

Invigorating Local Governance towards Effective River System Management

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Abstract

In the Philippines, all land resources in public domain including water and river systems belong to the state. The exploitation, development, protection and conservation of those resources are placed under the national government control and supervision. Decentralization of state powers in 1991 particularly on community forestry, small-scale mining, rivers and watersheds provided local governments enough opportunity to develop and engage in more relevant, speedy and efficient Natural Resources Management (NRM) programs. The experience of the Allah Valley Landscape Development Alliance (AVLDA) in Southern Philippines suggests positive results of innovative local environmental governance framework against the backdrop of varying political agenda and interests among leaders of separate political boundaries. The Allah Valley along Allah River experienced flashfloods in 1995 and 2002 with a combined damage to properties, infrastructures, and crops of about P 200 million (US\$ 8 million) including lost of 100 lives. The ill effects of flashfloods left horrible experience to communities vulnerable to another water-related disaster due to impact of unpredictable heavy rainfall and other man-made activities. The challenge to protect communities and properties from disasters paved the way for renewed commitment of local leaderships mandated with the role of being the vanguard and front liners of public services and to come with common terms among themselves in establishing partnerships with other stakeholders. This resulted in building alternative governance institution that is not another layer of bureaucracy and planning, but implementing projects without overlapping of responsibilities and engaging in a financial transaction in acceptable government auditing procedures. Forging of the communities, NGOs, civic groups, private and business institutions into the core of management framework of river rehabilitation and restoration program created desirable corporate and community responsibility actions. The outcome of this initiative is the overwhelming support and voluntary undertaking of households, farmers and landowners of their own actions in line with the ongoing program. Planning actions currently being undertaken by the alliance are geared towards addressing challenges and developing strategies to stabilize river systems and watersheds while improving their ecological values in the midst of changing climatic condition and upstream land uses.

I. Brief background on Natural Resources Management (NRM) policy

In the last 100 years, the country experienced notable transition in natural resource condition. A bleak forestry situation today is primarily a result of state-driven policies that centered on relentless resource exploitation and utilization. Government molded NRM direction that placed the entire nation now in severe scarcity needed timber and forest-based products.

But the state has inherent rights over natural resources. State powers over the archipelagic lands enshrined in the so-called Regalian Doctrine during Spanish occupancy are instituted under Philippine laws (Javier-Chiong, 2003). The 1987 Philippine Constitution provides that land

resources including waters and minerals in the public domain belong to the state. Correspondingly, functions and responsibilities to manage, exploit, protect, utilize, develop and conserve those resources are essentially covered by public policy.

Carrying a mandate as custodian and manager of environmental resources, the national government at present vested these powers and authority on several agencies and instrumentalities. For instance, in watershed management, more than forty (40) agencies are involved from forest protection to water supply management (Micalat, et. al., 2003). For forest management, the Department of the Environment and Natural Resources (DENR) leads the program.

In the earlier period, because of abundance, forest resources had been subjected to most of state exploitation policies. In the Spanish era up to the mid-20th century, forest clearing was a component of settlement and township development. Early beginnings of forest denudation can be traced in Luzon and Visayas in the 17th century (Poffenberger, et. at, 2005). Whilst during the American occupation in the early 20th century, the state further instituted more specific policies and programs on forest resources utilization. Widespread forest use in Mindanao began during American period and was further intensified during the Philippine government's settlement policy in the 1950's and in 1970's where logging concessions were granted to private concessioners by the government.

For example, the late President Marcos opted for forest resources exploitation as a national strategy to increase national income and spur economic developments in the country. From 1970's to 1980's, the Philippines had been a timber exporting country among the many Southeast Asian countries. The Marcos government granted over 400 Timber License Agreement (TLAs). However, while commercial logging was used as key instrument to generate much needed foreign exchange revenues, forest areas had been exhibited by growing numbers of social and environmental problems. Deforestation activities had been exacerbated by escalating land conflicts, displacement of indigenous communities, unsustainable type of agricultural production and widespread practice of slash-and burn. In many cases, logging concessions opened the forest with their roads followed by migrants who eventually convert the logged-over areas into permanent agricultural lands. At the end of 1970's, forest denudation reached a rate of 300,000 hectares per year and continued at a rate of 316,000 hectares per year from 1980 to 1990 (Micalat, et. al., 2004). By 1994, only about 5.3 million hectares primary forest remained in the country (Javier-Chiong, 2003).

