

Advocacy for IWRM: Cebu Experience

Fr. Margarito Alingasa, SVD
Vice President
Cebu Uniting for Sustainable Water Foundation
Cebu City, Philippines

“The emerging water crisis arising from increase competition for use and other factors affecting water supply and demand is essentially a crisis in governance. Societies are facing a number of social, economic and political changes on how to govern water wisely but there is increasing recognition that water resources are an integral component of the ecosystem, a fragile and limited natural resource, and a social and economic good.” (UNDP)

Worldwide water is recognized as a “fugitive and scarce resource with multiple uses, which can lead to conflict of use, negative externalities and upstream and downstream conflicts. While a renewable resource, nevertheless, its sustainable use requires integrated management.” Referring to the state of water governance and management in the country, in his article *Cebu: A Basket Case of Environmental Neglect*, Atty. Antonio Oposa, Jr., an environmentalist lawyer observed that the Philippines has taken this for granted, until symptomatic manifestations in the form of scarcity and torrential floods began to occur with alarming regularity. During the last thirty years, however, the Philippine government in its participations in World Water Forums and Summits on Sustainable Development made commitments to seriously consider implementing an effective water resource governance and management. The problem in the Philippines is what scale to use in adopting Integrated Water Resources Management employing the catchment or river basin approach. Except for two large islands of Luzon, and Mindanao the rest of the country is constituted by nine (9) principal but less large islands and many other small ones of varying sizes forming part of a group of more than 7,000 islands.

Cebu and Metropolitan Catchment Areas

Here is a case of the island Province of Cebu located in the geographic center of the Philippine Archipelago. It has a land area of about 500,000 hectares, elongated in shape, 250 kilometers long and at its widest center area, about 50 kilometers across. Its topography is such that about 64% of its land has a slope of 18% - 30%, and 12% with a slope of 30% - 50%. Cebu is one of the most severely deforested and eroded islands in the Philippines now with a forest cover of barely 0,8% on its total area. The three major catchments of Mananga, Kotkot and Lusaran river systems that should serve Metro

Cebu consisting of Cebu City and 3 other component cities and six large municipalities at the eastern seaboard area including Mactan Island are in serious degraded condition. This situation has been brought about by many years of tolerance to open these supposedly to be protected watershed areas to inappropriate and unregulated land use. The declaration of these areas as protected came very late only in 1992. These three catchment systems with a total area of about 29,000 hectares have an annual average rainfall of 1.7 meters over the area can have a potential storage capacity according to hydrologists sufficient to meet the needs of Metro Cebu well into this century. However, they urgently need to be managed properly – that environmental and ecological protection, conservation and rehabilitation should now be pursued effectively.

The Dream

The *Cebu Dream* as articulated anew in a vision statement by authors of the Cebu City Master Plan Study for 2000 – 2020 reads as follows: *“By the year 2020, Cebu City, (the center of Metro Cebu), shall be also a site of a vibrant and diverse economy in South East Asia led by globally competitive industry and service sectors, sustained by a dynamic human resource, integrated resource management, and an excellence in governance, whose quality of life is comparable to world class standards.”* This dream, however, still rests on the foundation of water security being achieved. Economic prosperity, good jobs, environmental vitality and quality of life all depend on reliable, sufficient and safe water supply

Causes of Water Sources Depletion

With already a population of about 1.2 million, 720,000 in Cebu City alone, Metro Cebu's water supply is already in a state of a “quiet crisis.” Quiet is to demonstrate the paradoxical low awareness and lack of concern about the situation among the people in general. Water as a critical, but often overlooked, element in sustainable development is verified in the actuations of political leaders who consider water as less a priority than infrastructure development and power generation to attain social and economic progress. This attitude is not unique to us, I think.

