

THE MNWD INTEGRATED WATERSHED MANAGEMENT PROGRAM: “A MODEL FOR CONSERVATION, A SUCCESS STORY”

The advent of the 90's brought new challenges to the Metropolitan Naga Water District. Successive periods of long dry spells or the “El Nino” has tremendously decreased the water production capacity of the MNWD. Added to the burden is the devastation brought about by deforestation at the watershed area in Mt. Isarog Natural Park.

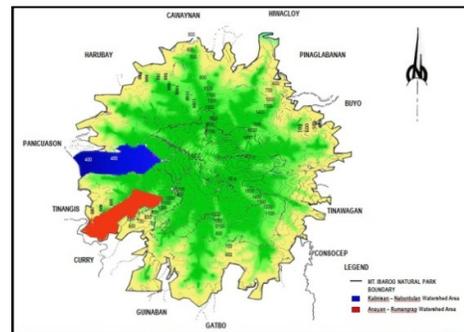
In the early part of 1993, a Rapid Rural Assessment was conducted covering the catchment areas of the two springs inside Mt. Isarog, Anayan and Rumangrap. Results revealed that 60% of the watershed area has been opened to agricultural cultivation. There were 81 park occupants, 47 of which were actually residing inside the natural park.



This scenario prompted the MNWD to enter into a Memorandum of Agreement with the Department of Environment and Natural Resources for the rehabilitation, management and protection of the 317 hectares Anayan – Rumangrap Watershed Area in August 18, 1993.



This likewise prompted the MNWD

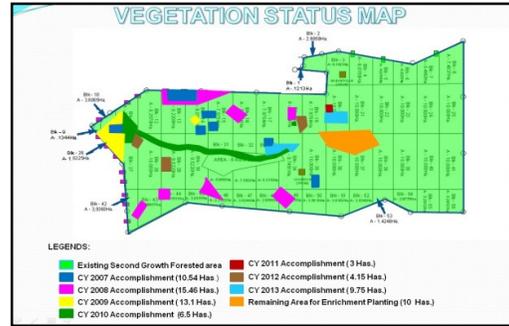
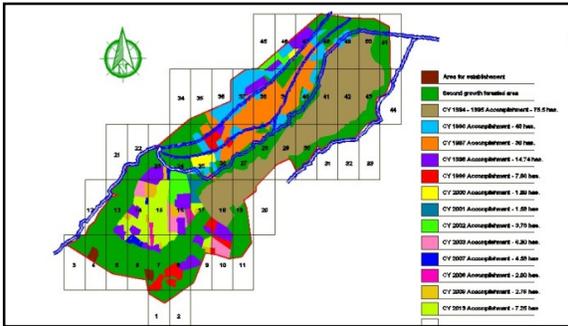


to suspend the expansion of new service connections due to water shortage and the erratic changes in water supply behavior of their two main spring sources.

Since then, numerous citations were given to the MNWD for its watershed development activities and as an environmentally-responsive partner in mitigating the threats of climate change and global warming.

Mt. Isarog Natural Park is the main source of water for the City of Naga and adjoining municipalities surrounding it within the province of Camarines Sur. It is likewise the home of the spring sources of the MNWD and the recharge area of the production wells or pumping stations situated in the upper slopes of the Naga River Watershed.

The Integrated Watershed Management Program of the MNWD covers the 317 hectares of the Anayan – Rumangrap Watershed, the 356 hectares of Kalinisan – Nabuntulan Watershed and the Naga River Watershed Areas with the end in view of water production at the right time with the right quantity and quality.



One of the basic strategies that MNWD adopted in the implementation of its watershed management program is localized on-site project management, with the affected families being adopted as co-protectors, or farmer-cooperators to the advocacies and objectives of the project initiatives. They must feel that they are not the problem but they are part of the solution. Despite the resistance and all other odds, the Project Management slowly convinced the Farmer – Cooperators to accept the relocation program being offered by MNWD with the assistance coming from the Rotary Club of Naga and Plan International Bicol and the intervention of the Local Government Unit.

To date, 34 households are currently in occupancy of the Rotary Village Corps (RVC)



Relocation Site in Brgy. Del Rosario, Pili, Camarines Sur. Various amenities have already been provided by the MNWD such as the Day Care Center, Stage and Playground together with the water supply system, while the multi-purpose pavement-solar dryer was provided by the

Department of Agriculture. The Municipal and Barangay LGU likewise provided the concrete road inside the Relocation Site and the concrete benches at the basketball court, respectively.



