

## CAPACITY BUILDING WORKSHOP ON NATURE-CULTURE LINKAGES IN HERITAGE CONSERVATION IN ASIA AND THE PACIFIC 2016 (CBWNCL)

### FOUNDATIONS FOR THE RECONSTRUCTION OF COFFEE CULTURAL LANDSCAPE OF COLOMBIA, CCLC.

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#### ABSTRACT

The Coffee Cultural Landscape of Colombia (CCLC), inscribed in the UNESCO World Heritage list in 2011, is the biggest productive cultural landscape in Latin America. The CCLC is a territory where collides a complex cultural, social, productive and biodiversity facts having a national policy to its preservation.

The CCLC encompasses six farming landscapes in 340,000 hectares surface, including eighteen urban settlements, in a unique sustainable and productive landscape that represents the Colombian coffee tradition. Its biodiversity is combined with the physiography of valleys and steep slopes, to the glaciers and volcanoes on the tops of ridges and native forests and biological corridors, which are strategic to the conservation of biodiversity world. Located near to the Andes, hazards are representative by Cerro Machin Volcano (CMV), a highly explosive stratovolcano, with recent activity. Evidences of CMV activity occur each 900 years, and it is expected to be as strong as eruption of Mount Pinatubo, Phillipines (June 12th, 1991).

**KEYWORDS:** Disaster Management, World Heritage List, Cultural landscape, CCLC, Unesco.

The CCLC is a unique sustainable and productive landscape that represents the Colombian coffee tradition. With 340,000 hectares surface, it includes eighteen urban settlements. The exceptional combination of the urban and rural landscapes reflects a centennial tradition of coffee growing in small farms and the innovative management practices of natural resources of the community in challenging geographical conditions. The biodiversity of CCLC is combined with the physiography of valleys and steep slopes, to the glaciers and volcanoes on the tops of ridges, native forests and biological corridors, which are strategic to the conservation of biodiversity world.

Coffee represents a cultural tradition in Colombia. Most of 100 years ago it was introduced to the territory, crops adapted to the environment, surrounded by three cordilleras (western, central and eastern) of the Andes. Heights and temperature of equatorial zone that Colombia is related, plus volcanic soils, gave a way for coffee cultural identity across the nation, achieved with the hard work of Colombian farmers.

Located in Ecoregion Coffee Belt, the CCLC is a territory with priority ecological units for water regulation.

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One of the priority ecological units of the Coffee Belt Ecoregion forms the Nevados National Park, comprising an area of approximately 58,300 hectares. Its zone of influence caters to the needs of over two million people.

Despite the natural wealth of the Ecoregion, there are some natural hazards that can affect the environmental, productive and cultural richness of the CCLC. The major threats are identified by mass movements or landslides, volcanic and seismic hazards and risks for wildfires. About volcanic hazards, can be mentioned as follows:

Volcanic threat is related to the ecoregion five active volcanoes: I) Nevado del Ruiz volcano, II) Nevado Santa Isabel volcano, III) Cerro Machín volcano, IV) Cerro Bravo volcano, and V) Nevado del Tolima volcano. The Nevado del Ruiz Volcano and Cerro Machín, are those that have increased activity in their behavior with different fluctuations in the release of seismic energy, geophysical and geochemical parameters. In the case of Nevado del Ruiz volcano, the highest activity occurred in early 1982, with its outcome of the episode of November 13th, 1985, when a major revival occurred that caused several explosive eruptions and caused the lahar that destroyed the town of Armero (27,000 deaths) and eastward flow of the river course destroyed some outlying areas of the city of Chinchiná west in CCLC, killing 2,000 people.

Inevitable eruption of CMV is predicted to be as strong as Mount Pinatubo, Philippines (June 12th, 1991) and its pyroclastic flows may be similar to Mount St. Helens eruption (May 18th, 1980). In addition, it is a need to recognize at all the threats to the CCLC that push him to his imminent demise: the effects of climate variability result of the global climate

change and the risk of threat of CMV, whose area impact of the disaster covers Quindío<sup>2</sup>.

