plans after a disastrous event, but to review the policies and strategies in the event of a disaster, as well as existing regulations that make this process as transparent and versatile as possible. As applicable instruments in this line of action are strategies, policy development and specific recovery and reconstruction plans<sup>124</sup>.

### **Management levels and areas**

MANAGEMENT LEVELS AND AREAS					
Areas	(-)	Levels	(+)	Institutional	Mechanisms
International		Global		UN	Cooperation
		Continental		OAS, EU	Humanitarian Aid
		Regional		CEPREDENAC, CCAT	Emergency Assistance Scientific Research Network of Social Organization and of Peoples
National		National		President or Prime Minister	Inter-institutional Coordination
		Peoples		Ancient Authorities Councils	Network of Social Organization and of Peoples
		Regional		Departmental Governors and/or Regional	Response Humanitarian Aid Scientific Research Ancestral Knowledge and Experience
Community		Municipal		Mayors, Regent	Inter-institutional Coordination
		Communitarian		Ancient Authorities Councils	Network of Social Organization and of Peoples Ancestral Knowledge and Experience

Source: Author.

According to the Hyogo Framework for Action, it establishes three levels of management for implementation, the international, the national and community level. The direction of the relationship between levels occurs in both directions. The international collaborates with the national providing cooperation, humanitarian aid and emergency assistance that can provide and is required for risk reduction and for disaster response. The national level has different mechanisms to manage DRR in a

<sup>121</sup> P. 33, National Policy to Reduce Disaster Risk in Guatemala, SE-CONRED, Guatemala, 2009.

<sup>122</sup> Ibid. P. 33.

<sup>123</sup> Ibid. P. 33.

<sup>124</sup> Page 18, Incorporating Disaster Risk Management in Planning and Land Management, predict, Peru, 2009.

participatory manner, to address disasters and distribute aid received. The community level is the one that is taken into account in these cases, however, it has many important qualities such as organization and knowledge that begin to interact with the other areas mentioned, in that sense, and the sense of direction of the relationship builds up, establishing a dialogue and coordination, indispensable for DRR. The state's role is to facilitate and support the process of empowerment at community-level and to coordinate the institutions and of the distribution of the assistance received for the benefit of affected communities and peoples<sup>125</sup>.

### **Causes, relationships and major dynamics**

Disaster risk is a result that emerges from the development, that is, it is not a condition that arises suddenly or by external agents or factors to the development process, it is the cumulative result of political, economic and social taking place in the territory. The development process expressed as territorial processes, as the use, occupation and transformation of the territory, and sectoral processes, such as flows of goods and services, resource use and waste disposal, have a deep connection with the generation and accumulation of risk and therefore with disasters<sup>126</sup>.

The Latin America and the Caribbean countries, where disasters are a growing problem and its impact is growing are due to failures in development models and ways of occupying territory prevailing in the region. Population growth, rapid urbanization, the location of human settlements in risk areas, housing construction and infrastructure without the use of appropriate techniques and pressure on natural resources, have steadily increased the vulnerability of the population from a wide variety of natural hazards<sup>127</sup>.

Although from the technical point of view has been significant progress, still problem of disasters is not understood as an unresolved deficit in the development agenda, in the sense that disasters are not events of nature per se, but rather situations that result from imbalances in the relationship between the dynamics of the natural and human dynamics. Tangible evidence of these imbalances can be seen globally every day<sup>128</sup>.

Repeatedly, the poor are victims of the national development process, seeing that the school buildings, hospitals, homes and all their livelihoods are destroyed by floods, earthquakes or other natural hazards. However, this regression and destruction of the reported benefits of development can be largely avoided. The successful investments in risk reduction can significantly protect against such losses to both the population and the national treasury<sup>129</sup>.

85% of people exposed to earthquakes, cyclones, floods and droughts live in developing countries. The enormous cost of disasters threatens the achievement of the Millennium Development Goals, especially the first goal: Reduce poverty by half by 2015<sup>130</sup>.

The combination of developmental factors such as growth and concentration of population, technological development in industry, information and communications, the expansion of urbanized areas, the complexity of networks and infrastructure service provision and the mixture of uses and activities in the territory, generate causal relationships between socio natural and anthropogenic threats, so that the occurrence of one can lead to others, thereby in this way constituting multi-risk or multi-hazard scenarios in which it is increasingly difficult to identify and individually intervene<sup>131</sup>.

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<sup>125</sup> Systematization by consultant.

<sup>126</sup> Op. Cit. Pag. 15.

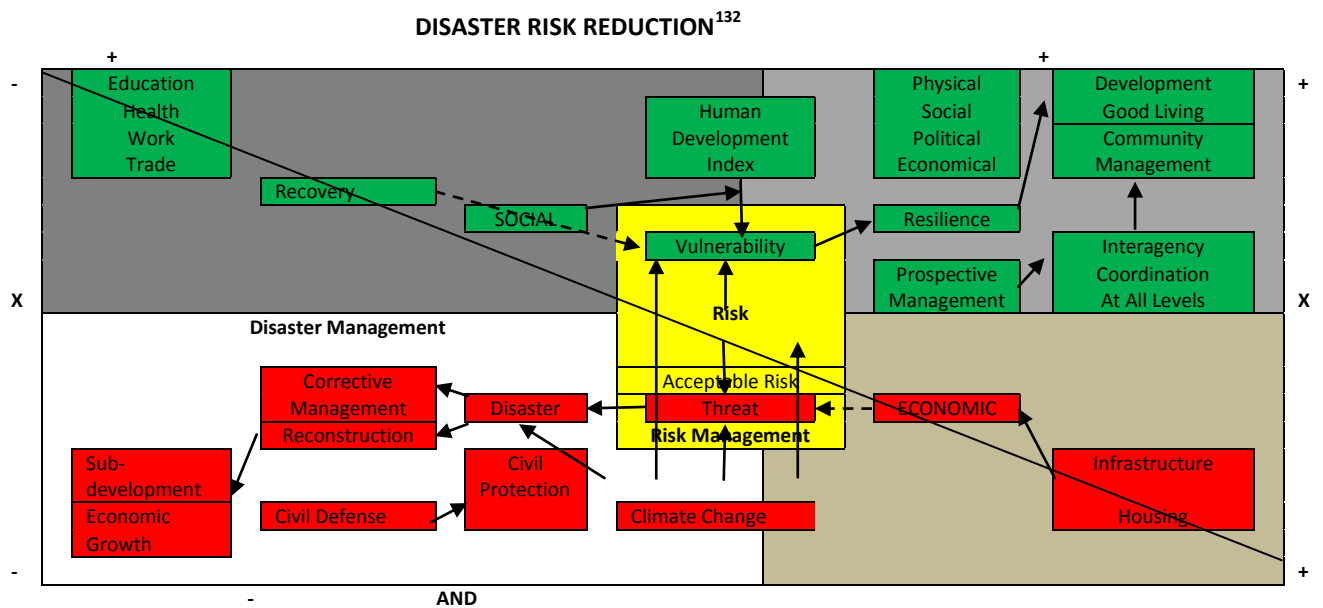
<sup>127</sup> Ibid. Pag. 5.

<sup>128</sup> Ibid. Pag. 5.

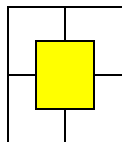
<sup>129</sup> Page 3, Disaster Risk Reduction: a tool for achieving the Millennium Development Goals. UIP, ISDR, Switzerland, 2010.

<sup>130</sup> Ibid. Pag. 8.

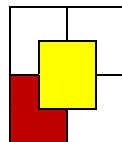
<sup>131</sup> Op. Cit. Pag. 15.



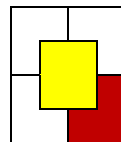
**1. Risk**



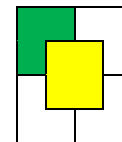
**2. Conceptual and organizational path**



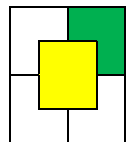
**3. Economic Growth**



**4. Human Development**



**5. DRR**



1. **Risk** as a precondition of the disaster, consists of any threat, be it natural or anthropogenic, and personal, social, peoples and communities vulnerability. Depending on its emphasis, so it will be the conceptual construction to be drawn up on disaster risk reduction DRR. There is no place or condition without risk or zero risk or null risk. Risk is the chance, great or small, that something may or may not happen and can become a disaster. The current concept of DRR placed in the center of the approach Risk Reduction, and then sets an acceptable level of Risk, which is determined by each society and person.
2. **Conceptual and organizational Path.** As we have explained, the previous concept disaster was placed in the center of the focus point, and from this perspective a series of activities and organization derived, such as disaster management, corrective, the risks and reconstruction, which maintained or deepened underdevelopment conditions and inequality of economic growth. The organization of civil defense was undertaken by the armed forces, and the subsequent civil protection, a civil-military alliance with decentralized structure. The action focused towards threat, one of the components of risk.
3. **Economic growth** focused on the construction of infrastructure, it entails urbanization and its associated potentializing threats effects.
4. **The human development approach** focuses on creating conditions for increasing and strengthening education, health, work and participation of the population to better cope with social and political situation. Here we talk about terms such as recovery of livelihoods and infrastructure. This improves the position of national human development index, in accordance with the Millennium Development Goals. This situation should reduce social vulnerability and increasing social resilience of nations.
5. **DRR** includes prevention by reducing physical, social, political, economic vulnerability, and so on, increasing social resilience and of the peoples, across the organization and interagency coordination at all levels and the management methodology prospective. It aims to achieve sustainable development, community management and the realization of the *Good Life*.

<sup>132</sup> See these and other concepts in Annex 1: Glossary, CEPREDENAC, UNISDR, PREDECAN y CARE.

## **Causes and complementary consequences**

### Population and DRR

The growth of informal settlements and slums in the urban core fueled by international immigration or internal migration from smaller urban settlements or from the countryside to the cities has led to the flowering of unstable living environments. These settlements are often located in ravines, steep slopes, in floodplains or near industrial plants or hazardous or dangerous transportation systems<sup>133</sup>. Most cities in Central America are characterized by their low capacity to deliver public services in quantity and quality.

In this decade, most of the world's population growth will occur in urban areas of Africa, Asia and Latin America and the Caribbean and, in 2007, more than half the world's population will live in cities<sup>134</sup>.

The causes of migration, both internal and international, are due to several reasons: 1. the economic structure, social and cultural exclusion: Major inequalities in access to resources and export-oriented activity based on natural resources with little transformation 2. Political conflicts, 3. The process of urbanization and reduction of rural stimulated rurality; and 4. Risks and disasters.

The negative impact of unplanned urbanization on the environment and the ecological balance is manifested in<sup>135</sup>: 1. the density of land use, 2. deforestation; 3. loss of soil cover and 4. Pollution.

The weak control on the implementation of Minimum Standards of Construction and Safety Building and Housing is an important factor in increasing vulnerability in urban areas<sup>136</sup>. In addition, deficiency of Drainage Systems and changes in Land Surface Area increases the accumulation of rain water and the sudden threat of flash floods and landslides<sup>137</sup>.

In 2005 in Central America<sup>138</sup>: 1. Areas for agriculture exports increased over 2000, replacing mostly forested areas, 2. Populated areas increased by 46%, and 3. Forests decreased by approximately 10%.

### Climate Change and DRR

"Managing risk reduction" and the so called "adaptation to climate change" should be seen, built, implemented and executed as key components of a new vision and definition of development, not as an attachment to an existing development, satisfactory but still there is room for improvement. Development must be redefined through a necessary and fundamental integration issues such as risk, gender, environment and equity. At the same time, it is imperative to realize that when operating on land degradation, territorial ordering, livelihoods and governance, as the Global Assessment Report on Risk Disaster Reduction 2009, we simultaneously progress in reducing risk and poverty, adaptation to climate change and achieving the Millennium Development Goals<sup>139</sup>.

Risk reduction management and adaptation to climate change should be seen as a transversal, transterritorial and integral management, within the framework of comprehensive development. Climate change is another expression that explains how global processes affect local processes. But also when it occurs in a world characterized by new forms of development and integration, modernization, globalization, knowledge, we know, even though not exactly, that there will be severe changes in risk factors associated with exposure and vulnerability that will be resolved only to the extent where intervention is perceived and concretized under the integrated modalities. Sectorization, the bias and specialization, although relevant, will sometimes have to be overcome with a more comprehensive and

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<sup>133</sup> Disaster risk reduction. A challenge for development. A global report; UNDP, 2004; p. iii.

<sup>134</sup> Ibid. P. iv.

<sup>135</sup> Trejo, Rosa, Department of sustainable development, OAS, January 2009.

<sup>136</sup> Trejo, Rosa, *ibid.*

<sup>137</sup> Trejo, Rosa, *ibid.*

<sup>138</sup> Trejo, Rosa, *ibid.*

<sup>139</sup> Lavell, Alan, The Risk of Disasters Occurrence, climate change, the local level and management. Environmental Observatory, USAC, URL, FLACSO, March 2011, p. 4.

holistic intervention and the relationship between poverty, poor development, disaster risk and complexity<sup>140</sup>.

### **Perspectives**

#### **Resistance to change and update**

The rapid advancement of science and the sharing of intercultural relations enriches DRR, with a wide diversity of knowledge and wisdom derived from the Worldview of Indigenous Peoples, Biodiversity and Climate Change, it also increases complexity and with it the difficulty of understanding and popular dissemination of DRR. The renovation efforts are sometimes fruitless due to the advance of science itself and intercultural relations, as well as some attitudes of officers, servers, social sectors and people in particular, for their resistance to accept new knowledge involving the necessary social transformations.

#### **The transition towards the holistic**

The current institutional separation of management for risk reduction and adaptation and mitigation of climate change must be replaced by more integrated and complementary systems where there is recognition that the risk is a poorly obtained product of processes of sectoral and territorial development and environmental management. Also, that adaptation will be possible at the reduction of vulnerability, which means that, both management for risk reduction and adaptation, should be located and treated by Institutions for development planning and of those with responsibility for planning and implementation of public and private investments<sup>141</sup>. Linkage between Climate Change and Disaster Risk is confirming the transition from the simple to the complex of the situation of the mono-causal towards realities of multi-threats and multi-risk of diverse origin, considering the anthropogenic as underlying factor.

#### **Security and Defense**

The current global security crisis, demands the integrity of approaches, and the framework and processes for DRR, do not escape it. The social perspective and sustainable development must be complemented by the approach or framework for security and defense. The American continent and especially the Central American region, in the last decade there has been a substantial progress in this field. Treaties, meetings and regional summits have worked on a conceptual basis of the threat and disaster. In this regard we can mention the Framework Treaty on Democratic Security in Central America, the creation of the Observatory and the Democratic Security Index on the Central America, Integration System, the dialogue with Mexico on Democratic Security and the recent Special Summit of Heads of States and Government Countries of Central American Integration System for the Re-launching of the Central American Integration Process. All these documents and authorities address the DRR issues.

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<sup>140</sup> Lavell, Alan, The Risk of Disasters Occurrence, climate change, the local level and management. Environmental Observatory, USAC, URL, FLACSO, March 2011, p. 4

<sup>141</sup> Ibid. Pag. 7.



## Organizational and legal context

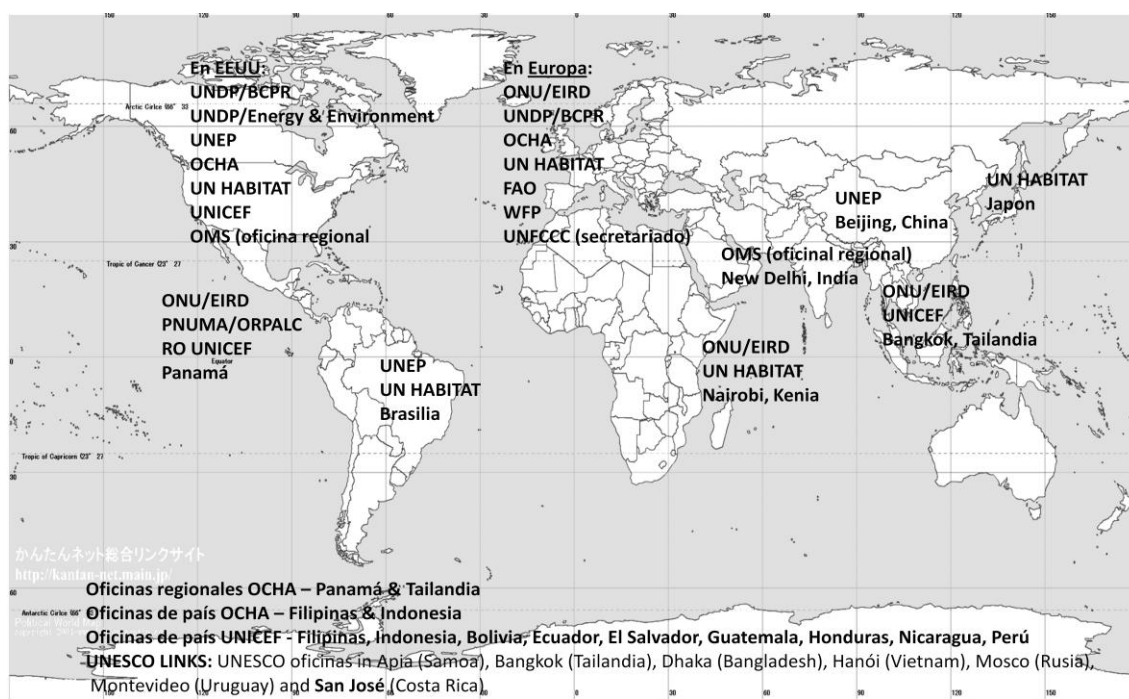
While previous chapters have mentioned that several international, regional and national organizations working on different thematics and outline the legal context, this chapter aims to summarize the information and generate an integrated approach for a better understanding of the legal and organizational context.

It will begin with an explanation of the organizational and legal context at an international level as basis for the family of United Nations (UN) followed by an explanation of the legal and organizational context in the Central America region with a specific focus on the situation in countries of Guatemala, El Salvador, Honduras and Nicaragua.

After the punctual explanations, this chapter closes with an analysis of key stakeholders who can help in facilitating the harmonization of knowledge and experience from the indigenous/local, technical and scientific spheres for DRR and CC programming indicating the name of the stakeholders, the organization description and/or mandate and an indication of the attitude, interest and contribution to harmonization.

### The United Nations family (UN)

The UN family is fully linked to the focus of this Study. Some family members are specialized in different topics<sup>142</sup>, while others take the subject as a crosscutting issue<sup>143</sup>.



Given the central thematic of this study, it is evident that members of the United Nations, working in an integrated manner. Such is the case of agriculture and food issues, where an initiative called "Delivering as One" the purpose of reducing fragmentation and make full use of the system to support development at a global, regional and national levels<sup>144</sup>.

While recognizing that indigenous and local knowledge has added value in the programming of Risk Reduction<sup>145</sup> and Agriculture<sup>146</sup>, there is still no clear vision on how the programmes might benefit from such knowledge.

<sup>142</sup> UNISDR, UNDP/BCPR, UNEP, OCHA, UNFCCC, UNESCO/LINKS.

<sup>143</sup> UNDP, FAO, WFP, UN HABITAT, Unicef, WHO.

<sup>144</sup> <http://www.fao.org/partnerships/partner-un/partners-one/es/>

<sup>145</sup> Indigenous knowledge for Disaster Risk Reduction: Good Practices and lessons learned from experiences in the Asia-Pacific Region, UNISDR, Kyoto University and ECHO, 2008.

In the contexts of United Nations, there are different conventions that are relevant to the thematic of this Study:

Convention Name	Organizations within UN	Description
Convention no. 169	ILO	International legal instrument dealing specifically with the rights of indigenous and tribal peoples. To date it has been ratified by 20 countries. After ratifying the Convention, the country has one year to align legislation, policies and programmes before it finds it legally binding.
Hyogo Framework for Action (HFA) 2005-2015	ISDR	Framework of actions for disaster risk reduction for a period of 10 years.
Kyoto Protocol	UNFCCC	International agreement to reduce gas emissions.
Convention on Biological Diversity	UNEP	Overall global agreement on all aspects of biodiversity: genetic resources, species and ecosystems, therefore, its definition will appear under this framework.

#### Other international organizations

In addition to UNS, there are other international organizations with an interest and/or they include in their programming the thematics of this Study:

- Universities as the United Nations University (UNU-IAS), Kyoto University, University of Venice and University of Michigan.
- Donors as the European Union (EU) and USAID whose focus is directed towards strengthening the community resilience priority of indigenous communities.
- NGOs such as CARE, Tearfund, GOAL, among others.
- Indigenous Knowledge for Development Program, World Bank (WB)<sup>147</sup>.
- Organization of American States (OAS), Inter-American Network for Disaster Mitigation<sup>148</sup>.
- International Centre for Integrated Mountain Development (ICIMOD)<sup>149</sup>.

#### The Central America Region

In the region of Central America with the Central American Integration System (SICA)<sup>150</sup> which is the institutional framework for regional integration created by the States of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. SICA was established in December 1991 by the Protocol to the Charter of the Organization of American States (OAS) and entered into full force formally on February 1, 1993. The creation of the SICA was endorsed by the General Assembly of the Organization of the United Nations in its resolution A/48L of December 10, 1993 that enables bodies and regional institutions of SICA to relate to the United Nations system.

The system was designed taking into account past experiences for regional integration, and the lessons bequeathed by common regional historical events, such as political crises and armed conflicts. Based on this and added to the internal constitutional changes and the existence of democratic regimes in Central America, its main objective was established, which is then carrying out of the Central American integration, to become a Region of Peace, Freedom, Democracy and Development, strongly supported in the respect, protection and promotion of human rights.

<sup>146</sup> FAO and Traditional Knowledge: The linkages with sustainability, food security and climate change impacts, FAO, 2009.

<sup>147</sup> <http://www.worldbank.org/afr/ik/iknotes.htm>

<sup>148</sup> <http://www.rimd.org/index.php>

<sup>149</sup> <http://www.icimod.org/>

<sup>150</sup> [www.sica.int](http://www.sica.int)

The three bodies within the SICA are important to the thematics of the Study:

1. Coordination Center for the Prevention of Natural Disasters in Central America (CEPREDENAC)<sup>151</sup> - a regional inter governmental organization, belonging to the SICA as the Specialized Secretariat who has a mandate to promote activities, projects and programmes that lead to disaster risk reduction that cause human and economic losses caused by socio-natural. It has a Regional Plan for Disaster Reduction (PRRD).
2. Central American Commission for Environment and Development (CCAD)<sup>152</sup> - responsible for the regional environmental agenda, its main objective is *"to contribute to the sustainable development in the Central America region, strengthening the regime of cooperation and integration for environmental management"*. It has the Central American Regional Environmental Plan (PARCA).
3. Central American Indigenous Council (CICA)<sup>153</sup> - Since 1975, indigenous peoples in Central America promote regional partnerships resulting in the establishment of the Central American Indigenous Council (CICA) that since 2005 is legally registered in Costa Rica. Since its formation the CICA has implemented programmes that seek to exercise the rights and historical recognition of the autonomy and self-determination of indigenous peoples in Central America. It has also expressed its concern about climate change through its statement at the International Forum of Indigenous Peoples on Climate Change and a draft national policy on climate change for Guatemala by the AJPU National Council in Guatemala.

