



Contribution to the Citylab Student Competition during the “PBL for Sustainable Cities” conference 19-20-21 September 2018

CITYLAB MODULE Universidad Metropolitana, Caracas - Venezuela

- **Citylab module:** Towards the sustainability of informal communities.
- **Faculty or department offering the module:** Faculty of Engineering and Faculty of Arts and Sciences.
- **Program(s) in which the module will be implemented:** Community service.
- **Level (undergraduate/postgraduate):** Undergraduate.
- **Modality (summer school, workshop,...):** Workshops, seminars and field visits.
- **Timing (when will the module run):** 9 months.
- **Total number of students (approximately):** 30 students
- **Number of students per group:** 5 students per group
- **SDG goal(s):** Ensure the improvement of public services in the informal community. Promote joint participation for improvement the urban environment through the joint venture with a vision of sustainability. Foster care and Protection of Cultural Heritage. Promote access to public spaces and green areas of the Community.



new
methodology for
better learning **PBL**

● Learning experience

The approach to the PBL methodology represented a challenge for students and teachers, incorporating it as a learning strategy in the Chair of Community Service, being this a condition of degree required by Law. The process allowed us to acquire and strengthen competences such as critical thinking, work collaborative, autonomy in learning and project management, but at the same time, added value through strengthening the community in terms of diagnosis of needs, training in water quality issues and the collaborative approach to problem solving, what facilitated community empowerment. The process evidenced that this double intention, allowed to respond to typical problems of urban sustainability of our country.

● Interdisciplinarity

The project was designed and executed by students of the different careers of the Universidad Metropolitana, which favored training through a holistic and global vision with the capacity to solve complex current problems. This methodological contribution of meaningful learning for life was based on the importance of diagnosis, communication and socialization during the process, from an integral approach.

● Involvement of local stakeholders

The project responds to a problem of national sustainability, seen from the local, where all the actors involved in the management of water resources search collaboratively for viable alternatives seen from their different roles and assuming that they are all part of the problem as well as of the solution.

WHO? : Fundación Vivienda Popular, Asociación de Viviendas Civiles ASOVIV Las Minitas, Mayor of Baruta, and the Universidad Metropolitana.

HOW? : La Fundación Vivienda Popular, actively participated in all phases of the project, facilitating the exchange with the organized community and the training of the students. For its part, the Asociación Civil de Vivienda ASOVIV Las Minitas, collaborated with the students in the diagnosis and identification of problems and solutions. The Mayor's Office of Baruta, participated in the initial phase for the recognition of the problem and the authorizations of law and later in the evaluation. Finally, the Universidad Metropolitana, was responsible for the links of collaborative work with external actors.

WHEN?: The actors supported the development of the module during the 9 months of execution. Some did it permanently, but in the case of the public power actor, participation was for specific moments within their functions as a municipality.

● SDG goal(s)

Contribute to the development of sustainable cities and communities, means the integral management of the resources that the urban ecosystem has, and one of them is precisely water, which according to the concept of water security, must be of quality and at the same time sufficient to satisfy the needs of citizens. A sustainable city is one where its citizens are partners in solutions to sustainability problems, so promoting training in water security, among all the actors of the resource, is vital to contribute to the quality of life and promote development. . This project, not only reflects the work towards the achievement of Goal 11 of sustainable development, but also affects the achievement of Goal 6 of clean water and sanitation, given that we can not see the SDGs, as isolated objectives, in terms of Sustainability issues refer.