### The complex dimension of CCLC

There is in the CCLC and therefore the analysis of cultural landscapes, two fundamental challenges. On the one hand, the challenge of understanding the notion of heritage linked to a territory - the cultural landscape, as an abstraction which is territorially the difficulty of realizing a series of intangibles and intangible manifestations (traditional knowledge, religious holidays mostly associated to crops, among others) and other tangible (buildings or materials, represented by nature, architecture, urbanism, archeology). What immediately it leads to a reflection of the heritage from the intricate processes of aesthetic perception to the social appropriation. On the other hand, the challenge of developing recurrent conditions geographical and environmental-biological heritage reading material dimension.

The World cultural and natural heritage Convention of 1972, created the World Heritage Committee, which approves in 1992 the category of Cultural Landscapes. The term cultural landscape "embraces a diversity of manifestations of the interaction between humankind and its natural environment." According to the Committee, "cultural landscapes should be selected on the basis of their outstanding universal value and of their representability in terms of a clearly defined geo-cultural region and, consequently, their ability to illustrate the essential and distinct cultural elements of such regions". (UNESCO, 2008).

The definition of Unesco refers to that cultural landscapes represent the works that "... combine the work of man and nature" and that

"illustrate the evolution of society and human settlements over the years, under the influence limitations and / or advantages of the natural and social forces, economic and cultural successive internal and external environment, "often reflecting" specific techniques of sustainable land use, given the characteristics and limits of the natural environment in which they are established, and a specific spiritual relation to nature." (UNESCO, 2005).

In June 25th, 2011, the 35th World Heritage Committee of Unesco inscribed the CCLC in the World Heritage List in accordance with Decision 35COM.8B.43.<sup>3</sup> Convention included the CCLC site on the World Heritage List, because of its outstanding universal value criteria. Based on criteria v, the CCLC is a continuing land-use where farmers generated innovative management practices of natural resources in challenging geographical conditions. Considering criteria v, the coffee culture in the CCLC has led to tangible and intangible manifestations in the region. Later, Agreement for Prosperity No. 43, in August 13th, 2011, mandated to develop the CONPES<sup>4</sup> document, the inclusion of CCLC in Land Management Plans<sup>5</sup>, the definition of the zones of mining exclusion and the nation decree. In October 7th, 2011, Resolution 2079 of Ministry of Culture of Colombia recognizes the CCLC as a Cultural Heritage of the Nation as a property inscribed on the World Heritage List of Unesco, consisting of a territory composed of areas of special archaeological, historical and cultural interest.

According to Mata Olmo (2006), "the convention rightly understood that landscape is a reality and a global perception of the area in which it should not oppose, but melting, natural

and human, without denying the other step in each landscape are natural, rural, urban or any other elements. And so also the potential of the landscape for regional planning policy, a policy that finds its meaning and its *raison d'être* as a public action that addresses the territory in its entirety and not as a mere sectoral policy scenario".

Landscape definition, is in constant construction due to changes of the landscape and the representation we make of it, he leads us again and again to resolve the problem: its cultural connotation. The landscape is explained from several scientific proposals: ecology, geography, geology, archeology, anthropology, even the economy. From which you can find many definitions, which do not solve the fundamental; hence the question: What is the cultural thing of landscape? In the broader dimension, cultural landscape involves a process of territorialization of social transformation of agricultural production space. An understanding of this process and your question require the development of an epistemology of the cultural landscape for interpreting the territorial space transformed by man and possible reconstruction rethink the imminence of the threats.