In addition, the SICA facilitates the regional strategy on the issue of climate change<sup>154</sup>. In addition, Central America has different academic institutions and research centers such as CATIE<sup>155</sup>, FLACSO<sup>156</sup>, CIAT<sup>157</sup>, INCAE<sup>158</sup> and INBIO<sup>159</sup>, focusing on the topics of the Study and thus could contribute to the harmonization of knowledge.

However, regional integration in Central America gives more importance to the political organization whose sole binding issue is the trade issue. There is still a need for more involvement from the participation of civil society and indigenous peoples.

## Guatemala

The National Coordinator for Disaster Reduction (CONRED)<sup>160</sup> is the national agency responsible for disaster reduction, working before, during and after disasters. On the issue of harmonization of different types of knowledge in disaster risk reduction programming in the course of 2010, CONRED has installed a Commission on Harmonization of knowledge and wisdom of the peoples of Guatemala before DRR which was formalized in a Minute protocol at the National Palace attended by the President of the Republic on 1st December 2010<sup>161</sup>. The commission consists of 18 governmental and non governmental entities, including the Roving Embassy of the Indigenous Peoples<sup>162</sup>.

In addition, Guatemala has established a National Round table of Management Dialogue for Disaster Risk Reduction<sup>163</sup> which is the national technical multi-sectoral platform, which establishes specific responsibilities between national and local levels as established by the Hyogo Framework for Action 2005-2015. It also consists of five working committees: Risk Identification and Monitoring, Risk Reduction, Planning and Institutional Strengthening and Financial Strategy.

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<sup>151</sup> [www.sica.int/cepredenac/](http://www.sica.int/cepredenac/)

<sup>152</sup> [www.sica.int/ccad/](http://www.sica.int/ccad/)

<sup>153</sup> <http://www.cicaregional.org/>

<sup>154</sup> [www.sica.int/cambioclimatico](http://www.sica.int/cambioclimatico)

<sup>155</sup> <http://www.catie.ac.cr/magazin.asp?CodIdioma=ESP>

<sup>156</sup> <http://www.flacso.org/>

<sup>157</sup> <http://www.ciat.cgiar.org/work/latinamerica/Pages/LatinAmericaandtheCaribbean.aspx>

<sup>158</sup> <http://www.incae.edu/>

<sup>159</sup> <http://www.inbio.ac.cr/es/default.html>

<sup>160</sup> <http://conred.gob.gt/>

<sup>161</sup> <http://conred.gob.gt/index.php/secretaria-ejecutiva/notas-de-prensa/975-oficializada-comision-de-acompanamiento-de-los-pueblos-indigenas-de-guatemala-en-la-gestion-del-riesgo>

<sup>162</sup> <http://embajadaitineranteindigena.blogspot.com/>

<sup>163</sup> <http://conred.gob.gt/index.php/component/content/article/2-informaciongeneral/323-mesa-nacional-de-dialogo-en-gestion-para-la-reduccion-de-riesgo-a-desastres>

The theme of biodiversity and climate change is addressed by the Ministry of Environment and Natural Resources<sup>164</sup>.

### El Salvador

With regard to risk management there are two important government agencies:

1. Civil Protection<sup>165</sup>: Inter-institutional Coordination for the implementation for the execution of Contingency Plans and control of emergency operations.
2. National Service of Territorial Studies (SNET)<sup>166</sup>: Perform studies and monitoring of processes and phenomena of nature, environment and society, with direct and indirect relationship with the territorial dynamics and the likelihood of economic, social and environmental occurrence of losses and damages. It also provides references as to territorial threats, vulnerabilities, capacities and opportunities to improve regional decision-making for sustainable development and human security.

### Honduras

- The National Contingency Commission (COPECO)<sup>167</sup>: Governmental office that adopts policies and measures to serve the population, rehabilitation and reconstruction of areas damaged by the impact of natural disasters that affect economic activity and welfare of the population and how to program and develop different activities in order to prevent negative consequences in areas of more incidences of these phenomena.
- Ministry for the Development of Indigenous Peoples and Afro-Honduran (SEDINAFROH)<sup>168</sup>: The Ministry of State in the Office of Indigenous and Afro-Honduran (SEDINAFROH), created to pursue economic, political and social development, with identity, of indigenous peoples and Afro-Honduran: Lenca, Miskitu, Tolupanes, Pech, Maya-Chortí, Tawahka and Afro descendants of English-speaking islanders. On the other hand, has been actively involved with the extension of invitations to indigenous and African descent and their involvement in the learning process in Honduras.

In addition, in order to monitor weather events, is with the National Weather Service in Honduras<sup>169</sup>.

### Nicaragua

In Nicaragua the following governmental entities are related to the subject of the Study:

- National System for Disaster Prevention, Mitigation and Relief (SINAPRED)<sup>170</sup>: Coordinates risk reduction caused by natural and anthropogenic phenomena that affect the safety of persons, goods: promoting the construction of a culture and prevention practice in the population and all social stakeholders; encouraging the incorporation of risk management plans for institutional development and implementation of mitigation programmes and to strengthen response capacity of the nation.
- Nicaraguan Institute of Territorial Studies (INETER)<sup>171</sup>: Generates and makes available to the whole of society, basic information (Cartography, Cadastral, Meteorological, Hydrological, Geological, etc.) and research and studies of the physical environment that contribute to socioeconomic development and reducing vulnerability to natural disasters, and constantly monitor the natural hazards phenomena.
- Ministry of Environment and Natural Resources (MARENA)<sup>172</sup>: It carries the thematic of environment and climate change.

### Analysis of key stakeholders

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<sup>164</sup> <http://www.marn.gob.gt/>

<sup>165</sup> <http://www.proteccioncivil.gob.sv/>

<sup>166</sup> <http://www.snet.gob.sv/>

<sup>167</sup> <http://www.copeco.gob.hn/>

<sup>168</sup> <http://www.sedinafroh.gob.hn/>

<sup>169</sup> <http://www.smn.gob.hn/web/>

<sup>170</sup> <http://www.sinapred.gob.ni/>

<sup>171</sup> <http://www.ineter.gob.ni/>

<sup>172</sup> <http://www.marena.gob.ni/>

Based on research of available information and comments during meetings and events, the following analysis of key stakeholders has been developed in which the stakeholders are mentioned, a brief description of their organization and/or mandate, and an indication of the attitude, interest and contribution to harmonization.

Actor	Organization/Mandate	Attitude	Interest	Contribution
UNISDR	The focal point within the UN System to promote synergies and coordination between the various activities for disaster reduction, in the socio economic, humanitarian and development as well as to support the integration of the various related policies. It is a focal point for the implementation of the Hyogo Framework for Action (2005-2015). It serves as an international center for disseminating information on disaster reduction, developing awareness campaigns and producing articles, promotional materials, magazines and other publications, all related to disaster reduction.	Positive	Yes	Publication of good practices and lessons learned based on experiences in the Asian-Pacific
UNDP/BCPR	It works through more than 50 UNDP offices in the world to restore the quality of life of men, women and children who have suffered the devastating effects of natural disasters or violent conflict. The direction is a bridge between humanitarian agencies that deal with immediate needs and the agencies that promote the development. Once the recovery phase is finalized and is constantly seeking new ways to prevent conflicts to act more quickly and effectively and in riskier situations.	¿?	¿?	
UNEP	Its mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and people's ways of improving the quality of life without compromising that of future generations.	¿?	¿?	
FAO	Leads international efforts to defeat hunger. It acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy and is a source of knowledge and information.	Positive	Yes	Publication of good practices and lessons learned
WFP	It has the world view in which every man woman and child has access at all times to the power needed for an active and healthy life. Works in emergencies and recovery situations. Works together with FAO and IFAD.	¿?	¿?	
OCHA	Responsible for compiling humanitarian stakeholders to ensure a coherent response to emergencies. Ensure that there is a framework in which each actor can contribute to the overall effort.	¿?	¿?	
UN-HABITAT	Responsible for human settlements. Through its mandate promotes towns and cities socially and environmentally sustainable in order to provide adequate shelter.	¿?	¿?	

UNICEF	Collaborates with others to reduce the obstacles that poverty, violence, disease and discrimination place in the way of children.	¿?	¿?	
WHO	The directing and coordinating authority for health within the United Nations system. It is responsible for playing a leadership role in global health matters, set the agenda for health research, setting standards, articulating policy options based on evidence, provide technical support to countries and monitoring and assessing health trends	¿?	¿?	
UNESCO / LINKS	The LINKS project is an interdisciplinary initiative of UNESCO consisting of expertise in natural science, social and human science, culture, communication and information, and education. The following UNESCO offices are involved in the project LINKS: Apia (Samoa), Bangkok (Thailand), Dhaka (Bangladesh), Hanoi (Vietnam), Moscow (Russia), Montevideo (Uruguay) and San Jose (Costa Rica).	Positive	Yes	LINKS has generated several good practices and lessons learned.
CEPREDE NAC	Promote activities, projects and programmes that lead to disaster risk reduction that cause human and economic losses caused by socio-natural factors.	Positive	Yes	In its latest Strategic Plan has included the importance of knowledge and wisdom of indigenous peoples.
CCAD	Contribute to sustainable development in Central America, strengthening the regime of cooperation and integration for environmental management.	¿?	¿?	
CAIC	Has implemented programmes that seek to exercise the rights and historical recognition of the autonomy and self-determination of indigenous peoples in Central America.	¿?	¿?	
CATIE	Improves human welfare and reduces rural poverty through education, research and technical cooperation, promoting the sustainable management of agriculture and natural resources.	¿?	¿?	
FLACSO	Latin American Faculty of Social Sciences	¿?	¿?	
CIAT	Eco-efficient agriculture for the poor	¿?	¿?	
INCAE	Actively promotes the integral development of the countries it serves, developing leaders for key sectors, improving their practices, attitudes and values through: <ul style="list-style-type: none"> <li>• Research, teaching and dissemination of modern management concepts and techniques.</li> <li>• Strengthen analytical capabilities and understanding of economic, political and social phenomena.</li> <li>• Facilitating dialogue, understanding and collaboration between individuals, sectors and countries.</li> </ul>	¿?	¿?	
INBIO	Promote greater awareness of the value of biodiversity to achieve its conservation and improve the quality of human life.	¿?	¿?	

SE- CONRED	The national body of Guatemala responsible for disaster reduction, working before, during and after a disaster.	Positive	Yes	Has a Harmonization Commission promoting the harmonization of knowledge and wisdom of the people in DRR programming in the country.
Civil Protectio n	Coordination in El Salvador to implement plans for managing Contingencies Plans and control of emergency operations.	Positive	Maybe	It is the focal point and national platform of the Hyogo Framework for Action. Might be interested in strengthening and comply with the same agreement
SNET	Conduct studies and monitoring of processes and phenomena of nature, environment and society, with direct and indirect relationship with the regional dynamics and the likelihood of the occurrence of losses and economic social and environmental damage. Provide references as to territorial threats, vulnerabilities, capacities and opportunities to improve regional decision-making for sustainable development and human security.	¿?	No	
CCNIS	The CCNIS is the Salvadorian National Indigenous Coordinating Council. Founded on November 15, 1992, a body which currently brings together twenty-three at the National Indigenous Organization (Lencal and Nahuatl Indigenous Peoples).	Positive	Yes	Agrees to the creation of a commission for harmonization of knowledge.
COPECO	The government agency in Honduras that adopts policies and measures to serve the population, rehabilitation and reconstruction of areas damaged by the impact of natural phenomena, that affect economic activity and welfare of the population, and plan and pursue other activities, to prevent negative consequences in areas of more incidences of these phenomena.	Positive	Yes	
SEDINAFROH	The Secretariat of State in the Offices of Indigenous and Afro-Honduran (SEDINAFROH), established by Legislative Decree 203-2010 to find the economic, political and social, identity, of Indigenous Peoples and Afro-Honduran CA: Lenca, Miskitu, Tolupanes, Pech, Maya-Chortí, Tawahka and Afro descendants of English-speaking islanders.	Positive	Yes	
SINAPRED	In Nicaragua coordinates risk reduction caused by natural and anthropogenic natural phenomena.	¿?	¿?	
INETER	Generates and makes available to the whole society in Nicaragua, basic information (Cartography, cadastral, meteorological, hydrological, geological, etc.) and research and studies of the physical environment that contributes to socio economic development and reduces vulnerability to natural disasters; and continuously monitors the hazards natural phenomena.	Positive	Yes	INETER a member of the Nicaraguan Alliance on climate change ANACC, is a platform compounded by governmental and non governmental agencies Universities, Research Centers, which deal with the issue of climate change in an integrated way this is an effort that is under

				development but already has paid off in relation to the position of Nicaragua against climatic change. Affects at an international, regional and national level. It focuses on the "prediction" of future climate which causes inaccuracy by lack of data and resources to build these climate scenarios. They are seen as the predictor par excellence.
MARENA	It involves the thematic of environment and climate change	Positive	Yes	Has prioritized the topic of CC in their programming, has the resources, integration issues needs to be more practical. The CC is still seen as an environmental issue. However there is much political will for the harmonization and the pursuit of synergies. Leads the adaptation and mitigation process in Nicaragua. Along with INETER leading in the aspects of DRR and Climate Change which creates a very positive context to drive this process of harmonization issue in Nicaragua.



### ***Synergy model that displays the added value of indigenous and local knowledge***

As expressed in previous chapters, the worldview of Indigenous Peoples is an integral or holistic approach. Therefore, to see the added value of indigenous and local knowledge in DRR, CC and Biodiversity programming, efforts have been made to create a model of synergy between the three thematics based on the following questions: 1) What do DRR, CC and Biodiversity have in common? And 2) what is the meeting point of three approaches?

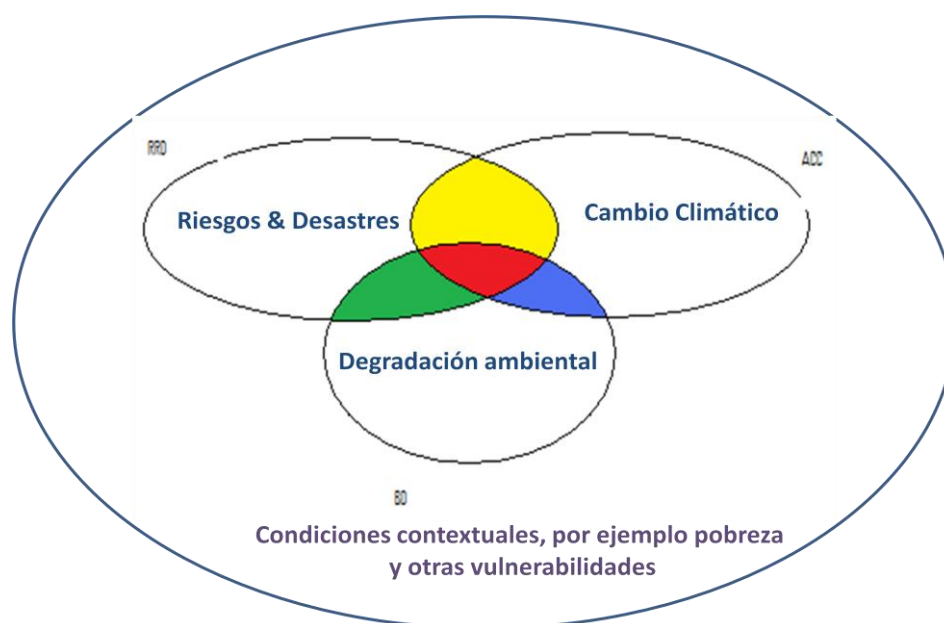
The synergy between the thematics of DRR, CC and Biodiversity has been defined through the following complementary areas:

Environmental degradation / climate change: is cyclical. Increased environmental degradation increases vulnerability to climate change in the Central American population and global warming will increase environmental degradation.

Environmental degradation / Risk and Disaster: It is cyclical. Further environmental degradation increases the vulnerability of Central American population to risks and disasters and disasters reduce the quality of life.

Risks and disasters / climate change: is not cyclical, is a sequence of dependent processes. Climate change increases threats, risks and intensity of disasters. On the other hand, disasters can affect the livelihoods and the resilience of communities.

Environmental degradation / hazards and disasters / climate change: Climate change exacerbates environmental degradation caused by the increased vulnerability of the Central American population to risks and disasters.



Due to the Central American context, there are some conditions that must be considered when working on issues of DRR, CC and Biodiversity, as in the case of poverty and other vulnerabilities. The synergy model takes these contextual conditions as an independent variable or influencing existing base in a specific way those issues without giving details.

On the other hand, the synergy model defines different levels in which there are different types of stakeholders: Global, Central American, national and community. Furthermore, to see the added value of indigenous and local knowledge, we have identified the movements and organizations of Indigenous Peoples and local organizations as key stakeholders.

The following stakeholders have been defined in the geographical scope of the Study, that within their environment and context could take into account the thematic and model of synergy in their daily work:

Level	Stakeholders
Global	<p>International Organizations that are working in this area including the UN Universities such as the United Nations University (UNU-IAS), Kyoto University, University of Venice and University of Michigan</p> <p>Donors such as the European Union (EU) and USAID whose focus is to strengthen the Community resilience with indigenous communities as priority</p> <p>NGOs like CARE, Tearfund, GOAL, among others.</p> <p>Indigenous Knowledge for Development Programme, World Bank (WB)<sup>173</sup></p> <p>Organization of American States (OAS), Inter-American Network for Disaster Mitigation<sup>174</sup></p> <p>International Centre for Integrated Mountain Development (ICIMOD)<sup>175</sup>.</p>
Central America <sup>176</sup>	<p>SICA:</p> <ul style="list-style-type: none"> <li>• CEPREDENAC</li> <li>• CCAD</li> <li>• CICA</li> <li>• Central American Parliament</li> </ul> <p>Council of Ministers (COMCO)</p> <p>Academic and research center such as CATIE, FLACSO, CIAT, INCAE and INBIO</p>
National	<p>State Institutions<sup>177</sup></p> <p>Indigenous Peoples Movements</p> <p><u>Civil Society</u><sup>178</sup>:</p> <ul style="list-style-type: none"> <li>• Academic institutions (national and regional /departmental)</li> <li>• Non Governmental organizations (Associations, Municipal Associations, ANAM, AGAAI)</li> <li>• Private Sector</li> <li>• Indigenous Organizations</li> <li>• Women's organizations</li> <li>• Cooperatives</li> </ul>
Community	<p>Present state institutions</p> <p>COCODE</p> <p>COLRED</p> <p>Board of elderly men and women</p> <p>COLSAN</p> <p>The movement of indigenous peoples, including indigenous municipalities and guilds</p> <p><u>Civil society:</u></p> <ul style="list-style-type: none"> <li>• NGOs</li> <li>• Private Sector</li> <li>• Cooperatives</li> <li>• Credit Committee</li> </ul>

<sup>173</sup> <http://www.worldbank.org/afr/ik/iknotes.htm>

<sup>174</sup> <http://www.rimd.org/index.php>

<sup>175</sup> <http://www.icimod.org/>

<sup>176</sup> The Study focuses on the four project countries, namely Guatemala, El Salvador, Honduras and Nicaragua. However, there are efforts already in Mesoamerica worth taking into account. Another observation is that in Central America lack the participation of civil society and indigenous peoples. It is also an environment where the political agenda is only binding the trade issue.

<sup>177</sup> The idea of this study is the strengthening of the State beyond the terms of office.

<sup>178</sup> Civil society is defined as anything that is not government within a nation-state.

### Added value of indigenous and local knowledge

The best way to see the added value of indigenous and local knowledge is its contribution in addressing the solutions of the causes of the areas of complementarities as defined in the synergy model mentioned above. Therefore, different tables have been created which are defined by the contributions of Indigenous Peoples for each area of complementarity.

On the other hand, in broad terms, it has been observed that the recovery, systematization and exchange of knowledge and wisdom of Indigenous Peoples would help resolve some of the problems of environmental degradation, climate change and the risks and disasters. In addition, the population to be using such knowledge, must be define and sensitize whether they are indigenous peoples or not.

<b>Environmental degradation / Risk and Disaster:</b> It is cyclical. Further environmental degradation increases the vulnerability of Central Americans population to the risks and disasters and disaster reduces the quality of life.	
<b>Causes</b>	<b>Contributions by the Indigenous Peoples (What and how?)</b>
<b>Central America</b> Inappropriate use of coastal marine and coastal resources.	Ancestral knowledge recognizes the respect of water and river and marine biodiversity in the coastal territory of the IP, considering the water as alive and as a person.
Bad management of watersheds and coastal areas.	The contribution of knowledge and practice through the active participation of indigenous ancestral authorities of the IP with their practice and sustainable management plans in integrated watershed and coastal areas.
<b>National</b> Weak central management systems that do not reduce local environmental vulnerability and Disaster Risk.	The contribution of knowledge and wisdom of the IP through the active participation of indigenous authority's ancestral practice and sustainable use of environmental management systems and Disaster Risk.
Bad practices of large and small mining.	From the indigenous worldview mining is not conceived, because the Indigenous territory is sacred.

<b>Risks and disasters / climate change:</b> is not cyclical, is a sequence of dependent processes. As climate change increases the threats, risks and intensity of disasters. Moreover, disasters can affect the livelihoods and the resilience of communities.	
<b>Effects/Impacts</b> <sup>179</sup>	<b>Contributions by the Indigenous Peoples (What and how?)</b>
<b>Central America</b> <sup>180</sup> Weak systems of national governments.	Institutional strengthening when taking into account the guidance of authorities and ancestral forms of organization of the IP.
Little incorporation of risk in the design and infrastructure development (biophysical conditions).	Based on the knowledge and wisdom of indigenous peoples, consult and ask permission from people and Mother Earth to begin construction of infrastructure. They could also contribute to practices and tools (technology) own the IP.
Increased frequency and intensity of extreme events.	The thematic of risk in their worldview and traditional organizational practices is incorporated.
Inability of systems to produce food and food security (reduction of areas to produce food and livelihoods).	IP can wisely contribute on good agricultural practices and use their own seeds for food security, in harmony with Mother Earth.
<b>National</b> Weak systems of national governments.	Institutional strengthening when taking into account the guidance of ancestral authorities and ways of IP organization
Little incorporation of risk in the design and	Based on the knowledge and wisdom of indigenous

<sup>179</sup> Emphasis is made in the sense that they are probable effects that will possibly happen in the future. In addition, climate change scenario is optimistic, intermediate and pessimistic, for example, the concentration of CO2 levels.