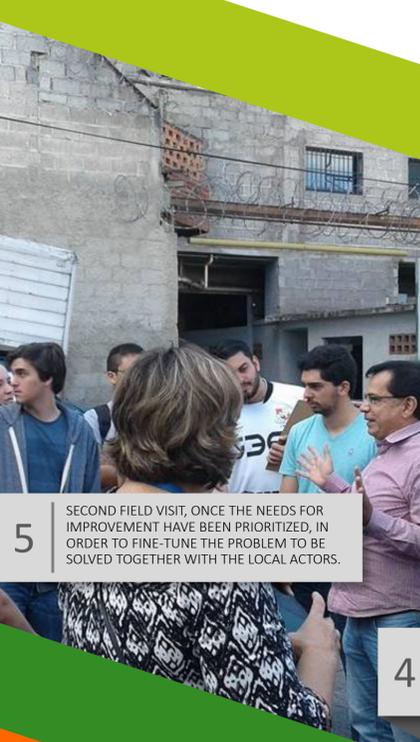
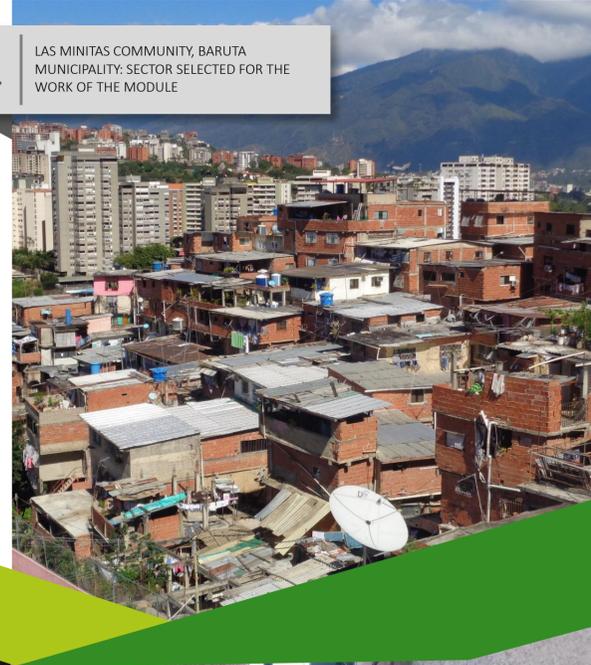


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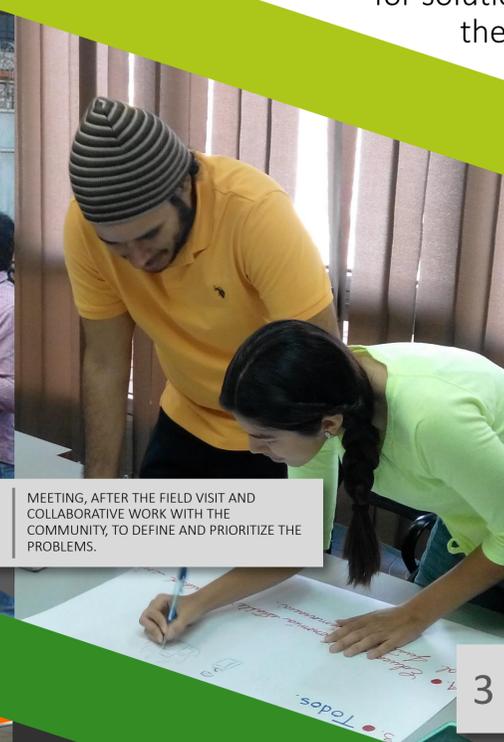
GOALS

Train citizens to become actors and authors of their own development, through the recognition of the sustainability problems of their environment and empowerment through the application of tools that allow them to mitigate or prevent them from their citizen role, understanding that there must be interaction with the rest of the social actors in the search for solutions, which contributes as a whole to the mayor of goal 11 of the Sustainable Development Goals.

1 LAS MINITAS COMMUNITY, BARUTA MUNICIPALITY. SECTOR SELECTED FOR THE WORK OF THE MODULE



5 SECOND FIELD VISIT, ONCE THE NEEDS FOR IMPROVEMENT HAVE BEEN PRIORITIZED, IN ORDER TO FINE-TUNE THE PROBLEM TO BE SOLVED TOGETHER WITH THE LOCAL ACTORS.



4 MEETING, AFTER THE FIELD VISIT AND COLLABORATIVE WORK WITH THE COMMUNITY, TO DEFINE AND PRIORITIZE THE PROBLEMS.



3 CONVERSATION WITH THE LOCAL ACTORS TO KNOW THEIR PERCEPTION ABOUT THE PROBLEMS IDENTIFIED AND VALIDATE IF THE SOLUTIONS TO THEM WOULD CONTRIBUTE TO IMPROVE THEIR QUALITY OF LIFE.



2 FIELD VISIT TO THE LAS MINITAS COMMUNITY TO DETERMINE IN SITU PROBLEMS OF URBAN SUSTAINABILITY.



6 CONFORMATION OF INTERDISCIPLINARY WORK GROUPS TO DETERMINE THE BEST OPTIONS FOR IMPROVEMENT TO THE IDENTIFIED PROBLEM, IN THIS CASE WATER QUALITY.