II. Environmental management issues and problems in the Allah Valley

The case of Southern Philippines, particularly in Southern Mindanao, is historically interwoven in the country's NRM policy dynamics. Starting from 1900's, major resource utilization policy programs had been implemented by various state administrations with the opening of forest areas for large plantations and logging concessions. In the latter half of 20th century, the government had enforced forest protection policies. But the overall picture showed that the watershed and forestland exploitation had more far reaching consequences than the protection policies. Well-intentioned national development policies in the past had been lately creating undesirable results. Social dislocation and river siltation in the Allah Valley are partly contributed by extensive deforestation and unsustainable upland agriculture. Some leaders believe that this water-related problem is creating remarkable regional, if not, national security concerns. Food supply and peace and order issues will likely emerge if environmental problems will continue to worsen.

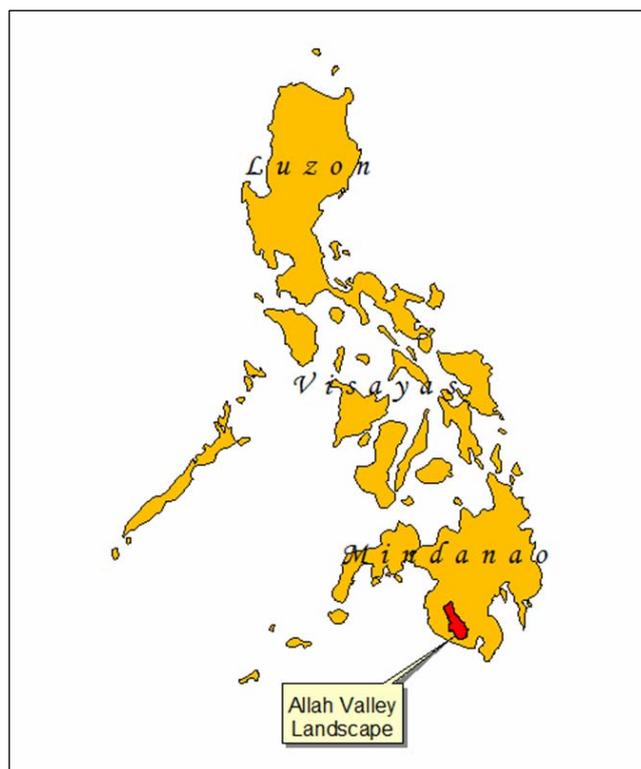
The Allah Valley Landscape (AVL) and government projects

The Allah Valley area is located in Southern Mindanao -- earlier part of the Cotabato Empire now divided into six (6) provinces with their components cities. Important resources are fertile lands, forest and water where many inhabitants composing the Maguindanao, Manobo, T'boli, B'laan and migrants from Luzon and Visayas used to depend upon. The AVL is construed as land areas drained by water through the Allah and Banga rivers. It has a total land area of about 252,060 hectares which is traversed by two (2) provinces (South Cotabato and Sultan Kudarat Province) where within these provinces are 10 municipalities and 1 city. See Figure 1.

Abundance of water in the Allah and Banga Rivers prompted national government agency -- the National Irrigation Administration (NIA) to construct irrigation system for rice production. Launched in 1978, the Allah River Irrigation Project (ARIP) was funded from Asian Development Bank (ADB) loan at the amount of P87 million. The project was completed in 1989 with the cost of P1.096 billion. However, the irrigation target of 21,000 hectares was reduced to only 12,000 hectares starting from 1990 the year it commenced its operation. This was caused by unfinished irrigation facilities and reduced water supply due to siltation of rivers.

The ARIP had other component: the Allah Valley Watershed Development Project under the DENR Bureau of Forest Development. Reforestation using *g'melina arboreda* was implemented from 1979 to 1989 to increase tree cover of 11,000 hectares denuded forestlands. The upstream watershed covering 102,034 hectares was declared protected areas under Presidential Decree (PD) 2455 in 1985. Primarily, the purpose of this component project was to ensure continuous water supply to irrigation facilities and secondly to increase incomes of upland farmers. However, on the other hand, the national government in 1991 declared Lake Sebu watershed (which formed part of a larger upstream Allah Valley watershed) as forest reservation to safeguard and preserve the lake's natural integrity. Considering the aforementioned, this has caused several problems on the utilization of land and water resources in the Allah Valley Landscape.

