

Adopt-**a-Forest** Project

of **Butuan City Water District**
in **Taguibo River Forest Reserve**



*Our Watershed...
Our Responsibility*



BUTUAN CITY WATER DISTRICT

VISION

A leader in the water and sanitation industry advancing integrated water resource management.

MISSION

Butuan City Water District, a service-oriented entity, endeavors to preserve the environment, deliver quality service and satisfy its customers.

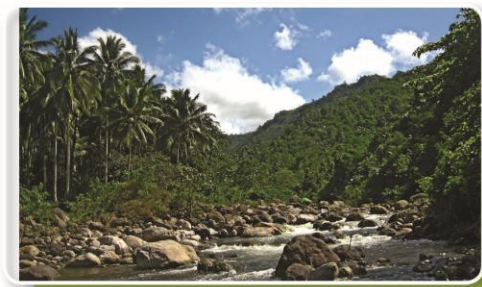
Adopt-**A-Forest** Project of **Butuan City Water District** in **Taguibo River Watershed Forest Reserve**

BACKGROUND AND RATIONALE

The Taguibo River was proclaimed as a Watershed Forest Reserve by President Fidel V. Ramos under Proclamation No. 1076 on September 4, 1997. The area covers 4,367.44 hectares which include Barangay Anticala in Butuan City, Barangay San Antonio in Remedios Trinidad Romualdez (RTR) and Barangay Mahaba in Cabadbaran and a portion of Sibagat, Agusan del Sur. The rationale of its proclamation is to establish the Taguibo River Watershed Forest Reserve for the purpose of protection, maintenance and improvement of its water yield and providing restraining mechanism for inappropriate forest exploitation and land use practices.

The Taguibo River Watershed Forest Reserve (TRWFR) plays a vital role in the socio-economic development of Butuan City as this is the main source of potable water supplied by Butuan City Water District (BCWD). The Watershed also supplies water to the irrigation dams of National Irrigation Administration (NIA) servicing to a vast area of rice fields. It is also a source of livelihood for the residents in the watershed.

With the continuous exploitation of the watershed resources, a threat to imbalanced ecosystem is clearly manifested. TRWFR is a part of the Mt. Hilong-Hilong Range of the Northeastern Mindanao which is rich in biodiversity. The forest cover of this watershed is now dwindling and is considered in critical state due to overexploitation and lack of management. Continued human activities such as logging, mining, and slash-and-burn farming within the watershed will expand the deforested areas.



The greater the area affected by deforestation, the greater the problem will be on soil erosion, declining soil productivity and deterioration of water quality and quantity. (Leaf Foundation, Sustainable Watershed Development and Management Plan of Taguibo Watershed)

In spite of the proclamation of the Taguibo Watershed as a Forest Reserve, unscrupulous individuals have been devastating the watershed. The illegal activities – manganese mining, timber poaching and construction of road in the watershed greatly affected the water quality of Taguibo River. The composite team, formed by the Department of Environment and Natural Resources (DENR), in its report dated September 11, 2009, confirmed the occurrence of illegal activities in TRWFR particularly, in Barangay San Antonio, Municipality of Remedios T. Romualdez (RTR), Agusan del Norte.

Frequent occurrence of turbid water and drop in surface water volume of the Taguibo River are the results of these illegal activities and other anthropogenic or human induced activities happening within the watershed. These indicate that the water holding capacity of the Taguibo Watershed is now waning due to deforestation.

In order to restore the Taguibo Watershed's healthy state and improve its quality and quantity of water yield, there is a need to implement a massive reforestation program. However, massive reforestation program requires considerable budget to include its maintenance activity. Thus, BCWD should implement small scale reforestation project in the area, dubbed as Adopt-A-Forest Project, and invite individuals, institutions and organizations to do the same.

The proposal will enable BCWD to help the communities in the watershed area to have a source of income. Farmers will no longer resort to slash-and-burn farming as they will be earning during the implementation of the project. Future earnings from the harvest of fruit trees and bamboos will go to the farmers through the Anticala Watershed Farmers Producers Cooperative



(AWFPC). As such, people in the watershed will help protect the watershed from illegal logging and mining activities.

Moreover, the project will benefit the people and businesses in the city by having uninterrupted supply of potable water. It will spur economic activity as more people and businesses will be coming in. Water is the most basic human need, hence, where there is water, there are more people living in that area. As such, investors are enticed to pour investments in that area. So, if Butuan City has abundant supply of water, we can expect a lot of investors will do business in the city.