The focal causes of this threatening water crisis are the degradation of the major watersheds of Central Cebu, mostly overlooked as vitally linked to Metro and Central Cebu's groundwater storage. Lacking appreciation for this essential role of watersheds and political will to implement existing regulations, improper developments are still

allowed to ravage the environment and ecosystems in these water resource areas. Then, ignoring the sensitive nature of coastal aquifers, over pumping depletes them allowing seawater intrusion to move about 4 kilometers inland in certain places happening just within the last thirty years. Further, the destruction of natural recharge areas by infrastructure constructions and other human developments altering natural contours and filling up of wetlands contribute to water resource depletion

Not having any substantial source of surface water the Metropolitan Cebu Water District (MCWD) relies on about 96% of its water supply from deep well groundwater extraction. The surface water derived from MCWD's weir system in the Mananga River is about 25,000 cm/day during rainy months and even less than 15,000 cm/day during dry months. An old small Buhisan dam built in 1911 with original capacity of 10,000 cm/day because of its being heavily silted can now at best supply only about 2,000 cm/day. Yet, MCWD's service system supplies only 40% of its potential clientele. According to MCWD's projection, by year 2005 or this year, there is a demand of 302,713 cm/day against available sources of 154,600 cm/day which is barely 49% of the actual need. The 60% of the total water demand of Metro Cebu is supplied by private deep wells usually made by commercial establishments and in residential areas together with public artesian and open dug wells in poorer communities. Ground water mining by MCWD, governmental, industrial, and other private well-owners is calculated at 86.4 million cm/year, well beyond the safe allowable extraction limit of 57.8 million cm/year. This latter situation contributes very much to seawater intrusion into the coastal aquifers.

Interventions to Meet Threat of Water Scarcity

The water situation in the whole island of Cebu, but more particularly in its primary growth area of Metro Cebu really looks dire. Alarmed by this situation a group of Metro Cebu residents composed of about 250 stakeholders representing civil society, government agencies and private sector met in January 1995 and organized the Cebu Uniting for Sustainable Water (CUSW). This organization was to initiate concerted action to address the threat of water scarcity. Thus, began the movement and advocacy to protect, conserve and rehabilitate the catchment areas which were by then already declared by presidential proclamation in 1992 as protected areas. Also a vigorous awareness campaign among political leaders and ordinary citizens as to the seriousness of the threat of a water crisis in Metro Cebu and the need to conserve water began.

Early on, it was seen that the degradation of the water resource areas, the catchments and aquifers, was brought about by fragmented sectoral decision-making about developing and managing water resources, and weak implementation of environmental policies and regulations and the lackadaisical compliance to them. From this perception, the conclusion came that we needed a locally organized mandated authority that can focus on the water problem, coordinate decision-making and monitor the implementation of environmental policies and laws which are to be carried out by various government agencies and local government units in their respective jurisdictions. Thus, a proposed congressional bill to create a Cebu Water Authority was drafted and submitted to the lower house of the Philippine Congress in 1996. Our experience of having a bill passed in congress proved to be a tedious process, that after years of following it up we had nothing to show but more effort of refilling revised drafts. Eventually, we learned through our participations in national and international conferences more about Integrated Water Resources Management (IWRM) that having such Water Authority patterned after traditional governance as proposed could not be the means to achieve sustainable management of water resources at the local level.

Major Conflict Resolutions Undertaken

A highway built connecting Cebu City and Balamban municipality at the western seaboard in the early 90's cuts right across the Central Cebu protected areas through the common divide forming the headwaters of Mananga, Kotkot and Lusaran river systems. Almost half of the 40-kilometer highway is within the political jurisdiction of Cebu City. Merely thinking of economic benefits to be derived, the Cebu City council passed an ordinance declaring 200 meters from both sides of the highway as a commercial strip. If allowed the further destructive effects of this ordinance on the viability and sustainability of the already heavily degraded catchments cannot be imagined. CUSW sued for the repeal of this ordinance and was successful.

The other matter was the move to consolidate the five (5) declared protected areas in Central Cebu whose boundaries overlapped in many sections into one protected landscape. As provided by law, each of these protected areas has to have their respective Protected Area Management Board (PAMB). This fragmented jurisdictional responsibility over an area of just about 29,000 hectares augurs conflicts, management inefficiency and waste of resources. In 2001 CUSW proposed through the regional office

of the DENR to consolidate this five protected areas into one Central Cebu Protected Landscape (CCPL). This is to ensure a better chance of achieving management efficiency and cost-effectiveness. After almost three years of working on the proposed consolidation and management frameworks together with lobbying among congressional representatives, heads of government agencies and presidential office, CUSW succeeded to obtain a presidential proclamation to effect the consolidation of the 5 areas into Central Cebu Protected Landscape. However, this proclamation has still to be made into law by an act of Congress. Again, CUSW is working on this final stage of resolving this potential source of conflict.