FIGURE 1
Location of the Allah Valley Landscape



Current NRM issues, problems and concerns

Due to severe poverty and limited access to investment capital, poor upland and forestland communities practice illegal cutting of naturally-grown trees and those planted in public lands during reforestation. They opened reforested areas to give way for corn production which is often unsustainable and low yielding, and in most cases destructive. Because areas are becoming limited to increasing needs of expanding population, opening of steeply sloped mountains are often resorted to, especially those areas declared within the ancestral domain.

Forest laws enforcement of government is weak due to budgetary problems and limited number of forest rangers. National orders for temporary ban of timber harvesting affected even private land owners who were lured by promises of huge income for their involvement in the reforestation project. Ironically, these private farmers sometimes are becoming "thefts" of their own properties. As of 2006, of the total Allah Valley watershed area, only about 11 percent remained forested in its pristine condition compared to about 25 percent in the 1940's.

Based on historical developments, two situations are now observable: (1) economic progress in terms of increased food production due to government irrigation infrastructures, and (2) ecological degradation due to government deficiency in forest and watershed management. The latter problem is becoming more complicated these years as government granted land tenure rights to indigenous communities over their ancestral domain. The Certificate of Ancestral Domain Claim (CADC) issued to T'boli and Ubo tribes in 1995 covers around 39,852 hectares overlaid to AVL protected area. As such, two overarching policy guidelines are applied in the same areas. Unless clearly resolved, the issue will often redound to question of which guidelines will prevail when utilization affects conservation, and vice versa.

Earlier version of purely state ownership of resources has mixed impact on the environment, social and economic development. National government interventions in watersheds and water resources management were not effectively sustained, though there is indication of sincerity for protection and conservation. Forest development was not successfully done after extensive harvesting despite reforestation project. Social condition of upland people has likewise not significantly improved as poverty remains evident. The strategy for forest exploitation was not concurrently dealt with similar political will to enforce management policies for watershed and forest recovery. Apparently, a wide disarray of forest management strategies negated to address other socio-economic concerns and the long-term implication to water resources and ecological stability.

III. Context of cooperation and partnership in the AVL

Whatever complexities and unresolved issues, there is only one vital concern that affects many people in the AVL -- the flooding in the area and its destructive effects. During many flooding incidents, local governments are the first to come into rescue of those affected by floods -- for support, mitigation and rehabilitation. As front liners of public services, local governments are generally expected by the people to respond immediately during emergencies. The first flooding that hit Allah Valley was in 1995 when Lake Maughan/Holon burst its huge water down the Allah River. The cost of damage amounted to P200 million (\$US 8 million) including lost of about 100 lives of people situated along the riverbanks. Many of them are children. In 2002, the aftermath of earthquake caused another major flooding incident. Although many private properties and public infrastructures along the rivers were destroyed, no human life was claimed. After careful inventory of the damages caused by two major flashfloods, local governments issued official report that the total cost reached to staggering amount of P515 million pesos (\$US 18 million).

Flooding is becoming too costly for local governments because the national government in most cases funded only repairs for damaged irrigation facilities. Since the two major flooding events, there is now occurred a frequency of flooding because rivers become braided. A braided river is characterized by shallow riverbed, wide flood ways with island bars and riverbank migration. From about 20 meters wide and about 3 meters depth for most of the river sections until 1970's, Allah River in the mid-sections is already about 150 to 400 meters wide. Waterways most often are claiming private lands that were once fertile grounds for rice and corn farming. Tremendous destruction of agricultural areas means income loses for many poor farmers. Such loses continue at present every time there is heavy rains coming from the upstream. Normal travel route and flow of goods are often disrupted because bridges are destroyed.

Until recently, flooding is generally perceived as a significant disaster. Because Local Governments Units (LGUs) are mandated to protect the people from harmful effects of disasters, man-made or natural, and to provide relief services during calamities, they are left with no option but to respond and face the problems squarely. The question that confronted them was how to respond effectively? What framework of effective response is possible? At what scale of response can be created? What is possible under the administrative powers and functions of the local governments? What can be done under limited funds?

