



## **From Response to Responsibility: An Academe-Industry Partnership on Solid Waste Management In the Philippines**

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### ABSTRACT

By the late 1980s and early 1990s, a shift in environmental governance began to focus on advocates for effective environmental management by looking into communities and local institutions as important actors to involve in the process of environmental governance. There emerged a new view in environmental governance by pinpointing three (3) social actors, the states, markets and the civil society (Lemos and Agrawal 2006). This was followed by another set of changes in the mid-1990s giving heavy emphasis on environmental governance, changes that was brought about by developments such as: 1) the worsening living conditions in many urban areas linked to increasing population pressure and the inadequate capacity to govern of city governments 2) civil society's response to this lacking, were a series of growth on self-help associations (such as neighborhood organizations) and 3) the changing relationship between the state and civil society organizations (Dahiya, 2003) with the state becoming more open to civil society organizations.

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## Introduction

It made clear representations for clamor in environmental governance and which took part as a dissertation report entitled Environmental Governance and Solid Waste Management in the Philippines. Taking the cue from said representation lead to an examination of environmental governance by this author, in an attempt to take an in depth look on the roles, participation and accountability of non-state actors in the implementation of the solid waste management program. Further, the study took a look also into the trajectory of environmental governance, the roles and the specific tasks particularly in the performance of private sector in its pursuit of Corporate Social Responsibility. Citing a specific example for the research, the author chose as a case study, Toyota Auto Parts Incorporated and the different schools in implementation of solid waste management in the City of Santa Rosa, Province of Laguna in the Philippines which explored a least studied partnership known as the Social Private Partnerships (SPP). Making this study unique as it tackled the actual participation of non-state actors such as the academic institutions, and industries that are engaged in partnerships. The study made use of data from surveys, focus group discussions and interviews to determine the strengths and weaknesses of different partnership arrangements in the implementation of Solid Waste Management (SWM) City of Santa Rosa. In conclusion, the thesis puts forward some recommendations for improvements of partnerships in environmental governance, particularly in the area of law, policy, education and research. The overall conclusion is that, for successful environmental governance in this field, a combination of partnership arrangements as well as other mentioned requirements could promote improved incentives and accountability among non-state actors.

Base on the same study, it was also noted that among the non-state actors to have that strong contribution in waste generation and waste management aside from the industrial and commercial establishments are the schools and universities. It is common knowledge that in order for private businesses to sustain interest in their business, product or services and likewise being basically motivated by a return of its investment

seek to constantly garner public interest for their company or service. It was, in the course of this study, was the Social-Private Partnership discovered wherein a new form of partnership was created between the business sector and academic institutions. The Industry-Academe partnership, while an emerging partnership during our present time and age, was commonly known to have carried out programs through partnerships that involve provision of scholarship funds, on the job trainings and similar endeavours. The emerging partnership of Industry and Academe through Social-Private Partnership added another dimension to its joint undertaking in the context of implementing a school-based ecological solid waste management.

Such is the joint undertaking by the Toyota Auto Parts (TAP) as among those industries actively performing its Corporate Social Responsibility or CSR in the City of Santa Rosa. The TAP is the global production and supply base for manual transmissions of Toyota for its Innovative International Multi-purpose Vehicle (IMV) project which was initiated to create an optimized global manufacturing and supply system for pickup trucks and multipurpose vehicles to satisfy market demand in more than 140 countries worldwide. TAP has a total of 1,063 team members with main customers from other Toyota affiliates located in other Asian countries, Argentina and South Africa. Empowered by teamwork and good product, TAP is committed to:

- Provide products that guarantee customers' delight done in a timely and efficient operation empowered by continuous improvement and challenging spirit, assuring safe working condition and in harmony with the environment.
- To sustain company growth and profitability by promoting efficient management of its resources and cost effective programs for the benefit of customers, stockholders, employees and their families, business partners and the community.
- To continuously uplift team member's self-esteem, quality of life and productivity through developmental programs, strengthening mutual trust, respect, and effective communication.

## Santa Rosa City: The Detroit of South Luzon



Figure 1. Map of Laguna Province highlighting the City of Santa Rosa

The City of Santa Rosa is located in the Province of Laguna, in the Southern most part of Metro Manila. It is linked to Metro Manila and other southern provinces by the South Luzon Expressway (SLEX) and has a total land area of 5,514 hectares which represents 3.08% of the total land area of the province. It is mainly composite of land plains making up 97.89% of its total land area; having slopes ranging from 0.0 to 2.5% indicating level to nearly level lands. It has 18 barangays of which 3 are coastal Laguna Lake villages.