<sup>180</sup> The Central America region contributes in small measure to the climate change. The Central American region contributes little to climate change. This is evident because the causes are global or from other countries.

infrastructure development (biophysical conditions).	peoples, consult and ask permission from people and Mother Earth to begin construction of infrastructure. They could also contribute to practices and tools (technology) own by the IP.
Increased frequency and intensity of extreme events.	The thematic of risk in their worldview and traditional organizational practices is incorporated. They also have the ability to interpret natural indicators before the occurrence of disaster.
Reduction of potential areas for conservation and fragmentation of biodiversity.	The lifestyle of IP-based world view, knowledge and wisdom makes them have a harmonious coexistence with Mother Nature.
<b>Community</b> Increased vulnerability.	The lifestyle of IP-based world view, knowledge and wisdom will develop community resilience due to the incorporation of disaster risk vision.
Increased frequency and intensity of extreme events	The thematic of risk in their worldview and traditional organizational practices is incorporated. They also have the ability to interpret natural indicators before the occurrence of disaster.

**Environmental degradation / hazards and disasters /climate change:** Climate change exacerbates environmental degradation caused by the increased vulnerability of the Central American population to the risks and disasters.

Causes	Contributions by the Indigenous Peoples (What and how?)
<b>Global</b> Cycle: Model of economic development that leads to the scale production which increases the amount of solid and liquid wastes. Which also increases the problem due to poor education about managing wastes.	In the worldview of IP economic development is balanced and based on local needs. For example, sustainable agricultural production for home consumption. It proposes its lifestyle as an alternative to the model of life dependent on consumption.
Lifestyles dependent on consumption (petroleum, energy and consumerism).	
Model of economic development (petroleum consumption at the expense of using alternative energy). Increased petroleum consumption.	
Pollution from large industries. Greenhouse gases.	The IP can contribute to good agricultural practice with wisdom in harmony with Mother Earth.
The idea that man is the center and thus master of the universe taking nature as a material resource and not as a Mother.	From the worldview of the IP is important the awareness on how to live their own life to the fullest.
Increased demand for agricultural raw materials.	The human being is part of everything in the universe. IP can contribute wisely on good agricultural practices and use of own seeds for food security, in harmony with Mother Earth. Furthermore, with sustainable and environmentally friendly practices.
Increased deforestation.	
Growth of urban population.	
Inadequate system of GRRD and lack of a system with harmonized approach. Lack of communication between stakeholders. Lack of implementation of international conventions and other valid agreements on the subject.	Holistic and integral (non-reductionist) and contribute their knowledge and wisdom in matters of DRR and CCA. Visión holística e integral (no reduccionista) y aporte de sus conocimientos y sabidurías en asuntos de RRD y CCA.

They do not work in a separate manner because they are bound by separate efforts. If there were more openness and institutional integrity, a greater impact would be achieved.	
<b>Central America</b> Cycle: Model of economic development that leads to scale production which increases the amount of solid and liquid wastes. Which increases the problem due to poor education about waste management.	In the worldview of IP, economic development is balanced and based on local needs. Such is the case for sustainable agricultural production for home consumption.
Pollution from industries related to petroleum, energy, mining and agro-industries (sugar, coffee, cocoa, oil palm, rice). Transportation related to petroleum industries.	IP can contribute wisely on good agricultural practices and use of their own seeds for food security, in harmony with Mother Earth. Conventions and international treaties protect the IP against mining exploitation and hydrocarbons. Respect in the appropriate land use and IP territories as well as known sustainable agricultural practices that allow the recuperation of the soil fertility.
Change of use of rural land to respond to external demand for agricultural raw materials.	
It has not been taken with responsibility and political commitment to international conventions and treaties on the environment (forests, biodiversity, wetlands, etc.).	IP practice show the harmonized vision on environmental issues (forest, biodiversity, wetlands, etc.) helping the linkages of international conventions and treaties on environmental issues.
Lack of linkage of CEPREDENAC with SICA.	
The existing public forest policy does not encourage the protection of forests efficiently and equitably.	IP participation in the development and implementation of a harmonized public forest policy.
Forest management efforts do not focus on forest ecosystems and reforestation rates are not sustainable (unbalanced rate of forest ecosystems).	Since practices and technologies of IP, forests are respected from their own worldview, as the main providers of livelihoods. Moreover, the contribution of Knowledge and wisdom of the IP through the active participation of indigenous ancestral authorities of the in the integrated management plans of care and protection of forests and biodiversity.
Reduction of potential areas for conservation and habitat loss due to fragmentation of ecosystems.	
Increased vulnerability by changing the native forest cover especially broadleaf <sup>181</sup> for monocultures of conifers and other commercial species, which has an impact on the microclimate and biodiversity.	Preserve and promote the planting of own seeds and species belongs to the place.
Inability of systems to produce food and food safety (reduction of areas to produce food and livelihoods).	
Poor implementation of soil protection technologies and production (climate change).	
It does not take into account information about the potential of the soil or its application.	
Alteration of urban planning for housing development. Human settlements in urban areas of	

<sup>181</sup> Species characteristic of tropical and subtropical forests prevailing in the Central American region.

instability.	
Poor construction practices for road infrastructure.	
Inappropriate use of water resources.	Profound respect for the IP for water sources
Little preparation to deal with multi-threat effects.	Consultations for prevention (early warning systems based on indigenous and local knowledge).
Inability to plan a harmonious development.	The worldview in its practices and wisdom contributes balance and harmony with all living beings coexisting with Mother nature, establishing an ongoing dialogue with everyone.
Decline in the HDI (Human Development).	
Deterioration of the economic and social base (conflict).	
Population displacement related to climate change.	Local communities can contribute their knowledge of spontaneous adaptation, for example, planting sorghum or ducks in Vietnam.
<b><u>National</u></b> Cycle: Model of economic development that leads to the scale production which increases the amount of solid and liquid wastes. Which increases the problem due to poor education on waste managing.	In the worldview of IP economic development is balanced and based on local needs. Such is the case for sustainable agricultural production for home consumption.
Contamination by petroleum-related industries, energy, mining and agro-industries (sugar, coffee, cocoa, oil palm, rice). Transportation related to the petroleum.	IP can contribute wisely on good agricultural practices and use of their own seeds for food security, in harmony with Mother Earth. Conventions and international treaties protect the IP against the mining and hydrocarbons exploitations.
Has not been taken with responsibility and political commitment on conventions and international treaties on the environmental field (forests, biodiversity, wetlands, etc.).	The practice of Indigenous Peoples vision show harmonized environmental issues (forest, biodiversity, wetlands, etc.). Helping the connection of international conventions and treaties on environmental issues.
The existing forest policy does not encourage the protection of forests efficiently and equitably.	IP participation in the development and implementation of a harmonized public forest policy.
Forest management efforts do not focus on forest ecosystems and reforestation rates are not sustainable (unbalanced rate of forest ecosystems).	From the practices and technologies of IP, forests are respected from their own worldview, as the main providers of livelihoods. Plus, the contribution of knowledge and wisdom of the IP through the active participation of ancestral IP authorities, in the integrated management plans of care and protection of forests and biodiversity.
Deforestation of high risk slopes.	
Lack of stabilization of areas damaged by forest fires.	
Flora depredation by domestic and international demand.	
Reduction of potential areas for conservation and loss of habitat due to fragmentation.	
Increased vulnerability by changing the native forest cover especially broadleaf <sup>182</sup> for monocultures of conifers and other commercial species, which has an impact on the microclimate and biodiversity.	Preserve and promote the planting of their seeds and species belonging to the area.
Change of land use respond to external	Ancestral knowledge, respect in the appropriate land

<sup>182</sup> Species characteristic of tropical and subtropical forests prevailing in the Central American region.

demand for agricultural raw materials.	use and land of IPs IPs have sustainable agricultural practices that they known and allow recuperation capacity of the soil fertility
Poor implementation of soil technologies and production protection (climate change).	
Misuse of water resources. Inappropriate use of coastal marine and coastal resources. Poor watershed and coastal resources management.	The contribution of knowledge and practices through the active participation of IP ancestral authorities with their practice, respect and sustainable use in the plans for integrated watershed and coastal areas.
Little incorporation of risk in the design and infrastructure development (biophysical conditions).	Based on the knowledge and wisdom of indigenous peoples, consult and ask permission from people and Mother Earth to begin construction of infrastructure. They could also contribute to practices and tools (technology) own the IP.
Little preparation to deal with multi-threat effects.	Prevention consultations (early warning systems based on indigenous and local knowledge).
Weak central management systems that do not reduce local environmental vulnerability, Disaster Risk and the CC.	The contribution of knowledge and wisdom of the IP through the active participation of the social organization of indigenous ancestral systems in environmental management and Disaster Risk.
External dependency for post-disaster recovery.	
<b><u>Community</u></b> Cycle: Model of economic development that leads to the scale production which Increases the amount of solid and liquid wastes. The problem increases due to poor education about managing waste.	In the worldview of IP economic development is balanced and based on local needs. Such as the case for sustainable agricultural production for home consumption.
Forest management efforts do not focus on forest ecosystem and reforestation rates are not sustainable (unbalanced rate of forest ecosystems).	From the practices and technologies of IP, forests are respected from their own worldview, as the main providers of livelihoods. Plus, the contribution of knowledge and wisdom of the IP through the active participation of ancestral IP authorities, in the integrated management plans of care and protection of forests and biodiversity. Ancestral knowledge, respect in the appropriate land use and IP territories. The IP have agricultural practices know and allow the recovery of soil fertility.
Flora depredation by domestic and international demand.	
Change of land use respond to external demand for agricultural raw materials.	
Poor implementation of soil protection technologies and production (climate change).	Preserve and promote the planting of their own seeds and species belonging to the area.
Misuse of water resources. Inappropriate use of coastal marine and coastal resources. Poor watershed and coastal resources management.	The contribution of knowledge and practice through the active participation of indigenous ancestral authorities of the IP with their practice and sustainable management plans in integrated watershed and coastal areas.
Inability to plan a harmonious development.	The worldview in its practices and wisdom contributes balance and harmony with all living beings coexisting with Mother nature, establishing an ongoing dialogue with everyone.
Little preparation to deal with multi-threat effects.	Consultations for prevention (early warning systems based on indigenous and local knowledge).
Populations' displacements related to climate change.	Local communities can contribute their own knowledge of spontaneous adaptation, for example planting sorghum or ducks in Vietnam.

## Existing experiences

Through these experiences we can see that it is possible to achieve effective harmonization of knowledge on the issues of disaster risk reduction and adaptation to climate change. These are remarkable experiences in several South American and Asian countries, where in strengthening monitoring and early warning systems through the harmonization of scientific knowledge and indigenous and local communities. Also, several of these examples show that the act of taking local indigenous and local knowledge as part of the process encourages ownership of projects and empower indigenous and local communities to achieve their development goals. On the other hand, the analysis of these experiences shows the best practices or most appropriate procedures for its implementation to have been successful as well as lessons learned to be taken into account in future cases by other stakeholders on the issue.

EXPERIENCE	BEST PRACTICES	LESSONS LEARNED
Community preparedness for emergencies helps reduce poverty The development of vulnerable communities' preparedness for emergencies prone to drought in southern Bolivia <sup>183</sup> .	<p>This initiative can be described as a good practice because it contributed to the reduction of poverty, with the participation of key stakeholders such as civil defense, municipal governments, local NGOs and grassroots organizations.</p> <p>Respect to the institutionalized processes of participatory municipal planning and community organizational structures.</p> <p>The combined planning and organizational activities with community-level practices (e.g., reforestation, cleaning of water deposit tanks), and at urban level (e.g., contingency planning, exercises).</p> <p>Introduction of local stakeholders in identification, prioritization, implementation and supervision of mitigation work. Implementation of demonstrative mitigation costs works of different colors and sizes to show the different stakeholders involved that were possible.</p> <p>Promoting investment of municipal funds in disaster preparedness and mitigation measures.</p> <p>Use of participatory training methods.</p> <p>Use of techniques that facilitate reflection and exchange of experiences (e.g., theater, puppetry, music, poetry and play</p>	<p>Respect to local participatory planning processes to ensure ownership of the initiative, empowerment of the social sectors to make decisions related to local planning, and the legitimacy of the commitments.</p> <p>The pattern of development of local areas is often the main cause of disasters and emergencies. Therefore, it is important to adopt a local territorial planning strategy, incorporating a risk management approach to mitigate long-term effects of disasters.</p> <p>Greater efforts are needed to institutionalize the process of building capacity for emergency preparedness and response, especially in institutions such as the Civil Defense. Civil Defense departments should develop policies and guidelines on risk management throughout the country.</p> <p>Emphasis should be on emergency preparedness, as institutions tend to prioritize capacity building for the response. An overemphasis on response only helps to develop and strengthen a culture of reaction to prevention.</p> <p>Risk management in municipal planning must be developed from an environmental perspective, which helps to plan production activities and resource management that is sensitive</p>

<sup>183</sup> Community Preparedness for Emergencies Helps Reduce Poverty: Developing Vulnerable Communities' Emergency Preparedness in Drought-prone Southern Bolivia. Care International in Bolivia. In: Linking Disaster Risk Reduction and Poverty Reduction: Good Practices and Lessons Learned, 2008.



	<p>activities).</p> <p>Introduction of educational units, teachers and students for risk reduction.</p>	<p>to natural disaster prevention.</p> <p>To establish agreements with local governments and branches of Civil Defense is paramount. It allows clear identification and distribution of roles and responsibilities among stakeholders. It also encourages transparent municipal administration, in coordination with strategic partners.</p> <p>It is useful for mapping institutions and areas of intervention in terms of their contributions to the development of selected regions. This helps to identify strategic partners and allies to help promote the continuity and sustainability of the work. Assessment of threats and vulnerabilities and analysis are important to establish the historical pattern of disasters. This helps to identify and implement mitigation measures according to the knowledge based on past experience.</p> <p>Youth participation in the formation of volunteer groups is important: it contributes to the continuity of awareness and strengthening local capacity for risk management.</p>
<p>Amazon DIPECHO Project “Strengthening local capacities to mitigate flood damage in the binational region of Pando (<b>Bolivia</b>) and Madre de Dios (<b>Peru</b>)”<sup>184</sup>.</p>	<p>The communities’ selection was a participatory process. Municipalities in Bolivia provided counterpart resources for the execution of demonstrative works and are willing to put cash counterpart for a second project phase. In the case of Peru, the municipalities have incurred into some costs for training workshops and are also willing to put cash counterpart in case of a second phase project. It was possible to motivate communities to participate actively in the process of public awareness. Greater participation of women (in Bolivia more than men) in awareness events and training project. Working with the media helped create a good atmosphere in the public opinion. Conformation of the Binational Instance creates a space for consultation, coordination, exchange of knowledge</p>	<p>Respect to executive staff need to be taken into account that if a change occurs, you must ensure that staff replacement is actually dedicated to the project full time.</p> <p>Contracts with temporary personnel (consultants) should clearly indicate the purpose of the work and the choice of consultant should be made based on proven experience and expertise. The need for some communities in training for the prevention of damage by fire and high winds (not included initially in the project) have been recognized as an activity as important as training in prevention of flood damage. The project design must address the real needs of beneficiaries. The choice of a partner institution (strategic partner) at the time of preparing the proposal must be ratified or rectified at the time of execution due to the dynamics of institutions. It is best to change</p>

<sup>184</sup> Final evaluation of the DIPECHO Amazon project report: project DIPECHO Amazon (ECHO/DIP/BUD/2007/03004) "Strengthening local capacities for the mitigation of damage caused by floods in the binational region of Pando (Bolivia) and Madre de Dios (Peru), 2008.

	<p>and experience between INDECI and Civil Defense of Bolivia at the regional, national and local levels.</p> <p>Alliances with other institutions such as ACOP, AMDEPANDO, Manuripi wildlife Reserve, Forest, Society and Development, allow work to expand coverage and facilitate the implementation of activities. INDECI decisive support in training project staff and Civil Defense of Bolivia and both institutions for the establishment of the Early Warning System. Madre de Dios Regional Government Commitment to support, coordinate, advocates organizations as INDECI.</p>	<p>counterpart since the beginning of the implementation if the case warrants it.</p>
<p>Chaco DIPECHO Project "Strengthening local capacities for preparedness and response to emergencies in the Bolivian Chaco", <b>Bolivia</b><sup>185</sup>.</p>	<p>The signing of agreements with the municipalities and the explanation continues on the progress of the project to local Authorities.</p> <p>The community partners that empower its members, to understand and recognize that their contribution is essential for demonstrative construction.</p> <p>In 9 communities, community practices of water and forest management shortcuts were conducted such as cleaning, clearing banks, channel streams and protection of water systems in critical locations, allowing communities to apply their knowledge and strengthen community organization.</p> <p>The municipality of Villa Vaca Guzman, through young volunteers applied the knowledge gained in the workshops to achieve the re-indictment of the stream, through their participation of the pile of sandbags on the banks.</p> <p>Teachers from the Huacaya Township decided to replicate some of the games as Riesgolandia on the basketball court, so that children and older people would enjoy learning about the topic of risk management in greater detail.</p> <p>Technicians from the municipalities of Villamontes, drafted a proposal for restructuring the organization of the</p>	<p>Respect for local participatory planning processes to ensure ownership of the process, empowerment of the social sectors in making decisions about local planning and the legitimacy of the commitments made during the project period.</p> <p>The pattern of regional development is a major factor in many cases disasters and an emergency causes, so it is important to articulate the vision of the territory order with the risk management approach to mitigate long-term effects in the occurrence of disasters.</p> <p>It should guide efforts to institutionalize the process of capacity building for preparedness and emergency response, especially in formal institutions such as Civil Defense, which should develop policies and provide guidance for risk management throughout national level.</p> <p>There should be more emphasis on preparation, as institutions focus their skills at the time of response and this helps to develop and consolidate an attitude of prevention rather than reaction.</p> <p>Risk management in municipal planning is designed from the cross-sectional environment, which helps to plan productive activities and better use of natural resources from the standpoint of prevention of natural disasters caused by the</p>

<sup>185</sup> Chaco DIPECHO Project "Strengthening local capacities for preparedness and response to emergency situations in the Bolivian Chaco. ECHO & CARE International in Bolivia (2005).

	<p>municipality, which includes an Administrative Office of Environment that will address the issue of risk management in greater detail.</p> <p>In the town of Muyupampa, the issue of watershed protection has become municipal priority as well as in Monteagudo which was appointed by the City staff hired to manage microbasins and risk management.</p>	<p>actions of men.</p> <p>The agreements reached with city halls and the offices and representations of Civil Defense are key when it comes to clearly establishing the roles and responsibilities of the stakeholders; it also contributes to strengthening transparency and municipal management with strategic allies.</p> <p>Mapping institutions and areas of intervention in terms of its contribution to the development of the region is important, when considering strategic alliances to promote continuity and sustainability of the process started, as is the case of German DeD and its commitment to continue to strengthen specific activities in the areas of management capabilities of GIS and others.</p> <p>The diagnosis and analysis of threats and vulnerabilities are important in establishing a historical pattern of the disaster or emergency situation, thus allowing mitigation concrete actions based on past knowledge.</p> <p>The participation of youth in the formation of volunteer groups is an important factor because it ensures continuity in the process of reflection and consolidation of strengthening local capacities in risk management.</p>
<p>Indigenous Knowledge on Disaster Mitigation: Towards complementarity between communities knowledge and the scientific, Bardiya, Chitwan, Syangja and Tanahu District, <b>Nepal</b><sup>186</sup>.</p>		<p>Nepal is a small but very hilly and very prone to disasters. The country's ability to cope with floods and disasters has been very weak, both at national and community levels. Several reports are available on the value of indigenous knowledge to manage the natural resources of Nepal, but the literature on indigenous knowledge for disaster mitigation and preparedness are scattered and scarce. Systematic and in-depth studies on disaster mitigation in general and indigenous knowledge, in particular, are almost nonexistent.</p> <p>In addition, a review of the literature shows that indigenous</p>

<sup>186</sup> Indigenous Knowledge on Disaster Mitigation: Towards Creating Complementarity between Communities' and Scientists' Knowledge, Man B. Thapa, Youba Raj Luintel, Bhupendra Gauchan and Kiran Amatya, In: Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region. Pag. 30 – 33, Free translation.

		<p>knowledge and practices in the hands of these communities are not recorded or taught in the classroom. For the most part, this knowledge still exists for two reasons: First, knowledge has a functional utility of the communities concerned, knowledge Secondly; it has a strong character and dynamics of transmission between generations through practice and oral tradition.</p> <p>After nearly a year of observation and interaction with local people in eight villages, it is clear that not all communities have an equivalent range of expertise in disaster mitigation, as can be expected. This knowledge has been found to be stronger in homogeneous communities and tribal communities of migrants (such as Brahmin and Chhetri in the districts of Terai). Communities that have a strong sense of solidarity and harmony, Gurung and Tharu, had more knowledge on disaster mitigation. The more self-sufficient and relatively endogenous that a community is, the more likely they will have a wealth of indigenous knowledge. For all communities, however, there is a growing threat of erosion of traditional wisdom, due in part to the effects of modernization.</p> <p>Communities have a large number and diversity of knowledge on disaster mitigation based on traditional wisdom. Since living in remote villages, isolated and inaccessible at the crests or in the hills, they have their own coping strategies in disaster situations. The cross-fertilization and the mixture of this indigenous knowledge contribute to a broader understanding and appreciation of their overall contribution to better and safer living conditions of the people. Therefore, it is imperative to collect, compile and systematize the diversity of indigenous knowledge before it disappears. A record of that knowledge will show whether more can be done for capacity building efforts for disaster management in communities not only economic but also sustainable and harmonious development of the interface of nature and culture.</p>
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<p>The combination of indigenous and scientific knowledge in the Flood Warning System Dagupan, Dagupan City, Pangasinan, Philippines<sup>187</sup>.</p>	<p><b>1. Community Involvement</b>  Since the beginning of the project, the involvement of bases is dynamic and became a major consideration. A series of consultations between the city government and the community took place to secure a place for exchanging information, sharing of ideas and reconciliation issues among stakeholders. Each was given the opportunity to express their views and concerns about the project, putting into practice the value of respect, responsibility and transparency. Apart from the consultation meetings, members of the community also found the opportunity to evaluate the real risk of the community including the completion of its flood risk maps that highlighted the elements at risk in their respective localities. Gender parity was encouraged from the outset. The children also participated, not only in risk assessment, but also in other vital activities such as CBDRM action planning activities, public and community awareness and response simulation in flooding across the city. The project also involved all sectors in planning and implementation of disaster risk reduction community-based plans, including early warning and evacuation plans. It discredited the traditional top-down management of disasters that the government considered is the top group and left the local population in a subordinate position. This material became a major vehicle for the community to exercise their own abilities, develop self-sufficiency and realize its potential as a catalyst for development.</p> <p><b>2. Partnerships between stakeholders,</b>  The project highlighted the importance of cooperation and collaboration between government and local people in disaster risk management. These associations were evident in</p>	<p>The early warning system for floods in the city of Dagupan is a combination of indigenous and modern-scientific knowledge and is an effective response to the perennial problem of flooding in the city. In designing the system, some important lessons to be realized are:</p> <ol style="list-style-type: none"> <li>1. The use of kanungkong has mobilized local capacity, while reviving and maintaining a local practice that is now used in disaster preparedness.</li> <li>2. It is important to involve the community in risk assessment (ie, risk, vulnerability and capacity assessments) and the design of early warning system.</li> <li>3. It is important to test the warning system and evacuation procedure through theoretical exercises and practical exercises in the community.</li> <li>4. "Learning through good practices," with visits to communities involved in community disaster preparedness and mitigation encourages communities and local government officials to continue the good work. Study visits by local officials and community members pay for similar projects critical reflection on how to improve their own preparedness and mitigation.</li> </ol>
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<sup>187</sup> Combining Indigenous and Scientific Knowledge in the Dagupan City Flood Warning System. Lorna P. Victoria. In: Op. Cit. Pag. 52 – 54.

