

CASE STUDY OF THE MAASIN WATERSHED: Analyzing the Role of Institutions in a Watershed-Use Conflict

Jessica C. Salas



Developing Mechanisms for
Rewarding the Upland Poor in Asia for Environmental Services They Provide

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World Agroforestry Centre (ICRAF)
Southeast Asia Regional Office
PO Box 161, Bogor 16001, Indonesia
Tel: +62 251 625415, 625417; fax: +62 251 625416, email: icraf-indonesia@cgiar.org
ICRAF SEA website: <http://www.worldagroforestrycentre.org/sea>

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CASE STUDY OF THE MAASIN WATERSHED: Analyzing the Role of Institutions in a Watershed-Use Conflict

By Jessica C. Salas¹

1 Background

The Maasin watershed is the source of domestic water supply for Iloilo City. It also provides for the irrigation water requirements of around 3,000 hectares of farmland and supplies the water needs of towns and barangays along the Tigum River System, mostly through groundwater extraction. The management of Maasin Watershed was put under the control of the Metro Iloilo Water District in 1923 when the area was declared a watershed reserve to service the potable water supply requirements of Iloilo City. At this time the Metro Iloilo Water District started to pay real estate tax to the Municipality of Maasin and 1% utilization fee for the use of the watershed reserve.

In the early part of the 1990s, however, this control was transferred to a multi-sectoral task force – under the authority of the Provincial and Municipal Governments. The move was a response to the increasing water scarcity problem that was felt in the City at that time. The Municipality of Maasin was in a legal dispute with the Metro Iloilo Water District (MIWD) over the latter's default on paying the required taxes and

fees. Feeling the urgency to rehabilitate the source of domestic water for the city a Task Force was formed and raised levels of awareness and funds among the city community to plant trees in efforts to revegetate the reserve. These efforts resulted in the replanting of about 500 ha out of the 6,300 ha area of the entire reserved watershed.

The effort did not end there. The Provincial government had sought the assistance of the national government and the Department of Environment and Natural Resources (DENR) to finance further replanting initiatives in the area. It received funding through a Forestry Sector Project Loan with a loan of P51 million to reforest 3,150 ha. This project, however, necessitated that the control over the management of the site be placed under the DENR through the Supervising Site Management Unit (SuSiMu).

With the infusion of foreign funds – the community involvement had fizzled down – with enough resources available to carry on the task – the provision of environmental services (ES) was left for the DENR, with the forest-based communities that they organized, to carry out the task. In the process as well, the multi-sector task for Maasin Watershed was left out.

In 2002, a project developed by the International Fund for Agriculture Development (IFAD) and coordinated by the World Agroforestry Centre (ICRAF) invited proposals to test mechanisms that would reward upland poor communities for environmental services they provided (RUPES). A Maasin NGO (Kahublagan Sang Panimalay Foundation) submitted a proposal on the Maasin watershed to the RUPES project and the interest generated from the proposal sparked an agreement to prepare a study on this site describing the ES payment mechanisms and what had been the successes and problems including the pricing, mechanisms, institutional arrangements and how the payments were spent.

This case study is a result of that agreement and analyzes the socio-institutional relationship of watershed protection over the past decade in the Maasin watershed. It also designed and presents a workshop framework and instruments to educate and inform stakeholders in the watershed management on the restoration and equitable distribution of benefits (social, economic, and ecological) coming from a balanced watershed management.

¹ Managing Director of Kahublagan Sang Panimalay Foundation; Chair, Philippine Watershed Management Coalition and Team Leader for the conduct of the Case Study. The author acknowledges the input from 1) Josefina Torre, Training Officer, Kahublagan Sang Panimalay Foundation, Inc., La Paz, Iloilo City; 2) Dolores Madera, Project Officer Biodiversity Conservation in Sibalom-Baguigin Watershed Project Kahublagan Sang Panimalay Foundation, Inc., La Paz, Iloilo City; 3) Dr. Herminia Francisco, University of the Philippines-Los Baños Los Baños, Laguna; 4) Mrs. Luz M. Figueroa (kept records of the history of Maasin) Daughter of the late historian, Porferio Marquillero Local Civil Registrar Municipality of Maasin, Maasin, Iloilo; 5) Mr. Valeriano Biyo, Water Utility Supervisor, Metro Iloilo Water District Bonifacio Drive, Iloilo City, (Note: a pioneer of Maasin Watershed); 6) Fiona J.C. Chandler, RUPES Program Manager, ICRAF-SEA Office, Bogor, Indonesia.

2 Conceptual Framework

Environmental goods and services are abundant in a well-functioning ecosystem and the habitats and their inhabitants enjoy the benefits. In an unhealthy ecosystem, environmental services are thinning out, some stakeholders receive are negatively affected and many could quarrel over what little may be left. How to redress the balance, restore the ecosystem functioning, and install a mechanism or system to sustain the equilibrium between conservation and use are the objectives of environmental management, particularly watershed management in the Maasin Watershed.

The conceptual framework assumes:

1. A healthy watershed or a balanced ecology refers to a degree that the integrity of ecological flow is maintained within the watershed. In a healthy watershed, people enjoy the benefit of environmental services to the fullest. Upland farmers enjoy the benefits of soil fertility that results from low tillage management and lower carbon dioxide emissions with more herbs for health and nutritious fruits and vegetables while lowland population enjoys stable lowland farm with good rain and bounty fish production and no destructive flooding except perhaps a once every ten year visit of waters to render more environmental service.
2. Environmental goods and services and intrinsic values are the product of a healthy watershed and a balanced ecology. Examples of environmental 'goods' are clean drinking water, fish and fiber. Examples of environmental 'services' are water purification, flood mitigation, recreational opportunities. Intrinsic values derived from a healthy watershed include the valuing of certain cultural practices attached to the environmental goods or services, particularly those held by indigenous people. Examples are places considered spiritual centers of the area and areas used as ceremonial place for healing.
3. The concept acknowledges that there are other systems impinging on the ecological system that are powerful as they are brought in by human decisions in the purview of the economic, social and political systems. The imperfections brought by these systems affect the ecological balance and the integrity of the environmental flow that had brought equitable benefits to the inhabitants of the watershed. The result could be negative

benefits or perverse incentives to stakeholders thus accelerating the degradation of the ecosystem and the diminution of benefits.

4. The challenge of watershed management is to restore the equitable distribution of benefits coming from a balanced watershed through a manipulation of an impinging system be it establishing social infrastructures, monetizing services, establishing a reward and punishment system within the socio-ecopolitical framework, or applying any other intervention which is appropriate, acceptable, and effective to the stakeholders. The bottom line is to restore the equitable distribution of benefits and the balanced ecosystem.
5. It is assumed that the restoration challenge is a long-term attempt, is not perfect; and thus is seen as evolving with change in times and culture brought about by information, education, and better understanding of the ecosystem relationship.

3 Methodology

The Study was undertaken in two phases. This report covers the first phase, which entailed developing a narrative (qualitative) report written in non-technical language that gathered relevant data, undertook a socio-institutional analysis and developed material for information and education of the case study.

Activities conducted were the following:

1. Historical Transect. Interview documentation of key informants upstream and downstream (photo, transcripts, and video clips compilation)
2. A Focus Group Discussion involving all interviewees and additional key informants.
3. A workshop participated in by both the upstream and downstream stakeholders where the results of the historical transect were reported following a current reality assessment. The workshop ended with recommendations.
4. Analysis and short report (the analysis is needed in preparation for IEC messages)
5. Environmental Services-Information Education Communications (ES-IEC) for downstream communities. The objective is to mobilize downstream communities to accept the idea of supporting the ES

providers. IEC materials will be in form of brochures and workshop design.

The second phase will examine the bio-physical links and analysis of the environmental services provision.

In this study, the methodology of data gathering basically made use of a historical transect tool of Participatory Rapid Appraisal (PRA). Interviews, focus group discussion, workshops, photo documentations were conducted. While there is a need to scientifically link environmental services to land-use, such was not included in the Terms of Reference because of limited time and fund.

The analysis followed the framework of institutional channels described in the classification from Norman Uphoff, namely; (a) local administration (b) local government (c) membership organization (d) cooperatives (e) service organizations in private philanthropy (f) service organizations in marketization, and (g) private business. Culture and practices could be institutions in themselves. These informal non-organizational institutions are classified in here as (h) user-management.²

This study presents the objective and methodology in the introduction section, the result of the historical transect in the second section, followed by Institutional Analysis and Summary of Observations and Recommendations. While the arbitrary periodic description of the history was the result of the analysis, these periods were used in the presentation of the historical transect in Section 5.

4 The Maasin Watershed

Maasin town is a fourth class municipality in the province of Iloilo, Philippines, 30 km from Iloilo City and has a population of 30, 828 (2000) with an area of 17,100 ha. Iloilo is one of the four provinces of Panay Island located in the central portion of the country.

One third of the total land area of Maasin town is reserved for potable water of Iloilo City and as irrigation source of 2,900 ha of rice land. This reserved area of 6,738.52 ha is known as the

Maasin Watershed. The Maasin Watershed is a Reserve Forest intended to produce water for the City of Iloilo. The area is surrounded by 16 barangays with a total population of 9,995 (1997 figures).