In the year 2005, the annual population growth is estimated at 6-8 percent resulting to a population density of 3,417 per sq. km. Fifty (50%) percent of its population belong to the age bracket of 15-40 years of age. Santa Rosa became a city on July 10, 2004, as predicted in a study conducted by the Japanese International Development Cooperation (JICA) in 1994, Santa Rosa is now fast becoming the premier business city South of the Philippines. It hosts several industrial parks, such as, (a) Laguna Technopark Inc., (b) Santa Rosa Business Park, (c) Meridian Industrial Complex, (d) Greenfield Development Park, (e) Toyota Industrial Complex and also considered as the “Little Detroit” of the Philippines with the presence of Ford Motors, Toyota Motors, Nissan Motors, Honda Cars, Star Motors and Columbian Motors premiere car manufacturing companies. In terms of contribution to the economy, ten (10%) percent of total

electronics exports and 50% of local automotive production come from the City of Santa Rosa, Laguna. However, Santa Rosa, for some scientists and city planner, is not ready as a city because of the lack of physical infrastructure (i.e. wider roads and other infrastructures) in the province. Thus, Solid Waste Management among other problems in the city of Santa Rosa became likewise a fast rising problem. In the becoming industrialized city which is Santa Rosa, Laguna. Given the reality stated above, it has become evident that a new partnership be formed in the upkeep of the city. Leading to the necessity of a Solid Waste Management project and the search for active partners to which Toyota Auto Parts along with the schools and universities of the city of Santa Rosa heeded the call in carrying out said task.

### Roles of the Non-State Actors in the Academic-Industry Partnership

One of the projects initiated by the Toyota Auto Parts in the City of Santa Rosa is the implementation of the School-based Ecological Solid Waste Management (SBSWM) Project. Previously, although the project is known as another type of Social Project Partnership or SPP in joint partnership between an industry and all the schools in the City of Santa Rosa focusing on the implementation of an on-campus solid waste management and introducing a sustainable Ecological Solid Waste Management and in compliance with the provision of Republic Act 9003. Sought to define the following specific roles and participation of the non-state actors in the school based solid waste management using the Solid Waste Management Framework, namely Environmental, organization, Engineering, Education, Equity and Enforcement.

Base on the Focus Group Discussion and Key Informant Interview activities undertaken relevant to the study, hereunder are its following results:

### Environmental Organization of the SBSWM Project

Implementation of the School Based Solid Waste Management (SBSWM) project in most of the schools, revolve around student organizations as its active participants. This was made possible through the partnership between the TAP and schools in the City of Santa Rosa with the project aimed at implementing a comprehensive ecological solid

waste management that would include formation of student environmental organization on campus. An initial result of this partnership is the establishment of a Young Environment Society Organization (YES-O) or the Environmental Science Club for each school.

Base on the Focus Group Discussion conducted, it was found out that in this partnership, a number of Non-State Actors were directly involved in the project namely, the school principal or administrator, campus coordinator (usually a teacher), student leaders from the Environmental Science club or the Young Environment Society Organization (YES-O) and the utility workers of the partner school. The identification of Non-State Actors (NSA) in this project reveal the significant role the NSA play, particularly in the areas of capacity building, Information Education and Communication, actual waste segregation, waste collection and composting of biodegradable wastes in response to their respective Solid Waste Management program. Another NSA identified in said project are the junk shop owners wherein the different participating schools have partnered with a junkshop owner creating an opportunity for them to sell their recyclables which were collected weekly. In some schools, it was also found out, that some individual parents of school children were actively involved in the Solid Waste Management Program by helping their children in bringing recyclables in the schools. However, it was found out that the Parents Teachers Association (PTA) in general, have not been involved in the implementation of the SWM program which could be attributed to the lack of awareness on the importance of SWM implementation among members and even PTA officers. Borne of the earlier mentioned partnerships, a particular environmental organization was formed and utilized in order to implement SBSWM project. It was also during conduct of the same FGD, that schools with active student organizations particularly the YES-O, proved to have a more sustainable implementation of SWM program. This was affirmed by the presence of several active student organizations in each of the top schools who implemented the SWM project by batch.