To undertake an interpretation about it, there is references that I find very relevant, to account for the relevance and evolution of reflection on the cultural and social role of landscape panorama scientific discipline: the recognition of social and cultural factors of the territory has a strong and fundamental influence on geography. However, references to 'territory' and 'landscape' are exceptional in classical geography, and the great discussion between the representative schools (English,

<sup>2</sup> UNESCO, <http://whc.unesco.org/en/list/1121>

<sup>3</sup> The National Council for Economic and Social Policy (CONPES) of the CCLC

<sup>4</sup> The Land Use Management Plan is a technical and policy planning instrument of long-term management, is a set of actions and policies, administrative and physical planning, which will guide the development of municipal areas, occupation and transformation of urban and rural physical space. The 1998 Law of land management require to mayors to local plans update, and National Planning Department launched a program to technical guiding. <http://k8territorial.co/> (2016).

<sup>5</sup> The CCLC has six polygons spread over four provinces or departments: Caldas, Quindío, Risaralda and Valle del Cauca.



French, American among the most dissimilar) and discontinuities, the search is ruled one agreement defining the object of geography between man and nature, discovering its binding element: the space, social or natural. For geography, for much of the twentieth century, the closest to the territorial concept and / or landscape is the construction of the concept and perception of 'Geographic Space'.

### National Policy for the CCLC

On behalf the "Policy for the Preservation of the Coffee Cultural Landscape of Colombia", factors threatening the CCLC are:

- a) Deterioration, loss and lack of social appropriation of the cultural heritage of the CCLC.
- b) Decreased acreage in coffee by the increased profitability of alternative uses of land and buildings.
- c) Low profitability of coffee growing.
- d) Little resilience to the effects of climate change and environmental pollution.
- e) Reducing ease of access and movement for the performance of activities associated with tourism and coffee trade.
- f) Vulnerability outstanding universal value of CCLC by extractive activities and large infrastructure projects.
- g) Negative effects and losses on risk and disaster threats.

The Conpes document, "Policy for the Preservation of the Cultural Coffee Landscape of Colombia" aims to formulate a specific policy for the CCLC in order to ensure the preservation of its outstanding universal value and improve conditions for environmental, cultural, social sustainability and economic territory. It Defines strategies, programs, actions and funding

required to ensure the sustainability of the CCLC as a commitment for the Colombian government. Specific objectives of policy are:

- a) Strengthen the social appropriation of cultural heritage that heritage CCLC and articulate the social and economic development of the region.
- b) Develop strategies to promote and protect employment generation in the region of CCLC.
- c) Design and implement the necessary mechanisms to develop risk management plans in accordance with the provisions of Act 1523 of 2013, in order that its threats, vulnerabilities and risks are recognized and environmental preservation and sustainability is ensured CCLC including a strategy for environmental management of mining that is consistent with the preservation and sustainability of the landscape.
- d) Promote the sustainability of coffee production in the CCLC, by encouraging their competitiveness, profitability and balanced coexistence with other productive activities in the territory.
- e) Improve the accessibility and mobility in the CCLC to strengthen coffee production and activities such as sustainable tourism.
- f) Promote actions to preserve the cultural value of CCLC within the consolidation of System of Cities in the coffee region.
- g) Strategy and actions to encourage the Conpes number 3 objective is: a strategy to ensure the preservation and environmental sustainability of CCLC:

According to the "Guide to Enactment of the CCLC in the review and adjustment of Land Management Plans" (environmental and cultural) determinants of land use need to be included in the municipalities plans of CCLC with coordination from Ministry of Housing, City and Territory, Ministry of Environment and Sustainable Development and the Ministry of Culture.

Ministry of Environment and Sustainable Development (MASD) has to support regional environmental agencies, governments and major municipalities in the process of formulating and implementing the Territorial Plan of Adaptation to climate change through the Climate Change Regional Nodes.

In order to strengthen the process control, environmental monitoring and management, MASD provide training to regional authorities and environmental authorities in mining and environmental control illegal training to perform processes regional corporations in management urban environment.

Another serious problem of generational change in the CCLC is coffee farmers with an average age 55 years old, are affected by the influence of modernization and poor local competitiveness of the coffee business to the global market, as the youth do not want to work as coffee farmers. That is called "generational change".