IWRM Adaptation

A Global Water Partnership literature "*Effective Water Governance*" (2002) by Peter Rogers and Alan Hall describe water governance as referring to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services at different levels of society. Further mentioned are different types of governance. The Cebu Uniting for Sustainable Water is constituted by a full range of society representations. The question "can society coordinate and manage itself?" In the article cited the authors discussed about *distributive governance* that looks at the coordination and various forms of formal and informal types of Government/society interactions and the role of civil society and policy networks. Therefore, could a local body with a MOA among the stakeholders be created that would serve as a venue for dialogue, coordination and collaboration in dealing directly and immediately with the local water problem? This is advance in concept and application, but a model of governance that tends very well to facilitate the top-down and bottom-up water management framework enhancing participative decision-making, a key principle in IWRM. To achieve, however, an effective management in IWRM, it is necessary to create an enabling environment, which facilitates efficient private and public sector initiatives and stakeholder involvement. Such an enabling environment should be provided in the general framework of national policies, legislation, regulations and information for water resources management stakeholders. The question, therefore, is whether such an enabling environment exists in the context of Philippine water governance and management policies and laws.

Enabling Environment Policies for IWRM

In our review of Philippine policies and laws pertinent to governance and management of water resources, we find that the Philippines has sufficient and excellent policies and laws, rules and regulations when rationalized could provide the requisite enabling environment for implementing the IWRM process. Not to burden the main text of this paper, an analysis of pertinent Philippine policies, laws, rules and regulations seen to provide elements of an enabling environment for IWRM implementation is furnished as an appendix.

Local Obstacles of IWRM Implementation

The main problem that challenged the efforts of CUSW to promote IWRM in Cebu is how to break the inertia of the leadership inured to traditional fragmented management of water resources compounded by the attitude to regard the need for water as just a matter of increasing supply. As already cited this comes also as a consequence of failure to recognize water as a critical priority ingredient for development as well as for poverty alleviation. Under these circumstances, introducing the IWRM participative management and bottom-up decision making together with the river basin approach to managing water clashes with the entrenched traditional top-down style of resources management.

There also exists a prevailing meticulous regard for “legal mandate” so that anything done by and for the community should be with some basis found in a formal legal policy more particularly, if it involves government participation. However, the attempt to create a local water authority as mentioned did not materialize because of political foot-dragging. Another maneuver was attempted through obtaining a presidential executive order to organize a local Water Resources Management and Coordinating Council, now modeled after IWRM framework similarly suffered delays. Instead President Gloria Arroyo issued in July 2003 an order to the director of the National Water Resources Board (NWRB) to form a government interagency task force to coordinate with CUSW to look into the problem of water in Cebu. Previous to this event, CUSW organized, with the support of the Netherlands Embassy in Manila, a visioning exercise on the Metro Cebu by 2020 in July 2002 drawing participants from political leaders, government agencies, academe, NGOs, business and industry representatives. About a year later, CUSW held the first Cebu Water Forum in June 2003 and another in October 2004. Both were well participated by representatives from local government units from the province, cities and

municipalities as well as civil society groups and private sector. These forums were part of the information and capacity building program that CUSW designed to increase awareness on IWRM and elicit commitment especially among government leaders to prioritize water needs and involve themselves in water resources management projects.

Visioning Outcome

Meanwhile the results of the visioning exercise were formulated into a project plan called the *Central Cebu Water Resources Management and Integrated Development* (Water REMIND, for short) to be implemented from 2003 to 2008 and funded by the Netherlands Government. The project management is handled by the Water Resources Center of the University of San Carlos in Cebu City. CUSW plays a role as a contractor for certain parts of the project activities. This project is focused on Central Cebu, that is, the areas of Metro Cebu now extended north to Danao City and the municipality of Carmen and the counter-side Western seaboard of the island including Toledo City and the municipalities of Asturias, Balamban, and Pinamungahan. The objectives of this project are to examine the national and local policies whether there could be found provisions that would enable the creation of a local “upper body” involving a tripartite representation from government, civil society and private sector which would coordinate the government agencies’ and local government units’ implementation of water resources management policies; to pilot specific small intervention models that could be used and replicated as entry points in introducing the IWRM process at the lower level; and finally to update the hydrological data base of Cebu and conduct scientific studies on specific problems of water quantity and quality.