### **Engineering of the SBSWM Project**

Implementation of a solid waste management project includes numerous activities and structures necessary to the same which include: construction

of facilities such as sanitary landfill, conversion of open dumpsite into controlled dumpsites and setting-up of a Material Recovery Facility (MRF) per barangay. Initially, for the SBSWM Project, there was no expectation to construct a sanitary landfill in that locality. However, in all the partner schools the setting up of a Material Recovery Facility (MRF) is required as well as the installation of a solid waste segregation bins and putting up a composting facility. Results from the study's FGD, also attest that a significant number of partner schools were able to install three waste segregation bins for recyclables, compostables and residuals in compliance to the SBSWM project. In addition, a distinct food waste container was likewise put up in several school canteens where the putrescibles (food wastes) are collected daily and utilized as animal feed.

### **Education of the SBSWM Project**

An SWM project that is known and owned by the community has a great chance of sustainability; major to this act is to make the community aware of the project through the aspect of education. The Education aspect includes dissemination of Information, Education and Communication on SWM, capacity building on SWM through seminar workshops and similar activities. Interviews conducted with Key Informants (KIs) reveal that schools have been successful in coming up with various Information Education Communication campaigns to increase the level of awareness of the school's community on SWM. This campaign utilizes various media such as poems, music, poster, comics and other forms of media. To include, other activities were undertaken by all partner schools per batch wherein selected student leaders of partner schools were provided with more opportunities to get involved in environment related projects especially on solid waste management. Supplemental to said activities are a number of Trainers' Training Workshop organized by the TAP in cooperation with the National Solid Waste Management Council (NSWMC), United Nations Development Programme (UNDP), Department of Environment and Natural Resources (DENR), Environmental Management Bureau (EMB), Community Based Ecological Solid Waste Management Council (CBESWMC), Laguna Lake Development Authority (LLDA) and Save Silang Santa Rosa River (S3R2). The various workshops initiated with the different trainers aimed at

integrating SWM in the school curriculum. These consisted of topics such as Republic Act (RA) 9003, community-based ecological solid waste management, air and water quality management, and ecological solid waste management modules for the secondary schools based on the curriculum set by the DENR. More than **20,000** students were able to participate in the trainers' training activities on waste management in a span of three (3) years from school years 2007 to 2010. Also, the students have intensified their information dissemination campaign on SWM by putting-up bulletin boards and publishing newsletters about the different initiatives on SWM.

Meanwhile, outcomes from Key Informant Interviews with the different school representatives yielded results with a number of them having introduced competitions such as poem and song writing contests as well as beauty pageants that promote fashionable outfits made from recyclable materials. Such competitions, as school partners observe, create a significant increase in the level of environmental awareness among students and teachers. Further, the actual participation of schoolchildren in said competitions enabled the participation of even some of their parents in SWM activities. But, there was no tangible proof on the part of the Parent-Teacher Association (PTA) in almost all the school partners showing its support and participation in SWM programs of said partners. The incorporation of solid waste management in the different learning areas particularly in Science and Values Education subjects evidently was realized on paper. With the full-blown implementation of such SWM project yet to be realized, this completed module was turned over by TAP to the City Government of Santa Rosa and the Department of Education Division of Santa Rosa.

### **Enforcement of the SBSWM Project**

All schools in the City of Santa Rosa, (both private and public) have been part of the SBSWM project, project implementors in each school serve as enforcers of SWMs on campus. The type and level of enforcement varies from campus to campus depending on the kind of SWM projects implemented. The SBSWM involves a competition of best project or program implementation of which criteria was set base on the provisions of RA 9003. Monitoring teams organized by the TAP conduct monthly visits for six months to partner schools to

determine the extent of SWM implementation using said template. The regular monitoring of these schools had contributed strongly in making the partner schools comply with appropriate SWM practices base on RA 9003. This aspect of SWM has strengthened the partnership between TAP and the partner schools as it provided an opportunity to clarify expectations and accountability of the project implement or and the donor. Before the actual visit of the monitoring Team, concerned personnel of school partners are already aware of what the team will look into that made the relationship more pleasant ensuring harmony in program implementation.