Adopt-A-Forest Project will strongly support BCWD's advocacy for the rehabilitation and conservation of TRWFR. Being the primary stakeholder of TRWFR, it is but apt and fitting for BCWD to take the lead in bringing back the watershed's healthy state by enjoining everyone to its cause. However, the proponent believes that before anyone can be convinced to join in the rehabilitation and conservation effort of BCWD, it must do first a model project that can be followed, thus this proposal.

DESCRIPTION OF THE PROJECT

Adopt-A-Forest Project is a 3-year tree planting and “parenting” project to be undertaken by BCWD which will serve as a model project for those individuals, institutions and organizations that would like to conduct tree planting activity and/or just donate or provide funds for one hectare or more hectares to be reforested in TRWFR. The project design will ensure that the seedlings provided will be planted, well-maintained and monitored regularly. In this manner, we can assure high survival rate of the planted seedlings, which eventually, will enhance the forest cover of TRWFR.

The project will be implemented in Anticala part of TRWFR. Species to be planted are narra, tugas and other endemic species, fruit trees and bamboos. The number of seedlings per area will depend on actual slope and contour of the project site. However, estimated total number of seedlings to be planted is 14,720. One hectare will have, more or less, 611 narra, mahogany, tugas and other endemic species to be planted in 3 m x 3 m spacing, while 125 fruit trees and bamboos will be planted in 6 m x 6 m spacing. The spacing is enough to allow the seedlings to survive and grow freely. To ensure survival of the planted seedlings, organic fertilizers will be used to nourish the seedlings, and barb wires will be installed where appropriate to protect the seedlings from animals. The fruit-bearing trees and bamboos will serve as sources of livelihood for the beneficiaries or claimants of the project site.



COMPONENTS OF THE PROJECT

Figure 1. Flow Chart of Adopt-A-Forest Project

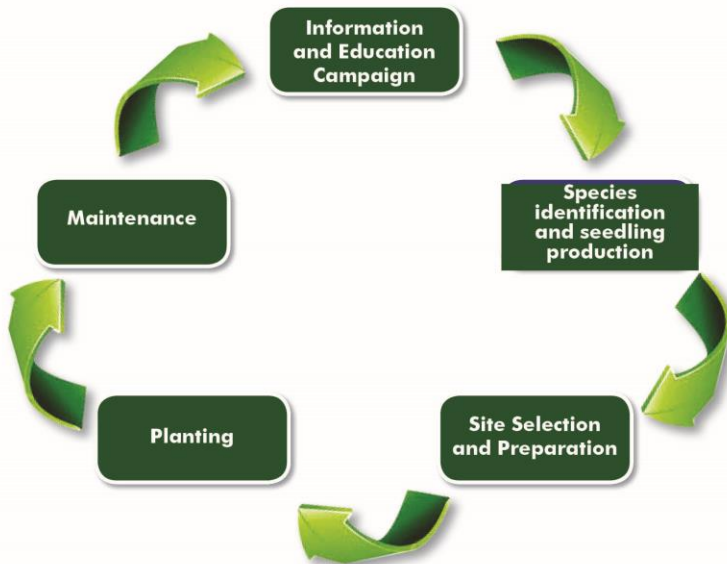


Figure 1 shows the flow and components of Adopt-A-Forest Project.

Information and Education Campaign

This activity is important before the start of the project undertaking to inform and educate the people to be affected by the project on its benefits for them, other stakeholders and the environment. It is also necessary to attract future partners to Adopt-A-Forest.



Species Identification and Seedling Production

This is determining the kind of seedlings to be planted. After which, canvassing and purchasing of seedlings are done.



Site Selection and Preparation

This activity includes location hunting, staking, brushing and ring weeding, and digging.



Planting

This is the actual planting of seedlings at the site which also includes application of organic fertilizers.



Maintenance

This ensures that the planted seedlings will survive, and replace any mortality. This includes re-staking of the site, brushing and ring weeding, hauling of seedlings, and replanting.

