

# Xavier University- Ateneo de Cagayan

## Community Engagement

### Solid Waste Management: The ATENEO Way

## About the project

### Summary

The Solid Waste Management (SWM) Program of the University has improved through the years. The program has achieved productive results that include support from top management; presence of color-coded bins strategically located in grounds, hallways and offices; operation of Materials Recovery Facility (MRF) and vermicomposting facility; monthly revenue from recyclable materials and initiation of information, education and communication (IEC) campaigns; and recognition of University initiatives at local and international level.

### Project partners

Project partners are faculty, staff and students of Xavier University - Ateneo de Cagayan

## The results

### The problem

Solid waste is an immediate concern at Xavier University. Although experts have gone out of the University for Solid Waste Management engagements, the solid waste concerns in the campus are not properly addressed. This is because the University has not institutionalized the proper solid waste management and put it into operation.


### The approach

The University implemented the following:

1. To facilitate proper waste disposal, the University invested and purchased color-coded (GREEN for Biodegradables, BLUE for Non-biodegradable, and MESH/YELLOW for Recyclables) trash bins that are strategically located on campus grounds, hallways and offices. These bins are properly labeled to facilitate proper segregation of solid waste. All biodegradable (food waste) materials from the canteen are being sold and used as feeds.
2. On-campus operation of Materials Recovery Facility (MRF) to facilitate diversion and storage of recyclables items such as used paper, cartons, newspapers, PET bottles, cans, and plastic cups. All the yardwaste and selected biodegradable materials are processed in a vermicomposting facility where products (vermicast) are used to fertilize plants on campus
3. Information, Education and Communication (IEC) campaigns initiated by students, janitorial personnel and security guards
4. Integration of environmental aspect to National Service Training Program and other related subjects, and formation sessions of faculty, staff and students.

### Our goals

1. To build and maintain a green campus by integrating sustainability in all aspects of University life.



**Xavier University**  
ATENEO DE CAGAYAN

### Profile

- Established in 1933
- 9458 students (senior high, undergraduate and graduate students)
- 871 faculty (part time and full time) and staff
- Urban

- To become a zero waste campus through instilling values of environmental stewardship that would lead to change of personal behavior.

## Obstacles and solutions

<p>Consistent practice of segregation at source</p>	<ul style="list-style-type: none"> <li>The National Service Training Program students are assigned to conduct monthly monitoring of segregation at source practice in all offices</li> <li>Although segregation at source is not yet 100% practiced, the program is still a work in progress.</li> </ul>
<p>Lack of awareness on solid waste management program of the University</p>	<ul style="list-style-type: none"> <li>integration of solid waste policy in student handbook (i.e. Senior High School, Undergraduate and Graduate Studies)</li> <li>integration of solid waste management module to the National Service Training Program classes</li> <li>Orientation given to student leaders</li> <li>Information, Education and Communication campaign initiated by faculty, staff and students</li> </ul>
<p>Lack of discipline among students on proper waste disposal</p>	<ul style="list-style-type: none"> <li>Implementation of bento box (lunchbox) system. Aside from reduction of disposable wastes, the bento system also instills discipline and values of responsible stewards by returning their used lunchbox and utensils to get their ID and or money (PHP 50.00)</li> <li>The Office of Student Affairs initiated the development of a University Cleanliness policy for senior high school students, undergraduate and graduate students. Now on the information drive phase. Students are given sanctions for the following violations: littering, not properly segregating waste, and use of Styrofoam-based packaging.</li> <li>Development of <b>Magis Habit, A Program on Canteen Cleanliness</b> initiated and supported by the Office of Student Affairs, Xavier Center for Culture and the Arts, Atenista Ako Movement, Central Student Government, Campus Development, Green Campus Agenda, National Service Training Program, Freshmen Formation Program, and School of Education Peace Education</li> </ul>
<p>Lack of facility and technology to attain the goal on zero waste campus</p>	<ul style="list-style-type: none"> <li>Establishment and operation of Materials Recovery Facility (MRF) as storage for recyclable materials. These materials are sold to junkshop on a monthly basis.</li> <li>Establishment and operation of composting facility for processing of biodegradable materials (yard waste and food waste from offices) using a shredder. Earthworms are then added to the partially decomposed biodegradable materials to further process these materials. This process is called vermicomposting. Vermicast or worm castings are utilized as organic fertilizer to all the plants around the campus. Through this practice, the University has already saved from buying</li> </ul>