### **Equity of the SBSWM Project**

Another important aspect of SWM implementation is the availability of resources that will be utilized to sustain the project. In the case of the SBSWM project which has been implemented through the provision of an initial mobilization fund for all participating schools to facilitate the implementation of the SBSWM project. The TAP however, introduced an incentive system called the "SBSWM Program Competition" by batch requiring each participating school to implement a solid waste management project for evaluation for a period of six (6) months to sustain the project. The process requires that on the sixth month, top three (3) schools by batch are selected base on the criteria set, which determines the top schools to receive cash rewards and certificates of recognition. The cash reward is viewed as an incentive, which aims to assist the three winning schools in sustaining the SWM project implementation on-campus. School representatives thus, find the SWM project as venue for healthy competition among various schools in the City of Santa Rosa.

Part of the SBSWM project thrust is to develop a more systematic way of selling recyclables. Students in the elementary levels were encouraged to bring dry and clean recyclables (pet bottles and tin can), which could be sold to the junkshop, these same collected recyclables are then sold to the junkshop. Eliciting positive reaction from respondents through expressing appreciation in having raised additional funds from selling these recyclables notably, with recyclable items gathered and sold resulted in additional school funds that were used for special projects on campus. It has also been observed that not only has said partnership

contributed to the enhancement of creativity especially among students in making craft. It has also resulted to discovering more innovative fund-raising activities that could undertake after the SWM project life.

### **Performance of Accountability Roles in School-Based SWM Partnership**

In determining the performance of accountability roles of the TAP and partner schools, same accountability indicators based on the concept of Naidoo -- upward and downward accountability were applied in this study.

#### **Upward Accountability**

Drawing from KI interview results point out that the SBSWM Project was implemented by the TAP with funding support from the Toyota Foundation in Singapore. To ensure accountability in the project, a Memorandum of Agreement (MOA) between the TAP and its Toyota Foundation Singapore was executed. Among the provisions in the MOA is the regular submission of progress reports of TAP to the donor agency. Clarifying TAP's accountability from its regular report submission to the donor on the progress of the project. On the other hand, there is no MOA or even a Memorandum of Understanding extant between TAP and the Partner Schools. Again drawing from the same KI interview, all 109 school partners were aware of their responsibility to complete a solid waste management project in their respective schools within the prescribed period. Since there was no formal agreement about the project, the participating schools submitted their reports only when being requested by the TAP. Some of the Partner Schools felt that even without a MOA, the school as guardian of values and integrity have innate responsibility of informing their donors of the project progress. Project Coordinators were designated in every participating school to ensure program implementation will be sustained and inherent to produce progress reports to donors as part of their function. The common activities undertaken by the partner schools were 1) Submission of accomplishment and/or progress reports to the School Administrator, Department of Education-City of Santa Rosa and the TAP; 2) Conduct of regular meetings with the school teachers and staff; 3) Submission of action plan to the school administrator and TAP; and 4) Conduct

of visitation, inspection and monitoring of project implementation.

With regards to project monitoring, the TAP was monitored by the donor. On the part of the TAP, it has organized a Project Monitoring Team, which is composed of volunteer experts on SWM from the TAP, LGU, DENR, NSWMC, and S3R2 on a voluntary basis. Resultant of the successful partnerships created through meetings conducted by the team with school participants, it two (2) main benefits for the same: feedback on the progress of the project; and 2) devising an assessment tool, used for their monthly monitoring and evaluation of the progress of SWM implementation in all the schools participants. Largely, the National Government Agency such as the Department of Environment and Natural Resources – National Solid Waste Management Commission and the Environmental Management Bureau have provided for the technical assistance in the preparation of the training design and in the formulation of the monitoring and evaluation assessment. The monitoring covers only the actual progress of the implementation of the SWM in the school such as solid waste segregation bins, composting facility and others but does not look into the record on how the funds were utilized. Auditing was not part of the requirement for the project, instead the usual accounting and auditing requirements of the Bureau of Internal Revenue and Security and Exchange Commission had been consistently done.

#### **Downward Accountability**

Aside from upward accountability, the partnership between TAP and the partner schools also involved downward accountability. This includes whether the delivery of services are provided as expected by the TAP to the school partners and to the community in general. The other aspect of downward accountability is whether TAP had conducted a systematic assessment of needs of the partners (project beneficiaries). During the KI with the TAP, it was found out that there was no separate assessment conducted to find out the needs of the school partners rather it was assumed that the school partners would need the SWM program interventions considering that SWM is a vital concern of the schools. The assumption being that the partnership has provided basic requirements in pursuit of mobilization of funds, conduct of capacity building and incorporate SWM in the

school curriculum which are all in compliance of Republic Act 9003.