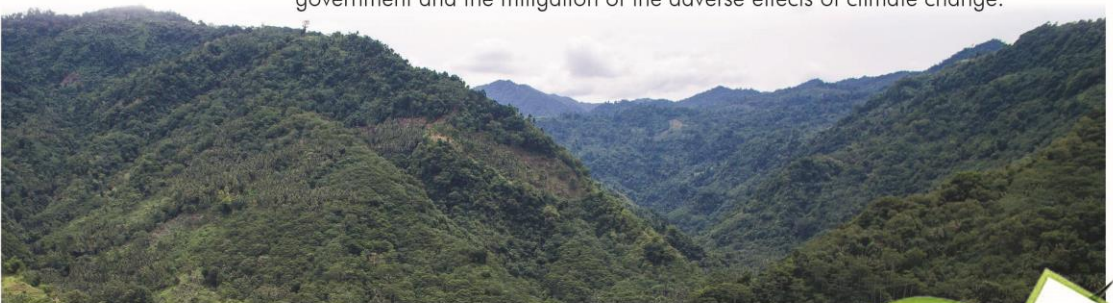


Goal and Objectives

Generally, the proposal aims to reforest Taguibo River Watershed Forest Reserve.

Specifically, the project shall have the following objectives:

1. Conserve and protect the depleting watershed eco-system by enforcing the community-based development approach;
2. Build the capacities/capabilities of the watershed settlers and the community to actively participate in the environmental and social development, promotion of participatory approach in the implementation, monitoring and evaluation of the project toward sustainable development;
3. Provide alternative livelihood support for the socio-economic development of the community by integrating fruit trees in the tree plantation sites, thus, helping watershed settlers alleviate poverty in a sustainable manner;
4. Spur economic activity in the city as a result of the 24/7 supply of potable water; and
5. Support the efforts of the National Greening Program of the national government and the mitigation of the adverse effects of climate change.



METHODOLOGY

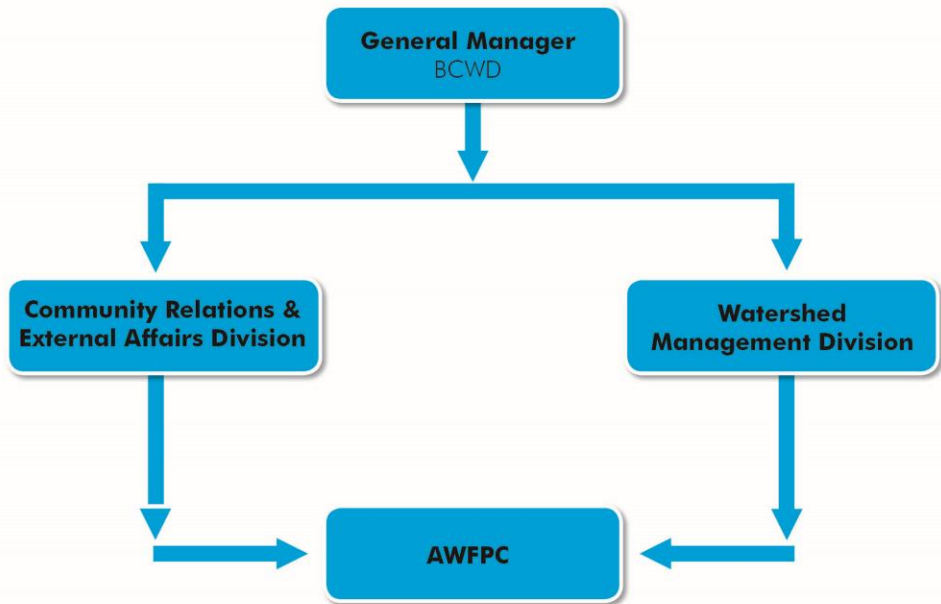
A methodology which fits for the project to be undertaken shall be adopted. This will include creation of the project management team, site selection and preparation, species identification, planting procedures, maintenance, disbursement of funds, and income generation.

Creation of the Project Management Team A team will be created to oversee and implement the project. It will be spearheaded by the BCWD General Manager, and will be composed of BCWD's Community Relations and External Affairs Division, Watershed Management Division and Anticala Watershed Farmers Producers Cooperative.



Figure 2

ORGANIZATIONAL STRUCTURE OF THE PROJECT MANAGEMENT TEAM



Information and Education Campaign

The Community Relations and External Affairs Division of BCWD shall conduct IEC in the communities to be involved in the project. For the communities and/or beneficiaries, seminars and consultative meetings will be conducted; flyers and leaflets will be in placed in the area. For prospective donors, a series of fora will be held where flyers and leaflets will be distributed; and billboards will be installed around the city. The IEC will focus on the benefits to be derived from the implementation of the project.



Species Identification and Seedling Production

Species that will be used in the project will depend on the selected site and the desired species of the farmers or beneficiaries. However, narra, tugas, bamboo and other endemic species in the area will be given much preference. In addition, bamboos and fruit tree seedlings such as durian, lanzones and rambutan will also be included. Purchased seedlings will be placed at the BCWD nursery in Mahayahay and Tagkiling, Anticala before the actual planting activity.