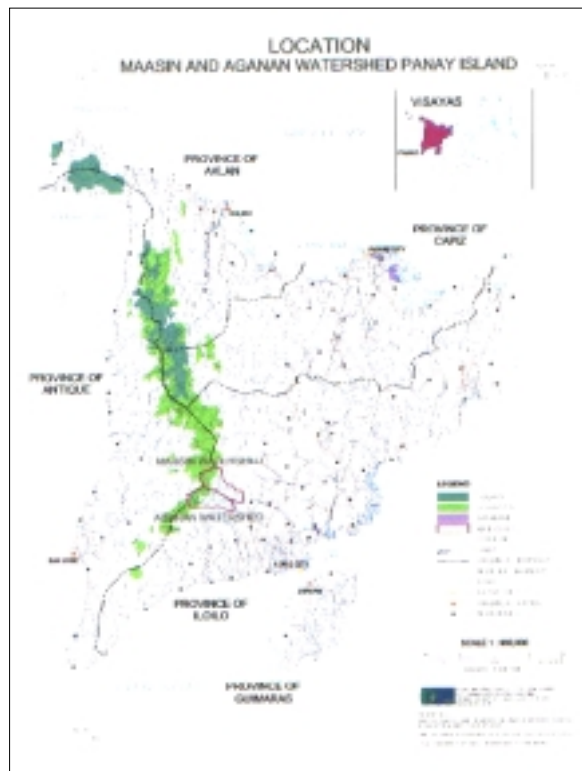


Figure 1: Location map of the Maasin Watershed

The analysis of data yielded six periods of activity in the subject watershed. These periods were arbitrarily labeled as: (a) Pre exodus, 1900-1909; (b) No Man's Land, 1910-1939; (c) War Time, 1940-1949; (d) Economic Adjustment, 1950-1980; (e) Watershed Rehabilitation, 1981-2000; and (f) Post Rehabilitation, 2000 and beyond. These periods were defined events of the historical transect to help analyze the interplay of institutions and people and natural resources.

5 Historical Transect: 1900-2000

5.1 Pre-exodus

During this period, the upper portion of the Maasin watershed was a pristine old-growth forest. The lower portion was delineated into

² Norman Uphoff for the Rural Development Committee, Cornell University. Local Institutional Development: An Analytical Sourcebook with cases. Connecticut: Kumarian Press, 1986.

*sitios*³ and barangays and was occupied by the residents of Maasin. Aside from houses, there were farms, schools, sugar cane plantations and sugar mills (4 on the record). Macario Cartagena owned the sugar mill located in Sitio Bugtason, Zacarias Billena owned one in Sitio Jagna, the mill in *Sitio* Layagon was owned by Vicente Sabido and one in *Barangay* Bolo owned by a certain Monero.

In the headwaters of the Tigum River, inside the pristine old growth forest, is a settlement of Bukidnon-Solodnon descent, a minority tribe, headed by Oto Valentin. His tribe has not integrated with the town's population as they were regarded as bandits after they revolted against the Spaniards with their "*ginunting*" (blades, local sword). To this day, the tribe entertains visitors to their area with their "sayaw sa gunting" and their ballads of bravery as Oto Valentin fought the Spaniards and brought his flock to the foot of Mount Inaman (highest mountain in the watershed). The tribal chief, during the 1989 visit of some government agencies and NGO workers, claimed that that was the first time he had seen government people setting foot on their land.

The population in 1903 was 8,401.⁴ At that time, the town's major economic activity was sawali (bamboo mat) weaving and sugar planting and milling. The town was described as having a population with a relatively equitable share of land and income as farmers planted sugar, corn, vegetables and fruits. The people were described as "contented, hospitable industrious and progressive."⁵

5.2 No Man's Land

Between 1910 and 1920, the Philippine government started negotiating to buy the land inside the 6,150⁶ ha headwater of the Tigum River, known today as the Maasin Watershed. It was explained that the watershed would be used to build a dam and sedimentation basin that would benefit a greater good. There would be water

for people in the City, water for the farmers, and this meant economic growth in the area. The owners of sugar land and mascovado sugar mill agreed to sell their lands. Two schools in *Sitio* Layagon and *Sitio* Tinayak were also closed. Other landowners willingly relinquished their land.⁷

In 1923, negotiation was completed and the 6,150 ha of headwaters of the Tigum River was declared as a Reserved Watershed by Proclamation No. 16 series 1923 by Gov. Gen. Leonard Wood. The land was purchased with funds from the central government to be disbursed by the local government through the Municipal Treasurer. According to key informants, Mr. Porferio Aguilar and Ms. Luz Figueroa⁸, Mr. Felipe Olivares was the treasurer at that time and he was imprisoned because it was alleged that he took part of the money and was able to pay only a few landowners. The informants reported that this was not admitted publicly. During the focus group discussions (FGD)⁹ on June 29, 2004 another participant, Mr. Santiago Maguillo, reported that the treasurer's name was Mr. Porferio Olivares and he was terminated from his work because he was unable to pay all the landowners or holders of land titles and tax declaration certificates. To validate that fact that the area was inhabited and the land was parceled and owned at that time, Mr. Valeriano Biyo, another key informant, presented documents of old land titles in his file as the superintendent of the Watershed employed by the Metro Iloilo Water District.

After the declaration and purchase of land, people were not allowed to enter the reserved area. The occupants left the land willingly to give way to the government's project. The land became a no man's land.¹⁰

1912 was recorded as one of the worst drought periods on the island (September 1911 to August 1912). The lowest discharge of Tigum River at *Barangay* Bolo was recorded at 220 lps on June 6, 1912. Three months later, October 16 and 17,

³ *Sitio* is a local term for zones which are the smaller units of a *barangay* or village.

⁴ All population data in this report were taken from the records of the Office of Population Commission, Municipality of Maasin.

⁵ "Compilation of the Works of Mr. Porferio Marquillero, Antonio Albacete and Alfonso Miado on the history of Maasin by Ms. Luz Figueroa. Cited in the Maasin Comprehensive Devt Plan 2000-2009.

⁶ The area of the Maasin Watershed determined in the 1991 survey as reported in the Feasibility Study (RDC VI) was 6,150 ha. Recent report of DENR showed an area of 6,738.52 as re-delineated in 1994.

⁷ From the interviews with Mr. Valeriano Biyo on June 10, 2004, Mr. Abraham Mandate (June 11, 2004) and from the compilation of Ms. Luz Figueroa. Data were validated during a Focus Group Discussion on June 29, 2004.

⁸ Interview with Mr. Porferio Aguilar was conducted on June 27 and 29, 2004 and Ms. Luz Figueroa, on June 10, 2004.

⁹ As part of the historical transects process, a Focus Group Discussion (FGD) of all interviewees was conducted on June 29, 2004, to validate data from individual interviews.

¹⁰ Interviews with Mr. Valeriano Biyo (June 10, 2004), Mr. Abraham Mandate, (June 11, 2004), and Ms. Beatriz Maderable (June 11, 2004).

flood occurred. The record in San Miguel observation point showed that Aganan had 1,150 lps while Tigum was recorded at 1,024 lps at Sta. Barbara station.¹¹

5.3 War Time

The years 1940 to 1949 were considered as the war period. The town was affected by World War II, and a rebel movement by the *Hukbalahap* Movement. In 1945, Governor Tomas Confessor of the province of Iloilo put up a resistance government and retreated to the mountains, and made Maasin Watershed as one of its operating areas. The population followed in the retreat to the mountains. Maasin Watershed became the sanctuary of the Maasin population and the neighboring towns.

5.4 Economic Adjustments

Even after the Japanese surrendered to the American forces (1945), a part of the population, especially the people who originally owned farms in the area, remained in the Maasin watershed because of the economic dislocation brought about by the war. People then started or expanded their farms using the *kaingin* (a method of clearing the land). This was in 1947 and the population of the town was 16,384. The politicians, aware of the economic difficulties at that time, promised to help their constituents in any legal impediment in the utilization of the watershed.¹²

In 1950, the Iloilo Metropolitan Water Works (IMWW) which now has been converted to NAWASA or National Water Works and Sewerage Authority, realizing that it was not capable of bringing the people out of the watershed, requested personnel from the Philippine Constabulary. Twelve enlisted men augmented the eight forest guards.¹³ It was during this time that bribery started as the farmers could not leave their already established farms. Men bribed the guards with their produce while some women were raped. One woman reported the case in the *munisipyo*¹⁴ but the guard defended himself saying, "She knows that people are

prohibited to enter the *linya*¹⁵. If she enters the *linya* again, I will rape her again."¹⁶

The economic difficulties, however, did not allow the guards to succeed in their mission. From 1949 to 1970, the fuel wood industry, starting the lower barangays of the Reserve, became a booming business in Maasin. It was reported that during these years, an average of five trucks of fuel wood a day (about 3 tons) were delivered to the City of Iloilo where the bakery business was starting to pick up. For this period, interviewees described the gradual disappearance of flora and fauna, including the Philippine Eagle, which was last sighted in 1958.¹⁷ The 1970's saw a continuance of firewood and charcoal making especially when the raw sugar mill and the refinery in Calinog started using fuel wood instead of bunker oil in 1975. Engr. Ricardo Jimena, Boiler Superintendent of the defunct Calinog Sugar Refinery for 11 years, reported that the sugar mill and the refinery needed 400 to 500 tons of fuel wood a day and it had agents were delivering fuel wood at a cost of P200 to P300 per ton. Such a business opportunity encouraged small business entrepreneurs to do business with the refinery. During the FGD¹⁸, however, participants all agreed that the impact of the fuel wood deliveries to the sugar refinery was not as destructive as the impact of the fuel wood deliveries to the City for bakeries, which started in 1950. For fuel wood for the city, the households were using small branches of ipil-ipil (*leucaema leucocephala*) that branch out again after a month and this made fuel wood collection almost sustainable. The occupied areas at that time were in Daja and other flat lands in the middle portion of the watershed. The old growth portion of the watershed was still relatively intact.