The LGU, together with the Department of Education is jointly supporting the elementary

education program from Kinder and Grades 1 to 6, with the construction of the school building funded together by RCN and MNWD.

A major component of the National Integrated Protected Areas System Act (NIPAS Law), is the General Management Plan for Mt. Isarog Natural Park. The MNWD make sure that through its IWMP, the NIPAS Law is not violated and that it also fully supports and works for the success of the General Management Plan. The IWMP is anchored on the maintenance and/or enhancement of essential ecological processes, biological diversity and natural resource base.

The watershed areas of MNWD inside Mt. Isarog are classified as restoration zone while on-going rehabilitation and will eventually be declared as strict protection zones. What started as a local community volunteer group during the late 1990's, MIGS or the Mount Isarog Guardians became



stewards of Mt. Isarog Natural Park. They are now directly hired by the MNWD as its Forest Workers, tasked with the protection and maintenance of the watershed areas. They conduct regular foot patrol works aside from their nursery and plantation maintenance activities such as weeding, watering, brushing, climber cutting and replanting. This patrolling of the MIGs serves as protection and monitoring of activities inside the MNWD watershed areas including community mobilization with regards to forest fire prevention.



Partnerships, likewise, plays an important role in the development of a watershed's natural resources in a manner that is economically efficient and institutionally sustainable. Various government and non-government agencies extended and are continuously extending their financial and technical support to the relocated families and the watershed rehabilitation efforts. It all started with the DENR – MNWD 25 – year stewardship agreement renewable for another 25 years, and subsequent memorandum of agreements followed. The tripartite Memorandum of Agreement by and among MNWD, Rotary Club of Naga and Plan International Bicol carries with it substantial financial and technical assistance for the project.



The Project Management Office (PMO) took the responsibility of overseeing watershed development activities being undertaken by the Central Bicol State University of Agriculture (CBSUA) formerly Camarines Sur State Agricultural College Development Foundation Inc. (CSSACDFI) funded by Plan International Bicol within the 200 hectares designated area, while

undertaking reforestation works within the 117 hectares utilizing funds from the Project Evergreen of the Local Water Utilities Administration (LWUA). Two years thereafter, the

PMO took over the implementation of the activities being undertaken by CSSACDFI together with the funding support from Plan



International Bicol. A multi-party Memorandum of Agreement was likewise forged in support to the possible economic dislocation of the relocated families, which specifically provided for alternative livelihood opportunities by improving their productive and institutional capabilities. In 2003, the Kalinisan Spring was turned-over to the MNWD by the Local Government Unit of Naga. This prompted the MNWD to enter into another 25-year Memorandum of Agreement, renewable for another 25 years, with the Department of Environment and Natural Resources for the rehabilitation, management and protection of the 356 hectares Kalinisan – Nabuntulan Watershed Area. Recently, Procter and Gamble Distributing Philippines entered into a memorandum of agreement with MNWD for the adoption of two hectares of the Kalinisan – Nabuntulan Watershed area in Panicuason, Naga City and financed the printing of 34,000 pieces of a back to back Public Service Message Flyer on watershed and water saving tips.

Various low-cost infrastructures and facilities were constructed for specific purposes. Protected Area Information Boards were constructed along the boundaries of the watershed areas adjacent to private landholdings to prevent encroachment and illegal activities. Lookout towers were installed for monitoring and protection purposes. At designated entry and exit points, Mt. Isarog Guardians (MIGs) outposts were likewise constructed to regulate the entry and exit of people into the watershed areas.





Gully dams constructed out of sprouting brush woods, bamboo and boulders were also installed to arrest rapid siltation / sedimentation and erosion across gullies within the watershed areas. These simple and low cost structures were proven to be effective and beneficial to further enhance the water-holding capacity and environmental integrity of the watershed areas.