Site Selection and Preparation

The team will identify and select the site for the project. The team will also assist in the site preparation and coordination of all activities of the project to the beneficiaries. Before the site preparation, bamboo sticks for staking, barbwire and organic fertilizers will be purchased. Laborers for the site preparation must be members of AWFPC and/or residents within the TRWFR to provide them income.



Planting Procedures

Species that will be used in the project will depend on the selected site and the desired species of the farmers or beneficiaries. However, narra, tugas, bamboo and other endemic species in the area will be given much preference. In addition, bamboos and fruit tree seedlings such as durian, lanzones and rambutan will also be included. Purchased seedlings will be placed at the BCWD nursery in Mahayahay and Tagkiling, Anticala before the actual planting activity.



Maintenance

During the first year, it will be undertaken every month. In the second year, it will be conducted once every two months. For the third year, it will be done quarterly. It will also include re-planting of any possible mortality of planted seedlings. It will be the team's responsibility to monitor, supervise and ensure proper implementation of the maintenance activities of the project. In case of donated funds for the implementation of the project, the team will provide status reports and updates to the donors. Donors may also visit the site anytime and verify the project's status.



Disbursement of Funds

The team will make cash advances from BCWD's Finance Department for the implementation of the project subject for liquidation. In case of donations, donors shall course through their donations to BCWD. The team will make cash advances from BCWD's Finance Department subject for liquidation. Donors will also be provided with a copy of the liquidation of expenses.

Income Generation

One of the purposes of this project is generating income for the beneficiaries or claimants of the site. Thus, bamboos and fruit tree seedlings are among the species to be planted in the selected planting site. Income to be generated from the harvest of bamboos and fruits will be divided among the beneficiaries, claimants and AWFPCC. AWFPCC will be the one to determine the percentage share of each recipient.



SCOPE AND COVERAGE

The proposed project shall be limited within the Anticala part of the TRWFR. It shall cover areas whose claimants are members of AWFC. It shall have a minimum of one (1) hectare to be reforested. BCWD shall undertake the initial 20 hectares to be planted and maintained over a period of three years.

The proposal is relevant to the proponent as he is the head of the Community Relations and External Affairs Division of Butuan City Water District. Hence, it is part of his duties and responsibilities to handle programs, projects and activities which deal with the community and external environment of BCWD, including efforts for the conservation and protection of the watershed and environment.



TARGET BENEFICIARIES

The **Adopt-A-Forest Project** shall benefit the following:

BCWD

Adopt-A-Forest Project will be a relevant endeavor for BCWD because it would result to a healthy watershed that can sustainably yield water for the BCWD's concessionaires. Also, it would be easier for the water agency to attract donors for the reforestation of the TRWFR as it already has a model to offer to prospective donors.

AWFPC and its Members

The proposed project will enable AWFPC to provide its members sustainable income and at the same time, exercise their duties and responsibilities to develop and protect their ancestral domain as stipulated in the IPRA Law. AWFPC, whose members are indigenous people (IPs) and non-IPs who are given by the IPRA Law the right to claim vast areas of land in the watershed considered as ancestral domain. Provided, however, that they must develop, preserve and protect the natural resources, environment and culture in the ancestral domain.

Residents and Businesses in Butuan City

As the proposed project is expected to improve the quality and quantity of the water yield of the watershed, residents and businesses in Butuan City will enjoy 24/7 supply of potable water. The residents will no longer be bothered by water supply interruptions during torrential rains, thus, they will be able to do their socio-economic activities normally and be able to maintain good health as they will be assured of potable and safe water supply in their faucets. The businesses, on one hand, especially those which require heavy usage of water such as restaurants, factories, slaughter houses, supermarkets, malls and the like, will be able to continuously provide their products and services to their customers.

Individuals and Groups Interested in Conserving and Protecting the Environment

The proposed project will be useful for those individuals and groups who are interested in conserving and protecting the environment. They will no longer undergo all the hassles of implementing a reforestation project. They will just provide funds, and BCWD and its Project Management Team will do all the activities involved in the implementation of the project.

Researchers

Adopt-A-Forest Project will serve as guide and reference for future researchers in the fields of environmental science, forestry and watershed management.