	<p>the successful mobilization of Mangin, including use of indigenous knowledge and intrinsic skills. The process became an instrument that allows both the government and the community to overcome their differences and unite behind the call of social solidarity for resistance and sustainable development. Not only were the members of the community - especially households in high risk areas - given the opportunity to participate in project activities but also were able to give valuable suggestions and recommendations for improving the early warning system and plan evacuation. The local community organizations such as the barangay council BDCC, seniors organization, Mangin primary school and parish youth council participated in the project as well.</p> <p>In addition, external organizations were also used to mobilize human and material resources as well as for networking. These include the Dagupan Water District, Bangus Jaycees, Scouts and Rover and Dagupan Bantay, a coalition of NGOs. These groups were able to participate in public awareness campaigns, simulation of floods and drilling throughout the city and other risk reduction activities.</p> <p><b>3. Strengthening Organizations and Resources</b></p> <p>As a pilot community, Mangin has proved to be more responsive and efficient. Ultimately it succeeded in pushing their activities promoting a culture of safety and preparedness. Mangin was chosen later, the mode community I for the staging of flooding simulation throughout the city to respond. Apart from this, the community also received the Kalasag prize from the Department of Interior and Local Government for outperformance of other communities throughout the Ilocos region in disaster preparedness. The adoption of the proposed arrival of CBDRM paved the way for the strengthening of local organizations Barangay Mangin. The activities that the community engaged in response to the objectives of the project allowed them to</p>	
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<p>Indigenous Skills and the mysticism of the expulsion of lava from Mayon Volcano Barangay Matanag, Legazpi, Albay, Philippines<sup>188</sup>.</p>	<p>revive the BDCC and increase their resources.</p>	<p>Officials often have trouble persuading the villagers to clear danger zones despite natural disasters and vulnerabilities. Instead of listening to officials, geologists and volcanologists, people rely on spiritual beliefs and advisers for guidance. The failure to evacuate people when there in a volcanic eruption in some cases could amount to an absurdity. However, not all cultures view volcanic eruptions as destructive. Instead, many who live near Mayon, eruptions are seen as a benefit event for the creation and evolution. Being near a volcano does not mean that people cannot thrive in its environment. Local people know that volcanoes do not erupt for any reason. Volcanoes are often regarded as important institutions that reflect the vengeance and fairness in the world, doing justice to the life and crimes of its inhabitants. The different views about volcanic eruptions produce a disconnection between scientists and people who are affected directly. Such views confuse the scientific community, but cannot be discarded immediately. Indeed, indigenous knowledge has been passed down from generation to generation, helps to minimize risk, cope with natural hazards and to learn to survive. The level of risk people are willing to take because of their indigenous knowledge can be unreliable. However, these stories and irrational rituals also help these people deal with disasters. Social scientists note that there are not more naive views of nature. Superstitions and myths are still part of fundamental beliefs of the people. These beliefs make them optimistic in order to confront the danger. Scientists using the latest technology can construct a bridge between people who benefit from their work. However, we should not underestimate the capacity of indigenous people who own and must understand how their work will be received</p>
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<sup>188</sup> Indigenous Know-How on Mayon Volcano's Lava-Spittle Mysticism, Gerardine Cerdana. En: Ibid. Pag 55 – 58.

		by persons that intimately experience and cope with volcanic eruptions.
The indigenous knowledge saved lives during the tsunami in the Solomon Islands in 2007 Western Province, <b>Solomon Islands</b> <sup>189</sup> .		Of the 52 people who died during the earthquake and tsunami in the Solomon Islands, 31 (59.6%) were gilberts immigrants from Titiana, Nusa Mbaruku and New Manra that not reacted properly, because they had no cultural memory of such an event. Kiribati is a nation of coral atolls, located far from any regular earthquake source. Because there have been no major earthquakes or tsunamis in the 50 years since his emigration, they simply lacked the indigenous knowledge of their adoptive environment that could have helped save their lives. Gilbertens Children are especially vulnerable because they were not only too weak to swim against the tsunami, but lacked the indigenous skills that have kept from exploring the empty lagoons. The natives of the Solomon Islands, on the contrary, in large part, responded in a way that reduced their mortality. Indigenous knowledge of the Solomon Islands, where volcanoes and earthquakes are common, managed to mitigate the effects of the tsunami. In the most affected indigenous peoples, in Gizo Island, the tsunami effects were mitigated by the combination of 1) a healthy coral reef with a steep barrier in front of a shallow lagoon that attenuated the energy of the tsunami, 2) accessible and effective evacuation pathways and uplands provided by the existing topography, and 3) indigenous knowledge on how to react during an earthquake followed by the emptying of the lagoon. Immigrants from gilbertens villages that were affected by the tsunami of the same intensity, lacked indigenous knowledge and led them to suffer more casualties. Many people died in the Indian village of Tapurai due to their morphology, lack of an effective barrier against the coral reefs that did develop in Simbo Island. Indigenous

<sup>189</sup> Indigenous Knowledge Saved Lives during 2007 Solomon Islands Tsunami, Brian G. McAdoo, Jennifer Baumwoll and Andrew Moore. In: Op. Cit. Pag. 64 – 67.



		knowledge is a tool for effective tsunami mitigation with the right combination of education and physiography. Places with large coastal plains have a difficult evacuation of the coast, especially if population densities are high as in the case of Banda Aceh, Indonesia in the Indian Ocean tsunami of 2004. However, a barrier reef, a lagoon-wide support and the mangroves were not sufficient to protect the residents of New Manra because they had no knowledge of tsunamis in the region.
Weather forecast through indigenous knowledge for the vegetable crops in drought-prone area of Vietnam An Hai Commune, Ninh Phouc District, Ninh Thuan Provice, <b>Vietnam</b> <sup>190</sup> .		The observation of insects and weather phenomena such as halos were used as a means of empirical weather forecasts before the weather technologies had been developed. The indigenous knowledge is transmitted over thousands of years and generations by the community. These are based on practical experience and have been in use for a long time. In some areas where residents lack access to high technology, traditional weather forecasts based on the observation of the moon and insects play an important role in agricultural activities. The main problem in the An Hai community is the lack of clean water for crops. Knowledge of the exact date of the rainy season and drought forecasting helps farmers choose crops, seeds and sowing and planting time. From this traditional knowledge is very useful in areas without access to the methods of weather forecasting, these strategies can and should be disseminated to other communities in regions with low development rates.

<sup>190</sup> Weather Forecasting through Indigenous Knowledge for Crop Cultivation in the Drought Prone Area of Vietnam, Nguyen Ngoc Huy & Rajib Shaw. En: Op. Cit. Pag. 79 – 82.

## Conclusions and recommendations

During the process of preparing the Study the team of experts has formulated some conclusions and recommendations related to the topics and how to provide follow-ups to promote the subject in various fields.

Conclusions	Recommendations
The processes that involve the interaction of knowledge and wisdom of indigenous peoples in Central America are a collective social construction, where you must be clear of the limitations of the current development models to harmonize them.	Promote better models of social and ethnic harmonization through education, legislation, political participation, public policy and other state actions.
Is urgently needed to link development planning in favor of the knowledge of the peoples.	Take into account the knowledge and wisdom of IP in national and local planning to build a common understanding of harmonization. Take into account the communities in the planning and programming processes for the approval and harmonization of the subjects of DRR, Climate Change and Biodiversity, for example, refer to the synergy model proposed in this study. Systematize and share knowledge and wisdom of indigenous peoples who can provide strategic lines for disaster risk reduction issues, climate change and biodiversity.
The knowledge and wisdom of indigenous peoples do not consider risks in an isolated manner, but as an interaction between the cosmos and all living beings that are presently on Mother Earth (including water, fire, air, etc.). In addition, humans have contributed to the escalation of risks directly related to lifestyle imposed by a culture of consumerism and individualism in the predominant development model.	Engage indigenous and local communities in managing protected areas and biodiversity protection. Recognize and respect their ancestral knowledge to build models of environmentally friendly development.
Climate change shows that the cycles of nature and society are deeply linked. It is not only "because nature is acting out of control" but there are also threats and unsafe conditions, that mankind has caused patterns the deforestation by forests, mountains and hills of various countries, pollute rivers and mountains, such as mining practices, among others.	Preserve and sustainably use biodiversity, taking into account the knowledge, wisdom and traditional practices of indigenous peoples. Rescue agro biodiversity for food security in climate change.
The existence of practices and technologies from the knowledge and wisdom of indigenous and local peoples have not been taken sufficiently into account. In most cases countries have historically underestimated the value of this knowledge and wisdom and are excluded from the formulation of public policies. However, a number of national and local processes have been initiated in an attempt to find a space for dialogue and harmonization of such knowledge and wisdom in the context of compliance with certain international conventions and the demands of indigenous peoples.	Strengthen the process of harmonization of knowledge and wisdom of the IP related to DRR, CC and Biodiversity, to be projected in public policies, plans and actions at national and local level, and increase community organization and resilience.

<p>In various international conventions such as the Hyogo Framework for Action, Bali Declaration, the ILO Convention 169, Universal Declaration of the Rights of Indigenous Peoples, Convention on Biological Diversity, Climate Change, Cochabamba Declaration on the Rights of mother Earth, among others, respect is being shown for indigenous peoples.</p>	<p>Raise awareness and strengthen national institutions with the accompaniment of the international institutions, working the theme harmonized DRR, CC and Biodiversity.</p> <p>Legal and political recognition of knowledge and wisdom of IP through the creation of strategies supported by cooperation in the assessment of knowledge and wisdom from them.</p> <p>Develop and implement public policies, new laws and regulations and legislative reforms that seek harmonization and complementarity of knowledge and wisdom in matters of DRR, CC and Biodiversity.</p> <p>Strengthen capacity of governments, IP and NGOs to define and develop programmes and projects for international cooperation based on the needs and desires of target population, that are reflected in public policies, laws, regulations, programmes, projects, etc. through consultation and other processes where is reflect adequately the expectations of that population, in compliance with the Paris and Antigua Declaration.</p>
<p>To preserve the life of earth requires responsibility and contribution of all. The nowadays consumerist lifestyles do not respect Mother Nature.</p>	<p>Engage in dialogue between peoples, policies and philosophy of life to bring diversity to save all of mother earth and to create mechanisms for achieving the harmonization of different knowledge.</p> <p>Find the balance of current lifestyle to achieve living in harmony with the natural environment and civilization.</p>
<p>Weak central management systems that do not reduce local environmental vulnerability, Disaster Risk and the CC.</p>	<p>Strengthen stakeholders in charge of national systems of risk management, climate change and biodiversity to take into account the voice and involvement of indigenous and local communities and consequently strengthen participatory processes.</p> <p>Develop the process of harmonization of local, municipal and community authorities to strengthen coordination and early warning systems on every level, and in order to generate scenarios and participatory monitoring systems related to climate change.</p>
<p>Harmonization is a process of learning where is important to understand that you need to have sensitivity, willingness to learn and interest in learning other practices and experiences and openness to change.</p>	<p>Identify and understand the interests (for/against), attitudes (pro/against), and the balance between contributions and gains (win-win).</p> <p>Recognizing the existence of different visions and methods rather than a single, fragmented perspective of reality.</p> <p>Awakening people to understand the added value of different approaches and</p>

	understand that only togetherness will create the best solution to solve the current problems.
Harmonization is a mutual learning process that needs to be facilitated the best way possible and only works if there is interest, attitude and contribution of each stakeholder.	<p>To have clear rules of facilitation with an organization/person to take responsibility to facilitate understanding the process which will position the organization/person within the different levels of context, such as regional, national and community levels.</p> <p>The dialogue on the harmonization of knowledge between different stakeholders, to complement not only the technical but also sharing and learning from the practices of each people.</p>

Finally, it is suggested to maintain the momentum of the theme in this study since it only reflects a contemporary perspective of the process. Just as life is changing, so will the contents of this Study which may be supplemented by different researches or practices. Likewise, we invite you to join this dynamic and learn with us for our good, our environment and our Mother Earth.

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## **ANNEX I**

### ***Glossary of terms and concepts relevant to Disaster Risk Reduction***

#### **Adaptation**

Comprehensive global process on the possibility of understanding, support and local construction of the need for nations, peoples and natural systems of poor countries to adapt, alter, modify, change or adjust, spontaneously or planned, in its structure and behavior to the economic and social activities, reducing social vulnerability and taking advantage of opportunities, in response to or anticipation of expected conditions, current, actual or projected, the variability or climate change, through mitigation, technology transfer and financial and investments.

#### **Ecosystem-based adaptation**

Management, conservation and restoration or rehabilitation of ecosystems to ensure they continue to provide services. It allows people to adapt to the impacts of climate change and have income. It is achieved with the establishment of protected areas by involving local communities and indigenous peoples in their management.

#### **Agricultural biodiversity**

Broad mix of life forms (genes, species and ecosystems), including the human species for food and agricultural production.

#### **Agroforestry**

These systems are formed in household production units by the combination of trees with clean crops where production practices are implemented environmentally friendly, water and soil.

#### **Protected Areas**

Conservation strategy for biodiversity, with various forms of management and from representative regions and species to protect.

#### **Biodiversity**

Broad mix of life forms (genes, species and ecosystems), including the human species, a result of the evolutionary process, that interacts with each other and their environment, which has made the world a habitable place and also unique, that offers a wide range of goods and services that sustain life.

#### **Climate Change (CC)**

Change in status of the global climate, which can be identified by changes in the average and or variability of its properties, directly or indirectly caused by humans through the consumption of fossil fuels, deforestation and other practices, or by changes in currents the oceans, solar activity, volcanic eruptions and other natural factors that increases the concentration of greenhouse gases in the atmosphere that are warming the earth's surface, and persists for decades or longer. Example: ice ages or changes in the level of the oceans.

#### **Climate**

General characteristics and long-term experience while at the same place. Ecological complexes: relationships between species and ecosystems.

#### **Indigenous knowledge**

Cluster complex knowledge, skills, practices and performances intertwined and mutually dependent, which still exist, developed by indigenous peoples with a extended history of interactions with the natural and cultural environment that does not conflict with each other and has no defined boundaries, which includes language, attachment to context or place, spirituality and worldview, "in which" rational "or" objective "cannot be separated from the "sacred" or "intuitive" It is the ancestral knowledge that governs the lives of Indigenous Peoples, is dynamic, with a differentiated relationship with the outside world, evolving, reconstituted, recreated and revised by each successive generation of knowledge-holders.



**Local knowledge**

Includes people and communities that live in rural or urban areas. It is knowledge that is acquired by practice and experience; they know it to be helpful. It covers all the perceptions, beliefs, understandings and skills that one or more members of a community or potential uses to communicate and manipulate the world, formed by the natural physical environment and built, as well as the social, economic and political consequences on the environment that affect the production and consumption locally, with dynamic features and steadily increased production in the tendency to hybridization.

**Traditional Knowledge:**

Knowledge that is managed by expert and local communities, which develops, conducted and is owned collectively and individually, and is transmitted through print, oral and nonverbal Medias between and within cultures, generations, populations, communities, households and individuals.

**World View**

Thoughts centered on nature. Harmonious and holistic relationship of the elements of mother earth and the universe. The human being is one of the beings of mother earth. Practice and lifestyle of its inhabitants to live with respect, understanding, communication, interaction and networking with Mother Earth and the Universe. Human beings belong to Mother Earth and the universe.

It is the practice and lifestyle of Indigenous Peoples. It is a way of seeing, feeling, understanding and living life to its fullest, in interaction and interconnection with Mother Earth and the Universe. These practices are reflected in the literature, ideograms, art, knitting and music, especially reflected in the dialogue that takes place in ceremonial events of appreciation for the existence of humans and all living things that coexist in the mother Earth. At this time there is dialogue and communication with the entire Universe.

**Ecosystems**

Dynamic complex of plants, animals and micro-organisms communities and their non-living environment, interacting as a functional unit.

**Climate scenario**

Coherent description, internally consistent and plausible of a possible future climate condition. Hydro meteorological phenomena.

**Mitigation**

Reduction of greenhouse gases emissions legally binding on developed countries. For developing countries is to determine the appropriate level of mitigation and the registration process to establish and support national actions.

**Disaster Risk Reduction (DRR)**

Multidimensional conceptual theoretical framework, which involves all political, technical, social or economic actions, from governments to individuals, aimed at disaster risk reduction, loss of life, social equity, economic and environmental losses.

**Social, economic, structural and environmental resilience**

Implementation of appropriate technology, and strengthening participation, improve interventions and use of biodiversity and ecosystems, increase responsiveness, strengthen and improve their skills and livelihoods. Collection, compilation, dissemination and use of local knowledge and of indigenous peoples. All this requires good information and motivation.

**Climate Variability**

Fluctuations occur year after year and also the statistics of extreme conditions, such as severe storms or unusually hot seasons. Phenomena that change slowly can last for whole seasons or even years as ENSO.

## ANNEX II

### Particularities of different complementary approaches and synergistic with the DRR and CCA

DRR <sup>192</sup>	PABC <sup>193</sup>	MVS <sup>194</sup>	GICH <sup>195</sup>	GIRH <sup>196</sup>
There are many experiences and practices, including at national and local levels.	Linked to climate change that brings other consequences related to Livelihoods, food security, and ecosystems. It is based on climate scenarios that were developed in local areas.	Many experiences in the family, community, local and national projects based on sustainable livelihoods. The fragility of the MVS and "exposed elements" is the main element in common.	Many experiences in the family, community, local and national projects, are based in the Integrated Management of River Basins. This approach allows for spatial orientation, planning and targeting and the "geographical space" for integration (top, middle or bottom of the basin)	Many experiences in the family, community, local and national projects based on sustainable water and sanitation. In coastal areas this is a crucial point for DRR and CCA. Similarly, in areas affected by drought and in the process of degradation and desertification.
There is a clear structure.	From the scientific side (prediction models), has not yet come down to local / community. Very complex issue, limiting knowledge in national and global uncertainties in the data on impacts scenarios based on emissions of greenhouse gases (B2, B1, A)	It allows a holistic approach between resources of the families and the communities. Existing tools can be applied to analyze vulnerabilities of resources and threats, and expand reflection and learning.	It makes use of a wide range of maps and map databases on land use, potential uses, proposed uses, proposed land use and agro-ecological proposals would be complemented by construction of local climate scenarios.	In the coastal zone models can work well with high level structures to avoid sedimentation and groundwater contamination by salts or during flooding in extreme events. There are experiences of red mangrove reforestation to prevent erosion and protection of ecosystems such as coral reefs, and so on.
There are tools. Methodologies and risk management plans. Recognized platforms. Improved and existing legal framework, could provide space for the CCA	Works from the meteorological scenario. There are no local climate scenarios. Tools can combine between risk scenarios and climate scenarios.	It allows working in a participatory way risk scenarios and climate scenarios <sup>197</sup> . Families, local governments, clearly identify the main livelihood of the municipalities	Many technologies used in IRBM can mitigate (reduce GHG and impacts of threats) and strengthening the adaptive capacities of families. Models of agro forestry adaptive production systems, reforestation of areas of instability.	Torrent control in the upper watershed extends the life of infrastructure and investments of A and S but also increase infiltrations, reduce runoff and sediment, as well as reduced flooding and flash floods.
It is based on the focus of threats,	It is unknown what will happen	It ignores the impact of	We know the response of watersheds to major	There are models for designing water

<sup>192</sup> DRR: Disasters Risk Reduction, CCA: Climate Change Adaptation. MVS: Sustainable Livelihoods. GICH: Integrated management of river basins. IWRM: Integrated Water Resource management.

<sup>193</sup> PABC: Adaptation to Climate Change Based on the Community.

<sup>194</sup> MVS: Sustainable Livelihoods

<sup>195</sup> GICH: Integrated Management of River Basins.

<sup>196</sup> IWRM: Integrated Water Resource Management.

<sup>197</sup> To work climate scenarios is a complex process that deserves to link scientific knowledge with locals. The hydro meteorological models and scenarios should be used to generate scenarios of impacts on biodiversity, ecosystems and the 5 resources, social, physical, natural, financial and the human side of families and communities and even municipalities, taking the above and bioclimatic supported with maps and taken to the CCA, DRR, IRBM, and GIRD from this unified Management framework clear strategies can be worked for a more suitable adaptation to local conditions. The management of river water resources, planning elements and management and livelihoods for families with DRR and CCA as operating elements or units of practical implementation. It involves the implementation of mitigation measures (from both CC and DRR issues), control of floods, water resource management, research and knowledge management.

which are threats with a certain probability of occurrence. (from history point of view)	(toward the future) also in all official UN documents, the phrase "storms are likely to increase " ...	major weather threats over the means and resources of people's lives. There is confusion between the impacts of climate change and seen disaster risk reduction.	threats of climate change and climate variability. Mainly floods, landslides, fires, loss of water sources or reduce flow, impacts on biodiversity <sup>198</sup> .	structures that should include the flow of future climate variable, in addition to ecological flow which is already included in the design.
The issue is very important and has been accepted, recent disasters have "contributed" to that acceptance and awareness.	Political issue - strategies / political confrontation. There are regional and national platforms. Different interests do not allow "to oil" these gateways.	The MVS provide a space to analyze the secondary causes of poverty and vulnerabilities, but cannot attack the underlying causes of vulnerability to both (DRR and CCA)	There are national platforms, regional that can be supplemented with the platforms of DRR and CCA and Water and Sanitation.	Legal frameworks promote the management of water resources, despite the lack of legal local level strategies related to the CCA and DRR
<sup>199</sup> Others?.....	Others?.....	Others?.....	Others?.....	Others?.....

