

Benito Juárez'S integral Waste Management, 2012-2014 Period, Siresol'S Cancun Project Assesment

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Abstract: Waste management deficiency, is a constant problem México's lengthwise. Mexico's daily waste generation reaches 102,895 tons, about 62,287.67ton, are treated into land fields and controlled sites, and 16,395.13 are disposed into non controlled sites, leaving a 2,132.73 tons deficit, which were about is not known. A sing of the Mexican waste management inefitency, is the small average of recyclable by-products contained into this waste flux that is recovered with profit porpoises. In spite of been the most important Mexican touristic destination, Cancún city, Quintana Roo México, located in Benito Juárez municipality, it is not an exception, with a high per capita waste generation, limited by-products recover, and constant waste collection problems. The decentralization of the waste management system was improved, during the 2012, as the chosen strategy to solve this problem, and it was accompanied of another four strategies, waste generation prevention, by-products valorization and the improvement of the waste collection and waste treatment and disposal systems.

One of the most important objectives, in public administration, is to make sure that the resources invested into programs are reaching the goals

they were created for. It has been more than 3 years, since this decision was taken and this time gives the opportunity to make an evaluation of the public decentralized organism, known as SIRE SOL Cancún, which is the administrator of the waste management system in this municipality. This evaluation will include design, processes, results and impacts and efficiency assessment, so this project fulfills pertinence criteria in agreement with the Cancún city context.

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Introduction

Solid waste management problems are a recurrent situation in Benito Juárez municipality, where Cancún city is located. Waste collection

routs and schedule fails as well as a bad management of the landfill are the most regular issues.

This situation challenges the current municipal administration to establish efficient waste management systems according to the main touristic Mexican destination. Nowadays, integrated solid waste management is reaching popularity among public administration, as the best option to decrease the amount of materials that are currently confined at land fields, setting waste prevention at first place and including activities such as sale of by products and waste based energy generation. Based on the past administrations experiences, where centralized administration of the solid waste management service, was the chosen option, and using the law integrated waste management concepts, prevention, reuse, recycling, valorization, and according to NOM-083-SEMARNAT-2003 waste disposal, during 2011-2013 administration, SIRE SOL, Cancún, was created as an decentralized public entity of the Benito Juarez administration.

Using the logical framework methodology, deficient solid waste management in Benito Juárez Municipality was identified as the central problem, and the municipal administration approach to solve it, was the setting up of the decentralized public entity "Cancún Solid Waste Integrated Solution" (SIRE SOL, Cancún), in order to attend the citizenship needs from an integrated perspective.

The main strategies of SIRE SOL Cancún are:

- Waste Reduction, Reuse, and Recycling strategy. This strategy will initiate a new tendency, where citizenship and business owners will contribute to waste generation reduction, changing its waste production patterns.
- Recyclable material markets formalization. This strategy will strength the enterprises establishment.
- Waste collection system, efficiency increase. This strategy will decrease the social discontent whit a public administration acceptance as a result.
- Landfill operation in accordance to Norma 083 SEMARNAT 2003, and the framework accomplishment, will allow leaving behind, public health negative impacts, and the use of technology for waste treatment will reduce operational costs, and increase the landfill lifespan.
- Decentralized administration. Increase of the system processes efficiency.

To run the entire waste management system, the public administration uses more than 160 million pesos per year, being this, one of the most important impacts to the municipal finances. This is why the evaluation need arises, in order to know which the real impacts of the activities are. Based on the previous statements the next questions are proposed. Is SIRE SOL Cancún strategies, solving the waste management failures? Are the identified target groups being positively affected?

It has been more than two years since SIRE SOL, Cancún was created, and in order to know if the chosen strategies are solving the waste management deficiencies, and citizenship is being positively impacted, and evaluation of the system emerge as a prime need.

Evaluation will be executed taking into account three hypotheses.

- Promotion of waste prevention, reduction and recycling, will lead to a minimization of citizenship and commercial waste generation.
- Decentralization will increase efficiency
- Waste collection service optimization by the city division into 4 different zones and competition between waste collection companies, will increase efficiency of the system.
- The use of Landfill methodology for waste disposal as the only strategy is not enough at the Quintana Roo context.

Because of its characteristics, this evaluation will be internal and intermediate. This exercise will review design and processes, as well as the impact on Cancún's tourist industry and citizenship.

The resulting information will be used to support decision maker's activities and in such case, resources redirection, in order to reach the main objectives of the project.

Materials and methods

As mentioned in previous paragraphs, in the design of the project under evaluation, the methodology used was that of the Logical

Framework Methodology, and given that this tool allows us to follow up on the projects designed with this focus, it will be through its components that the evaluation will be carried out.

As a project design tool, The Logical Framework Focus provides a series of tools for the design that, when utilized creatively, can be used for project planning, design, instrumentation or execution, supervision, and evaluation. The logical framework methodology provides a logical and structured focus to set priorities and determine the expected results, activities, and required supplies.