IMPLEMENTATION MECHANICS

Adopt-A-Forest Project shall be implemented within the TRWFR with AWFC members as beneficiaries. There will be four phases in the implementation of the project. These are presented in **Figure 3**.

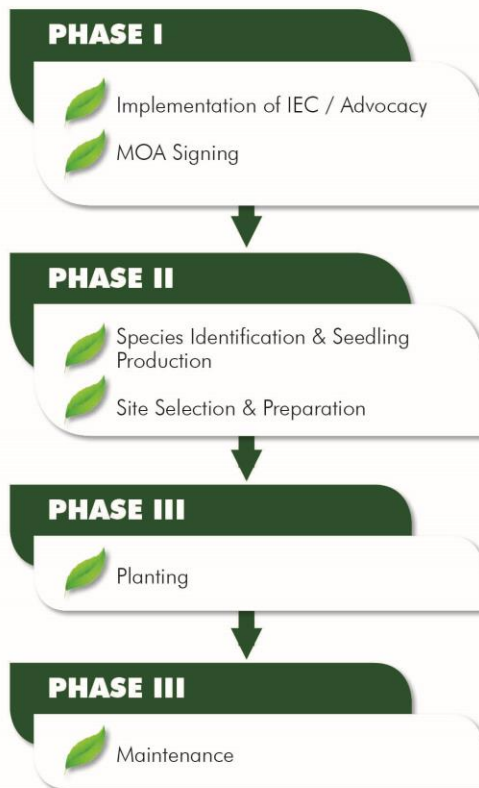


Figure 3. Flow Chart for the Implementation Mechanics

Phase I shall consist of the implementation of Information and Education Campaign and MOA signing. The IEC activities will focus on the BCWD advocacy for the rehabilitation and protection of the Taguibo Watershed. These activities will result to social accord as manifested by the number of MOAs signed between and among the BCWD, farmer-beneficiaries, AWFPC, and donors.

Phase II shall have two main activities. These will be the species identification and seedling production, and site selection and preparation. At this stage, the first main activity will be species identification and seedling production which will include determining the kind of seedlings to be planted, canvassing and purchasing of seedlings and placing them in the nursery. Some seedlings, particularly forest tree wildlings/seedlings that are available in the watershed, will be propagated on site to provide livelihood to the beneficiaries. The second main activity will be site selection and preparation which will include location hunting or finding the planting site, staking, brushing and ring weeding, and digging. The Watershed Management Division of BCWD shall take charge of these activities.

Activities in **Phase III** will include hauling of seedlings from the nursery to the site, planting, application of organic fertilizers, and installation of barbwire. AWFPC shall take charge of these activities with the supervision of the Project Management Team.

In **Phase IV**, maintenance shall be performed for three years to ensure the survival of the planted seedlings. At this phase, re-planting will be conducted to replace any mortality of planted seedlings. This phase shall be implemented by AWFPC with the supervision of the Project Management Team.

BUDGET

The cost of a 1-hectare is Php. 75,000.00. Donors will only share Php. 30,000.00; BCWD will shoulder Php. 45,000.00.

ADOPT-A-FOREST PROJECT PARTNERS

- 
- Rotary Club of Makati Salcedo and Butuan North** (1 Hectare)
 - Phoenix Foundation Inc.** (5 Hectares)
 - Atty. and Mrs. Jehremiah Asis** (1 Hectare)
 - Butuan Doctors Hospital and Colleges Inc** (10 Hectares)
 - Couples for Christ Global Mission Foundation** (1 Hectare)
 - CFC School of the Morning Star** (1 Hectare)
 - Crispin Young and Family** (1 Hectare)
 - Filipino Chinese Lourdes Catholic Community** (1 Hectare)
 - Mr. and Mrs. Terence Yu and YHotel** (1 Hectare)
 - Happy Enterprises and Resources Inc.** (1 Hectare)
 - Mr. and Mrs. Rudy Tiu** (1 Hectare)
 - Kimson Commercial** (1 Hectare)
 - Ivory Charities** (1 Hectare)

The activity plan of the proposed Adopt-A-Forest Project is shown in **Table 1**.