<sup>198</sup> There is a perception that CC will affect biodiversity, but how and when will this happen? It is still an uncertainty.

<sup>199</sup> If any other aspect that could provide relevant inputs for the integration, harmonization or synergistic unification of approaches, please use the proposed table. The team will add your contributions because as it has been noted above this study is changing and therefore, subject of modifications.

### ANNEX III

#### 1. What is the Mayan worldview?

It is the practice and lifestyle of the Mayans. It is a way of seeing, feeling, understanding and living life to its fullest, in an interaction and interconnection with Mother Earth and the Universe. These practices are reflected in the codices, ideograms, art, knitting and music, especially reflected in the dialogue that takes place in ceremonial events of appreciation for the existence of humans and all living things that coexist in the Mother Earth. At this time there is dialogue and communication with the entire Universe. "It is a livelihood deeper than our grandmothers and our grandfathers created to explain the origin of life, the origin and development of the universe. It is our own way of seeing, understanding and experiences the meaning of life"<sup>200</sup>.

The Mayan Cosmvision is life itself, is the ontological, epistemological, philosophical, and fundamentals wealth that can guide mankind on the ongoing widespread crisis of climate change and the environment. The Mayans and other indigenous peoples of the world as the amazonians are jointly contributing in practice to have a good life.

The land has a very deep sense in the worldview and the very form of existence of indigenous people: she is the "mother who welcomes us" or "Pachamama" [2], the space where life is created and re-creates. In the indigenous view, man must "raise Mother Earth and let it be raised by her." This deep relationship between man and land as a source of life is contrasted radically with the vision of the colonizer who saw the land as possession and space of looting and extraction of precious metals and stones, the object of predation.

#### We are one of the indigenous peoples of the world<sup>201</sup>

We are one, it is a portrait of the beauty and diversity of indigenous peoples also exposes the environmental and humanitarian crisis that many of them are going through and that endangers their survival. A call to action that highlights the universal and growing need for human values to take precedence over the economic needs, to curb climate change and the destruction of rainforests, to redefine the Western concepts of progress and development to give the attention it deserves to indigenous values of balance, humility and reciprocity.

The Mayan<sup>202</sup> worldview is, at present, a current model with cultural practices that are exercised in different spheres of everyday life, including the preservation of health and recovery from it.

Within the framework of this paradigm of life, the human person as such, can only be fulfilled if:

- "It recognizes that his existence is an expression of joy and happiness of the eternal movement of life, the Creator Maker. Hence his own joy and happiness.
- It is accepted as the evolutionary point of original creation.
- Seeks and maintains communication with the originating source and eternal life, and each of their material expressions and energy.
- Seeks the understanding of life, its cycles, and its qualities.
- Cultivate and experiences respect for the natural cycles of Mother Nature.
- Respects the human being and life in their mineral, vegetable and animal expressions, in that they contained the wisdom of the Creator Maker.
- Recognize needs of nature and the universe to live, and those that protect, purify and nourish it.

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<sup>200</sup> Council of authors. Raxalaj Mayab' K'aslemaalil, Mayan worldview, fullness of life. P. 29, 2006.

<sup>201</sup> <http://www.survival.es/somosuno>

<sup>202</sup> Camey Huz, Donato, Domingo López, Daniel and Camey Huz, Rosenda Guidelines for the establishment and operation of a model of mental health from and for indigenous peoples in the institutions of State. 2009, pages. 20 and 22, 27.

- Appreciates and respects their organic development and physiological maturity as a gift from Mother Earth.
- Recognizes the gift of being co-creator of life, through its engendering and reproduction ability.
- Respects and feeds their ancestors and works for the sustainability of human descendants<sup>203</sup>.
- Respect, happiness, peace and fulfillment in holistic complementarity is the explanation assumed by the indigenous peoples to define health-including mental health-that is, to live in balance and harmony.

Every living being, whether person, plant or animal is born with an energy force called *nawal* within the Mayan worldview. This energy, grown in harmony and balance, develops in a balanced society. However, if growth and development is in disharmony and imbalance, its energy and integral being, would be sick.

"Historically, the world's indigenous peoples have had a practice, a way of life from their worldview. This, because human life, the life of Mother Earth is sacred. For every vibration, every sound and song of the animals, mountains, hills, lakes, seas, rivers and births, are vibrations of the natural life of every being that exists on Mother Earth and the Universe. Because when "a being is born, a star is also born" in the words of a Cakchiquel Maya grandfather<sup>204</sup>.

"The worldview of indigenous people is above all a way of living life from an integral view. Since that integrality, are as important people as the mountains, lakes, seas, animals, insects, plants and other living things because everything is alive, they are all a whole. From there then arises the harmony, from the relationship, interconnection, dialogue, respect and gratitude interconnection with all beings that exist in the Universe and Mother Earth. All of this creates harmony, fulfillment, balance and wellness in every being, from the smaller cells and atoms in the human body. Therefore, every being has its own name, it may be called energy or *nawal*<sup>205</sup>, B'atz B'e, Aj, Ix, Tzikin, Ajmaq, Noj, Tijax Kawoq, Ajpu 'Imox, Ik', Ak'abal, K'at, Kan, Keme, Kej, Q'anil, Toch, Tz'i<sup>206</sup>; each of these energies, fed and harmonized by every being, leads to a state of joy, comfort, happiness, prosperity and harmony. Therefore, this ancient wisdom leads humanity to a paradigm of true existence with Mother Earth and the cosmos"<sup>207</sup>.

From the perspective of the Mayan people, life is conceived as a integral / holistic process that is only possible if the three dimensions of human existence are in equilibrium: the material / biological, and social energy. It is life to the fullness, which means living in harmony, joy, love, happiness, prosperity, tranquility, which is achieved from the three-dimensional balance, put into practice.

Happiness and joy are not built only on the material, but it is also built on the existing spiritual and emotional state. Mayan elders say that when people are in a state of fullness, they are *Winaq*<sup>208</sup> (person or people), which means a total state of maturity, understanding, respect and comprehension. This includes a relationship of interaction and comfort with the whole environment, with Mother Nature.

<sup>203</sup> Council of Mayan authors . Op. Cit., pp. 38 -39.

<sup>204</sup> Camey Huz, Rosenda. 2009. Inf. MPSP.

<sup>205</sup> *Nawal* is energy of the Mayan Calendar, Sacred Lunar Calendar of 260 days.

<sup>206</sup> Energy and *nawals*, 20 days of the Mayan Sacred Calendar, also called Lunar, of 260 days.

<sup>207</sup> Op. cit. 5.

<sup>208</sup> Term which means a whole person with strengths, potentials, capabilities and also weaknesses. It also means 20, numerology of Mayan mathematics.

## ANNEX IV

### Indigenous Peoples in El Salvador

#### COUNTRY DATA:209

<b>Capital:</b>	San Salvador
<b>Surface:</b>	The extension of its territory is 21.393 Km2.
<b>Geography: 210</b>	El Salvador is the smallest country in Central America. Its limits are: to the west and northwest by Guatemala, north and northwest by Honduras and south and southeast by the Pacific Ocean. Southeast also limits with Nicaragua through the Gulf of Fonseca, which belongs in common to Honduras, El Salvador and Nicaragua.
<b>Population:</b>	The population of El Salvador is 5,744,113 (2007census) within its territory. It is estimated that the ethnic composition is comprised of 90% of mixed race, 9% White and amerindian, of which very few have retained their customs and traditions. It is the most densely populated country in Latin America.
<b>Indigenous Population:</b>	Not recorded in the national census breakdown by ethnicity or indigenous / native peoples
<b>Legal recognition of indigenous peoples: 211</b>	<p>In El Salvador there is no specific legal framework that recognizes the existence and protects the rights of indigenous peoples. In Article 62 of the Constitution of El Salvador, in paragraph II, says: "The indigenous languages that are spoken within the national territory are part of the cultural heritage and shall be preserved, disseminated and respected" and in Art. 63, says: "The rich artistic, historical, and archaeological country are part of the cultural treasure of El Salvador, which is under the protection of the State and subject to special laws for their conservation".</p> <p>When the Constitution refers to these items, we ignore the human component, the existence and recognition of indigenous peoples, looking like folkloric and patrimonial objects</p> <p>Not recognizing the autonomy and other rights of these peoples is only done from the standpoint of folklore. For historical, social, cultural and political purposes, they are invisibilized, making it necessary to draft national laws to protect and recognize their customary rights as well as the constitutional recognition of their existence as peoples.</p> <p>For its part, CONCULTURA has made several actions in relation to the strengthening and recovery of the Nahuatl language but unrelated to the formal education system. With regard to Article 63, the bodies responsible for CONCULTURA and in this case, the National Directorate of Cultural Heritage, has enacted the Law of Cultural Heritage, focusing its main attention to the ancestral heritage, but not to improve the living conditions the heirs of these ancient treasures<sup>212</sup>, it has not been linked their work to the indigenous communities in rescue, preservation and dissemination actions as it seems they are more interested in the built heritage that in the culture that is alive.</p>
<b>IDH</b>	Of 0.747213
<b>International conventions signed with indigenous peoples by the country:</b>	The Government of El Salvador on Convention 107, made a series of sociological and political considerations, in order to describe the legal status of indigenous communities in the country and to identify organizations that make it up, offering also the index compliance with the obligations of the Government in consequence of the Convention. As can be seen, there are aspects of non-legislated discrimination, but in a general

<sup>209</sup> Wikipedia-El Salvador: [http://es.wikipedia.org/wiki/El\\_Salvador](http://es.wikipedia.org/wiki/El_Salvador)

<sup>210</sup> EL SALVADOR, DE LA ESPERANZA A LA DESILUSIÓN. PARTE I. ADMINISTRATIVE AND GEOGRAPHICAL DATA By Heródoto el Rojo: <http://www.nodo50.org/arevolucionaria/masarticulos/junio2004/salvador1.htm>

<sup>211</sup> INDIGENOUS PEOPLES-CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. February 2003, San Salvador, El Salvador. *Profile of indigenous Peoples in El Salvador/ VI. Legal Framework / Legal Framework of the Indigenous peoples in El Salvador/ 6.4Legal Instruments.6.4.1 National Instruments*, Cit: Pag 52:

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<sup>212</sup> CONCULTURA, has a Special Law for the Protection of Cultural Heritage of El Salvador, which are reported as assets that comprise the cultural heritage, ethnological material, of historic, vernacular and ethnographic language Nahuatl and other indigenous and the traditions and customs, techniques and traditional craft products. See, Article 3 paragraphs f,ñ-l y 2.

<sup>213</sup> 2007 Data. [http://es.wikipedia.org/wiki/Anexo:Pa%C3%ADses\\_por\\_%C3%ADndice\\_de\\_desarrollo\\_humano](http://es.wikipedia.org/wiki/Anexo:Pa%C3%ADses_por_%C3%ADndice_de_desarrollo_humano)

	<p>framework, without taking into account indigenous peoples as such, as autonomous peoples, with their own idiosyncrasies. Therefore the urgency of the ratification of ILO Convention 169 and the formulation of draft laws that recognize the rights of the original peoples.</p> <p>There is a need to formalize and order a harmonious coexistence between the state courts and traditional forms of conflict resolution of indigenous law practiced by the peoples.</p> <p>The government of El Salvador formally ratified the Convention 107, November 18, 1958, but indigenous peoples do not take it as their own because it is an integration agreement, far away from their national and socio-cultural reality and therefore is detrimental to their own identity<sup>214</sup>.</p>
<b>Political system:</b>	In the 1983 Constitution the country's basic legal system defined. It states that El Salvador is a democratic and representative republic. With three branches, the executive, legislative and judicial.

#### INDIGENOUS AND ORIGINAL PEOPLES:

From an anthropological perspective and being helped by the anthropological linguistic, three are the indigenous peoples who today can be seen in El Salvador: Nahua/Pipiles<sup>215</sup> in the departments of Ahuachapán, Santa Ana, Sonsonate, La Libertad, San Salvador, La Paz and Chalatenango, Los Potón, Lencas branch in the departments of Usulután, San Miguel, Morazán and La Unión and Cacaoperas in the department of Morazán. Indigenous peoples located in areas known as "Nonualcos" and "Tepezontes" are descent but Nahua- pipil throughout history have maintained their own cultural traits<sup>216</sup>.

In general terms we can say is people caught between rural and urban populations and that their approximate percentage would be ranging between 10 and 12%. However, this has not been determined by a census.

It is a fact that in almost all areas with indigenous presence is marked with a lack of resources to meet basic social needs. In other words, landless Indians in El Salvador are the majority.

The accelerated migration over the past and recent history that have had to endure the indigenous peoples, the ravages of nature and socio-political violence that has afflicted the country and their places of origin, are key event to understand their current situation. Many indigenous people as a means of survival had to leave their homelands to settle in villages outside the national borders.

The impacts of culture have not been extensively studied, but the constant process of cultural and economic transformation has touched her identity as a cultural unit. Customs, traditions and introduction of foreign words are a daily occurrence that has affected even their family and social relationships.

The land plays for them a leading role and is considered the mother, who gives life, but they are daily faced with other cultures to impose their economic interests and over-exploiting their resources and in other cases they are converted to chemical receptors and other pollutants, which affect the national environment.

In the characterization of indigenous people, some anthropologists apart from its physical features have characterized the Indians for some conditions that can broadly be described as follows:

Speak Spanish as their first language and in the case of the Nahua-Pipil something of their pipil language.

They dress as peasants in general, although some older women are the ones that retain their traditional costumes.

They are characterized by their strong ancestral spirituality.

They have proven Indian ancestry.

They are recognized as Indians by other Indians and Ladinos.

They use their own tools and make handcrafts from their region.

Are receptors and transmitters of oral tradition in the region.

Show reverence for the earth as part of its indigenous worldview.

The indigenous population of the municipality of Izalco and counties now plays a leading role in regard to safeguarding their own customs. That's where cultural elements are still alive as the Mayor's Office of Policy and brotherhoods that vivify and give strength to the indigenous culture of the place.

Traditional dress has undergone substantial changes and is almost not used and if used, are those elderly people, mainly women Nahua-pipiles. Very few women wear their traditional dress.

<sup>214</sup> INDIGENOUS PEOPLES-CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. February 2003, San Salvador, El Salvador. *Profile of indigenous Peoples in El Salvador/ VI. Legal Framework / Legal Framework of the Indigenous peoples in El Salvador /6.4 Legal Instruments.6.4.2 international Instruments* Cit: pag 48-49  
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<sup>215</sup> INDIGENOUS PEOPLES -CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA.Febrero 2003, San Salvador, El Salvador. *Profile of indigenous peoples in El Salvador / Status of the indigenous peoples of El Salvador/2.1.6.La Lengua*, Cit: pag ix  
[www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020\\_03\\_03.doc](http://www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020_03_03.doc)

<sup>216</sup> INDIGENOUS PEOPLES -CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA.Febrero 2003, San Salvador, El Salvador. *Profile of indigenous peoples in El Salvador / Status of the indigenous peoples of El Salvador/2.1.6.La Lengua*, Cit: pag 13.  
[www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020\\_03\\_03.doc](http://www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020_03_03.doc)

The men wear straw hats or synthetic material and long sleeved shirts (no longer cottons blanket of yesteryear). Few wear sandals indigenous (Indian sandal), these shoes have been replaced in popular use but in the rainy season now prefer to wear rubber boots.

Indigenous people in El Salvador have been victims, throughout history; the dominant system has negatively that have affected their culture. However, there are ancient structures including organizational and cultural elements that come together and give life, as is the case of stewardships, for in them are preserved many social-organizational elements that identify them<sup>217</sup>.

Location of some Indigenous communities<sup>218</sup>:

In 13 of the 14 departments that make up the national territory is scattered indigenous population and there are departments in which the concentration is higher. This profile is located in the indigenous population in the places indicated below

Indigenous people in El Salvador are a very different picture of what happens in the other Central American countries. Here the Indians are considered preferably by self-definition and the people they belong to. Very marked physical traits in certain regions reveal this population group. Few studies have been done on this population in El Salvador.

#### Communities with indigenous presence:

##### Western Zone

Department of Ahuachapán: Concepción de Ataco, San Francisco Menéndez, San Pedro Puxtla, Tacuba y Apaneca.

Department of Sonsonate: Sonsonate ciudad (población dispersa en barrios urbanos y sector rural), Caluco, Cuisnahuat, Izalco, Juayúa, Nahuizalco, Nahuilingo, Salcoatitán, San Antonio del Monte, San Julián, Santa Catarina Mazahuat, Santa Isabel Ishuatán, Santo Domingo de Guzmán y Sonzacate.

Departamento de Santa Ana: Texistepeque y Chalchuapa.

##### Central Zone

Departament of La Libertad: Jicalapa, Chiltiupán, Huizúcar, Jayaque, Teotepeque, Tepecoyo y Talnique.

Departament of San Salvador: Panchimalco, Rosario de Mora y Santiago Texacuangos, San Antonio Abad, Tonacatepeque.

Departament of Cuscatlán: Cojutepeque, San Pedro Perulapán, Santa Cruz Analquito, Monte San Juan, Tanancingo y Santa Cruz Michapa.

Departament of La Paz: San Antonio Mazahuat, San Pedro Mazahuat, San Francisco Chinameca, San Juan Nonualco, Zacatecoluca, San Pedro Nonualco, Santiago Nonualco, San Juan Tepezontes y San Miguel Tepezontes and Santa María Ostuma cantons.

Departament of San Vicente: Apastepeque y San Sebastián.

Departament of Chalatenango: Tejutla y Nueva Concepción.

##### Eastern Zone

Departament of Usulután: Jiquilisco (Los cantones Salinas, El Potrero y Puerto Los Avalos), Ereguayquín, Ozatlán y Tecapán.

Departament of San Miguel: Lolotique y Moncagua (Cantón El Jocotal)

Departament of Morazán: Cacaopera, Chilanga, Guatajiagua, San Simón y Sensembra.

Departament of La Unión: Conchagua y Yucuaquín.

#### INDIGENOUS PEOPLES FROM EL SALVADOR<sup>219</sup>:

##### CACAOPERA O KAKAWIRA<sup>220</sup>:

Are ethnic groups from El Salvador who once spoke its own language. The Cacaopera language, belonging to the misumalpa group of languages is now extinct, it is considered very akin to the Matagalpa language

During the Classic period of pre-Columbian times to the present, Cacaoperas emigrated from El Salvador between the V and VII century, and settled north of the current departments of San Miguel, Morazan, La Union and the municipality of Jucuaran in de department of Usulután.

After the Spanish conquest began the Cacaopera language extinction, the problem worsened after independence in 1974 until the last Cacaopera language peaker died in the department of Morazan.

<sup>217</sup> INDIGENOUS PEOPLES -CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. Febrero 2003, San Salvador, El Salvador. Profile of indigenous peoples in El Salvador / Status of the indigenous peoples of El Salvador/2.1.6.La Lengua, Cit: pag 13-15.  
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<sup>218</sup> INDIGENOUS PEOPLES -CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. Febrero 2003, San Salvador, El Salvador. Profile of indigenous peoples in El Salvador / Status of the indigenous peoples of El Salvador/2.1.6.La Lengua, Cit: pag 16-17.  
[www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020\\_03\\_03.doc](http://www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020_03_03.doc)

<sup>219</sup> Wikipedia – Indigenous Peoples in El Salvador:

[http://es.wikipedia.org/wiki/Categor%C3%ADa:Pueblos\\_ind%C3%ADgenas\\_de\\_El\\_Salvador](http://es.wikipedia.org/wiki/Categor%C3%ADa:Pueblos_ind%C3%ADgenas_de_El_Salvador)

<sup>220</sup> Wikipedia-Cacaopera: <http://es.wikipedia.org/wiki/Cacaopera>



Currently Cacaopera ethnicity, although their language is extinct, still maintain their traditions and customs, one of them is the Dance of the emplumados (the feathered). They are represented by the organization called Winaka. A museum is dedicated to the culture or Kakawira located in the municipality of Cacaopera.

#### LENCA<sup>221</sup>:

It is a Mesoamerican ethnic group that has its own language, which occupied part of the territory of Honduras and El Salvador since pre-Columbian times.

His affiliation with other languages is in dispute among linguists. According to Campbell, the Lenca language is not yet rated. According to the Costa Rican linguist Costenla Adolfo Umaña, is a language with chibchano roots, but with much influence from the Nahuatl and Mayan languages like Yucatec and Chol.

#### PIPILES<sup>222</sup>:

The Pipil are indigenous people inhabiting the western and central El Salvador. Its language is Pipil or Nahuatl. The ancestors of the Pipil emigrated from Mexico and settled in what is now El Salvador in the tenth century AD

Pipiles branches are:

The Cuscatlecos, who lived in Cuscatlan (now the town of Antiguo Cuscatlan in San Salvador area).

The Izalcos that harvested cocoa and traded obsidian tools

Nonualcos, who were known to be fond of war.

The Mazahuas, who raised herds of white-tailed deer.

#### XINCA<sup>223</sup>:

The Xinca people are a Native American ethnic, almost extinct, which was located in Central America, in what is now Guatemala and El Salvador. They were characterized by speaking the language Xinca of unknown family and not related to the Aztec.

### LEGAL RECOGNITION OF THE INDIGENOUS PEOPLES

In El Salvador, there is still no constitutional recognition of indigenous peoples' rights, especially with regard to collective rights, ie the use of language, the right to identity, the presence of his own regulatory traditional system. The Constitution of El Salvador (Constitution of the Republic) expressed in its content that there is no discrimination for the residents in the territory of the Republic, a fact which was ratified with the signing of peace accords in Chapultepec Mexico, January 16, 1992, in order to ensure the protection of human rights and set properly the powers of state bodies and legal powers which highlights the principles, rights and obligations and aims, the pursuit of justice, legal certainty and the common good.

All this was managed in a holistic manner. These instruments, though, are of vital importance to the system of law prevailing in the country, have not taken into account the specificity and worldview of indigenous peoples and communities. It has been ignoring the indigenous law.

The Constitution of El Salvador recognizes the principle of legal equality, which determines that the enjoyment of civil rights there may be not established restrictions based on differences of nationality, race, sex or religion, Article 3 NC, under which the Constitution has previously recognized the individual as the origin and purpose of state activity and indicates that the purpose of that is the constitution of justice, legal certainty and the common good<sup>224</sup>.

Indigenous Law and its practices:

Indigenous peoples historically exercised their own justice system, by which, retaining their values, customs, forms of organization and conflict resolution mechanism and implementation of justice. In some indigenous peoples still prevails this ancestral justice system.