The seventies also saw the increasing control of the Local Administration with military checkpoints in strategic location downstream the Maasin Watershed. Fuel wood and charcoal production decreased to almost nothing. However, to continue to survive, the occupants shifted to establish new farms using *kaingin* or slash and burn in clearing the land. The fuel

¹¹ Surface Water Supply of The Philippine Islands. Department of Commerce and Communication, Bureau of Public Works Irrigation Division, Water Supply Bulletin No. 1. 1908-1922.

¹² Interviews with Mr. Valeriano Biyo; and Mr. Abraham Mandate and Mr. Ernesto Mandate on June 10 and 11 respectively.

¹³ Interview with Mr. Valeriano Biyo and Mr. Santiago Maguillo.

¹⁴ Spanish word for municipal hall, the seat of local government in the municipality.

¹⁵ *Linya* is the local word used to refer to the delineation line of the Maasin Watershed. Technically, it is the watershed divide.

¹⁶ Interviews with Mr. Ernesto Mandate, Mr. Abraham Maderable and Mr. Valeriano Biyo. June 10 & 11, 2004.

¹⁷ Interview of Mr. Valeriano Biyo (June 10, 2004); Ms. Beatriz Maderable (June 11, 2004), Mr. Abraham Mandate and Mr. Ernesto Mandate (June 11, 2004)

¹⁸ Focus Group Discussion conducted June 29, 2004 at Maasin town hall among interviewees in the study.

wood trees were cut. FGD participants felt that this was the phase that hastened the denudation of the watershed. Families established mechanized farms on the flatlands, near the riverbanks. In the 1989 PRA¹⁹, 11 generator-powered irrigation systems were recorded. In spite of the police presence and laws promulgated, farming prospered inside the reserve area. "This is how they did it", said one FGD participant whose family had to leave their farms in 1995.

"My father sent all of us to take university education, five of us—because of his farm in the watershed. I remember, we would help him harvest the grains during moonlight nights. Farm activities were done in the twilight and dawn to avoid the guards. And we always set aside a farm produce for the guards in case we get caught..... I also own a chain saw. We fell down trees at night time and let them flow the river current to reach the town in the morning to be lumbered."

The FGD participants said that forest poaching and farming the flat land was the least destructive activity in the watershed. Those who did not have farms in the flat lands used the more destructive technique. They would clear the hillside by cutting the largest tree at the highest point and let it fall and roll to topple down more trees by the hillside. After a day or two, the trees were burned and as the last simmer of smoke passed by, land was ready for sowing without even a need for plowing. Century-old trees were axed for days and the log burned and simmered even for months while the farmer planted rice and corn on the prized land.

5.5 The Period of Watershed Rehabilitation

While the years 1950 to 1979 could be described as a period of socio- economic adjustment, reconstruction of physical and natural assets were seen in the next two decades. In 1989, the first walkthrough in the Maasin Watershed was conducted by the Department of Environment and Natural Resources (DENR) Region VI with NGO, *Kahublagan Sang Panimalay* (Community Movement) Foundation or KSPFI. A feasibility study for the rehabilitation of the Maasin Watershed funded by the Regional Development

Council was prepared by KSPFI. The information was used by the Metro Iloilo Water Department (MIWD) to put up boards in the City of Iloilo with the message, "Year 2000, *wala tubig sa ciudad sang Iloilo*" (Year 2000, No more water for the City of Iloilo.) (See Figure 2).

After the first visit of DENR and KSPFI to the Maasin Watershed in 1989, focused attention and intensive activities were subsequently directed to the Maasin Watershed. The feasibility study recommending social-agro-forestry as the basic strategy for the rehabilitation of the Maasin Watershed was approved. There was a wide and open discussion of the problem and the recommendations. An opposing group emerged from the City. This group espoused for a return to the No Man's Land either by militarization or relocation of people in the watershed. Then Governor Simplicio Grino (1991) created a Task Force for the Rehabilitation of the Maasin Watershed, the purpose of which was to plan for the relocation of the people. Even the Archbishop at that time wrote a letter to the Office for the President to stop the organizing of people farming in the watershed.



Figure 2: Land Use of Maasin Reserve in 1991

Proponents of social forestry established a 'Save Maasin' movement, spearheaded by Green Panay and KSPFI and working closely with the new Governor, then Governor Arthur Defensor. The group raised funds to start work in the watershed with a hands-on leadership of the Governor. His visibility and commitment encouraged the city folks and half a million pesos were raised from the city (businesses, employees, children), which reforested 500 hectares at the lower part of the watershed. (1992-1995). The governor declared his principle as "Let people co-exist with the trees." KSPFI worked in the area from 1990 to

¹⁹ Participatory Rapid Appraisal used as a method to gather data for the Feasibility Study for the Rehabilitation of Maasin Watershed, 1993, by Kahublagan Sang Panimalay Fnd.

1995 using its own funds. The local government unit (LGU) actively participated with the plan of the governor and established in Municipal Environment and Development Council on February 12, 1992 under Mayor Rene Mondejar.

From 1995 to 1997, KSPFI was contracted by DENR for two years to organize six barangays with national government funding. KSPFI won another contract for the period 1997 to 1999 to train the KAPAWA-Maasin Federation on how to establish a tree plantation according to the plan approved by DENR and the Japan Bank for International Cooperation (JBIC). The task was to organize an additional ten barangays, strengthen the six barangays organized earlier, and establish a federation of people's organization. KAPAWA (*Katilingan sang mga Pumuluyo sa Watershed*)²⁰ – Maasin, with KSPFI as its assisting organization, won the contract of P45 Million for site development and for planting trees on the area. Personnel management and financial management systems, operation management systems including scheduling and tasking procedures were established by KSPFI as part of its technical assistance responsibilities in a separate contract with DENR Region VI.²¹

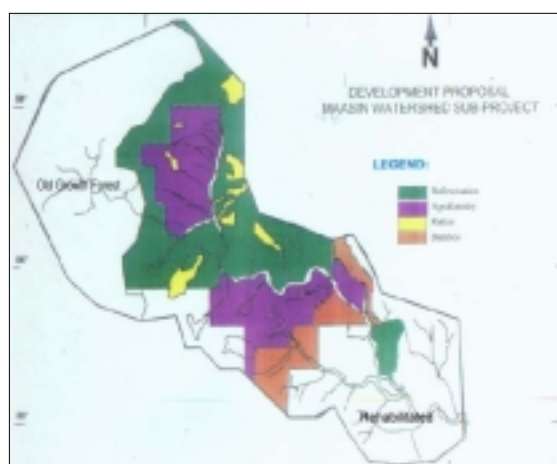


Figure 3: DENR Rehabilitation Plan for Maasin Reserve Forest

At the end of the contract of KSPFI with DENR, KSPFI continued to support the people's organization, by seeking funds from the Ford Foundation to start a 'School on the Air' reaching communities in the upstream, the downstream

and the city. The responding listeners initiated activities for environment conservation and protection, either as groups or individuals. The concept of barangay information centers was born and the river-basin organization was formed. Maasin Reserved Watershed became a part of the Tigum-Aganan Watershed, a medium sized river basin. The information campaign continued, and a memorandum of agreement among eight towns and Iloilo City was signed on November 7, 2001 to establish the Tigum-Aganan Watershed Management Board. The first Chairperson of this Board was the new Mayor of Maasin, Mayor Mariano Malones.

KAPAWA had three years to undertake maintenance work in the newly planted areas that included patrolling, and replanting of dead seedlings, this time under the supervision of DENR's SuSiMo or Supervising Unit and Site Management Office in the sub project without the assisting NGO. In the summer of 2002, while the trees planted were only three years old, the Tigum River experienced a severe reduction in the water volume flowing out of the dam. In the next summer, the residents of Maasin complained of empty wells and portions of the river without water. This was publicly debated including using the radio program and the local newspaper, with the LGU claiming the MIWD got more water than it should, the MIWD claiming it has been withdrawing less than its permit allotment of 500 ltr/second and that it had incurred additional expenses due to frequent cleaning of the silting pond. It had experienced "increase in silt many times more than that of the previous years", according to the manager, Engr. Ley Jalbuena²². DENR claimed it was not possible because the DENR-JBIC project area was well reforested and the trees gave clean water and more water. The NGOs put forward the opinion that the perceived shortage of water could be caused by the planting of exotic fast growing species which were newly established and which needed more water. Even within the Iloilo Watershed Management Council, where all the actors were members, the disagreements could not be settled until the rain came and silenced them all.²³

²⁰ Means literally - Organization of Occupants/Residents in the Watershed of Maasin.

²¹ Memorandum of Agreement between DENR VI and KSPFI, dated June 26, 1997 for the period July 1997 to June 1999 and quarterly project reports.

²² Minutes of meeting of the Technical Working Group of Iloilo Watershed Management Council.

²³ Salas, J.C. "Working Towards Hydrosolidarity," Paper presented to the Interactive Conference: EcoGovernance Program (DENR-USAID). Marawi City: Mindanao State University, Marawi City, April 16, 2002.