Because of the developing stage of the project, and according to what was described in the theoretical framework, the evaluation that will take place will be Mixed, with the participation of an external consultant and personnel from within the organization, in an intermediate stage, where the design, processes, results and impact will be verified individually, by SIRE SOL's personnel.

The evaluations criteria and questions

In order to arrive to critical value judgments about a developing intervention, every evaluation must be guided by a set of criteria.

The evaluation's criteria will serve as a guide and direction throughout the evaluative process, and will help us get to the bottom of a project's reality, to "grasp" said project.

The criteria are elements that provide order and structure to our evaluation. The evaluation is an

inquiry exercise, and through the criteria we “search” with a purpose.

The evaluation’s criteria in the development projects’ scope can be many. Nevertheless, the within the scope of development’s cooperation, the CAD (Comité de Ayuda al Desarrollo — Developmental Assistance Committee) proposes to take into account for the aforementioned project:

1. Pertinence: “Pertinence is the measure in which the development intervention’s objectives are congruent with the beneficiaries’ requirements, the country’s needs, global priorities, and the associates and donors’ policies” (CAD).

Information to be evaluates pertinence.
Results, specific objective and general objective Vs Sponsor’s policies, local policies, and beneficiaries expressed needs.

2. Effectiveness: is “the measure in which the development intervention’s objectives were —or are expected to be— achieved, taking into account their relative importance.” (CAD).

Information to be evaluates Effectiveness.
Relationship between activities/results/specific objectives Compliance indicators
Hypothesis

3. Efficiency: “is the measure in which the resources or supplies (funds, time, etc.) have economically transformed into results”. Information to be evaluates

Efficiency. Resources and costs (MPP) and budget Vs Obtained results.

4. Impact: Impacts are “the primary or secondary, positive or negative long term effects produced directly or indirectly by a development intervention, whether intentionally or not.”

Impact analysis is complex, as it’s necessary to establish causal relations, separating the influence of other multiple uncontrolled factors within a project, and the changes really generated by it, especially in the social sphere.

There are many kinds of impacts, according to the project’s nature, the context in which it takes place, etc. They can be:

- Economical
- Social
- Gender based
- Environmental

These criteria are based on the logic that, if a project is efficient, effective, pertinent, and viable and has positive impacts, it can be said that it is a successful project.

Results

The strategy design was laid out in a context where the centralized public administration, which provided the recollection and disposal, services through contracts with private companies. Nevertheless, to this date, this situation has changed. Modifications in the recollection strategies have taken place, changing routs and sectors, technology is being used to treat waste,

and the socialization of several programs for increasing the population's sensitivity regarding prevention and handling of urban solid residues is being suggested. Through the evaluation process based in the Logical Framework methodology, we expect to identify the flaws that could have occurred in the project's design process, as well as during its execution. It will identify if the outlined strategies in the planning exercise carried out need to be adapted to a new reality generated by themselves and that currently respond to the needs of the Benito Juarez municipality, in relation to stated need over the handling of urban solid waste.

As a final result we should obtain strategy's update by the Benito Juarez municipality, to attain the comprehensive management of the urban solid residues for 2014, having identified the areas that need to be strengthened, and the new needs, for their efficient attention. As an additional result, we expect to generate a replicable model for the rest of Quintana Roo's municipalities.

Conclusions

Urban cleaning is one of the most important basic services that the municipal administrations are responsible for, and the flaws in it lead to the citizens' general dissatisfaction, because of the deterioration of the urban image and health risks that the accumulation of residue in the streets can mean, besides the subsequent problems such as drain blockage and flooding in the rainy season. It is also one of the services that require the most

resources so that it can be done properly. In the majority of Mexico's municipalities this service is not charged, being subsidized by other concepts like property tax, which makes the citizens think they have already paid for this right, thus the dissatisfaction when the service fails are quickly manifested to the authorities.

The Mexican legal framework establishes that the service can be rendered directly, through concessions or through a decentralized public organization. Directly rendering the service in a centralized administration has proven to be complicated because of the internal bureaucratic process, that do not allow for a quick response to the issues that need to be immediately resolved, thus the inclusion of private entities and decentralization of the service has been the answer given to this issue.

Nevertheless, there is not yet a blueprint for the rendering of this service that can be taken as a model to adapt it to other municipalities, most of which have similar issues. Changing from a system that only provides recollection and final disposal, to migrate to a comprehensive urban solid waste management still has yet to find a way to point to a real solution. SIRESOL's proposed project, which is the integration of nationally successful cases, is still presenting flaws that require it's evaluation to implement the necessary changes and improve on the stages that work correctly. The currently invested resources in rendering this service haven't been enough, requiring a revision of the recollection system planning that allows cutting back on operative costs.

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