The use of the terms and customs, legal practice and even customary law, indigenous law prevails, being a proprietary system, through which justice is delivered.

In El Salvador there are villages where in spite of modern legislation, they maintain the traditions and ancestral customs that form a sort of common law and is preserved over time. Examples include the mayors of the communities, whose main functions are conciliatory and of spiritual character. In this way they make decisions to benefit their community and participate in the appointment of officers of guilds.

In this structure, each of the first members of a guild is part of a civil ceremonial council power. The positions of individuals within the council are nested according to the position he occupies in the inter guilds hierarchy, ie, the patron saint who represents the member.

This council made up of members who along with mayors appoint the mayors of all the guilds, controls the festival calendar and supervise the finances of the guilds. Another function is to meet with city officials and leaders of the

<sup>221</sup> Wikipedia-Lenca: <http://es.wikipedia.org/wiki/Lenca>

<sup>222</sup> Wikipedia-Pipil: <http://es.wikipedia.org/wiki/Pipil>

<sup>223</sup> Wikipedia-Xinca: <http://es.wikipedia.org/wiki/Xinca>

<sup>224</sup> INDIGENOUS PEOPLES-CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. February 2003, San Salvador, El Salvador. *Profile of indigenous Peoples in El Salvador / VI. Legal Framework / Legal Framework of the Indigenous peoples in El Salvador /6.4 Legal Instruments.6.4.2 International Instruments* Cit: pag 10-15:  
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people to discuss community affairs, make decisions and reconcile differences among members of the community. Indigenous peoples claim their cultural rights, including their customs, practices of traditional medicine, spirituality, language, the right to choose to keep their names and surnames in the original language<sup>225</sup>.

## LANGUAGES.

National Official Language of El Salvador is Spanish, although the Constitution of El Salvador under Article 62 reads, "The languages spoken in the country are part of national heritage and shall be preserved, disseminated and respected. However, indigenous languages in the east, are extinct (Lenca and Cacaopera) or the last generation of speakers Nahuatl<sup>226</sup>.

The chronicler Diego Garcia de Palacio (1570) mentions the variety of languages existing in the region in the late sixteenth century, protruding tongues Pipil, Popoluca, Chontal potón, taulepa, ulúa, cholulteca and mangue. Multilingual policy should mention the Spanish (1570-1769) from the government of King Philip II of Spain, who in 1570 recognized the Nahuatl language of evangelization for New Spain. This ordinance was discontinued in the late eighteenth century, because other peoples of Mesoamerica's southern border does not speak it, but should consider the length of time held is ordinance. Subsequently advocated by castellanization of indigenous people.

The only surviving indigenous language Nahuatl only in some families of pipiles, mainly in the west. However, the language survives and there are several efforts undertaken by indigenous organizations, universities CONCULTURA, and national and international independent researchers.

The Nahuatl is spoken only in families. Of these, the places that stand out are: Cuisnahuat and Santo Domingo de Guzman. Among the Lenca and Cacaoperas are now just a few words that survive but do not have a structured language. Nevertheless there is evidence of their struggle for cultural recovery, mainly language and the proof is the research and primers, both of the Cacaopera, and the Lenca, made for learning and dissemination<sup>227</sup>.

## Indigenous Peoples of Nicaragua

### DATOS DEL PAÍS:

<b>Capital:</b>	Managua
<b>Area:</b>	129.494 km2
<b>Geography:</b>	The country is located between the Pacific Ocean to the west and the Caribbean Sea to the east. Bordered by Honduras to the north and Costa Rica to the south.
<b>Population:</b>	Nicaragua is a multiethnic country with an ascending population according to the last census in 1995 it showed a population of nearly five million people. Official figures from the Nicaraguan Institute of Statistics and Censuses. The last census in 2005 shows a total of 5,142,098 inhabitants. Population by sex and rural-urban area: Most of the Nicaraguan population (61.4%) is mostly mestizo (mixed Spanish, Amerindian and African and to a lesser extent Asians). Despite having no current official estimates about the precise composition of most of European - mixed races with a high degree of homogeneity in recent centuries, some publications do not cite sources, it is estimate that among non- mixed European is about 37% and in censuses of the last century is up to 47%.
<b>Indigenous Population:</b>	8.6% of Nicaragua's population belong to ethnic groups the largest being the Miskito, mestizo (mixed) of the Caribbean Coast, Chorotega, Nahua-Mangue and Creole or Creoles of African descent, all of which together are more than two-thirds of ethnic minority groups. Most of the African -Nicaraguan population live in the Caribbean coast of the country, which is also the most vast and sparsely populated region and are mostly descendants of former slaves from Jamaica when the region was a British protectorate and preserve a rich indigenous culture.

<sup>225</sup> INDIGENOUS PEOPLES-CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. February 2003, San Salvador, El Salvador. *Profile of indigenous Peoples in El Salvador* Cit: pag 48-51  
[www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020\\_03\\_03.doc](http://www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020_03_03.doc)

<sup>226</sup> INDIGENOUS PEOPLES -CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. Febrero 2003, San Salvador, El Salvador. *Profile of indigenous Peoples in El Salvador / Status of the indigenous peoples of El Salvador / 2.1.6. La Lengua*, Cit: pag 11  
[www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020\\_03\\_03.doc](http://www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020_03_03.doc)

<sup>227</sup> INDIGENOUS PEOPLES-CONCULTURA-CTMPI-CANCO MUNDIAL-RUTA. February 2003, San Salvador, El Salvador. *Profile of indigenous Peoples in El Salvador* Cit: 13.  
[www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020\\_03\\_03.doc](http://www.ruta.org/.../Perfiles%20Indigenas/PerfillIndigELS/VERSION%20FINAL%201%20PI%2020_03_03.doc)

<b>IDH</b> <sup>228</sup>	For 2007 is of 0.6999
<b>Political Systems:</b>	Nicaragua is a Central American country that defines itself as an independent state, free, sovereign, unitary and indivisible. It is often also considered democratic, participatory and representative, maintaining four major powers (Legislative, Executive, Judicial and Electoral) and governing bodies.
<b>Main Sectors</b> <sup>229</sup> :	<p>Agriculture is one of the main economic activities include the cultivation of cotton, coffee, sugarcane, bananas, corn, beans, and sesame.</p> <p>Agriculture is currently 60% of its total exports which annually provides about \$: 300 million.</p> <p>Also, in early 2009, the Russian government was interested in creating a chocolate processing plant in Eastern Europe's largest and, according to the project managers, cocoa is produced in Nicaragua, to achieve the goal the country must produce more than 50.000 tons of cocoa, this will become the largest producer of cocoa in Central America and the ninth largest worldwide.</p> <p>Livestock is a thriving business.</p> <p>The main mineral resources include gold, copper, silver and lead.</p> <p>The main industrial centers are located in the western country. According to the World Bank, Nicaragua is ranked as the 85th best economy to start a business.</p> <p>Flor de Cana rum from Nicaragua is renowned among the best in Latin America, tobacco and livestock are also well positioned in terms of quality factors. During the war between the Contras and the Sandinistas in the 80's, much of the country's infrastructure was damaged or destroyed. Inflation has averaged 30% through the 80's.</p>
<b>Administrative Organization:</b>	For administrative reasons, Nicaragua is divided into 15 departments and two autonomous regions. These, in turn, are currently divided into municipalities, 153.

#### 1. TABLES OF PERCENTAGE OF INDIGENOUS PEOPLE<sup>230</sup>:

TOTAL POPULATION PER ETHNIC GROUP:		
North Atlantic Autonomous Region (RAAN)		
Ethnic Group	Population	Percentage
Mestizo (mixed)	109.116	56..6
Miskitu	75.000	38.9
Mayangna	7.000	3.7
Creole	1.600	0.8
TOTAL	192.716	100.0
South Atlantic Autonomous Region		
ETHNIC GROUPS	POPULATION NUMBER	PERCENTAGE
Mestizo (mixed)	232.702	85.5
Creole	28.000	10.3
Miskitu	7.500	2.8
Garífuna	2.000	0.7
Rama	1.100	0.4
Mayangna	950	0.3
TOTALS	272.252	100.0

<sup>228</sup> Wikipedia-Human developing index: [http://es.wikipedia.org/wiki/%C3%8Dndice\\_de\\_desarrollo\\_humano](http://es.wikipedia.org/wiki/%C3%8Dndice_de_desarrollo_humano)

<sup>229</sup> Wikipedia-Nicaragua, Production in Nicaragua: <http://es.wikipedia.org/wiki/Nicaragua>

<sup>230</sup> Nicaragua-Acnur. *Indigenous Peoples and Constitutional Rights in Latin America: An Overview*. Cletus Gregor Barié, Cit:pag: 411: [www.acnur.org/biblioteca/pdf/6294.pdf](http://www.acnur.org/biblioteca/pdf/6294.pdf)

## 1. INDIGENOUS PEOPLES OF NICARAGUA<sup>231</sup>:

It should be noted that the current legislation in Nicaragua recognizes the existence of indigenous peoples and ethnic communities.

The first are those composed of human communities whose origin lies in the Hispanic nations in the country, those ethnic communities are made up of Afro-Caribbean communities of origin.

Indigenous peoples are divided into three geographical sectors in the Caribbean Atlantic Coast; enjoy an autonomous status since 1987, in this zone they are in rural and urban areas. Settlements located in the rural communities, they form a trail of more than 400 communities: Indigenous origin, Miskito, Sumo-Mayangna (Panamahka, Twahka, Ulwa), Ramaand and Garifuna.

In the central northern hometowns are located Matagalpa, Chontal, Popoluca distributed in rural area with scattered settlement patterns and also in urban towns.

9 indigenous peoples are recognized in this area are: Muy Muy, Sebáco, Jinotega, Telpaneca, Totogalpa, Cusmapa, San Lucas, Mozonte.

Located in the Pacific indigenous communities of Chorotega origin In Monimbó (annex the city of Masaya), Sutiaba Maribios origin (annexed town to the city of León) and from Nahuatl origin in the southern department of Rivas.

Indigenous peoples of North, Central and Pacific of Nicaragua:

These are the current country's indigenous peoples that are not protected by the autonomous status, recognized by the Constitution of Nicaragua, indigenous peoples and ethnic communities on the Atlantic coast.

These villages located in the North Central and Pacific zone, have maintained cultural continuity and ethnic politics, which is derived from colonial rule that prevailed in previous centuries and peoples subjected to a process of nationalization. However they persisted reproducing their ethnic identities. Currently, they maintain their land and community rights, traditional forms of organization, customs and customary law, and carry out a struggle for a general law of autonomy for their people, under Article 5 of the Constitution that recognizes:

The existence of the indigenous peoples of Nicaragua.

Law of identity and culture

The land rights

The rights management of local affairs

Customary rights

These villages are located in the towns of Jinotega, Matagalpa, Madrid, León, Nueva Segovia, Masaya and Rivas. And they share jurisdictions in 17 municipalities. To this we add 9 indigenous municipalities of the Autonomous Regions.

### LIST OF MAJOR INDIGENOUS POPULATION:

NICARAO: (Nahuatl Chorotegas and Maribios)

Historic Indian village, named for the chief or Nicarao or Nicaragua, the hometowns were Nicaraos of Nahuatl origins, which arrived in the twelfth century from Mexico. The culture of Nicaraos as Chorotega of Nicaragua has a close relationship.

MISKITO:

The Miskito indigenous people constitute to the largest population of 120.000 inhabitants reaching Nicaragua. It is also a transnational town found in Honduras with 30,000 people, which likewise is a town with an indigenous majority.

In Nicaragua, The city of Bilwi is the main urban indigenous Miskito center and capital of the North Atlantic Autonomous Region (RAAN).

Politically the Miskito of Nicaragua actively participate in a Regional multi ethnic autonomy system. Governing the Regions of North and South Atlantic (RAAN, RAAS) with other ethnic groups in the Caribbean, enjoying this regime. Likewise local governments administer the municipalities of Prinzapolka, Wuaspam, Puerto Cabezas.

SUMOS – MAYANGNAS:

The villages Mayangna are located in Nicaragua and Honduras, with dialects in their language. Mayangna are known tawahkas located in southern Honduras. In Nicaragua are located: Panamahka, Tawahka, Ulwas, living in the Autonomous Regions of the North and South Atlantic, and the department of Jinotega. They are also related with the Miskitos.

<sup>231</sup> Final research Report - project water culture in Mesoamerica -UNESCO/Indigenous Peoples of Nicaragua and its culture of water/ Mario Riso/Nicaragua - November 2005, Managua, Nicaragua. PUEBLOS INDIGENAS CONTEMPORANEOS, Informe final Nicaragua: [http://www.unesco.org.uy/phi/aguaycultura/fileadmin/phi/aguaycultura/Nicaragua/INFORME\\_FINAL\\_nicaragua.pdf](http://www.unesco.org.uy/phi/aguaycultura/fileadmin/phi/aguaycultura/Nicaragua/INFORME_FINAL_nicaragua.pdf)

The Mayangnas are people who are deep in the jungles of Nicaragua and Honduras, Caribbean, difficult to access. The main communities are: Musawas, Wasakin, Karawala. The first 2 are in the towns of Bonanza and Rosita in the RAAN and the second is the county seat of Desembocadura in the RAAN. There are about 36 communities in Nicaragua and Mayangna and about 5 in Honduras. Mayangnas peoples constitute the second indigenous people of Nicaragua, speaking native language, adding 15,000 residents. Politically, the natives of Bicaragua from Mayangnas participate actively in the self-governing, multiethnic regional, through representatives in the government of the RAAN and RAAS. Along with other indigenous peoples who have the same regimen. Despite its relative minority population, the Home Rule Act allowed under the principle of ethnic democracy, participation on the board in the regional councils. At the same time they have the administration of local governments in the municipalities of Bonanza, Santa Rosa and the Desembocadura of Rio Grande.

#### RAMA:

The indigenous town of Rama or Ramaki, is located exclusively in the Nicaraguan Atlantic coast. Most live in the RAAS in the town of Bluefields, and a minority is in the municipality of San Juan de Nicaragua, in the department of Rio San Juan.

The village of Rama consists of about 1,600 inhabitants. Most of the population lives on the island of Rama Rama Cai, of 22 hectares, is located in the coastal lagoon of the bay of Bluefields.

#### GARIFUNA<sup>232</sup>:

The Garifuna are an ethnic group of African descent residing in various regions of Central America, Caribbean and United States. They are also known as Garifune or Black Caribs. It is estimated that over 600,000 are residents in Honduras, Belize, Guatemala, Nicaragua, Mexico and South America. In fact, the term "Garifuna" refers to the individual and his language, while Garinagu is the term used for the community of people. The best known version of the emergence of the 'Black Caribs' takes us to 1635, when two Spanish ships carrying slaves to the West Indies from what we know today as Nigeria shipwrecked near the island of San Vicente. The slaves escaped the ship and reached the island, where they were welcomed by the Caribs, who offered them protection. Marriages between them originated Garinagu people, now known as Garifuna. This name is derived from "Kalipuna" one of the names used by the Caribs to refer to them. In addition to the previous explorers shipwrecked from Africa, it should be noted that the Caribs captured slaves in their struggle against the British and French in neighboring islands and many of those captured were inserted in their communities.

When the British invaded the island of San Vicente, they opposed the French settlements and their alliances with the Caribs. When they surrender to the British in 1796, the "Black Caribs" were considered as enemies and deported, first to Jamaica and then to Roatan, an island that today belongs to Honduras. The British separated them, differentiating between those who had more the appearance of indigenous and those who were closest to the Africans, the latter being declared as the "real" enemies to be deported while the others were allowed to remain on the island.

Over 5,000 Black Caribs were deported, but only about 2,500 survived the trip to Roatan. Since the island was very small and infertile to sustain the population, the Garifuna petitioned the Spanish authorities in Honduras to be allowed to settle on land. The Spanish allowed it in exchange for using them as soldiers and so they expanded to the Caribbean coast of Central America.

Today most of the Garifunas have settled in the Gulf of Honduras and in particular in southern Belize, on the coast of Guatemala (around Livingston), on the island of Roatan in the coastal towns of Honduras and Nicaragua, and in several U.S. cities.

The Garifuna speak English, Spanish and Garifuna. The Garifuna of Guatemala and Honduras are Garifuna and Spanish speakers, while the ones from Belize and the U.S. also speak English as their mother tongue.

### 1. LANGUAGE<sup>233</sup>:

The official language is Spanish, on the Atlantic Coast Creole English is spoken and other native languages such as:

INDIGENOUS PEOPLES	LANGUAGE	CHARACTERISTICS
MISKITU	Miskito	Miskito Language: Integrates the Linguistics family called Misumalpa, most of the population speaks 3 languages, Miskito, Creole English and Spanish are also spoken mayangha sumo.
MAYANGAS-	Sumo	The language of this people is also called Sumo part of the

<sup>232</sup> Wikipedia .Garifuna:: [http://es.wikipedia.org/wiki/Gar%C3%ADfuna\\_\(etnia\)](http://es.wikipedia.org/wiki/Gar%C3%ADfuna_(etnia))

<sup>233</sup> Final research project-water culture in Mesoamerica - UNESCO / Indigenous Peoples of Nicaragua and its water culture / Mario Riso / Nicaragua - November 2005, Managua, Nicaragua. CONTEMPORARY INDIGENOUS PEOPLES, Final Report Nicaragua: [http://www.unesco.org.uy/phi/aguaycultura/fileadmin/phi/aguaycultura/Nicaragua/INFORME\\_FINAL\\_nicaragua.pdf](http://www.unesco.org.uy/phi/aguaycultura/fileadmin/phi/aguaycultura/Nicaragua/INFORME_FINAL_nicaragua.pdf)

SUMO		Sumalpa family, which brings together contemporary speakers, in Matagalpa.
RAMA	Rama	The Rama language, belongs the Boto-Rama group of languages
GARÍFUNA	Garífuna/Garigura <sup>234</sup>	The Garífuna or Arawak is an arahuaco language. An interesting feature of this language is the vocabulary that is used only by women and the one that is used only by men. This, however, does not affect the entire vocabulary. The terms used by men generally come from the Carib language while the vocabulary used by women comes from the Arawak language.

# 1. DEMOGRAPHIC CHARTS OF INDIGENOUS POPULATION:

Population by ethnic diversity universe based on self-recognition by macro-region. Census 2005 <sup>235</sup> :			
ETHNIC UNIVERSE / MACRO REGION		TOTAL	PERCENTAGE
Indigenous Peoples and Ethnic Communities		443.847	100
Caribbean Coast		270.870	61
Indigenous	Rama	4.185	0.9
	Mayangna-Sumu	9.756	2.2
	Miskitu	120.817	27.2
	Ulwa	698	0.2
African Descent	Kriols	19.890	4.5
	Garífunas	3.271	0.7
Mestizos (mixed)	Costal Mestizo (mixed)	112.253	25.3
Pacific-Central-North		92.204	20.7
Indigenous	Xiu-Sutiava	19.949	4.5
	Nahoa-Nicarao	11.113	2.5
	Chorotega-Nahuat-Mange	46.002	10.4
	Cacaopera-Matagalpa	15.240	3.3
Others		13.470	3.0
Don't Know		47.473	10.7
Total Indigenous		227.760	51.3
Total Afro descendants		23.161	5.5

Source: Based on census 2005 (Inec, 2006) and Fauné, 2004.

# 1. RIGHTS OF INDIGENOUS PEOPLES<sup>236</sup>:

Constitutional Recognition of Indigenous Peoples:	
Multiethnic nature of Nicaragua	Article 8 The people of Nicaragua are multiethnic and integral part of the Central American nation.
Official language: Spanish, Indigenous languages official use	Article 11 Spanish is the official state language. The languages of the Communities of the Atlantic Coast of Nicaragua it may also be officially used in the cases established by law.
Equality of persons before the law	TITLE IV RIGHTS, DUTIES AND WARRANTIES OF THE PEOPLE NICARAGUAN CHAPTER I Individual Rights Article 27 All persons are equal before the law and have rights to equal protection. There is no discrimination on grounds of birth, nationality, political views, race, sex, language, religion, opinion, origin, economic status or social status. Foreigners have the same duties and

<sup>234</sup> Wikipedia- Garífuna Language: [http://es.wikipedia.org/wiki/Idioma\\_gar%C3%ADfuna](http://es.wikipedia.org/wiki/Idioma_gar%C3%ADfuna)

<sup>235</sup> STATUS OF RURAL WOMEN NICARAGUA, FAO, 2007, Cit: Cap II rural female population in the multiethnic and multicultural Nicaragua/Nicaragua the multiethnic, multilingual, multicultural/Inequality in the Register Table 5, pag: 38; [http://www.landcoalition.org/pdf/08\\_FAO\\_SituacionMujeresRuralesNicaraguaFAO.pdf](http://www.landcoalition.org/pdf/08_FAO_SituacionMujeresRuralesNicaraguaFAO.pdf)