In other work of KSPFI for the Flood Control Project²⁴, it was reported that the cause of heavy silt getting into the pond of MIWD came from that part of the Maasin Watershed newly tilled by occupants who were moved out from the DENR-JBIC project of 2,685 ha. Some of the farmers transferred their farms to the other side of the watershed divide and caused heavy silting in the Salog River²⁵. It was claimed by a Key Informant that other dislocated occupants went to till at the old growth forest, which were part of the Mountain Forest Reserved of Panay Island.²⁶

5.6 Year 2000 and Beyond

The FGD on June 29, 2004 and the workshop on July 8, 2004, revealed that 30% of the Maasin Watershed is still tilled by farmers. The DENR-JBIC project is planted with mahogany, gmelina and other forest species (1,042.8 ha.), fruit trees (1,320.10 ha.), rattan (200.10 ha), and bamboo (281 ha).²⁷ It was reported that 100% of households in *Brgy* Punong, 100% of *Brgy* Bagsakan, 100% of *Brgy* Bugang, 75% of *Brgy* Dao and 95% of *Brgy* Umingan still farm inside the 6,738.52 ha. Reserved Maasin Watershed.

The Iloilo Watershed Management Council (IWMC) is working on certain mechanisms to help the Tigum-Aganan Watershed Management Board become sustainable and the environment services for the watershed, particularly the Maasin Watershed, will continue and be improved. The IWMC is under the chairmanship of Governor Niel Tupas, the governor who implemented the ordinance creating the Council. The Council is working on creating Watershed Boards or River Boards in the 13 watershed clusters of the province with the lessons and inspirations from the gains of Maasin Watershed.

²⁴ Salas J.C., "Sustaining Benefit of Project Intervention: Institutional Arrangement and Process" Presentation during the Watershed Management Plan Workshop. Iloilo City: Iloilo Flood Control Project, August, 2003.

²⁵ Salog River is a tributary of an adjacent watershed, the Magapa Suage Watershed.

²⁶ Part of Salas presentation. "Sustaining Benefit of Project Intervention: Institutional Arrangement and Process" August, 2003 and reconfirmed during the FGD, June 29, 2004. Information was also validated during the IWMC workshop, July 8, 2004 by the Municipal and Environment Officer (MENRO) of Janiway, citing clamor of people from the headwaters of Jalaur River.

²⁷ Brochure of Maasin Watershed Subproject, DENR, Region 6.

6 Socio-Institutional Analysis

A matrix to analyze resource management during the various periods in the Maasin Reserve history was constructed to clarify the resource condition, the management conditions and the institutions at work. This matrix is shown in Table 1.

From the matrix, it was observed that the conflict was basically due to resource use – a perceived conflict in the use of land and water. In a basic sense (and there a number of other complexities to this conflict), downstream communities need potable water, and upstream communities need farmland. Historically, part of the Reserve has been used as residential and agricultural land with some agro-industrial facilities. The conflict started when the need of downstream communities for potable water was backed up by central policy and there was an increase in demand for land by upland communities. Scientifically, the utilization of land and water in the same watershed could be harmonized with multiple land use and appropriate farming, and regulated and allocated water use with strong demand management. The Maasin history, however, tells the reader seemingly that central government was continuously in conflict with the people in the upland, "the people it has vowed to serve", according to one FGD participant.

It is also observed that resource management was remotely done by national functionaries that had a local presence, in particular the Water District, the local administration of DENR and the Philippine National Police. The conflict was manageable while there was a strong arm of a central policy but in the later years, with the increase in upland population and livelihood demand, intrusion into the Reserve was not abated. During the period of economic adjustment, remote management of central administration and its arm – the water distribution company, the resource was not protected at all. Rehabilitation started when the local government and the civil society intervened in the management of the Reserved Watershed. Progress was seen as confidence in governance was restored. Downstream communities volunteered funds, time, and professional skills to make the rehabilitation effort work. The local government of Maasin Municipality sued the water district for unpaid real estate tax and utilization fees in order to raise money for the rehabilitation work. The governor's policy of

"co-existence of trees and people" was not fully realized as local administration implemented again the policy of the central government over declared reserved areas. The area was again created as a virtual no man's land, a repeat of the 1920's. Local administration was insisting that the people were not prevented from using the Reserve for their livelihood. However, an opinion was expressed during the workshop that preventing the entry of draft animals, preventing open cultivation in between the trees planted two meters by two meters on their previously occupied farms was tantamount to driving these farmers away.

After the sub project funded by the JBIC loan was implemented on 1/3 of the Reserve area, the farmers of about 5 upland barangays were still occupying 30% of the Reserve, where 70 to 100% of their population depends on the resources of the watershed for their living. Other farmers taken out of the area transferred to other watersheds, migrated somewhere, or made their farms in another forestland.

6.1 Recommendations

One possible way to go is for the local government and civil society to assert their prerogative to participate in the management of this Forest Reserve and harmonize the use of land and water. Local administration could give feedback and assessment to its central agency, the DENR, regarding the problems created by an incongruence of some conditions of a policy that cannot fit the on-the-ground situation. The fear that the Reserve, without project money, will go back to "square one" should be addressed. The management of the resource could not just be left to one body i.e., the local administration.

Stakeholders should be involved and the local government should play a central role. An assessment report to be made by the local administration to its central agency, backed up by recommendations from the local government and the civil society, would contribute considerably to policy formulation for natural resource management.

Table 1: Resource Management in the Historical Periods of the Maasin Watershed

Periods of Historical Transect	Resource Situation – Maasin Reserve	Resource Management Situation	Institutions at Work
Pre-exodus	Lower portion utilized by town as residential and agricultural area w/ agri-industrial facilities. Upper portion stayed as old growth forest	Benefits accrued locally. Resource managed by those who benefited from the resource	User-management Local Government municipal & provincial
No Man's Land	Delineated watershed was for potable water use of the City	Benefits and cost accrued remotely Resource managed remotely	Local administration of a central policy/ and a quasi public corporation – the water district
War Time	Area became an open access space as safe refuge of the population.	Benefits accrued locally: both original occupants & migrants.	User management
Economic Adjustments	Resources utilized: Land and water	Conflict of resource use. Upland and locals needing the land; Lowland & city folks needing water.	Local Administration & its quasi government franchisee. Local government municipal & barangay.
Rehabilitation and another Virtual No Man's Land	Rehabilitation for water utilization Replanting of land with fast growing tree species. There was a temporary loss of water in 2000 to 2002.	Downstream civil society intervened Upstream civil society co-opted/ organized by local administration not to utilize land.. Water Distribution franchisee upgraded water utilization facilities due to increased demand.	Central policy implemented. Local Government established multi-sector body for the whole river basin. Civil society upstream & downstream participated in multi-sector body. Upstream civil society still controlled by local administration's organized PO.
2000 & beyond	30% of the Reserve still cultivated by upper barangays. 40% of the area covered by stable tree plantation, 20% covered by fruit trees with stunted growth and unpalatable areas. , 10% old growth.	A fresh look into the land-use conflict. Opportunity for the provincial multi-sector body of the local government to forge new agreement on land use and experiment mechanisms for environmental service payment. Opportunity for local admin to experiment a new partnership with local government with rationalized responsibilities and new roles	LGU Civil Society Local Administration In a multi-sector body.

Comparing the Maasin Watershed policy implementation with that of other rehabilitation projects of DENR in Mindanao, a question has been raised on why, in other projects in Forest Reserves or in Protected Areas such as that of the Matutum Protected Area, people were managed in place. Why was the same not done in the Maasin Watershed?

7 Observations

Two sets of observations are reported in this case study. The first one comes from the workshop participants who were asked to validate and react to the historical transect. The participants are both upstream and downstream stakeholders of the Maasin Watershed. Eleven (11) barangays upstream were represented by their barangay captain and/ by the head or representative of a people's organization. The business community, the academe, NGO's, employees, represented downstream communities in the city.

7.1 Problems and Constraints

The issues and constraints reported by the downstream participants may be classified into four basic issues, namely: water issues, solid waste issues, air and climate issues and the issue of governance.

On the other hand, upstream communities reported five sets of problems, namely inappropriate farming practices, inadequate delivery of basic social services, displacement of indigenous people and upland occupants, ineffective governance, and poverty. Basically, the first three are the results of ineffective governance. The last issue, that is poverty, could be the result of the first four deficiencies.

It was reported that the downstream communities suffer the most from environmental degradation, as they are the recipients of floodwater, silt, excessive nutrients and waste. Upstream communities also suffer from the degraded watershed, as they become victims of their own inappropriate farming practices in addition to lack or inadequate social services from downstream seat of government.