METHODOLOGY

Framed in the methodology Based on Problems Based Learning (PBL), and under the premise of "learning by doing", the students initially received training in community approach and diagnosis of urban sustainability problems. Fundamental requirement for the next phase that was the participatory diagnosis of the problems or needs for improvement. After that, World coffee sessions and collaborative work between students and actors were held to delimit and define the sustainability problem that was the quality of water. Then, the students received training in water resources, which allowed them to design the project as an alternative solution through different strategies such as workshops and dissemination pieces, to sensitize and train communities in relation to the subject, and these became multiplying agents.



7 EXPANSION OF KNOWLEDGE ABOUT THE SUBJECT, ONCE THE OPTION IS DEFINED, BY SEARCHING FOR REFERENCES OF PREVIOUS INVESTIGATIONS



8 PERFORMING TESTS AND LABORATORY PRACTICES NECESSARY TO SUPPORT THE PROJECT.

BACKGROUND

Water is a line of action research that the Universidad Metropolitana in conjunction with the Global Water Partnership (GWP Venezuela) has previously worked through projects of Integrated Management of Water Resources that include training workshops at different levels in terms of water quality detection and planning as a management tool, among others, carried out during the period 2015 - 2017 and whose objectives are to empower communities in the implementation of actions that allow them to improve their quality of life around water security, so this project reinforces and extends the work that has been developing in previous years.



9 TRAINING FOR LOCAL ACTORS, STARTING WITH THE CHILDREN OF THE COMMUNITY, IN TERMS OF WATER QUALITY DETECTION, TRAINING CARRIED OUT IN THE ONLY SCHOOL IN THE SECTOR.

THEORETICAL FRAMEWORK

The project is premised on the sustainable development of cities, seen as "development that meets the needs of the present generation, without compromising the ability of future generations to meet their own needs" (United Nations General Assembly, 1987), having as its main theme water security, based on the "capacity of a population to safeguard sustainable access to adequate quantities of water of acceptable quality to maintain subsistence, human welfare and socio-economic development, to ensure protection against water pollution and water-related disasters, and to preserve ecosystems in a climate of peace and political stability" (UN-Water, 2013). Water management, from the point of view of urban ecosystems, requires the participation of all social actors, who must have the appropriate training from their different roles to respond to the problems of sustainability of resources such as quality and quantity, so it is often essential to train the actors in this area, emphasizing community empowerment, which seeks to make it possible for the community itself to discover that it has the resources to respond to their problems in solidarity (Hombrados and Gómez, 2001).



10 FORMAL DELIVERY OF THE WATER QUALITY PROJECT TO LOCAL STAKEHOLDERS, WHO PARTICIPATED IN TURN IN A TRAINING WORKSHOP TO BECOME REPLICATORS OF THE SOLUTIONS GENERATED AS A WHOLE.

RESULTS

- Empowerment in the detection and resolution of urban sustainability problems.
- Development of skills and abilities of high performance team, autonomous collaborative learning.
- Acquisition of new knowledge product of interdisciplinary work.
- Greater civic commitment in those involved with the project, actively developing its role within the academic formation and the improvement of society.
- Design of improvement proposals for the communities served.
- 120 basic education students aware of water quality.
- 120 social actors trained in alternative water treatment with the use of Moringa Oleifera seeds.
- Replicability of the project to other communities with the same problem detected, which allowed continuity and validation of the process.
- Emergence of new institutional alliances.

CONCLUSIONS

- The project was of great impact for all the actors involved, given the significant learning obtained and the presentation of viable proposals to solve the problems of environmental sustainability detected, specifically in the matter of water quality.
- In the Venezuelan case, the sociopolitical context hindered the development of the project, which limited the programmed accompaniment to the community.
- The training workshops for the detection of water quality and its subsequent purification are efficient for the empowerment of communities as a mechanism for the construction of sustainable cities.
- It is recommended to continue monitoring and monitoring the results of the project in the hands of the social actors, since the accompaniment in this process is vital to know more precisely the impacts once the training processes are completed.



11 IT CONTRIBUTED TO THE MITIGATION OF THE REAL NEED DETECTED, IN THIS CASE THE LACK OF WATER QUALITY, IN THE POPULAR COMMUNITY OF LAS MINITAS.

CITYLAB PROJECT



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