





**2. Solid waste comprehensive management:** this plan intends to strengthen the resident environmental education in order to motivate them to manage solid waste rightly, to reduce waste in sanitary landfills, to avoid health problems related to the growth of unhealthy vectors, to create formal employments, to reduce the street cleaning tax for residential complexes, and to generate a prototype experience in waste management that could be replicated in another places of the city.

To develop the solid waste management in the neighborhood, there is a team who meets weekly and that is composed by the public sector: Secretary of the Environment and Natural Resources of Medellín (*Secretaría del Medio Ambiente del Municipio de Medellín*), the private sector: *Terra Biohotel*, the academy: University Colegio Mayor de Antioquia (*Institución Universitaria Colegio Mayor de Antioquia*), and the civil society: neighborhood *Los Conquistadores* residents. The work of this team is now materialized in the proposal of a project dealing with solid waste management for the neighborhood, which will be administered by the Communal Action Board, as a representation of the inhabitants.

**3. Historical memory recovery:** this project aims to preserve the neighborhood's identity and historical memory by means of appealing stories about the beginning, the history and the development of the neighborhood. With the narrative and visual material collected, it is expected to organize cultural events that broadcast the recognition of the neighbors with their community. Moreover, elderly population will be invited to participate in the *Terra Biohotel* initiatives concerning education in systemic sustainability (See Figure 4, letter a). Art, culture and ludic are invited to this project as facilitator elements for this idea become established (See Figure 4, letter b).



**Figure 4** (a) Resident storytelling recovering and (b) Artistic exhibit in the event “Cuando el Río Suen... Arte Lleva”, (“When the river sounds...there is art in it”) supported by Terra Biohotel.

#### SUSTAINABILITY DURING THE OPERATION PHASE

**Comprehensive water resources management:** *Terra Biohotel* will re-use the gray water from the building to garden irrigation and hotel toilet flushing. The project has a water purified system the of the phreatic zone, which will allow a quite important level of self-supply, under the granting of a license by the authority that regulates water resources in the city. The implementation of these measures will reduced the social environmental impact that generates water capturing, processing and distribution in Medellín's water supply network and will reduce the operating costs in an approximate proportion of 30:1.

**Energy efficiency:** the bioclimatic design of the building structure will minimize the use of electric energy associated to air conditioning and artificial light consumption in the hotel in a proportion of 50% of a conventional energy operation in hotels of similar type and size. The hotel is provided with high energy efficiency machines, such as LED lamps, solar collectors for heating water and an air conditioning system adapted to the geographical location and climate conditions of the city of Medellín.

**Comprehensive solid waste management:** in the hotel operation, recyclable waste will be gathered, ordinary waste will be compacted, and organic waste will be composted to minimize the volume of solid waste dumped in the open-air sanitary

landfills of the city.

**Sustainable destination-hotel:** the *Terra Biohotel* model of systemic sustainability management aims to organize an environmental, gastronomic, cultural, pedagogical, and patrimonial tourist offer which set the city and the region as an interesting sustainable tourist destination.

**Broadcasting and sensitization:** besides the commercial and economic management of the hotel project, a constant pedagogical management will be developed and will be oriented to inform the people directly interested in the project -potential clients, employees, suppliers, residents, authorities, students and professors-, so they become sensitized about the problems that the current unsustainable model has, by promoting systemic sustainability: a socio-economic and environmental balance.

#### CONCLUSIONS

The main contribution of this paper is the exploration of the social dimension in the systemic sustainability incorporated to the building industry, during the phases of construction and life cycle of the building . Regarding *Terra Biohotel*, it is important to remark its interdisciplinary contributions that go beyond the role of architecture and construction and that aim to reduce the environmental impact caused by construction, to achieve a strong community social incorporation and to create shared value, even in commercial uses, such as hotel industry, whose impacts are not taken into account during the planning, design and operation of a project. This environmental and social facet of systemic sustainability shows the impact of management micropolitics wills, linking the local neighbourhood management with the private sector of construction, in order to point the hotel project towards an exercise of economic sustainability, able to exceed the relation cost-benefit, supported on the environmental and social responsibility of construction.

Experiences developed and documented in this paper highlight the contributions of *Terra Biohotel* in a social, economic and politic context, whos management could become a proofing experience, able to contribute with environmental, social and economic analysis elements, in comparison to the problems resulting from the impact that conventional construction has, from the perspective of territorial social responsibility, glocalization, and governance, and to provide alternative solutions that influence the Colombian and Latin American reality.

#### ACKNOWLEDGMENTS

To William Enrique Salazar Salazar because of his valuable contributions for the writing of this paper and to the neighbourhood “Los Conquistadores” leaders from the city of Medellín who are building a sustainable community together with *Terra Biohotel*.

#### REFERENCES

- Alquimia, G. d. (2012). *Guía para la incorporación de la responsabilidad social territorial en las políticas de empleo a nivel local*. Retrieved from <http://www.bibliotecavirtual.info/2013/01/guia-para-la-incorporacion-de-la-responsabilidad-social-territorial-en-las-politicas-de-empleo-a-nivel-local/>
- Bedoya, M. (2011). AADA - Arquitectura de Alto Desempeño Ambiental: más que una certificación o un indicador, una metodología conceptual para Iberoamérica. *In: Sostenible?, Reciclar Ciudad, Revista de la Cátedra UNESCO de Sostenibilidad*(12). Retrieved June 04, 2014, from <http://cus.upc.edu/publicacions/revista-sostenible/revista-sostenible-1>
- El Khouli, S. (2011). Sustainable by design: the responsibility of the architect. *UIA Work Programme Architecture for a sustainable future (Region I)*, 146.
- García, A., González, A., & Salazar, J. (2006). *Labor Cero*. Medellín: Argos.
- Robertson, R. (2003). Glocalización: tiempo-espacio y homogeneidad-heterogeneidad. *Cansancio del Leviatán: problemas políticos de la mundialización*, 261-284.