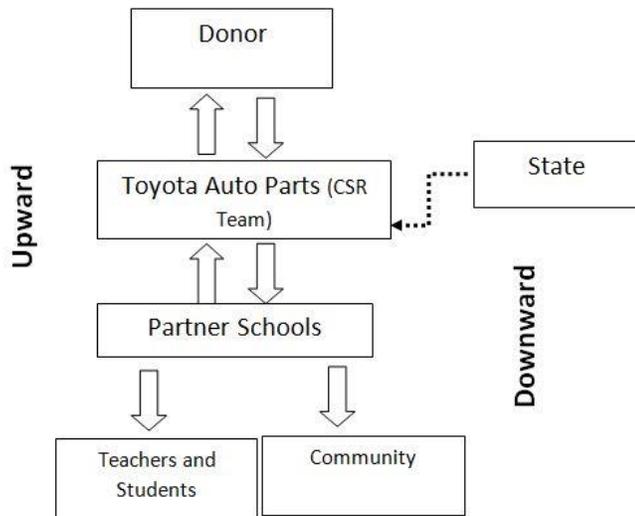


Figure 2. Accountability of the Non-State Actors in Academe-Industry Partnerships

#### Facilitating Factors in the Accountability Role in the Academe-Industry Partnerships

Being compliant to the provisions of Republic Act 9003 which requires the incorporation of ecological solid waste management in the school system at all levels, and having funds available for SWM implementation; these were the two major considerations which could have facilitated the SWM engagement of the TAP and the Academe using a social-private partnership model. More often than not, schools particularly the public ones, has no funds earmarked for solid waste management facility. The mobilization funds to support the engineering component of the project and the cash incentives (i.e. top school performers and selling of recyclables) for its sustainability have definitely facilitated and motivated the schools to participate in the implementation of the SWM on-campus. The financial incentive aspect on the other hand, enabled the partner schools to commit in the project and be more accountable in the partnership; having innate moral obligation to get involved in environment related projects and to do what is right despite the absences of a formal agreement. There are some factors considered to facilitate in the performance of accountability role on SWM, such as:

- Recognition by appropriate government agencies. This enabled the NSAs to implement SWM projects and to ensure that accountability

were looked into as required by the concerned government authority. The TAP has been given a formal recognition by the Department of Environmental and Natural Resources (DENR) for their active involvement and effort in the successful implementation of the School-Based SWM in the City of Santa Rosa. Active involvement of the school community, particularly the teachers and students who were given trainer's training on SWM, had contributed to the transparency effort of the project implementation.

- Intensification of SWM information and education campaign on campus and in the community at large. as well as advocacy and inspiration from the mass media provided transparency in the project implementation with the constant updates via press releases press conferences and the like undertaken to report on the progress of the project. This has contributed in the enhancement of the level of environmental awareness not only of the stakeholders on campus but also the other stakeholders outside of the schools.

- Lessons learned and insights gained from previous experiences resulting from flooding aggravated by poor waste management . This has not only increase the level of people's environmental awareness but also has improved the waste management practices of the people in schools and in the community.

#### Hindering Factors in the Performance of Accountability Role in Academe-Industry Partnerships

Formal agreements and similar documents presented show an enhanced performance of accountability roles in created partnerships. This is because, in such document, basic information required of the partnership such as project objectives, expectations from both parties, roles and responsibilities, functional structure, project output, outcome expected and project implementing guidelines have all been enumerated and defined to ensure accountability. This facilitated the processes of accountability not only in other private partnerships but proven to be true also in a partnership between the industry and the partner schools hence, an enhanced performance of accountability role.

Earlier, a Memorandum of Agreement was executed between Toyota Foundation (donor) and the TAP. However, there was no MOA nor Memorandum of Understanding (MOU) between the TAP and the partner schools. The absence of a formal agreement may be considered a setback in looking into the practice of accountability but also in the actual performance of accountability role of NSAs in a partnership. The context and level of expectations have become not clear that had resulted in a differing interpretation of the provisions of the partnerships. For some schools, it was revealed during the FGD that the project had been “passed on” to the schools without prior consultation with them. But since TAP has provided mobilization funds, there is no reason not to accept the project. In other words, the project when offered with equity and funding would be hard to refuse but the downside would be that the absence of formal agreement may result in some confusion and weaken accountability performance. Other factors believed to cause a lack of accountability performance could be attributed in the perceived lack of political will from the state particularly among the local government units which were manifested in the lack of local ordinances that would improve implementation of the SBSWM.

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