Table 2. Issues and Constraints of Communities in the Tigum-Aganan Watershed

Upstream Communities	Downstream Communities
Water Issues Flooding Insufficient supply of water Poor water quality Fertile soil carried by water/ silt on rivers Well water is salty- evidenced that there is salt water intrusion	Inappropriate farming practices. Soil & Water Conservation not practiced
Waste Issues Garbage: clogged drainage Pesticide-laden crops Easement along river banks not observed No waste water treatment plants	Inadequate delivery of basic social services: Health, Education, Infrastructure, Up to date information Technology update, particularly for soil & water conservation Non-maintenance of infrastructure (dams, roads, water system for locals)
Air & climate issues Intense summer head Air pollution	Poverty – Alienated culture, Low income, Farm products are very cheap Scarce opportunities for livelihood, No support to develop eco tourism potential
	Displacement of indigenous people, -of upland occupants
Governance Issues Budgetary constraints on part of LGUs Poor government supervision on programs, projects and activities Poor implementation of local ordinance = sand and gravel, anti littering, tree planting	Ineffective Governance Inadequate skills for governance among LGU (barangay & municipal) officials Not capable to sustaining rehabilitated forest & maintenance of watershed Lack of financial support Lack of support from downstream communities

7.2 Environmental Services and Products Enjoyed by Maasin Communities

Another part of the workshop facilitated the responses of the participants on the environmental services and products they enjoy. Answers of participants were classified into Environmental products, Environmental Services, and Intrinsic Values and these are presented in Table 3. It could be reported that the degraded watershed has reduced its services to the communities as these could not be seen and perceived by the participants. The rivers are no longer used to transport goods (as in the past). The forest had ceased to be a source of game animals and wild animals for food, used to be done in the past. There are no more fish in the rice paddies, no more fishing in the streams. No part of the watershed is used as filtering system for good quality water for the city people to drink. The Water Company has been using chemicals to purify water. Even seeing the upland as a source of medicinal herbs and high value rice variety or vegetables is not perceived by the present watershed dwellers. The degraded watershed considerably reduced benefits to the upland communities and created problems for

downstream communities in the last 30 years. In turn, these problems limited the services due to upstream communities. A perspective taken from one of the researches of the Iloilo Flood Control Project shows the following:²⁸

“Since most decision makers are from the downstream communities, it is easy to appropriate higher budget for infrastructures, more education, and more investment for external trades for themselves. Unknowingly perhaps, these actions create unintended pressure on upstream communities in terms of less budget for their own infrastructures, less access to social services, resulting into low income. The upland conditions are seldom seen clearly by policy makers downstream. Central decision making, low priority of programs and projects for the upland, lack of genuine participation, contribute more to this iniquitous process.

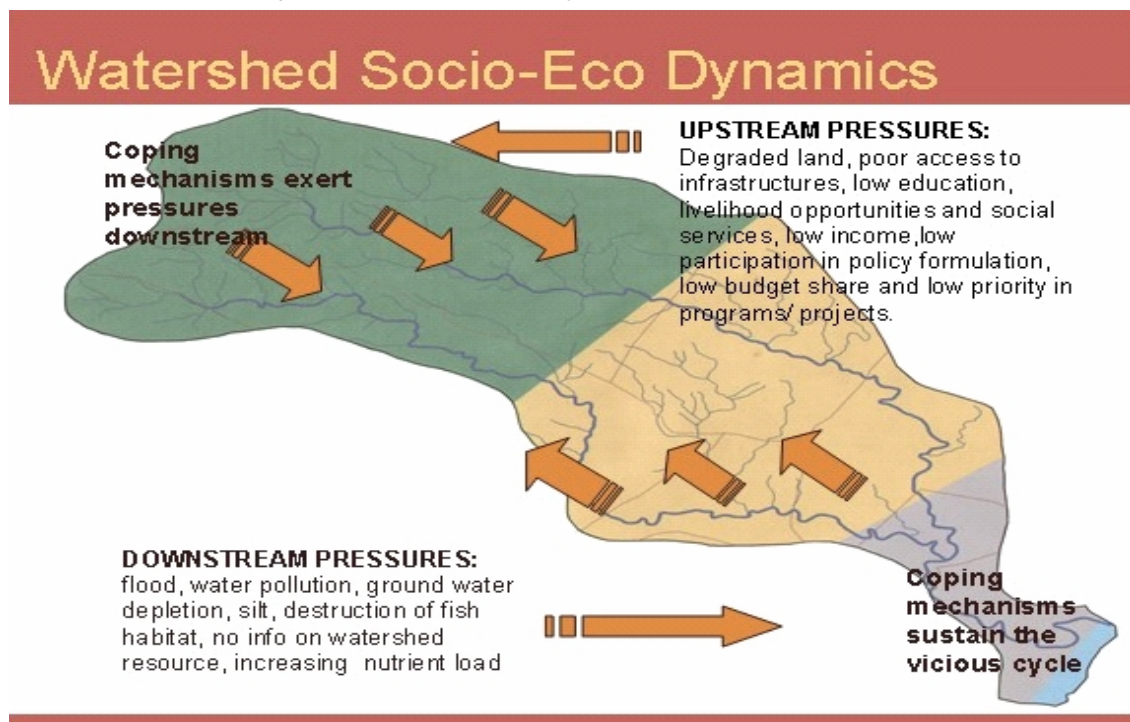
The socio-economic dynamic described create a pattern of vicious circle. Unless such is seen in the perspective of the watershed, it is difficult to recognize the pattern and a surreptitious impact on the degradation of water and land continues.”

Table 3. Environmental Benefits Enjoyed by Watershed Occupants

Benefits	Types
Environmental Products	Oxygen from trees
	Water
	Food, Medicine, Farm Products
Environmental Services	Prevention of flashflood
	Prevention of soil erosion
	Clean air (minimization of air pollution)
	Cool atmosphere
Intrinsic Values	Pleasant Environment
	Preservation of socio-cultural values & norms
	Stories of men and women (life stories, anecdotes, culture, folklore)

²⁸ A Socio-Economic Study of the Tigum-Aganan Watershed. Iloilo Flood Control Project, DPWH, 2003, page 88.

Figure 4. Socio-Economic Dynamics in the Watershed²⁹



8 Impact of Institutions on Watershed Management

The second set of observations was taken from the analysis of case facts, which came from the historical, transect. The analysis used the framework of institutional channels, namely; (a) Local administration (b) local government (c) membership organization (d) cooperatives (e) service organizations in private philanthropy (f) service organizations in marketization, and (g) private business. Culture and practices could be institutions in themselves. These unorganized institutions are classified in here as (g) user-management.

These observations are:

1. Local Administration - The decision of the Local Administration to declare the area as reserved watershed for the domestic use of the city of Iloilo was in favor of the Iloilo City government's request. Local Administration did not see through the completion of the expropriation process and when a problem happened (non payment of all affected families) these families were not compensated. In spite of this, it was able to establish a no man's land in the area.

The Local Administration did not have control over the situation in the area during and after the war to mitigate its impact over the resource. When the community resorted to utilizing the resource according to its needs, know-how and skills, local administration attempted to control the situation by posting police check points without realizing that the action brought further denudation of the watershed as the farmers cut the trees that supplied them the fuel wood to expand their farms using the *kaingin* as a land clearing method. Local Administration was helpless even as it distributed seedlings to encourage civil society to plant trees and even with a Presidential Decree requiring tree planting. For about 50 years, feeble attempts were made to reforest the area, even with loans for reforestation. A very low survival rate was achieved.

It was only when the local government and a service organization were able to restore governance legitimacy in the area that the Local Administration returned with packaged programs. The LGU's policy was to let the people co exist with trees. The NGO paid by Local Administration promised the people that a stewardship of the land, through Community Based Forest Management (CBFMA) would improve their lives. The

²⁹ Ibid.

promise was not fulfilled as Local Administration implemented the policy for reserved watershed that called for non-cultivation of land, (people can plant fruit trees and bamboos and bananas and rattan and profit from these as its CBFMA scheme) but not bring animals and not to apply open cultivation farming – two conditions alien to an ordinary farmer. There were those who got short-term benefits from salaries from reforestation. But there were many who also moved out to work in the city, in other towns and islands. Many did not believe (except a few close to Local Administration personnel) that the income from fruit trees, banana and bamboos could help them in the future. In effect, the policy has created a virtual no man's land, a repeat of the 1920's.

The history showed two basic conflicts of resource use:

- a. A conflict between upstream communities who want to use the land and the downstream communities who want to use water
- b. A conflict between a government policy of a single use of watershed declared as reserve and the policy of general welfare of the population provided for in the local government code.

During the focus group discussion, it was noted that the watershed history showed a "conflict of resource use; a conflict between the government and the people it has vowed to serve."

2. Local government - The local government felt duty bound to implement the declaration of the reserved watershed. It facilitated the expropriation proceedings. An aberrant event was the loss of money intended for the payment of the occupants, which was the responsibility of the local government. While the responsibility to cooperate with Local Administration was manifested in cooperation for replanting, LGU initiated certain instruments to balance attention to the population's economic needs and the need to follow policy for reserved watersheds. Deficient in alternatives and with inadequate monitoring and management of the agreement with its constituents, the local government was not able to foresee the impact of its action. When checkpoints were installed, upon the instance of Local

Administration, to confiscate the truckloads of firewood and charcoal leaving the watershed perimeter, local government did not have the technical knowledge on how to rationalize the fuel wood industry and make it sustainable.

Rehabilitation was started by local leadership – from the local government side and civil society side – and both were able to put confidence and credibility back to governance as the people agreed to trust and work with a new scheme – "coexistence of trees and people."

Recognizing the authority of the local administration over resource conservation, local government laid low when the former returned with a loan-driven program. However, upon seeing the unresolved concerns on the plight of the upland community (such as the threat of cutting trees because of no source of livelihood), there seemed to be a rework on a virtual no man's land; local government and civil society again came back to the scene and took the issues to another level by initiating another mechanism – that of a multi sector local body.

The local government code has empowered both LGU and civil society to balance the role of local administration in conserving natural resources so that the interest of communities will not be unnecessarily sacrificed.