Coordination with the various stakeholders likewise played a major role in the successful implementation of the MNWD's integrated watershed management program. Poster-making contests were conducted among high school students within the MNWD service coverage to enhance their knowledge and perceptions of their environment, specially the watershed areas, and how this will affect them as future stewards of their generations and for future generations to come. Community outreach programs and tree planting activities were likewise conducted by faculty and students from various colleges and universities as an offshoot of their commitment in their action plans during the "Save Our Watershed Seminar Workshops". Government entities likewise joined in the tree planting and parenting activities. Orientation on the project activities and accomplishments remain an on-going concern during educational visits by various groups to the Project Management Office.



Another major concern for the integrated watershed management program of the MNWD is the Naga River Watershed Area. It stretches from the slopes of Mt. Isarog Natural Park going downstream into the Naga River as it merges into the Bicol River. This area requires a comprehensive water resources management as this serves as the groundwater reservoir of the twenty-four pumping stations of MNWD.



The project aims to maintain the ecological balance within the watershed area with the active participation of all sectors of society through a continuing process of research, conservation and development of land and water resources with the end view of maintaining a sufficient water resource base to ensure a sustainable water supply. Activities for research and baseline assessment include water quality monitoring, conservation awareness thru information education campaign, seminar workshops and passage of a



local ordinance for a wastewater management program. Development activities were likewise implemented and continuously being implemented to restore and maintain the environmental integrity and functions of the Naga River Watershed Area in full understanding and cooperation of major stakeholders.

Since 2003, the United States Agency for International Development (USAID)



identified Naga City as one of the recipients of its Integrated Water Resources Alliance (IWRA) Project. Series of stakeholders' workshops were conducted to determine the priority areas of concern wherein the City of Naga can focus in so far as water resources are concerned. A year thereafter, the USAID – Local Initiatives for Affordable Wastewater (LINAW) Project was

implemented. Together with the cities of Muntinlupa, Dumaguete and Iloilo, Naga City became a recipient of a two – year technical assistance designed to assist Local



Government Units to meet the challenges of showing the responsibility in the management and improvement of water quality within their

territorial jurisdiction. The MNWD, together with LGU Naga, actively participated in the identification of pollution sources and priorities, development of action plans with stakeholders, site visits, study tours, public awareness campaign, national conferences and sharing of experiences. Technical assistance was likewise extended by the USAID through

the Philippine Sanitation Alliance (PSA) Project which terminated September 2011 whereby the MNWD formally assumed the responsibility of septage/wastewater management.

To date, the MNWD already developed and constructed some infrastructures such as; box culvert bridge, concrete road pavement, perimeter fence, guard house, motor pool and office building at the site of the Septage Treatment Facility and the approval of the Sangguniang Panglungsod of Naga City on the Ordinance No. 2014-076 entitled



“An Ordinance Establishing A Wastewater Management System in the City of Naga and Providing Penalties for Violations Thereof” last December 2, 2014 together with the Municipal Ordinance of the Sangguniang Bayan of Magarao, Camarines Sur passed last August 12, 2013. An agro-forest nursery was established in Panicuason, Naga City for the production of various species of forest and fruit-bearing seedlings for dispersal to interested farmers, landowners, school heads, church leaders and Barangay Councils who are willing to plant trees in their landholdings, backyards, campuses, open spaces and roadsides.

Today, and hereafter, the MNWD envisions a watershed that will once again become an ecologically managed area that will maintain and strengthen the stakeholders’ identity and be compatible with the maintenance and enhancement of essential ecological processes, biological diversity and natural resource base.



As a resultant effect, the MNWD received awards from the Civil Service Commission (CSC) for its Integrated Watershed Management Program which was granted the 2012 Bayaning Kawani Regional Honor Award (Group Category) and from the Philippine Association of Water Districts, Inc. (PAWD) as First Place – Best Integrated Watershed Management



Plan during its 33rd PAWD National Convention last February 2012 at Radisson Blu Hotel, Cebu City.

On the overall context, the Integrated Watershed Management Program of the MNWD is in consonance with the Naga River Revitalization Project of the Local Government Unit, the National Greening Program of the Department of Environment and Natural Resources and the Philippine Clean Water Act of 2004.



The Integrated Watershed Management Team

(Front from left to right)

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Ms. Virginia I. Nero (AGM), Engr. Virgilio B. Luansing I (SE),
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Harry C. Lañada, Jose Jesus B. Rey, Jr., Tony R. Miña, Ritchie S. Pinangang,
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and Jose L. Robredo (not in picture)