	<p>fertilizer outside</p> <ul style="list-style-type: none"> <li>• The above-mentioned facilities are maintained and managed by the Sanitation and Environment Unit of the Physical Plant Office.</li> <li>• The University, through the Vice President for Administration Office, has recently partnered with Global Land Property Management Incorporated. Global Land collects soft plastic wastes (plastic bags, plastic straw, candy/junk food/coffee/milk packaging), processes them into school chairs and then later on they will be donated to public schools.</li> </ul>
--	--

## Performance and results

Recyclable materials diverted to the materials recovery facility increased by 2.8% from 2014 to 2015. The implementation of the bento system reduced canteen waste to 75%. The MRF earns an average of 4,000 Philippine Peso (85 US Dollar) per month where it funds projects related to the green campus agenda. Annual yield of vermicast is 4,585 kilogram with an average of 382 kilograms per month. Most of the vermicast produced are used to fertilize plants on campus. Normally vermicast would cost PhP20.00 (0.43 US Dollar) per kilogram so the University is able to save a huge amount of money by just producing its own vermicast.

## The future

### Lessons learned

#### 1. COMMITMENT

As a Jesuit university, Xavier participates in the Jesuit mission of reconciliation with God, reconciliation with others, and reconciliation with creation. Environmental protection is embedded in the University mission, thus we ensure that this is translated into actual practice and concrete activities. Fr Roberto C. Yap, SJ, during his inaugural speech in 2011, announced that Xavier University will “maintain and build a green campus but with a blue heart; a heart that appreciates the goodness of creation and discerns the active presence of God within creation”.

#### 2. TEAMWORK

We recognized that every member of the University community plays a vital role for a successful program implementation. Key people and supporting units are working together to harmonize activities and initiatives towards building a green campus.

Concrete examples are as follows:

- In Peace Education and National Service Training Program (NSTP) classes, students are required to conduct solid waste management information and education campaign in strategic areas on campus.
- Engineering, Agriculture and Arts and Sciences students are assigned by some of their faculty members to conduct a study related to solid waste management.
- Student organizations (Central Student Government, Atenista Ako Movement, and College Councils) support the program through development of materials to be used for information, education and communication (IEC) campaigns.

#### 3. CHALLENGE

We, as a University, are tasked by the Association of Jesuit Colleges and Universities in Asia Pacific (AJCU-AP) to become a prototype green campus for other Jesuit schools in the region. The University embraced this

challenge positively and as a response, established the solid waste management program. The program is a work in progress, which seeks to attain zero solid waste and campus sustainability on a greater perspective.

### Sharing your project

The program, including policies and operations, is communicated through student orientations, social media (official website of Xavier University and Green Campus Facebook page), are disseminated through email blast. As always mentioned, the program is a work in progress. One of the areas that needs to be improved is the feedback system or communication of program updates (e.g. % reduction of waste disposal to the city controlled dumpsite, % reduction in water and electricity consumption, monthly sale of Materials Recovery Facility) to the whole community.

### What has it meant to your institution to be a GUPES Green Gown Award finalist?

"Joining the GUPES Green Gown Award signifies Xavier University's commitment towards environmental stewardship in caring for the earth, our only home. Winning the GUPES Green Gown Award is not only a testament of success but also a bigger challenge to surpass existing levels of performance in the near future." -

**Mr. Edison B. Sasoy**, Vice President for Administration, Xavier University - Ateneo de Cagayan

### Further information

**Office:** (088) 853-9800 local 9044 or (088) 858-3116 local 1311

**Website:** <http://www.xu.edu.ph/>

**Green Campus Facebook Page:** <https://www.facebook.com/XU-Green-Campus-Agenda-337715332978028/>