But simply policy is difficult to face the negative effects and risks losses threats and disasters in the CCLC. Over an area affected by the earthquake of city of Armenia in 1999, with

clear social evidence and deep cultural traces following this event, and the experience of Armero disaster caused by the event of the Nevado del Ruiz Volcano is recognized, the imminent volcanic event of Cerro Machin volcano (VCM) is virtually unknown. As part of the agenda of the regional environmental agencies, the National Unit for Risk Management and Disaster UNGRD, from the scientific report prepared by Ingeominas (2003), volcanic events of Cerro Machín have confirmed a every 900 hundred years occurrence. Today, we stand exactly in the beginning of period covered by last activity.

Due to its characteristics, the VCM is characterized by an explosive building, whose map of threat and risk throws the pyroclastic tide westwards rampaging completely the Coffee Cultural Landscape of Quindío, affecting its municipalities, and Valle del Cauca reaches the municipalities of Sevilla and Caicedonia. Studies sized hemispheric, regional and local impact of the volcano Cerro Machin, comparable to the events of Mount Pinatubo in the Philippines in 1993.

Therefore, you should think of preventive actions cannot be mitigated risk, but also in management policies adapted to the impending situations described, both in territorial, environmental, landscape and heritage appropriation system. Currently the VCM, belonging to the volcanic system of Nevado del Ruiz Volcano (NRV), according to the Weekly Newsletter activity Cerro Volcano Machin, the VCM presents alert "Yellow level activity or (III): changes in behavior volcanic (...) activity this week the Cerro Machin volcano, continued to record activity of volcano-tectonic type, related to the fracturing of rock inside the volcano. This activity showed very low energy levels less than 0.5 magnitudes. With regard to the other monitored parameters did not show significant changes."

The position expressed here far from apocalyptic call is to put on the map the

situation that keeps this threat to the CCLC. This could begin to establish a clear and action policy for risk management, and not expect to have to manage the event above politics. Such is the case of the Galeras volcano Conpes, Decree 3905 of 2008 for the implementation of the Resettlement Plan in High Volcanic Threat Zone of Galeras Volcano, declared a disaster area by Decree 4106 of 2005, and Conpes the Nevado del Huila, starting from the events occurred and people died. Despite local inhabitants near to the Cerro Machín Volcano participate periodically in simulacrum, and local land management is optimized, this contrast with national policy and regional governments fear to face the risk.

Based on the above, then it seems to think about of a reconstruction of Coffee Cultural Landscape. If expected event occurs, Colombia will be halved in two. Highways infrastructure connecting the Pacific coast to the Caribbean passes through near VCM. Land management plans of the region are not contemplating risk and threat criteria on land environment and infrastructure. The volcanic and seismology Observatory, all units of prevention and early warnings are installed in places near to volcano and routes of evacuation for locals, but main investments in infrastructure and evacuation are not clear. Once evacuated, if so, affected area of CCLC and Quindío region (1.350 square kilometers approximately) razed and burned, will be remain poisoned, especially superficial water. To restore it back, inhabitants will need an emergency water supply underground system. A huge infrastructure that no one is thinking about, less planning how to make it.

On the other hand, people need a clear understanding of the effects of harder climate variability after volcanic events, to apply patterns of conversion of landscape, development of types of compatible productive farms with sustainable agricultural activity, scenarios of evolution of burned landscape

arise. Affected land will be need to restore property system and cadastral superposition to guarantee individual and collective property, the landscape recovered and preserved, proposals for natural and cultural heritage restoration need to be generated. And in response to the forms of appropriation of the symbolic dimension of the landscape, the equity value of the production of the guadua (angustifolia), coffee, water conservation, the appropriation of architectural construction materials will be need to be recovered. But the hardest recover will be related to the heritage. A landscape lost has to be recovered, especially in the inhabitants minds.

