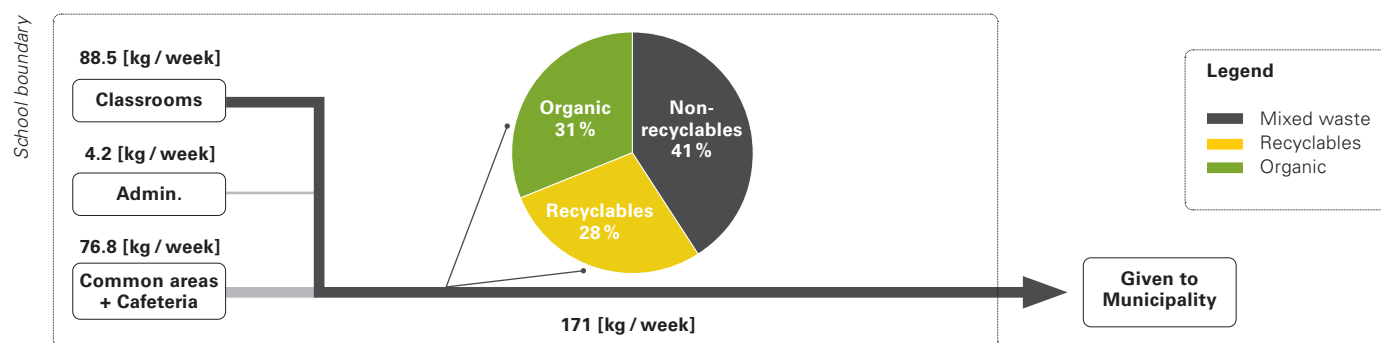


A Zero Waste Approach for a School in the Peruvian Amazonian Rainforest

“Towards Zero Waste at Schools” aims at systematically developing a circular approach to foster sustainable reduce, reuse and recycling practices in schools, and its replication in their communities. The approach was applied at a school in Iquitos, Peru. Adeline Mertenat¹, Anali Ochoa², Paloma Roldán Ruiz², Christian Zurbrügg¹



Waste audit results from Cristo Redentor school.

Introduction

“Towards Zero Waste at Schools” (ZW@S) is researching innovative solutions to environmental sanitation issues in schools, maximising synergies between water, sanitation, waste management, food production, health, environment and energy generation. The first ZW@S school was in Kathmandu, Nepal [1]. Knowing about the increasing waste generation rates and waste management-related challenges faced by Latin American municipalities, the project team joined with Ciudad Saludable in Peru to replicate ZW@S in another geographical, social and cultural context. This Lima based NGO, active in the fields of inclusive recycling, integrated solid waste management education and communication, helped to identify the city of Iquitos in the Amazonian rainforest as a site appropriate for ZW@S.

ZW@S approach

The first step was to study and identify the key success and barrier factors of waste-related initiatives and programmes at schools in Peru. Results showed that the Education and Environment Ministries promote a supportive legal and institutional framework for environmental education. Also identified was the need of schools, NGOs, Ministries, etc., for guidance on how to do baseline waste assessments, which are the basis for designing successful integrated zero waste management systems. The school selected for the project was “Cristo Redentor” in San Juan, Iquitos. It has around 400 students at kindergarten, primary and secondary levels. Its director was supportive and showed great interest in working on environmental education, which is part of the school’s ecological vision.

Waste assessment

A key step was to do a waste audit with the help of a teacher’s group (see Figure). The school produces an average of 171 kg of waste per week. The waste is mixed and given to the municipality for further disposal. The audit showed that 31 % is organic, 28 % recyclable (paper, cardboard, PET, etc.) and 41 % non-recyclable. Of the non-recyclable waste fraction, 61 % is dust and fines, while the rest consists of plastic bags (13 %), Styrofoam (2 %), disposable cutlery (11 %) and food wrappers (6 %).

Based on the waste audit results, the school board installed a three-bin segregation system for organic waste, recyclables and non-recyclables to increase recycling. New rules were made to promote waste reduction and decrease the amount of non-recyclable waste. Because 31 % of the waste is organic, setting up a small-scale composting plant at the school and using the compost in the school gardens was a priority.

Next steps

The next steps are to consolidate institutional support and the school’s solid waste management plan, and incorporating environmental education topics in the school’s curricula in a cross-cutting manner. Also on the agenda are establishing educational green areas in the school gardens and promoting good environmental practices among teachers, staff and students. How such interventions at the school can influence the surrounding community will then be evaluated.

Conclusion

Doing an in-depth baseline assessment with the waste audit and communicating the results helped significantly in steering and facilitating actions at the school. Furthermore, the results show that the support and commitment of the school board is decisive for a successful ZW@S project. •

Reference

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¹ Eawag/Sandec, Switzerland

² Ciudad Saludable, Peru

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Contact: adeline.mertenat@eawag.ch