Recent Drive for IWRM Implementation

Currently, CUSW is working further on capacity building among leaders of local government units. This is to provide for better understanding of the IWRM process and training on actual application of its principles in dealing with water needs and related problems in their local situation. Guided small group discussions and planning exercise involving a “core group” of five to ten tripartite representatives from members of the municipal development council occupy the activities of the first phase of this program. Then, they will be involved in identifying and prioritizing projects that are doable first by means of available local resources as a simple entry point in the implementation of the IWRM process. These projects maybe on flood mitigation or riparian rehabilitation, solid waste management, rainwater harvesting, spring box installation and others. In the same

thrust the river basin approach to water management as complement to the IWRM process is being promoted as a unit of management. To be noted here is the fact that the river basins within the local government jurisdictions are mostly small and short waterways. Formation of inter-jurisdictional water management councils is promoted as cluster management units among local governments that share large and longer river systems which often define a common boundary between them.

For the urban area, in particular of Cebu City, CUSW was instrumental in the creation of the Cebu City Rivers Commission by the city council. Immediately, this commission undertook as its first project to establish a management council in-charge of the rehabilitation and revitalization of the Guadalupe River, the main river system that divides the city into North and South sections. Members of this council comes from stakeholders of community residents of barangays (village communities) traversed by the course of the river. They are again composed of tripartite representations from government units, civil society and private sector. The city council appropriated 5 million pesos for the preparatory phase of the project. However, considering the serious degradation of the river, especially along the inner congested urban portion, it would need considerable political will just to implement the prescribed 3-meter easement along the river banks. From years of tolerance, the river has been narrowed by bank reclamation and outright building of houses over the embankments and edge of the river bed by squatters. The project of clearing the river from this kind of obstruction could last perhaps for a generation to realize. At the headwater portion of the Guadalupe River erosion due to improper farming and deforestation is the main problem. However, with less people in this area riparian rehabilitation and reforestation through tree planting and natural growth can be achieved far more conveniently but again not shortly. Ordinarily, the Guadalupe River has hardly any surface water flow except in places where sewage flows are fed into the river. However, even only during short but substantial tropical rainfall over the headwater tributaries, its flood flow can be violent.

CUSW works also with the Cebu City council on the revision of the city's ordinance on rainwater harvesting. The ordinance requires all buildings in the city to have rainwater collection system or cistern with a volume proportionate to the size of the roof area calculated together with the average rainfall. A minimum specification is prescribed for private residence houses. This project is related to the problem of flooding in many areas of the city during heavy downpours even for short duration. Requiring cisterns

could help mitigate and minimize the immediate flow of rainwater to the drainage systems which, however, due to poor maintenance are often clogged. Unfortunately, the city has really no sewerage system to speak of and its over-all drainage system has become inadequate to accommodate the increasing surface run-off from sealed ground areas occupied by more and more buildings and extensive paved roads and parking places. Also for lack of appreciation of the role of wetland portions, many of these places have been covered and built upon thus further aggravating the flooding incidents. This rainwater harvesting though a large project by itself, it could initially be integrated with the river revitalization program of the Cebu City River Commission which coordinates the actions of the City's Office of the Building Official, the City Engineer's Office and the Public Services Division. This, at least, is what we think should happen, but political decisions can alter this scenario.

“Feet-on-ground” IWRM Implementation

For its part, CUSW has just started a small but rather ambitious on-ground project of its own. The same river basin or “whole-of-catchment” project will be undertaken in another river system south and parallel to the Guadalupe River, but with a shorter waterway and smaller catchment.. Of course, we can implement this only with local government cooperation. The objective is to revitalize the Buhisan River and the small Buhisan Dam cited previously as one of the surface water source for Cebu City. To build a community base is the first order of activities that is organizing partnership among the seven (7) barangay (village community) officials and stakeholders living within the Buhisan catchment area. Further, they are to be capacitated to understand what IWRM approach means and how they can adopt and apply this approach to the project of revitalizing the whole Buhisan catchment, the dam and waterways. CUSW has just accomplished in May this year the preliminary focus group development (FGD) consultations. The longer and more tedious task of information, communication and education drive among the stakeholders and general public is still before us. We have to design short-term projects and a long-term program. This latter could extend beyond a generation to bring about a change in the scenery of the whole Buhisan catchment. Right now we are looking outside of locally available resources for other possible support to sustain our efforts in this daunting task to revitalize what appears now to be a dead river system.