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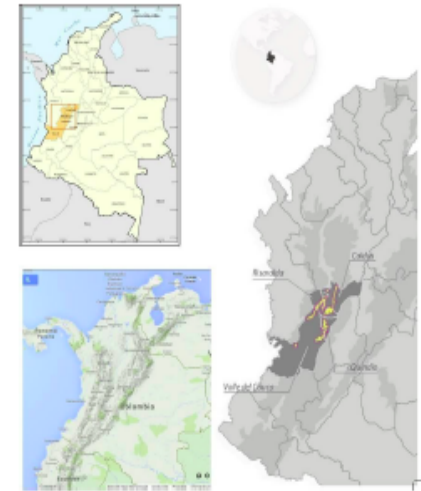
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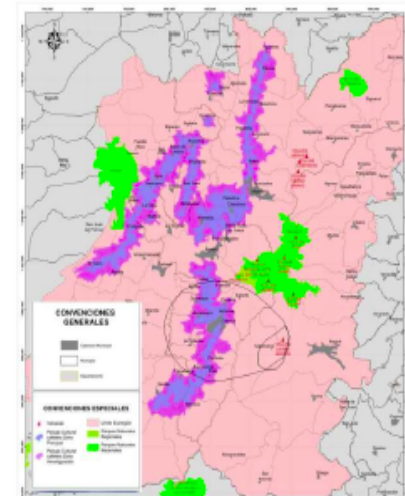
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Source: Google maps, 2015. And National Coffee Growers Federation of Colombia, 2014.



Drawing: Ing. Geo. Luis Manuel Reales Maestre. Ministry of Culture of Colombia, 2015.





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## LOS COSTOS AMBIENTALES Y SOCIALES DEL SISTEMA DE MOVILIDAD URBANA EN EL AREA METROPOLITANA DE LIMA

### THE ENVIRONMENTAL AND SOCIAL COST THE URBAN MOBILITY SYSTEM IN THE METROPOLITAN AREA LIMA.

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#### RESUMEN

El objetivo del artículo es evidenciar los costos ambientales y sociales del sistema de movilidad urbana en el Área Metropolitana de Lima. El diseño metodológico es de carácter exploratorio y descriptivo, para ello se hace uso de una fuente de datos cuantitativos y cualitativos secundarios. El artículo pone en evidencia que los mayores costos ambientales del sistema de transporte urbano, se asocian con el alto consumo de recursos no renovable; y en el caso de los costos sociales, los vehículos motorizados se superponen sobre los ciudadanos.

#### ABSTRACT

This article demonstrate the environmental and social cost the urban mobility system in the Metropolitan Area Lima. The methodological design is exploratory and descriptive, for which a quantitative and qualitative secondary data source is used. The article shows that the higher environmental costs of the urban transport system are associated with the high consumption of non-renewable resources; and in the social costs, motorized vehicles overlap citizens.

#### INTRODUCCIÓN

La visión convencional que se tenía sobre el transporte, como un bien económico que busca incrementarse indefinidamente, ha sido cuestionado en los últimos años. La preocupación por el deterioro del medio ambiente a causa del tráfico rodado fue manifestada inicialmente por Colin Buchanan en 1973, en su famoso informe "Traffic in Towns", posteriormente son Estevan & Sanz en 1996, quienes hablan también de la contradicción esencial entre el transporte y la naturaleza.

Si bien el equilibrio entre transporte y medio ambiente en las ciudades depende de las características institucionales, sociales, culturales y económicas de cada contexto y realidad territorial. Lo cierto es que muchas sociedades viven ya, con altos niveles de ruido, intrusión visual, tiempos de desplazamientos, etc. Y probablemente estas ciudades seguirán sobreviviendo con cada vez mas afecciones ambientales y sociales a causa de la movilidad motorizada. Desde este artículo se pretende evidenciar cuales son los costos (ambientales y sociales) del actual sistema de movilidad urbana de área metropolitana de Lima (AML).

#### MATERIALES Y MÉTODOS

El enfoque metodológico es de carácter exploratorio y descriptivo. Para ello se hace uso de una fuente de datos cuantitativos y cualitativos secundarios de: Instituto Nacional