3. Membership Organization. - Membership organizations came into existence when the people's organizations and its federation were organized. It is evident, however, that as the organizing was induced from the outside, particularly sponsored by local administration, it may have lost the nature of a true membership organization. It could be developed as a potential local institution that could protect the water resource for the city but for the present it seems that it is only following the dictates of local administration and is not self-propelling, as it works closely with the mandates and directions of the latter. It became, virtually, an extension arm of local administration.
4. Service Organizations - Private philanthropy blossomed for a short while when the governor took personal leadership over the

issue of resource conservation. The generosity for time, effort, and money fizzled out when big loans of the local administration took over. On the other hand, organizations marketing their services looked for funds to assist IEC and organize social infrastructure with the local government. The participation of NGOs was sustained from 1989 to 2004.

5. Private Sector - The Business sector contributed funds for the initial rehabilitation program led by the governor. There were several business firms who have not just given contribution but have invested in "tree parks" inside the reserved watershed. These roles however are part of the private philanthropy and not for profit. There are other roles that the private sector could assume as it is developed. One possible role is to exact responsibility from local administration or local governance as part of corporate social responsibility. It could also expand its role to develop economic transactions with the upland communities.
6. User-management - The pre-exodus period showed adaptability in the use of land by the residents. Only the flat portions of the Reserve Watershed were occupied. The upper side at higher elevations has stayed as old growth forest. During the period of economic adjustments, the cutting of trees for firewood was done sustainably. When farming was stopped in the lower portion of the watershed, denudation accelerated. An assurance of a security of tenure could give normal life to farmers and they could take care of their land in spite of adjustment problems, as shown by other studies. A protected soil, in turn will give water protection. Local Administration could exact compliance for use of appropriate farming practices under the stewardship agreement of the land.

9 Recommendations

This section presents the recommendations in two parts, namely,

1. Recommendations of the workshop participants
2. Recommendations for Environmental Services Information-Education-Communication (ES-IEC) materials
 - a. IEC framework
 - b. Workshop design
 - c. IEC brochure

9.1 Recommendations of the Workshop Participants

Part of the upstream-downstream community workshop was to solicit recommendations from the participants as the action commitment of the activity. Recommendations were addressed to institutions, to groups and to individuals. Table 4 shows that participants' recommendations addressed four issues, namely: ineffective governance, inadequate delivery of services to upland communities, the decreasing environmental services and poverty.

Two significant recommendations were seen to have impact on Environmental Services Payments. These are:

- Resolution from the *Sangguniang Panlalawigan* to return portion of the income from the use of water for the protection and maintenance of the watershed
- Creating a Stakeholders' Assembly

The Iloilo Watershed Management Council, the facilitator of the workshop, was asked to facilitate the Resolution and the Stakeholders' Assembly.

Table 4. Recommendations of Workshop Participants

Issues being addressed	Recommendations	Institutions/ Groups/
Ineffective Governance	<ul style="list-style-type: none"> • Coordination/ collaboration of multi stakeholders • Advocacy to encourage more participation • Production of IEC materials • Establishment of up to date information centers • IEC – Baklay Bukid • Resolution from the <i>Sangguniang Panlalawigan</i> to return portion of the income from the use of water for the protection and maintenance of the watershed • Create a Stakeholders' Assembly • Identify a group to act as champion • A good quality services from LGU and provincial government • Membership in organizations that are working for the environment 	IWMC Media, NGAs, NGOs, LGU People's Organization DENR SP, Province of Iloilo IWMC, Group Individual Individual
Inadequate Delivery of Services	<ul style="list-style-type: none"> • Conduct functional literacy classes • Information education campaign • Initiate environment related outreach program • Linkages • Dialogue with the people concerned • Reduce silt in irrigation canals 	Academe Media, LGU, NGO, NGA Academe All sectors NGA
Decreasing Environmental Services	<ul style="list-style-type: none"> • Adherence to policies and laws on environment • River clean up drives • Conduct IPM, practice appropriate farming practices • Be responsive and committed to environment related concerns • Solid waste segregation 	Groups IWMC & NGO, NGAs IWMC Individuals
Poverty	<ul style="list-style-type: none"> • Improve sustainable livelihood 	LGU, NGAs, NGO

9.2 Environmental Services Information-Education-Communication Materials

9.2.1 IEC Framework

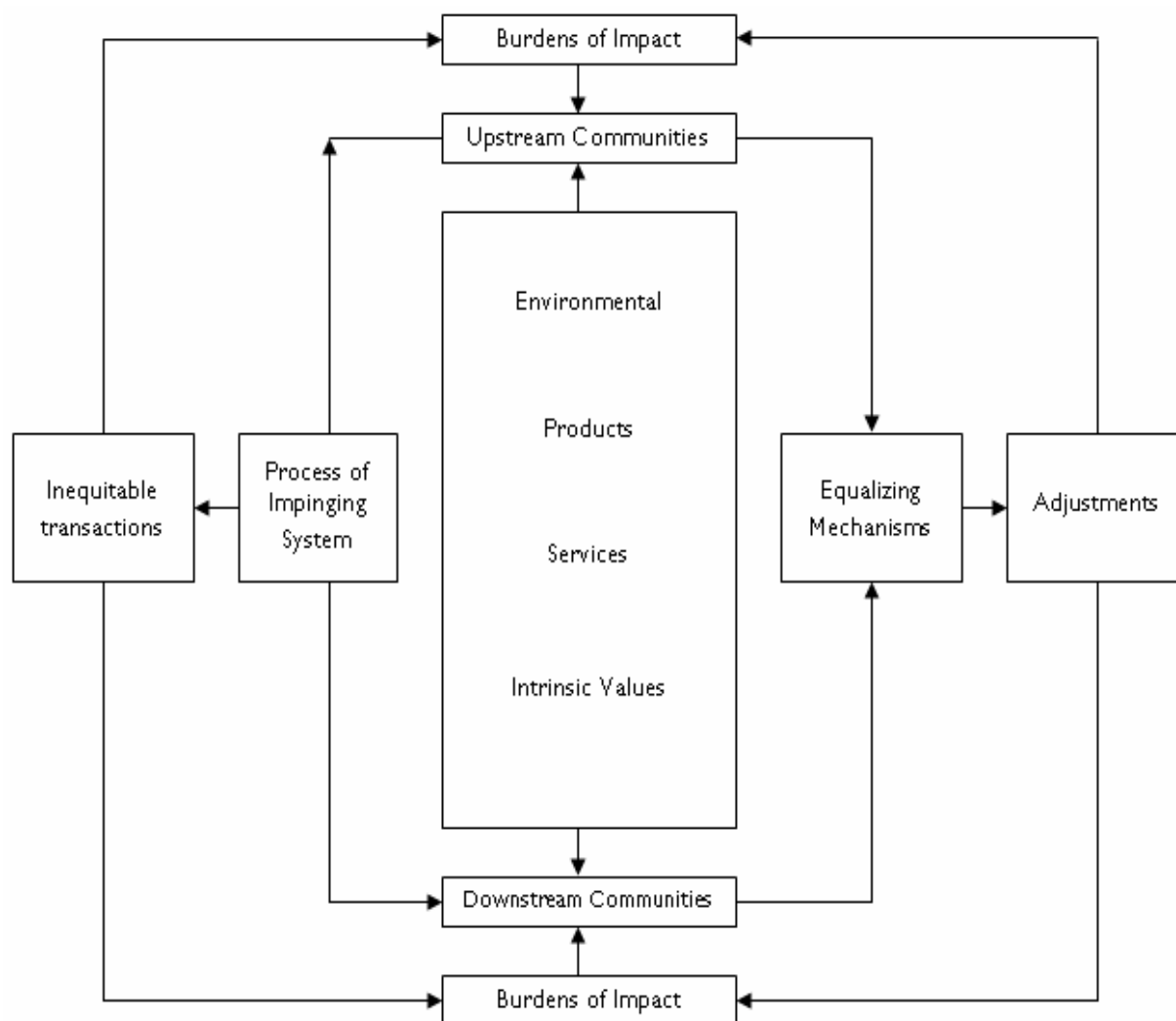
Another recommendation was the production of IEC materials to advocate for the resolution of the issues presented and the realization of the recommendations of the group. As an output of this Case Study, the IEC framework adopted the IWMC framework for Hydrosolidarity Project prepared by Kahublagan Sang Panimalay Foundation.³⁰ The framework is presented in Figure 5.

The framework and the experience from Maasin Watershed clearly showed that economic payments alone or financial investments have not promoted the harmonious working together of communities in the watershed. The framework explains the relationship of the upstream and downstream communities' vis-à-vis their utilization of a common natural resource. The act of utilizing this economic good is accompanied by other aspects of livelihoods (social, political, cultural, and psychological).³¹ An imbalance in these systems creates a force that creates inequitable transactions that favors, usually the upper class in the economic strata. These inequities, in turn, create coping mechanisms that exert pressures on these various systems, in fact

³⁰ Final Report to the Ford Foundation, December, 2003 , prepared by Kahublagan Sang Panimalay Foundation Inc., Iloilo City

³¹ Philippine Council for Sustainable Development. SIAD Guidebook: A Framework for the Localization of Philippine Agenda 21, September. 1999.

Figure 5. ES-IEC Framework³²



creating a vicious cycle that affects the degradation of the resource. To intervene in this vicious cycle is to create mechanisms in the various systems or dimensions of sustainable development, one of which is the economic system.

Loans and grants are the customary economic mechanisms to correct iniquitous transactions. A preliminary assessment of CBFM in the Philippines³³ tells us that there is more to fund in making forest and watershed protection

sustainable. In spite of loans and grants to rehabilitate a degraded resource, the country is still faced with critical issues in these areas. A users' fee or environmental service payment could simply substitute the source of funds invested in the upland if mechanism is not well studied and other system interventions are not in place. It should be noted that in the history of Maasin Watershed Forest Reserve, users' fee was implemented way back in 1992 but not sustained because the real intention and objective for the fund was not realized. (The money was spent for buying truck to haul sand and gravel and to construct buildings instead of rehabilitating the degraded watershed.) Even massive rehabilitation brought by massive fund may not be sustained in the long term if farmers' socio-economic situation is not reversed or its effect mitigated.