<sup>236</sup> Nicaragua- Acnur. Indigenous Peoples and Constitutional Rights in Latin America: An Overview. Cletus Gregor Barié, Cit: pag: 413-417: [www.acnur.org/biblioteca/pdf/6294.pdf](http://www.acnur.org/biblioteca/pdf/6294.pdf)

	rights as Nicaraguans, with the exception of political rights and established by law, they can not intervene in political affairs. The State respects and guarantees the rights recognized in this Constitution to all persons within its territory subject to its jurisdiction.
Rights of detainees to receive information in their language or mother tongue	<p>Article 33</p> <p>No one shall be subjected to arbitrary arrest or detention or be deprived of his liberty except on grounds established by law and subject to legal proceedings.</p> <p>Therefore:</p> <p>2.</p> <p>Every detainee has the right:</p> <p>3. Unitarian state</p> <p>4. Form of government: Republic</p> <p>5. Multiethnic nature of Nicaragua</p> <p>6. Official language: Spanish, indigenous languages in official use</p> <p>7. Equality of persons before the law</p> <p>8. Rights of detainees to be informed in their language or mother tongue</p> <p>2.1</p> <p>To be informed promptly in language or language which he understands and in detail, the reasons for his arrest and the charges against him, that his family is informed of his arrest, and also be treated with do respect due to the inherent dignity of human being.</p>
Right to have an interpreter at court proceedings	<p>Article 34</p> <p>Every defendant is entitled, on equal terms to the following minimum guarantees:</p> <p>6.</p> <p>free assistance of an interpreter if he cannot understand or speak the language used by the court.</p>
Rights for constitutions of organizations	<p>TITLE IV</p> <p>RIGHTS, DUTIES AND WARRANTIES OF THE PEOPLE</p> <p>NICARAGUAN</p> <p>CHAPTER II</p> <p>political rights</p> <p>Article 49</p> <p>In Nicaragua they have the right to organize workers in the city and the countryside, women, youth, farmers, artisans, professionals, technicians, intellectuals, artists, religious Communities of the Atlantic Coast and the population in general, without discrimination, to the realization of their aspirations in their own interests and participate in building a new society.</p> <p>These organizations will be formed according to the participatory and elective will of the citizens, to have a social function and may, or may not be non-partisan, according to its nature and purposes.</p>
Rights of communities of the Atlantic Coast: the right to cultural identity, self-government, community property and the use of its land	<p>TITLE IV</p> <p>RIGHTS AND DUTIES AND WARRANTIES OF THE PEOPLE</p> <p>NICARAGUAN</p> <p>CHAPTER VI</p> <p>Rights of the European Atlantic Coast</p> <p>Article 89</p> <p>The Communities of the Atlantic Coast are an inseparable part of the Nicaraguan people and as such have the same rights and have the same obligations.</p> <p>The Communities of the Atlantic Coast have the right to preserve and develop their cultural identity in the national unity, establish their own forms of social organization and manage their local affairs according to their traditions.</p> <p>The State recognizes the communal forms of land ownership of the Communities of the Atlantic Coast. It also recognizes the enjoyment, use and enjoyment of the waters and forests on their lands.</p>
Right to preserve cultures as part of a national culture	<p>Article 90</p> <p>The Communities of the Atlantic Coast have the right to free expression and preservation of their languages, art and culture. The development of culture and values enriches the national culture. The State shall create</p>

	special programmes for the exercise of these rights.
State guarantees non-discrimination	Article 91 The State has an obligation to enact laws to promote actions to ensure that no Nicaraguan is discriminated against because of their language, culture and origin.
Natural resources are national heritage	TITLE VI NATIONAL ECONOMY, LAND REFORM AND FINANCE PUBLIC CHAPTER I National economy Article 102 Natural resources are national assets. The preservation of the environment and conservation, development and rational exploitation of natural resources belong to the State, it may enter into contracts for the rational exploitation of these resources, when the national interest requires it.
Guarantee of the various forms of ownership	Article 103 The State guarantees the coexistence of democratic forms of public, private, cooperative, voluntary, community, associations' properties, all of which are part of the mixed economy, are subject to the higher interests of the nation and fulfill a social function.
Equality between different types of business and economic activities exercise	Article 104 The companies that organized under any form of ownership established in this Constitution, are equal before the law and state economic policies. The economic initiative is free. It guarantees the full exercise of economic activities, no restrictions other than for social or national interest to impose the laws.
The land system: Prohibition indigenous communities expropriation, common property regime according to specific law	TITLE VI NATIONAL ECONOMY, LAND REFORM AND FINANCE PUBLIC CHAPTER II agrarian reform Article. 107 Land reform will eliminate the large estates that are idle and it will be done primarily with state land. When the expropriations of idle land holdings affect private owners, it will comply with the provisions of Article 44 of this Constitution. [Article 44 guarantees the right of property and outlines its social function.]. The reform will eliminate all forms of exploitation of peasants, indigenous communities in the country and promote forms of ownership consistent with the economic and social nation established by this Constitution. The regime 12. Right to preserve cultures as part of a national culture. 13. State guarantees non-discrimination 14. Natural resources are national patrimony 15. Guarantee of the various forms of ownership 16. Equality between different types of enterprises and economic activities 17. The land system: Prohibition of expropriation of indigenous communities, communal ownership of property by specific law of the land of indigenous communities shall be regulated according to the law of matter.
Intercultural education and bilingual education	TITLE VII EDUCATION AND CULTURE CHAPTER ONE Article 121 Access to education is free and equal for all Nicaraguans. Primary education is free and compulsory in schools of the state. Secondary education is free in state schools, subject to voluntary contributions, may be made by parents. No person shall be excluded in any way from a state center for economic reasons. Indigenous peoples and ethnic communities of the Atlantic Coast have the right in their region to intercultural education in their mother tongue, according to the law.



Heritage Protection	<p>Article 128</p> <p>The state protects the archaeological, historical, linguistic, cultural and artistic heritage of the nation.</p>
<p>Powers of the Supreme Court:</p> <p>Resolve conflicts between government and central and autonomous regions</p>	<p>TITLE VIII</p> <p>STATE OF THE ORGANIZATION</p> <p>CHAPTER V</p> <p>Judiciary</p> <p>Article 164</p> <p>The powers of the Supreme Court</p> <p>13 °</p> <p>Hearing and resolving constitutional conflicts between the central government and municipal governments and the autonomous regions of the Atlantic Coast.</p>
<p>Political-Administrative Division:</p> <p>departments, autonomous regions</p> <p>Atlantic Coast and municipalities</p>	<p>TITLE IX</p> <p>POLITICAL AND ADMINISTRATIVE</p> <p>CHAPTER I</p> <p>Municipalities</p> <p>Article 175</p> <p>The national territory is divided for administration, in departments, autonomous regions and municipalities on the Atlantic Coast.</p> <p>The laws of matter determine its establishment, extension, number, organization, structure and functioning of the various territorial constituencies.</p>
<p>Political and administrative autonomy of municipalities: Municipalities Act, defining the relationship between municipality State-indigenous</p>	<p>Article 177</p> <p>The municipalities are politically, administrative and financially autonomous. The administration and governments of these corresponds to the municipal authorities.</p> <p>Autonomy does not excuse nor inhibits the Executive or the other state powers, obligations and responsibilities to the municipalities. Establishes the obligation to allocate a sufficient percentage of the general budget of the Republic to municipalities</p> <p>18. Bilingual and intercultural education</p> <p>19. Heritage Protection</p> <p>20. Powers of the Supreme Court: Resolve conflicts between central government and autonomous regions</p> <p>21. Political-administrative division, departments, autonomous regions and municipalities on the Atlantic Coast</p> <p>22. Political and administrative autonomy of municipalities: Municipalities Act defines relationship of municipality, the state and of indigenous people's of the country; priority will be distributed to municipalities with less earning capacity. The percentage and distribution shall be fixed by law.</p> <p>Autonomy is regulated under the Municipalities Act, which required for enactment and amendment of the favorable vote of an absolute majority of deputies.</p> <p>Municipal governments have jurisdiction over what affects the socio-economic development of their constituency. In contracts for the rational exploitation of natural resources located in the respective municipality, the State will request and take into account the views of local governments prior to approval.</p> <p>The Municipalities Act shall include, municipal responsibilities, relations with the central government, indigenous peoples from around the country and with all branches of government, and coordination.</p>
<p>Rights of Social organizations in the communities of the Atlantic Coast</p>	<p>TITLE IX</p> <p>POLITICAL AND ADMINISTRATIVE</p> <p>CHAPTER II</p> <p>Atlantic Coast Communities</p> <p>Article 180</p> <p>The Communities of the Atlantic Coast have the right to live and develop under the forms of social organization which correspond to their historical and cultural traditions.</p> <p>The State guarantees these communities the enjoyment of its natural</p>

	resources, the effectiveness of their forms of communal property and the free election of their authorities and representatives. It also guarantees the preservation of their cultures and languages, religions and customs.
System of autonomy, participation in exploitation of natural resources	Article 181 The State shall organize, by law, the system of autonomy for indigenous peoples and ethnic communities of the Atlantic Coast, which shall contain, among other provisions: the attributions of their governing bodies, their relationship with the Executive and Legislative Powers and with municipalities, and exercise their rights. This law, for enactment and amendment shall require the majority established to reform the constitutional law. Grants and contracts for the rational exploitation of natural resources provided by the State in the autonomous regions of the Atlantic Coast must have the approval of the corresponding Autonomous Regional Council. Members of the Autonomous Regional Councils of the Atlantic Coast will lose its status on the grounds and procedures established by law.
Transient effect of the former Statute of Autonomy	FINAL AND TRANSITIONAL PROVISIONS Article 20 The following are final and transitional provisions of this Partial Amendment of the Constitution of the Republic of Nicaragua: v) While the law of regime of autonomy is enacted referred to in section 181 of this Constitution, continue in force the Act NO. 28, Statute of Autonomy of the Atlantic Coast Regions of Nicaragua, while is not contrary to the Constitution.
Disclosure of the Charter language Communities Atlantic Coast.	TITLE XI FINAL AND TRANSITIONAL PROVISIONS CHAPTER I Article 197 This Constitution shall be widely publicized in the official language, likewise be disclosed in the languages of the Communities of the Atlantic Coast.

**Laws and decrees:**

28/02/1895 Legislative Decree approves the Act of Accession of the Miskito Reserve in the Republic of Nicaragua  
02/16/1906 Legislative Act repealed by Act of June 3, 1914 and declared effective by the Act of April 24, 1918.  
03/06/1914 Legislative Decree repeals the Law on February 16, 1906 on the sale of lands of indigenous communities, and regulates the administration of the assets of the Communities  
06/08/1918 Legislative Decree No. 120 Status of Indigenous Communities  
24/05/1934 legislative decree which donates 40,000 hectares of land to the indigenous community of Bluefields Criola  
26/06/1935 Legislative Decree Prohibits municipalities to sell their communal and Indigenous Communities land  
18/10/1945 Executive Agreement no. 404 Adopts Plan of Arbitration of the Indian Community Department of Jinotega Jinotega  
11/03/1952 Law on Elections of the Boards of Directors of the Property of Indigenous Communities  
25/11/1980 No. 571 Law on Language Education in the Atlantic Coast  
11/01/1986 Law no. 14 Law Reform of the Agrarian Reform Law  
02/09/1987 Law no. 28 Statute of Autonomy of the Atlantic Coast Regions of Nicaragua  
28/06/1988 Law no. Municipalities Act 40 amended by Law 261 of August 22, 1997  
02/04/1990 Law no. 88 Law on Protection of Agricultural property  
No. 30/10/1991. 44-91 as amended by Decree No.32-96, December 5, 1996 Statement of the National Reserve of Natural Resources "BOSAWAS"  
No. 26/06/1992. 38 Establishment of Forest Reserves and Cerro Silva Wawashan 421 Nicaragua  
22/06/1993 Law no. Act 162 Official Use of Languages of the Communities of the Atlantic Coast of Nicaragua  
07/12/1994 núm.53-94 Decree Creating the National Committee of the International Decade of Indigenous Peoples (CONADIPI)  
04/07/1995 Law no. Act 199 Implementation Framework Constitutional Reforms  
08/01/1996 Law no. 212 Law of the Ombudsman for the Defense of Human Rights  
27/03/1996 Law no. 217 General Law of Environment and Natural Resources  
13/04/1996 Law no. Act 218 of the university budget allocation and inclusion of colleges and URACCANBICU the Law of Autonomy of Institutions of Higher Education  
27/04/1996 Law no. 217 General Law of Environment and Natural Resources  
31/05/1996 Law no. 221 Reform Act Administrative Policy Division  
23/08/1996 16 -96 Nom. Decree as amended by Decree 23-97 of April 15, 1997 Creation of the National Commission for the demarcation of the lands of indigenous communities in the Atlantic Coast  
05/09/1996 Law no. 185 Labor Code

19/09/1996 Law no. 230 Amendments and Additions to the Criminal Code  
 05/12/1996. Reform No. 32. 44-91, 1991 National Reserve of Natural Resources "BOSAWAS"  
 12/12/1997 Law no. 278 Reformed Urban Property Law and Land  
 12/02/1998 Decree No. 14-98 Regulation of the Law no.278 Reformed Urban Property and Land  
 13/02/1998 Law no. 274 Basic Law for the Regulation and Control of Pesticides, Toxic, Hazardous and similar Substances  
 24/03/1998 Law no. 287 Code on Children and Adolescents 422 Nicaragua  
 20/04/1998 núm.272 Law of the Electricity Industry Act  
 11/06/1998 Law no. 286 Special Law on Exploration and Exploitation of Hydrocarbons  
 07/07/1998 Law no. 260 Law on the Judiciary of the Republic of Nicaragua  
 24/01/2000 Law no. 331 Election Law  
 23/01/2003 Law no. 445 Law of communal ownership of indigenous peoples and ethnic communities of the autonomous regions of the Atlantic Coast of Nicaragua and river mouth and Coco, Indio and Maíz<sup>237</sup>.

## 1. INDIGENOUS PEOPLES AND PRESERVATION OF FORESTS<sup>238</sup>:

There are several indigenous organizational structures that have developed not only in defense of the forest, but by its very existence. Because the land and its resources, primarily forest, is the source of existence of indigenous peoples today.

The defense of indigenous peoples has been in charge of their own organizations, which have evolved over time, but in the last 20 years have become more thrust and presence binder. These may highlight the following, starting with those who try to give a holistic view to the problem of indigenous peoples and their relationship to natural resources and the state.

First, the Council of Elders has been the traditional and historical organization of indigenous peoples in their mission to "guide to indigenous peoples to strengthen their way of life according to their own worldview, where humans, its ecosystem, biodiversity, legal norms and cultures constitute a harmonious whole within its territory ...".

In this sense, his last general assemblies have been directed to solve the pressing problems of indigenous peoples in the management of land demarcation, defense and protection of natural resources and promoting their rights based on their traditional cultures. As stated in the document "Summary of actions for territorial demarcation" efforts have been made before various state bodies, both the executive, judicial and legislative branches. One of the actions to protect forests has been the case before the Comptroller General's Office to review the concessions for exploration and exploitation of natural resources, and monitoring of funds received by way of issuance of fishing licenses and permits. In summary, these require a new form of control: environmental auditing. The action of the Council of Elders has been aimed at promoting the unity of indigenous nations Miskitu, Sumu-Mayangna and branches, an umbrella organization.

For its part, the indigenous organization Sumu-Mayangna (SUKAWALA, for its acronym in their native language: Sumu Kalpapakni Wahaini Lani), who just turned 25 years of existence, have advanced their organizational plans at the pace the requirements have imposed, since the declaration of the buffer zone and Bosawas reserve covers practically most of its territory, which as its name suggests is among the Bocay, and Waspuk Saslaya rivers. SUKAWALA has also made an active defense of their forests to advance the agricultural frontier that is on the verge of its territory. One of the demands that have transcended the boundaries has been filed by the Sumu community of Awastigni before the Inter American Court of Justice against the Korean company SOLCARSA.

With the revitalization of the activities of the Council of Elders and SUKAWALA, the rama indigenous people came to restructure themselves forming a Branch Coordinator of the Rama nation, and this September they intend to implement its general assembly.

Together these organizations have demanded their active participation in the process of demarcation of indigenous territories in the Caribbean coast of Nicaragua, and in the process of discussing the law for that purpose had consulted.

Another indigenous organization is the one that emerged during the military confrontation in the past decade, called Yapti Tasba Takanka Masrika Asla (YATAMA) "Sons of Mother Earth." After 1990 was presented to the regional elections by obtaining a significant number of councilors (the Regional Councils of both north and south). This dual role of political organization has affected indigenous groups and its traditional role, albeit at various levels it supports the process of territorial demarcation and legalization of indigenous territories. In the territories of the Bosawas reserve, but outside of the autonomous regions, has also strengthened the Association for Social Development of Peoples of Miskitu and Sumu of Jinotega (ADEPSOMISUJIN). This organization has promoted various actions to defend its territory from the advancing agricultural frontier, particularly the transfer of large tracts of its territory to the former members of the Nicaraguan Resistance, as part of the commitments the previous government. In this new arrangement, these new settlers have had the support of the

<sup>237</sup> Nicaragua- Acnur. *Indigenous Peoples and Constitutional Rights in Latin America: An Overview*. Cletus Gregor Barié, Cit:pag: 480-482: [www.acnur.org/biblioteca/pdf/6294.pdf](http://www.acnur.org/biblioteca/pdf/6294.pdf)

<sup>238</sup> *Indigenous Peoples and Forests in Nicaragua*, Submitted by Humberto Thompson CEDUPAZ, Nicaragua/4.3 Indigenous organizations: historical defenders of the forests: <http://www.puebloindio.org/moskitia/pi%20y%20recursos%20naturales.html>

Organization of American States (OAS), who is funding the settlement.

As part of the organizational development of these organizations several territorial structures have finalized, with both geographic and ethnic boundaries. This would have constituted the territorial and sectoral Miskitu Sumu-Mayangna and these are:

Alto Rio Coco Organization

Mayangna Sauni As

Mayangna Sauni Bu

Kipla Tasbaika kum

Other sectoral agencies grouped indigenous women, such as Coastal Women's Association (AMICA) and the Organization of Indigenous Women (IMNAT) youth like the "Lakia Tara" Youth and veterans Indians, YAT.

From this set of organizations have emerged basically two types of partnerships: the Coordinator for Territorial Demarcation, which in addition to the above organizations have joined members of the National Assembly, the presidents of regional councils and members of Commissions these Councils, as well as a non-governmental and URACCAN, Centro Humboldt, Alistar, CEDUPAZ, and others.

Another alliance that was formed TASBA Commission (Earth) prior to their integration was the Coordinator, and evolved to form another coalition called the ASLA (Unit).

These actions have to coordinate joint activities for both the territorial demarcation, as a basic requirement for the definition of property and therefore the definition of forest owners and for the preservation of indigenous rights in general.

In the Pacific, the Indigenous Movement of Nicaragua (MIN) was formed in 1992, the influence of the celebration of 500 years of indigenous, black and popular resistance. Its main base were of indigenous descent chorotegas, nahuatl,, Matagalpa, Hoka (Sutiaba) and Jinotega, in the Pacific and Central North of the country. In the Autonomous Region North Atlantic and South Sectional were also formed, calling them MIRAAS and MIRAAN. This movement also lives another kind of duality between indigenous organization and NGOs. However, it has also taken steps at central level for the defense of the indigenous their lands and properties, including community forests.

## Indigenous Peoples of Honduras:

### COUNTRY DATA:

<b>Capital:</b>	Honduras, officially the Republic of Honduras is a Central American country. It is divided into 18 departments, the cities of Tegucigalpa and Comayagüela together constitute the capital of the republic
<b>Area:</b>	The territory of Honduras has an area of 112.492 km <sup>2</sup>
<b>Geography:</b>	Honduras is located in the center of Central America. Bordered on the north by the Caribbean Sea or Sea of the Antilles, south to the Gulf of Fonseca (Pacific Ocean) and the Republic of El Salvador. To the east, Honduras and Nicaragua bordering the Caribbean Sea, and west by Guatemala and El Salvador. The maritime boundaries are still in the process being defined and / or demarcation.  In the Caribbean Sea Honduras has the archipelago of the Bay Islands, comprising: Utila, Roatan and Guanaja. Also belonging to Honduras, El Cisne Islands and Cayos Cochinos, among others. In the Gulf of Fonseca shared with Nicaragua and El Salvador, Honduras has: Zacate Grande, Tigre, Garrobo, Exposición, Güegüensi and other smaller islands.
<b>Population:</b>	The population of Honduras is approximately 7.8 million inhabitants, and is among the fastest-growing number of Latin America. The Hondurans are dedicated mostly to agricultural activities, in addition to trade, manufacturing, finance, and utilities among other activities, the most populous department Cortes Honduras is 1,529,826 inhabitants, followed by Francisco Morazán with 1, 406,769 according to the National Statistics Institute (INE).  Mayan society disappeared about the year 900 AD, in addition there were many other pre-Hispanic societies, many of which continue today, among them we have: The Lenca, inhabited the central and south. The Tolupanes, inhabited the north of the country. The Pech, inhabited the eastern region. The Tawahka, inhabited the eastern region near where Nicaragua is now. Chorti, inhabited the country's west, where 500 years earlier ruled the Mayan empire. The chorotegas, inhabited the southern region. and various societies that inhabited the whole territory of present-day Honduras.

	From Chiapas to Costa Rica about 5 million people inhabited.				
<b>Indigenous Population:</b>	<p>Faced with the loss of native languages as the Lenca or Chol and endangered languages that exist such as Payas, the Constitution considered necessary by Section 172 that "all wealth of anthropological, archaeological, historical and artistic Honduras is part of the nation's cultural heritage. The law shall establish standards as basis for conservation, restoration, maintenance and restitution, if any. It is the duty of all Hondurans to ensure the protection and prevent theft. Likewise, the Constitution is committed to preserving and enhancing "the native cultures and the genuine expressions of national folklore, folk art and crafts"<sup>239</sup>.</p> <p>Laws and decrees relating to indigenous peoples in Honduras<sup>240</sup>:</p> <p>14/11/1966 Education Law Decree no. 79  10/01/1974 Law of the Honduran Forest Development Law Decree no. 103  14/09/1989 Higher Education Law Decree no. 142  06/04/1992 Modernization Act and the Agricultural Sector Development Decree no. 31  Agreement No. 19/10/1992. 2124 regulations governing the award of land in the Land Reform  1993 Public Ministry Law Decree no. 228  27/05/1993 General Environmental Law Decree no. 104  03/08/1994 Agreement No. EP 0 719-94 recognition by Honduras as a multicultural and multiethnic that require institutionalization of Intercultural Bilingual Education  07/01/1 997. No. PCM-003  21/07/1997. Agreement No. 110 Building Commission to prepare draft law to regulate issues related to indigenous and tribal population.  24/12/1998 General Mining Law Decree no. 292</p>				
<b>IDH</b> <sup>241</sup>	In 2007, of the 0.732				
<b>International conventions signed with indigenous peoples around the country</b> <sup>242</sup> :	Promulgation of the Constitution	Form of government	Convention 107 (1957)	Convention 169 OIT(1989)	Hierarchy of International Conventions
	11/1/1982	State right sovereign, constituted as free republic, democratic and independent (Preamble 1)	Not ratified	ratified 28/3/1995	Treaties conventions are above of the Act (art. 16, 18)
<b>Political system:</b>	<p>Article 4 of the Constitution of the Republic of Honduras states that «the form of government is republican, democratic and representative. Is exercised by three branches: legislative, executive and judicial, independent and complementary and non-subordinate relationships. It adds that the rotation in office of the President of the Republic is mandatory, and that violation of this policy constitutes a crime of treason.</p> <p>In Section 5, the same constitution says that, government must be based on the principle of participatory democracy which is derived from national integration, which involves participation of all political sectors ... to ensure and strengthen Honduras's progress based on political stability and national reconciliation.</p>				
<b>Main Economy and Sectors</b> <sup>243</sup> :	<p>In all departments of the republic there is a continuing productive activity in agriculture, livestock, fisheries, textiles, mining, among others.</p> <p>In 2006 the Honduran economy grew by 6%, one of the most outstanding in Latin America, says a rising line which began in 2004 during the administration of President Ricardo Maduro, according to ECLAC's annual report.</p>				

<sup>239</sup> Wikipedia-Honduras: <http://es.wikipedia.org/wiki/Honduras>

<sup>240</sup> Honduras-UNHCR. *Indigenous Peoples and Constitutional Rights in Latin America: An Overview*. Cletus Gregor Barié, Cit: pag: 374 [www.acnur.org/biblioteca/pdf/6292.pdf](http://www.acnur.org/biblioteca/pdf/6292.pdf)

<sup>241</sup> Wikipedia-Human Development Index: [http://es.wikipedia.org/wiki/%C3%8Dndice\\_de\\_desarrollo\\_humano](http://es.wikipedia.org/wiki/%C3%8Dndice_de_desarrollo_humano)

<sup>242</sup> Honduras-UNHCR. *Indigenous Peoples and Constitutional Rights in Latin America: An Overview*. Cletus Gregor Barié, Cit: pag: 372 [www.acnur.org/biblioteca/pdf/6292.pdf](http://www.acnur.org/biblioteca/pdf/6292.pdf)

<sup>243</sup> Wikipedia-Honduras,Economy: <http://es.wikipedia.org/wiki/Honduras>

	<p>At the individual level, productivity per capita in 2006 yielded figures of an increase of 2.6%. These figures mostly agree with abundant liquidity and low interest rates. The growth was mostly for domestic consumption (8%) which was boosted by remittances which rose by 26%.</p> <p>The export growth was 19% in traditional products such as coffee, bananas and so on. While exports of nontraditional products such as shellfish and maquilas products contributed 7%.</p> <p>However, imports continued at the same pace and in 2006 represented 60% of the country's gross domestic product, this due to the high cost of oil prices, which fell by half in 2008.</p> <p>The unemployment rate fell from 4.5% in 2005 to 3.3% in 2006. However, the country is a member of Petrocaribe energy agreement, along with other countries in the region, through which Venezuela offers oil and derivatives in convenient payment terms.</p> <p>In the macroeconomic context, Honduras entered the market free trade with Central America, Dominican Republic and USA. Also it is important to highlight the staggering remittances sent to the country by Hondurans living and working abroad especially in USA. In 2006 the amount sent by these Hondurans was \$ 2,359 million, which is expected to be surpassed in 2007.</p> <p>Honduras is one of the countries that did not go into recession in 2008 and 2009; growth has been thought to be due in part to the trading with many nations and not with any particular nation. Tourism was not affected in 2009 as A-H1N1 flu has not spread in the country.</p>
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#### INDIGENOUS AND NATIVE PEOPLES:

The population of Honduras is approximately 8 million inhabitants, distributed as follows: 85% is mestizo, Amerindian 6%, 1% black, and 8% white (European and Arab).