Activity Plan

Table 1. Activity Plan for Adopt-A-Forest Project in Taguibo River Watershed Forest Reserve

Activity/Task	Strategy	Time Frame	Responsible Person	Expected Outcome
A. Budget Allocation	1. Present budgetary requirement to the BCWD Board		CREAD & WMD personnel	Available funds for the implementation of the project
B. IEC	1. Coordination & consultation meetings 2. Focus Group Discussion 3. Distribution of leaflets/flyers 4. Installation of billboards		CREAD personnel	1. Approval, support and cooperation of the communities in the watershed 2. Public support and cooperation for the project 3. MOA signing
C. Site Selection	Locating planting site and delineation of hectare		WMD personnel and AWFCP	Available areas for planting
D. Species Identification and Seedling Production	1. Determining the kind of seedlings 2. Canvassing, purchasing seedlings, placing the seedlings in the nursery 3. Purchasing other materials		WMD personnel	Available seedlings to be planted
E. Site Preparation	1. Staking 2. Brushing and ring weeding 3. Digging		WMD personnel & AWFCP	Ready planting site
F. Planting	1. Hauling of seedlings from nursery to site 2. Planting 3. Application of organic fertilizers 4. Installation of barb wires		AWFCP	20 hectares
G. Maintenance	1. Re-staking 2. Brushing & ring weeding 3. Replanting 4. Harvesting		WMD personnel & AWFCP Beneficiaries	High rate of survival Income for the beneficiaries

MONITORING AND EVALUATION

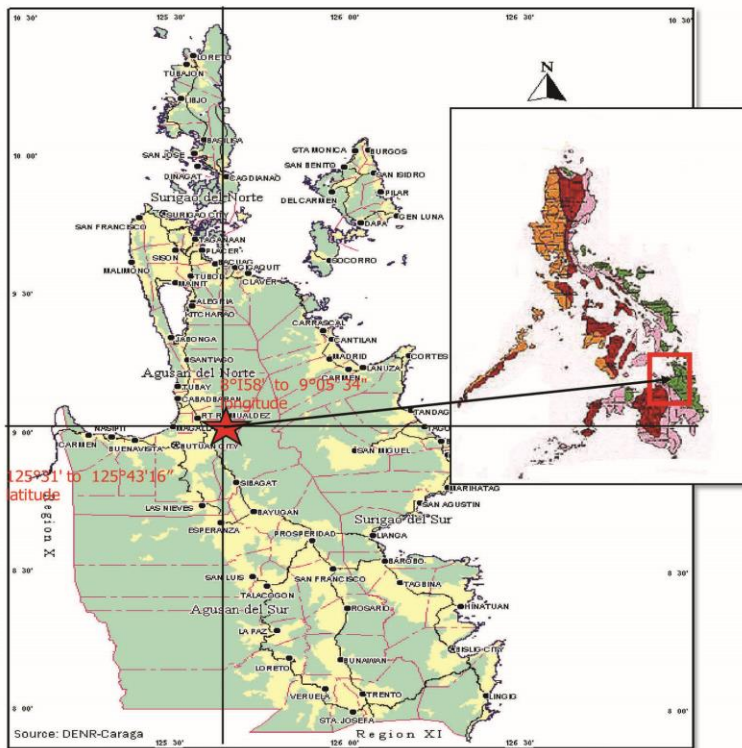
Monitoring and evaluation activities shall be conducted for three years to ensure high survival rate of the planted seedlings. Results of these activities shall be the bases for conducting maintenance activities to replace any possible mortality.

Monitoring and evaluation activities shall be conducted by the Project Management Team every month in the first year; once every two months in the second year; and quarterly in the third year.

A monitoring and evaluation instrument shall be used in conducting monitoring and evaluation activities to determine the number of planted seedlings to undergo re-staking, brushing and ring weeding, and replanting.

PROJECT LOCATION AND LAND AREA

The Taguibo Watershed is geographically situated at $125^{\circ}31'00''$ to $125^{\circ}43'16''$ longitude and $8^{\circ}15'8''$ to $9^{\circ}05'34''$ latitude which covers an area of 12,438 hectares. The majority of the watershed areas are within the administrative jurisdiction of BUTuan City while the rest are located at the Municipalities of Agusan del Norte such as Remedios T. Romualdez, Cabadbaran and Magallanes and partly of Sibagat, Agusan del Sur. The area which consist of 4,367.44 hectares was declared by President Fidel V. Ramos as Taguibo Watershed Forest Reserve on September 4, 1997 through Proclamation No. 1076.



Geographical location of the Taguibo Watershed

REFERENCES

Integrated Taguibo Watershed Management Plan. Butuan City: Taguibo Watershed Management Council. 2010.

Sustainable Watershed Development and Management Plan of Taguibo Watershed. Butuan City: Leaf Foundation. 2007.

Proclamation No. 1076. 1997.

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Taguibo River Watershed
Forest Reserve



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