³² Adopted Framework from Hydrosolidarity Project of Kahublagan Sang Panimalay Foundation, Project Report, and December 31, 2003.

³³ Community-Based Forest Management in the Philippines: A Preliminary Assessment. Quezon City: Institute of Philippine Culture, Ateneo de Manila University, 2001.

9.2.2 Workshop Design

The objective of the workshop is to appreciate problems and benefits derived by stakeholders, both upstream and downstream, in the watershed and to agree on doable actions that could address these problems and constraints.

For the Iloilo Watershed Management Council, the workshop was entitled: "Towards a Responsible Interaction Between Upstream Watershed Communities and Downstream City Folks of the Tigum River: A Workshop"

A recommended workshop designed to reach the objectives is found below.

Table 5. Suggest Workshop Design for Environmental Services Awareness and Action

Time	Activity, & Person Responsible	Expected Outcome
8:00 a.m.	Registration/ Arrival of Participants/ Informal introductions	Knowing each other.
9:00	Opening ceremony, Opening Prayer, Pambansang Awit, Welcome Remarks, Introductions of the workshop and the participants	Participants at ease and ready to undertake the dialogue process. Introduction of the workshop will clarify expectations of participants and workshop objectives.
9:30	Background and Definition Watershed and the River Basin Environmental Services definition	Will level off understanding of watershed and river basin
10:30	Structured Learning Exercise: Upstream-downstream dialogue Workshop Questions: 1. What 3 to 5 significant problems/constraints do you experience today in your community? (upstream or downstream) <u>Use metacards</u>	The activity will lead the participants through a learning process. This is the first episode.
11:00	2. To what extent are these problems caused by environmental degradation and why. <u>Discussion</u> . 3. <u>To what</u> (event, behavior, practices, institution, roles, culture, and policy) do you attribute these problems? <u>Discussion</u>	
12:00	Lunch Break	
1:30 p.m.	4. What environmental Benefits are you enjoying? Use metacards and facilitators classify answers according to EP, ES, IV	
2:30	5. What can you do as individual or group to help resolve the conflict and conserve the watershed? 6. What recommendations could be made to existing institutions working for resource protection/ conservation:	Facilitates the natural outcome of new learning and insights of the participants. Explores certain mechanisms that would evaluate the attainment of the episodes' instrumental and terminal objectives.
3:30	Closing Ceremonies: Participants' reaction Closing Remarks	Provide closure
4:30	End	

9.2.3 The ES-IEC Brochure

The Brochure is an invitation to the workshop and at the same time explains the picture of a sustainable catchments or watershed.

The picture is an illustration of a good and a bad watershed. It is entitled, The Good, the Bad, and the Ugly. Another message conveyed is the ugliness of one who does not know the kind of watershed/ his habitat where he lives.



The Good, the Bad, and the Ugly

Adapted by Kahublagan
Sang Panimalay Fnd.

10 Insights and Overall Recommendations Arising from the Study

1. National agencies could only give general directions in their policy definitions. A more directive policy could not ensure compliance because specific and localized conditions could not all be included and addressed in a policy statement. The implementers will have to go by the uniqueness of the local conditions. If they do not have enough elbow room for decision making, the policy will either create more problems (as in the case of military check points that made the farmers changed from fuel wood production to farming); or may not be implemented at all (case of Philippine constabulary and forest guards who have not stopped farming inside the watershed); or may be initially implemented but not sustained (as in the case of technically ejecting the farmers out of a sub-project area).

It is recommended that policies should be broad with enough room to consider specific and localized conditions. Local administration should have ample authority and mandate to look into the specific and localized conditions, together with the local government and civil society, and carve a local order to implement the policy.

2. Off farm or on farm livelihood activities, if not honed to the production skills and management skills of the farmer, will not prosper. Skills referred to here are livelihood skills other than farming. Changing land management or use of soil protection is still a farming skill improvement. Extension studies are numerous because researchers look for ways and means to hone-in the use of new technologies to existing skills or practices of farmers. Entrepreneurship, anywhere implemented, rests on the decision, skills, and determination of an individual. Project consultations for entrepreneurial development are often biased towards the objectives of the project as project holders conduct these consultations.

It is recommended that government, whether local administration or local government should not implement livelihood projects but rather facilitate entrepreneurship from a broad framework, providing incentives or disincentives

towards an economic direction. Welfare and development activities and social welfare "dole outs" should be clearly differentiated and managed as a time-bound project.

3. Watershed management is not just for water nor for the forest but for both water and land. Watershed management is not only upland but also lowland, and seashores. Watershed management is not just forest but also agricultural crops, pastureland, wetlands and fishing grounds. The focus of the study on the headwater of the watershed alone and not on the rest of the river basin leaves out other important variables for an integrated watershed management. City folks dealing directly with headwater dwellers automatically disregard other key actors and critical areas in the watershed. The river basin outlook should always be the reference point even when implementing an integrated and community-centered watershed management.

It is recommended that the watershed approach to development planning or the community-centered integrated watershed management be encouraged and institutionalized by the government. This means giving multi-sector and multi-level bodies with multiple agencies (not just DENR) have a strong lead in watershed management. This also means government agencies open up the boundaries of their turf as far as resource management is concerned.

4. A combination of political will from local government and support of organized groups in civil society (member organizations, service organizations and business sector) could be a potent force in protecting a natural resource as shown in the case.

It is recommended that local governments institute multi-sector bodies for the protection of natural resource, particularly watersheds/ river basins/ catchments.

5. It is a difficult task for local administration to create a civil society institutional channel, like organizing or capacitating people's organization, because the very nature of a bureaucracy runs counter to the characteristic of a civil society. To attempt to create one could only diffuse the effectiveness of both institutions.

It is recommended that government create incentives to facilitate organization of groups from the civil society but not purposively create one. Government agencies should be careful not to co-opt civil society organizations but rather respect their individualities.

6. The fickleness of user-management as an institution stems from a reaction to governance vis a vis the users' individual interest and goal. Governance will always be saddled with conflict if there is no congruence of goals. The function of education and dialogue is to serve this congruence.

It is recommended that local government and local administration should have ample budget for IEC in resource management channeled through and evaluated by multi-sector bodies.

7. Sustainability is grounded on user-management. All other institutions may or may not support the behavior of the user and vice versa. Its sensitivity to change and

pressure points is reflective of the effectiveness (or ineffectiveness) of other institutions. It is a natural indicator of systems integration.

It is recommended that there should be continuing education on demand management for users. Users' behavior should be monitored and evaluated periodically as an input to supply and resource management.

8. Traditionally, intervention in forestry development is in the form of financial package and the aspect of institutional impact is given less attention.

It is recommended that institutional studies, adopting the historical transect tool, should be used before preparing project proposals for natural resource management. Interventions not only for social and community preparedness but also for government and private sector institutions should be a standard component in these projects.

ANNEX A: ABBREVIATIONS

ASSA	Abay Sariling Sikap Association
ASBRIS	Aganan-Sta. Barbara River Irrigation System
CBFMA	Community-Based Forest Management Agreement
CDA-PENRO	Community Development Assistant
CO	Community Organizer
DAEP	Daja Association for Environment Protection
DAWP	Dagami Association for Watershed Protection
DAR	Department of Agrarian Reform
DENR	Department of Environment and Natural Resources
ES	Environmental Services
ENRO	Environment and Natural Resources Officer
FGD	Focus Group Discussion
GOP	Government of the Philippines
IEC	Information, Education, Communication
IPM	Integrated Pest Management
IWMC	Iloilo Watershed Management Council
JBIC	Japan Bank for International Cooperation
KAPAWA	Katilingban Sang mga Pumuluyo sa Watershed
KSPFI	Kahublagan Sang Panimalay Foundation Inc.
LGU	Local Government Unit
LIFAEP	Linab Forest Association for Environment Protection
MAO	Municipal Agricultural Officer
MENRO	Municipal Environment & Natural Resources Officer
MIWD	Metro Iloilo Water District
MPDC	Municipal Planning and Development Coordinator
NEA	Nagba Environmental Association
NIA	National Irrigation Administration
NGA	National Government Agencies
NGO	Non-Government Organizations
OIC	Officer in Charge
PAEP	Punong Association for Environmental Protection
PENRO	Provincial Environment and Natural Resources Officer
PIO	Provincial Information Officer
PO	People's Organization
PPDO	Provincial Planning and Development Office
PRA	Participatory Rapid Appraisal
RDC	Regional Development Council
SIKAT Dao	Association of Dao residents
SUSIMO	Supervising Site Management Officer
USAID	United States Agency for International Development
UWA	Uminggan Watershed Association
WVSU	West Visayas State University