The mestizo (mixed Amerindian and European) is what comprised the bulk of the Honduran population, and therefore extends to all corners of the country.

8% of the Honduran population are members of indigenous groups known as the Confederation of Indigenous Peoples of Honduras (CONPAH) and those in specific regions in the country. - This confederation and the government of Honduras count, seven different indigenous groups, among which are; Garifuna blacks or groups who are not American Indians<sup>244</sup>.

Indigenous population by sex and urban-rural 2001 census<sup>245</sup>:

Zone	Gender	Percentage
Urban	Men	2.3%
Rural	Men	10.9%
Urban	Women	2.4%
Rural	Women	11.2%
Urban	Total	2.4%
Rural	Total	11.0%

Population Structure by number of Indigenous population, non Indigenous, sex and rural-urban<sup>246</sup>:

Persons	Zone	Sex	Population Nº
Indigenous	Urban	Men	61.770
	Urban	Women	6.970
	Rural	Men	365.028
	Rural	Women	359.338
Non Indigenous	Urban	Men	2.599758
	Urban	Women	2.858.626
	Rural	Men	2.991.010
	Rural	Women	2.8848.490

INDIGENOUS AND NATIVE PEOPLES<sup>247</sup>:

Ethnic groups in Honduras are the indigenous groups living in Honduran territory since the formation of the Republic of Honduras, although some have already ceased to exist. There are several ethnic groups in

<sup>244</sup> Wikipedia-Honduras. Ethnography: <http://es.wikipedia.org/wiki/Honduras>

<sup>245</sup> RISALC.ORG. Management platform based on knowledge. Social Indicators for Latin America and the Caribbean. Social Indicators. Percentage of indigenous population: <http://www.risalc.org:9090/portal/indicadores/ficha/query.php>

<sup>246</sup> RISALC.ORG/ Management platform based on knowledge/ Social Indicators for Latin America and the Caribbean/ Social indicators. Population. Number of indigenous, non-indigenous by gender and rural -urban: <http://www.risalc.org:9090/portal/indicadores/ficha/query.php>

<sup>247</sup> Wikipedia-Honduras. Ethnic groups of Honduras: [http://es.wikipedia.org/wiki/Grupos\\_%C3%A9tnicos\\_de\\_Honduras](http://es.wikipedia.org/wiki/Grupos_%C3%A9tnicos_de_Honduras)

Honduras, each has a different origin, and are the Lencas, Chortis, Garífunas, Islanders, Sumos, Tolupanes or Xicaques, Pech or Payas, Misquitos.

#### LENCAS:

It is the largest group among the Indians of Honduras lives in the departments of Valle, Intibucá, Lempira and La Paz, are grouped around the National Indigenous Lenca Organization of Honduras (ONIL). Lenca language has disappeared today.

#### CHORTIS:

A group of Mayan roots. They were already there before the Spanish arrived. Culturally and linguistically, related to the Chontal of Tabasco and with Chol of Chiapas are considered direct descendants of the Mayans and cousins Chol identified as ethnic group living in Chiapas, Mexico, Colombia. They now live in the Southwest near the border with Guatemala in the department of Copán and Ocotepeque. Organized in ONICH (Organization of Indigenous Chorti Honduras). They are considered the largest ethnic groups in Honduras patrilocal and patrilineal.

#### GARÍFUNA

Blacks descended from West Indian mixture of indigenous Caribbean Reds with slaves kidnapped from Africa, most of them live in the Bay Islands and the Atlantic coast of Honduras. They are the result of the fusion of African slave population (which foundered in 1655 and two other ships that sank in 1675) with Carib Indians (ameridians, who had different languages called Carib languages), and from them the Black Caribs originated, who dominated the island St. Vincent until 1797, when they were expelled by the British to Roatán and Trujillo.

They are organized in the Black Fraternal Organization of Honduras (OFRANEH).

#### ISLANDERS / CREOLE:

Known as the island's population is located in the Bay Islands and coast of Honduras. Brought from England and Ireland when the pirates came to possess this land after the arrival of Christopher Columbus in 1502. Their tongue is English Creole.

#### PECHS o PAYAS:

They call themselves "Pech" which means "People", a term that is used only to refer to them for the rest of the population use the terms pech-akua (other people) or bulá which means Ladino. The Pech are located in the departments of Olancho, Colon and Gracias a Dios. They occupied the central region of the Honduran Mosquitia and the northeastern department of Olancho. The Pech territory is very uneven and mountainous. It is crossed by several major mountains that are branches of the Sierra Agalta, oriented from southwest to northeast between the department of Olancho and Colón, and includes the mountains of El Boqueron, separated by the valley of the Telica river and the mountains of El Carbón, of rivers Sico and Paulaya, separating the municipalities of San Esteban and Culmí that give rise to rivers Paulaya and Wampu, as well as the tributaries of the Rio Sico.

In the Rio Platano Biosphere, section of the Gracias a Dios department, there are small and dispersed Pech settlements communities along the middle of the river, between Las Marias and Waiknatara. In the community of Las Marias, where they are a minority, they have mixed with the Miskito and Garífuna, but the eldest's preserve part of their customs and speak their language.

They are organized since 1987 in the Honduran Pech Indian Tribal Organization (FETRIPH).

#### TOLUPANES o XICAQUES/JICAQUES:

During the sixteenth century, the term Jicaque / Xicaque seems to have been used by Mexicans to refer to non-Mexican original inhabitants of Honduras; it was later applied more broadly to any non-converted or hostile group in the area to the south of Nicaragua and Costa Rica. The term Xicaque or Jicaque or, as at present moment this group is called, also have names like "tol", Tolupán, or torrupán. Currently in Honduras the term Tolupán is used to define this ethnic group.

While culturally, Tolupanes resembled the sumos, payas and Miskito, they differed from them linguistically. There is not in doubt, from the linguistic data, is that we find an ancient indigenous group previous to the Mayan civilization that knew, in the midst of the cultural transformation of the environment how to maintain some identity until recent times.

Amid all this ethnographic historical overview we can say is that the Tolupanes suffered in a special way the early stages of the Spanish conquest in Honduras, characterized by a strong slave trade to the larger islands of the Caribbean and forced labor. The persecution was unleashed against them during colonization and forced them to take refuge in the jungles and mountains of the north central region of the country, remaining dispersed and distant from the rest of society.

Establishment of Tolupán population is approximately 19,300 individuals

Tolupa current population and location are constituted in 28 tribes in six municipalities of the Yoro department specifically the Montaña de la Flor, in the municipalities of Morazan, El Negrito, Victoria, Yorito, Yoro, Olanchito and part of the department of Francisco Morazán, in the municipalities of Marale and Orica.

Due to the location of the tribes in areas of difficult access in some cases, it is impossible to specify the information. Initially 21 tribes were known, but from the second half of the eighties, the FETRIXY Federation (Xicaques Tribes of Yoro) began conducting a survey in the area, that noted the existence of a good number of

small tribal groups that were separated from the tribes, for various reasons, and formed isolated groups in the mountains. On contact with the Spanish and the continuous contact with the Ladino, Tolupanes rapidly lost many ancestral values and customs, a process that has affected, especially their mother tongue (tol)

In the department of Yoro are located the following tribes: Plan Grande, Anisillos, Matadero, Santa Marta, Subirana, El Tablón, El Pate, El Palmar, Lagunitas, La Pintada, Luquigüe, Mina Honda, San Esteban, Candelaria, Las Vegas, Agua Caliente, Zapotal, San Francisco de Locomapa, El Siriano, Jimía, La Bolsita, Guajiniquil, Santa Rosita and Placencia; three tribes in the Montaña de La Flor y and one in the municipality of Marale, Francisco Morazán Department.

Cultural practices, ceremonies and rites of passage (birth, adolescence, death) have disappeared.

**Organizational Structure** The family apparently does not differ from Ladino families of the sector. They are however, in some tribes, certain features that may suggest ancestral family characteristics. Despite the intense process of latinization, currently the Tolupanes are the best organized ethnic group within the national context. They are organized into tribes and these in turn may include a varying number of hamlets and villages. There are also tribes of a single village.

Among Tolupanes, the type of land tenure is very special, because no one has an individual title. Every Indian has the right to fence off his land and work, but cannot sell it; he can enclose the extension that is able to work, ranging from 2-3 manzanas (a type of measurement). This feature of land tenure is in force despite the fact that some chiefs and coffee growers have brokered more, depriving many tribes from their lands.

Its economy is subsistence farming, combined with the dominant strata within the tribes: the rich Indians and small producers (simple commodity economy). Tolupán economy enjoyed a long transition between traditional and modern.

Tolupans produce especially basic grains (maize, beans, and coffee) and exploit natural resources, secondarily wild natural resources with roots and wood. The organization of work is essentially an individual one. There is no community cultivation in any tribe. While agriculture is of subsistence, there are some indigenous cases commercializing some amount of coffee, typically a ladino business, and crops of beans, corn and isolated cases of sale of fruits, vegetables and cassava. The Tolupanes are among those Indians who have developed extensive knowledge in the management of honey bees. They specialize in detecting and taming them, when in the mountains.

They are organized in the Federation of Indian Tribes of Yoro Xicaques (FETRIXY).

#### TAWAHKAS:

They are distributed on the banks of the river Patuca in communities of Krautara and Krausirpe in the municipality of Wampusirpi of the department of Gracias a Dios, and in Yupuwas, Kamakasna and Parawas in the municipality of Dulce Nombre de Culmí in the department of Olancho and in the Atlantic Coast of Nicaragua. The region comprising the department of Gracias a Dios is known as La Mosquitia.

They are cluster around the Federation of the Tawahkas Indian Tribes of Honduras (FETRITH).

In the part of Honduras, there are 800 to 1,000 Tawahkas, although it is impossible to pinpoint an exact number, because since 1974 there have been no census population on the country's indigenous communities. The data presented are an approximation. In total, we estimate that the number (in Nicaragua and Honduras combined) is 14,000, approximately. However, there are seven communities that make up this group in Honduras: Krausirpe, Krautara, Dimikian, Yapuwas, Kamakasna, Wasparasni and Santa Marta, home to 704 people, distributed as follows:

Krausirpi and Krautara are Tawahkas larger villages located on the banks of the Patuca river. Although Tawahkas inhabit this area for several centuries, Krausirpi, the main Tawahka village, was founded in 1938 by the last chief Tawahka (Claudio Cardona). Until 1948, the main Tawahka settlement was Yapuwas.

Among the customs practiced by Tawahkas this so-called Hand Back consisting helping each other in planting and harvesting of products.

The health situation is critical. This is another reason why this group is increasingly reduced. There are no medical centers that meet the minimum health needs in those communities.

98% of Tawahkas are Catholic. Cocoa, timber and gold mining are major sources of income.



## MISQUITOS<sup>248</sup>:

In 1996 there were 36,000 people with the highest concentration Miskito in Brus Laguna, Puerto Lempira and the recovered area in the department of Gracias a Dios. Currently located in Honduras and Nicaragua. In Honduras, in the northeastern region known as the Moskitia, this runs from the rivermouth of the Tinto or Negro river, mainly in the department of Gracias a Dios.

At present a population of 75,000 inhabitants is estimated, according to information provided by area representatives.

The origin of the Miskito people is currently in discussion among scholars. From pre-colonial times almost nothing is known about this ethnic group whose relationship to the misumalpa linguistic family of macrochibcha origin (like Pech and Tawahkas) suggests a South American origin. The first historical records are from the seventeenth century and refer to the mixture of Miskitos with shipwrecked African slaves, free blacks and Europeans. Product of alliances with British traders and buccaneers against Iberian authority which led to population expansion along the coast and the cultural fusion between Miskito, zambo and Tawira.

According miskiwat (center of Miskito culture) the history of this people are found in the Tawira tribe (hairy or long hair) who had an open society which facilitated mixing with other human groups (European and other local groups of which the Miskitos emerged).

According to anthropological studies, Miskitos appear to be a mestizo group that develops after contact as a result of the mixing of the indigenous and black population and pirates, from a cultural point of view it seems that the Miskitos were originally a small group that lived near Cape Gracias, perhaps were members of the Bawinka language group.

During the seventeenth and eighteenth and mid-nineteenth century the British exploited the Moskitia region, exercising its authority over the Moscos kings in the territory between the tinto and or black river (Honduras) and San Juan River (Nicaragua). The ownership interest was not only economic but also geostrategic against the U.S.

In colonial times the British offered them political and military support and in certain manufactured goods in exchange for the enslavement of other indigenous groups and of products such as leather, tortoiseshell, food etc. This collaboration between Miskito and English enabled the expansion of this ethnic group, which extended from the lagoon of Chiriquí in Panama to Honduras-Guatemala border.

The historical process of formation of this people was completed in the second half of the nineteenth century, the Miskitos contact with the Moravian and Catholic churches, which were directly involved in the ideology and religiosity formation of the Miskitos today.

They are organized throughout MASTA and/or MOPAWI

The confederation and each separate group of indigenous people since 1980 work for improvements in living conditions of indigenous peoples. The change, however, has been elusive as these peoples still face violence and discrimination.

## LANGUAGES:

According to a recent study, there is much variation between the number of people speaking Afro-Antillean and indigenous languages. The Garifuna and Creoles speak their own language, while indigenous languages only have four active groups, these being: Miskito, Pech, and Tawahka and Tolupan. It is noteworthy that the largest indigenous people - The Lenca - have lost its tongue in its entirety, but keep alive the cultural traditions. Only 40 people in Honduras speak the Chorti language. Tols language has a total of 3000 speakers of a population of 36,000 people.

The different ethnic groups that are part of the population of Honduras make it a multilingual country. Five of the seven ethnic groups of the country still retained their respective languages. The inhabitants of the Bay Island are the other hand, practice the English language. It is estimated that 95% of the island's population communicates primarily through Spanish.

### Peoples and languages:

LENCAS	Spanish. The Lenca language has virtually disappeared.
CHORTIS	Spanish and Chol: The language of the Chortí people was known as the chol language. Today the population has adopted the Spanish language.
GARIFUNAS	Garifuna <sup>249</sup> : The Garifuna, despite its Caribbean name (proto-Caribbean * gariphona 'men') speak a language of the Arawak family, in fact the since the arrival of Europeans, Caribbean communities where there, were many varieties Carib and Arawak spoken in the same community.

<sup>248</sup> Miskito Portal for sustainable development. <http://rds.hn/index.php?documento=890>

History of the Miskitos: <http://rds.hn/index.php?documento=882>

<sup>249</sup> Wikipedia-Garifuna, Language: <http://es.wikipedia.org/wiki/Gar%C3%ADfuna>

ISLANDERS	Spanish
SUMOS	<p>Tawahka:</p> <p>According to studies consulted, Mosquito and Tawahka language are quite similar in their morphological and syntactic structure, but do not have much vocabulary in common. Both languages belong to the macro-chibcha language, a group of South American origin. It is assumed that at very distant dates of the Tawahkas, Miskito and the Rama (other kindred) ancestors emigrated from what is now Colombia through the Isthmus of Panama. The Tawahkas call their language twanka, which shows a similarity to the name which, in the early seventeenth century the Spanish gave the Indians of the Guayape-Guayambre area: Tahuajcas. The mother language of this people is the Tawahka, but also speaks Miquito and Spanish.</p>
TOLUPANES/XICAQUE	<p>Tol:</p> <p>Only people from Tolupán that only live in the Mountain de La Flor retained their mother tongue. It should be noted that the Tolupán culture is similar to that of the Tawahkas, Miskito and Pech, as a "tropical forest culture" whose characteristics according The language spoken by Tolupanes during 18century was the Hokan Sioux. Now it is known as Tol.</p> <p>The tol language is in a state of survival, only a portion of adults speak it in an isolated way, only in four of the tribes mentioned are still people who speak it. Giving a rough figure it could be said that some 700 people speak tol; the largest number of speakers is the tribe of Mountain de La Flor, with 410 people, the rest is scattered in other tribes, where only the elderly speak it.</p> <p>Most of India's population does not speak their language. The pressures exerted by the Ladino discrimination against torrupanes by the way they speak Spanish, has made the Indians more concerned about improving the Spanish, than transmitting their language to new generations.</p>
PETH	<p>Peth:</p> <p>The most recent contacts with the coastal economy, dominated by the Miskito, has resulted in most of them speaking Miskito and losing their mother language. Children, for example, learn Spanish in Las Marias school, Miskito talk with their peers, but even though they understand Pech, they do not speak it.</p>
MISKITOS	Miskito.

## Indigenous Peoples in Guatemala

### COUNTRY DATA:

<b>Capital:</b>	Guatemala
<b>Area:</b>	Territorial area 108.430 km <sup>2</sup> .
<b>Geography:</b>	Geography: Located in the Central region and bordered to the north by Mexico, west and south with Belize, Honduras and El Salvador, bordering with the Gulf of Honduras. The relief is characterized by mountainous and limestone plateaus. Its territory of 108,430 km <sup>2</sup> ,1 is slightly smaller than Tennessee, USA.
<b>Population:</b>	<p>Guatemala, a country with a population of 11.2 million. Made up of 4 groups of pople, Mayan, Xinca, Garifuna and Ladino. According to INE, the Maya Peoples is 40%, Xinca 0.7, Garifuna 0.4% and 58.9, corresponds to the Ladino People.</p> <p>Distributed through all Mayan linguistic communities across the country. In the following departments: Alta Verapaz, Baja Verapaz, Chimaltenango, Chiquimula, El Petén, E Progreso, Quiche, Escuintla, Guatemala, Huehuetenango, Izabal, Jalapa, Jutiapa, Quetzaltenango, Retalhuleu, Sacatepéquez, San Marcos, Santa Rosa, Solola, Suchitepéquez, Totonicapán, Zacapa.</p>
<b>Indigenous population:</b>	<p>According to statistics from the INE. Approximately 40% are indigenous people of Mayan descent, while the Xinka population constitutes 0.7% of the total and the Garifuna people, representing 0.4% of the total population. However sources of Maya studies show 60%.</p> <p>According to the UNDP, the Mayan population is a 4.4,million, with 21 Mayan linguistic communities, comprising:</p> <p>Kich'e, Q'eqchi', Kaqchikel y Mam, constitue 81%.</p> <p>Q'anjobal, Popomchi', Achi, 8.6%</p> <p>Ixil, Tz'utujil y Cluj, 5.3%</p>

	Akateko, Awakatekon, Ch'orti', Jakalteko, Poqomam, Sipakapense, 4.5%. Itza', Mopan, Sakapulteko Tektiteko, Uspanteko, 0.5% <sup>250</sup> .						
<b>International conventions signed with indigenous peoples around the country</b> <sup>251</sup> :	Promulgation of the Constitution	Form of government	Indigenous Peoples	Rightholder	Convention 107 (1957)	Convention 169 OIT(1989)	Hierarchy of International Conventions
	14/1/1986	Republica n democratic representative government (art. 140)	23 groups 4.945 million 48.01% (1994), other estimates reach 70%	ethnic groups, indigenous Mayan descent, indigenous agricultural cooperatives, indigenous communities, indigenous population, vernacular languages	Not Ratified	ratified 5/6/1996	preeminence of the international right
<b>Bibliography</b>	http://es.wikipedia.org/wiki/Geograf%C3%ADa_de_Guatemala UNDP. Human Development Report.						

#### INDIGENOUS AND NATIVE PEOPLES<sup>252</sup>:

Guatemala is a nation ethnically predominantly Mayan Amerindian, if we understand Mayan as belonging to the Mayan family language. Half of the Guatemalan population is indigenous, from Mayan origins from different branches (Quiche, Cakchiquel, Mam, Ixil, etc.). Approximately 40% are mestizos. Fewer are mostly creoles descendants of Spanish colonists and other European nations. According to UNICEF, Guatemala is between the Latin American nations with predominantly indigenous populations of origin such as Bolivia, Peru, and Ecuador.

<sup>250</sup> National Report on Human Development, Guatemala. UNDP. 2005. Page 64.

<sup>251</sup> Guatemala- Acnur. *Indigenous Peoples and Constitutional Rights in Latin America: An Overview*. Cletus Gregor Barié, Cit:pag: 338 [www.acnur.org/biblioteca/pdf/6294.pdf](http://www.acnur.org/biblioteca/pdf/6294.pdf)

<sup>252</sup> Ethnography of Guatemala: [http://es.wikipedia.org/wiki/Etnograf%C3%ADa\\_de\\_Guatemala](http://es.wikipedia.org/wiki/Etnograf%C3%ADa_de_Guatemala)