Resume of the CUSW's Experience

The Cebu Uniting for Sustainable Water was organized out of necessity to immediately address the serious threat of water scarcity in Metro Cebu. The fragmented traditional sectoral management of water resources was considered a fundamental cause for the inefficiency of water resources management. CUSW had to engage in conflict resolutions relative to issues affecting the viability and sustainability of the Central Cebu major catchments. The creation of a body like a local Water Authority to coordinate the actions of government agencies together with stakeholders was first perceived to be possible through a congressional act. However, failing to attain this urgently needed measure, an attempt was made to fast-track this objective by securing a presidential executive order to create a Cebu Water Resources Management and Coordinating Council modeled after an adopted IWRM framework. Meanwhile, due to increased learning and better knowledge about IWRM implementation from best practices from all over the world through participation in international and regional conferences and workshops sponsored by Global Water Partnership as well as its publications on IWRM, particularly the Tool-Box, CUSW modified its strategy and approaches to promote IWRM beyond the usual advocacy activities. Encouraging local government units and stakeholders, CUSW initiated proposals for on-ground projects and practical demonstrable exercises in adopting IWRM models to manage water resources. CUSW, as of the present, has just started this latest phase of promoting IWRM in a local situation.

References:

1. Philippine Council of Sustainable Development, *Philippine Agenda 21*, Manila, 1997
2. WMIC-WRDP, Study Team, *The Philippine Strategy for Improved Watershed Resources Management*, Quezon City, 1998
3. Republic Act No. 9275, *Philippine Clean Water Act of 2004*, March 22, 2004
4. Republic Act No. 7586, *National Integrated Protected Area System (NIPAS) Act*, June 1, 1992
5. Republic Act. No. 7160, *Local Government Code of 1991*, July 21, 1991
6. Presidential Decree No. 1067, *The Water Code of the Philippines*, December 31, 1976
7. Presidential Decree No. 198, (As amended by Presidential Decree Nos. 768 and 1479), *Provincial Water Utilities Act of 1973*, May 25, 1973
8. Antonio A. Oposa, Jr., *Opportunities and Options: Water Management and the Role of LGUs*, Manila, 1998
9. Global Water Partnership, *Integrated Water Resources Management*, Stockholm, 2000
10. Peter Rogers & Alan Hall, *Effective Water Governance*, GWP, TEC Background Paper No. 7, Stockholm, 2002

11. Torkil Jonch-Clausen, *Integrated Water Resources Management and Water Efficiency Plans by 2005: Why? What? And How?*, GWP TEC Background Paper No. 10, Stockholm, 2004
12. Robert Lenton, *Guidance in Preparing a National Integrated Water Resources Management and Efficiency Plan: Advancing the WSSD Plan of Implementation*, Version 1, GWP Tec, Stockholm, 2004
13. Mushtaq H Khan, *State Failure in Developing Countries and Strategies of Institutional Reforms*, Draft Paper for ABCDE Conference, Oslo, June 2002, Department of Economics, SOAS, University of London
14. Asian Development Bank (2004) *Regional Meeting of National Water Apex Bodies: Leadership in Governance*, Hanoi, Vietnam
15. GWP TEC (2004) *Catalyzing Change: A handbook for developing water resources management (IWRM) and water efficiency strategies*, Stockholm Sweden
16. Rosalio B. Goze, *Major Policies in Watershed Management and Conservation in the Philippines*, Forestry Development Center, Technical Report Series No.2, UPLB, College Laguna, Philippines
17. Bobet Corral, *Review of Comparative Approaches to Water Supply Development*, presented at the LUWA Forum, Unpublished, March 2004
18. Dr. Ed Wronski (Visiting Research Fellow, 2002) *The Water Resources of Metropolitan Cebu – State, Issues and Policy Options*, WRC, University of San Carlos, Cebu, Philippines