ANNEX B: PARTICIPANTS TO THE FOCUS GROUP DISCUSSION

Agriculture Office, Municipality of Maasin, June 29, 2004

Focused Group Discussion
June 29, 2004

Names	Agency, Organization
German Allesa	KAPAWA Member (P.O.), Brgy. Bolo, Maasin
Norberto L. Bermudo	Retired AFP, Maasin
Bethany M. Busaing	DSWD, Maasin
Purisma Maldecer	PPO1, Province
Mateo Villasor, Jr.	Punong Barangay, Nagba, Maasin
Elizabeth S. Mates	PO Member, Daja, Maasin
Daisy Osorio	WOW President, Abay, Maasin
Beatriz Maderable	Sambag Dagami, Maasin
Ruben Calambro	Brgy. Kagawad Tranka, Maasin
Pablo Mejares	DAEP President, Daja, Maasin
Alfonso Libunao	Retired Principal II, Maasin
Felicitas Biyo	DAEP Member, Maasin
Luz Figueroa	MCR, Maasin
Renita Jagolino	Clerk III SB Office
Rosavilla Cabrera	AT, Agriculture Office
Edna Pedrola	DA, Maasin
Rosan Layawon	Municipal Agriculture, Maasin
Hubert Maido	LGU, Maasin
Ma. Luzviminda Casio	MAO, Maasin
Josephine Maestre	LGU, Maasin
Roland Parayaoan	Linyagan Takas, Maasin
Perla Molina	PO Member Buntalan, Maasin
Grace Maghopoy	DA, Province
Gil Casio	DA, Maasin
Merla Mondega	Punong Brgy., Alimodian
Ma. Jesusa Sedigo	Teacher I, Maasin
Cornelio Malificiar	Forester, Maasin
Ma. Jonah Trojillo	LGU Maasin, Tourism Officer
Felix Madera	Assessors Office, Maasin
Josefina Torre	KSPFI
Irene Belgira	KSPFI
Dolores Madera	KSPFI
Nenita Serra	PO Member Abay, Maasin
Mary Jun Maestre	PO Member Abay, Maasin
Judith Mandate	WOW Bolo, Maasin
Marieta Quiro	WOW Bolo, Maasin
Wilma Quiro	WOW Bolo, Maasin
Zaineth Molina	WOW Bolo, Maasin
Florentina Sabijon	WOW President, Dagami, Maasin
Perlita Aledo	WOW Member, Dagami, Maasin
Rogelio Aledo	WOW Member, Dagami, Maasin
Renato Sabijon	WOW Member, Dagami, Maasin
Mario Oberio	PO Member, Sta. Rita, Maasin
Imelda Cino	PO Member, Sta. Rita, Maasin
Nerio Camral	Punong Barangay, Bugang, Alimodian
Julia Esperedion	Barangay Treasurer, Bugang
Gina Esperedion	WOW Member, Bugang

Names	Agency, Organization
Susan Misamen	PO Member, Bagsakan
Myrna Arca	BAEP Assn. President, Bagsakan
Anita Alemania	Punong Barangay, Bagsakan
Nenita Misamen	PO Member, Bagsakan
Merly Mondega	PO Member, Punong, alimodian
Virginia Misamen	PO Member, Punong, Alimodian
Abraham Mandate	PO Member, Bolo, Maasin
Veronica Ramos	PO Member, Bolo, Maasin
Gloria Malificiar	PO Member, Buntalan, Maasin
Grace Malificiar	PO Member, Buntalan, Maasin
Purificacion Marquillero	PO Member, Buntalan, Maasin
Corazon Bamo	PO Member, Buntalan, Maasin
Agnes Valentin	WOW Member, Tranka, Maasin
Purferio Ramos	WOW Member, Tranka, Maasin
Rex Serra	WOW Member, Tranka, Maasin
Edwin Tronko	PO Member, Dagami, Maasin
Antonio Aldamar	PO Member, Dao, Alimodian
Mario Mendez	PO Member, Dao, Alimodian
Alex Montefrio	PO Member, Bugang, Alimodian
Aida Talambro	PO Member, Tranka, Maasin
Julie Casio	PO Member, Tranka, Maasin
Lea Oberio	PO Member, Bugang, Alimodian
Erma Eldreda	PO Member, Bugang, Alimodian
Ruby Arca	PO Member, Bagsakan, Alimodian
Rosela Clamar	PO Member, Bugang, Alimodian
Merly Florentino	PO Member, Punong, Alimodian
Linda Camino	PO Member, Punong, Alimodian
Shirly Catamen	PO Member, Buntalan, Maasin
Flora Montefrio	PO Member, Buntalan, Maasin

ANNEX C: WORKSHOP PARTICIPANTS

“Towards a Responsible Interaction Between Upstream Watershed Communities and
Downstream City Folks”

Iloilo Provincial Capitol, Iloilo City, July 6, 2004

Names	Agency, Organization
Tommy Que	Manager, The Atrium
Evelyn D. Tumambo	OIC, Dean, WVSU, La Paz, Iloilo City
Maricon J. Syching	Operations Assistant, Robinsons Land Corp., Iloilo City
Rizaldy J. Nolasco	Mayor's Office, LGU Cabatuan, Iloilo
Jovie Baldeovar	Engineering Department, St. Paul's Hospital, Iloilo City
Melchor I. Bajande	Sr. Engineer, NIA- ASBRIS
Atty. William Demaisip	Kahirup Bldg., Guanco St., Iloilo City
Reika Nakata	Project Manager, Iloilo Flood Control Project
Rex Sirilan	Engineer, Iloilo Flood Control Project
Rainer M. Ecang	Regional Technical Director, Forestry, DENR, Region VI
Wilfredo P. Canto	Supervisor, SUSIMO, DENR, Region 6, Iloilo City
Pablo Mejares	Daja Association for Environmental Protection, President (KAPAWA), Daja, Maasin, Iloilo
Merilyn Piojo	Linab Forest Association for Environmental Protection (LIFAEP) President (KAPAWA), Linab, Maasin, Iloilo
Magdalena Malojo	Punong Association for Environmental Protection (PAEP) President (KAPAWA), Punong, Maasin, Iloilo
Nenita Serra	Brgy. Kagawad, Abay, Maasin
Romeo Capilitan	DAWP President (KAPAWA), Dagami, Maasin
Daisy Osorio	ASSA President (KAPAWA), Abay, Maasin
Elias Mendez	NEA President (KAPAWA), Nagba, Maasin
Felix A. Caronongan	President, Iloilo Provincial Federation of Irrigators Association
Merla Mondeja	Brgy. Captain, Punong, Alimodian, Iloilo
Ruth A. Prado	City ENRO, LGU, Iloilo City
Lorena B. Lipa	Instructor, University of San Agustin
Aurea D. Delicana	Agricultural Technician, Provincial Agriculture Office
Lilibeth French	Information Officer, Philippine Information Agency
Soledad Sucaldito	Provincial ENRO, Province of Iloilo
Dr. Rebecca V. Yandog	Director III, Philippine Science High School
Sisenando M. Helera	Manager, Philippine Foremost Milling Corporation
Nelson Tagabi	Watershed Point Person, LGU, Alimodian
Evelyn Sustento	PPDO, Iloilo
Ronie Jagorin	Hydrologist, NIA, Region VI
Ma. Leni Supena	PENRO, LGU, Iloilo
Olivia Corazon Ledesma	Information Officer, Metro Iloilo Water District
Diosa Labiste	Managing Editor, Visayan Examiner
Baltazar Gumana	MPDC, LGU-Pavia
Wilfredo Maquiling	Barangay Capatain, Bolo, Maasin
Reynaldo M. Osano	Provincial Agriculture Office
German Allesia	KAPAWA member, Bolo, Maasin
Mateo Villasor	Barangay Captain, Nagba, Maasin
Nelson Robles	Columnist, The News Today
Fernando Camral	President, Katilingban Sang Mga Taga-Bugang, Alimodian, Iloilo
Julie Espiridion	Brgy. Treasurer and Member, Katilingban Sang Mga Taga Bugang, Alimodian
Aurora A. Lim	Assistant to the President, Central Philippine University

Names	Agency, Organization
Melanio Ambani	SIKAT- Dao Representative, Alimodian
Porferio Abelo	Umingan Watershed Association (UWA) President, Umingan, Iloilo
Emmanuel A. Pet	Planning Officer, PPDO, Province of Iloilo
Ricardo Minurtio	MENRO, LGU-Janiuay
Hermilo Superioridad	Barangay Captain, Daja, Maasin
Valeriano Biyo	Metro Iloilo water District
Jessica C. Salas	Managing Director, KSPFI
Dolores Madera	Project Officer, KSPFI
Josephine Torre	Training Officer, KSPFI
Aida Villanueva	CDA – PENRO
Lino Convocar	CDA – PENRO
Ramon Parreno	CDA – PENRO
Nellida Tayong	PPDO
Armando Baylon	PPDO
Irene Belgira	KSPFI
Solacia Jovito	PPDO
Venus Callas	CO, KSPFI
Rosene Sabidong	KSPFI
Ma. Hayde Padilla	KSPFI
Armand Tamayo	KSPFI
Edna Jallorina	CDA – PENRO
Edna Lago	CDA – PENRO
Angeli Domingo	CDA – PENRO
Samson Mogato	CDA – PENRO
Francisco Gallego	Forester
Mercy Lagana	OIC-DAR, ARPO
Mario Nillos	PPDO
Pet Millesa	PIO, Province
Cornello Malificiar	LGU, Maasin
Luz Figueroa	Civil Registrar, Maasin
Amado Ortalez	MENRO, Pavia
Perla Molina	PO, Buntalan, Maasin
Puresima Maldicer	Population Officer, Maasin
Sanny Apuang	DA, Sta. Barbara
Gaylord Porras	Engineer-Atrium
Rosario Reyes	MAO, Cabatuan

ANNEX D: REFERENCES

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