IV. Formation of the Allah Valley Landscape Development Alliance (AVLDA)

The quest for effective management response in the recurrent flooding problems along Allah River was initiated by local elected leaders in 2002. Never been in the Southern Mindanao history, and very few among local governments in other parts of the country, that cooperation among themselves can be done at the most feasible, politically neutral and equally successful way. A member of local chief executives (former Mayor Felipe Allaga) led the initiative of convincing other leaders of neighboring municipalities and city to join their hands and integrate their plan of actions because he viewed that cooperation and partnership strategies were crucial in resolving the pressing problems on floods and the differing political priorities among the local governments.

With the technical assistance of Local Government Support Program (LGSP) implemented by Canadian International Development Agency (CIDA), the AVLDA was formed. The creation was formalized through a Memorandum of Agreement (MOA) in March 2003. The operation started in January 2004.

The legal framework for cooperation and partnership is supported by the 1991 Local Government Code (LGC) as its gives impetus to new system in NRM emphasizing the roles and responsibilities of local governments. For purposes of containing external effects of environmental problems, and for purposes of efficient service delivery and action, the law provides for elected local officials to "adopt measure to safeguard and conserve land, mineral, and forest resources of the LGUs" (Sections 444, 455 and 465). Likewise the code provides that "LGUs may through appropriate ordinances, group themselves, consolidate or coordinate their efforts, sources and resources for purposes commonly beneficial to them" Article 61 (b) of the LGC Implementing Rules and Regulation (IRR).

The 1991 LGC provision was only a possibility for cooperation. There were other major reasons for strategic cooperation in the Allah Valley LGUs. These can be summarized into four below:

1. **Commonality of the problem.** Local leaders believed that no single LGU can solve the flooding problems because rivers cut along and across several political boundaries. To

undertake structural protection at each river section is becoming useless because water flow is uncontrollable. Flooding catastrophe usually devastates thousands of hectares of rice farms costing to an average amount of P50 million (US\$ 2.2 million) a year. Recent typhoon Frank resulted to flooding in the two provinces with total cost of damages of P392 million (US\$ 14.476 million) and displacement of 12,253 people and children. With limited financial resources of LGUs, only minimal concrete intervention and mitigation can be done. However, the brunt of effects resulting from flooding is automatically bearing on the local governments where people often run for services and support. Rising costs of disaster mitigation such as dike construction and riverbed dredging is forcing LGUs to come up with better preparation strategies.

2. **Weak enforcement of environmental laws and lack of national government support for NRM programs.** Local leaders generally observed that the national government through its numerous agencies lacks performance capacity to protect the remaining forests from unsustainable uses. There were many cases of illegal cutting of both natural and reforested trees without successful trial. Since the reforestation projects in 1979-1989, no substantial efforts in forest development followed. Forest protection monitoring is hampered by many administrative barriers. Watershed continued to suffer from denudation, and flooding and siltation in the river valley is getting intensified. Estimate is reported that about 630 cu. m. of sandy silts are washed and deposited in the river bed (Flores, 2007). Hence, local governments needed to consider law enforcement on NRM as an important component to efforts to reduce flooding occurrences and effects.
3. **Absence of coherent environmental plan and action.** Each LGU at different levels have specific functions, powers, authority, responsibilities and with varying level of resources. Where each LGU has elected officials, priority of programs is often the bases of actions. Expectedly even in similar setting and given limited funding, separate political boundaries reflect separation of priorities and ground actions. However, as the adverse effects of flooding and soil erosion continue to hit communities across the river valley, there were realizations of the absence of planning, coordinating and synchronizing LGU programs at the watershed. Local leaders realized the need to integrate their programs to effectively respond to impact of water disasters.
4. **Creation of new political force to generate external support.** Local leaders believed that the Alliance will be a potential influence and lobby group to gain the attention of external institutions especially the national government. Pooling of political energy can have greater chances of realignment of national policy preferences and priorities towards local flood mitigation. The cooperation also indicates readiness of local stakeholders to initiate long-term partnership with international development agencies. Specifically, to undertake the process of watershed development programs that require solid, sustaining cooperation among governments, private sectors and communities -- the alliance was established.

V. Uniqueness and strength of AVLDA for river and watershed management

The AVLDA has unique features that have been influenced by the political perceptions, socio-cultural values and emergence of environmental problems and pressures. Its primary purpose is the protection and management of Allah Valley watershed anchored on social, environmental and economic development.

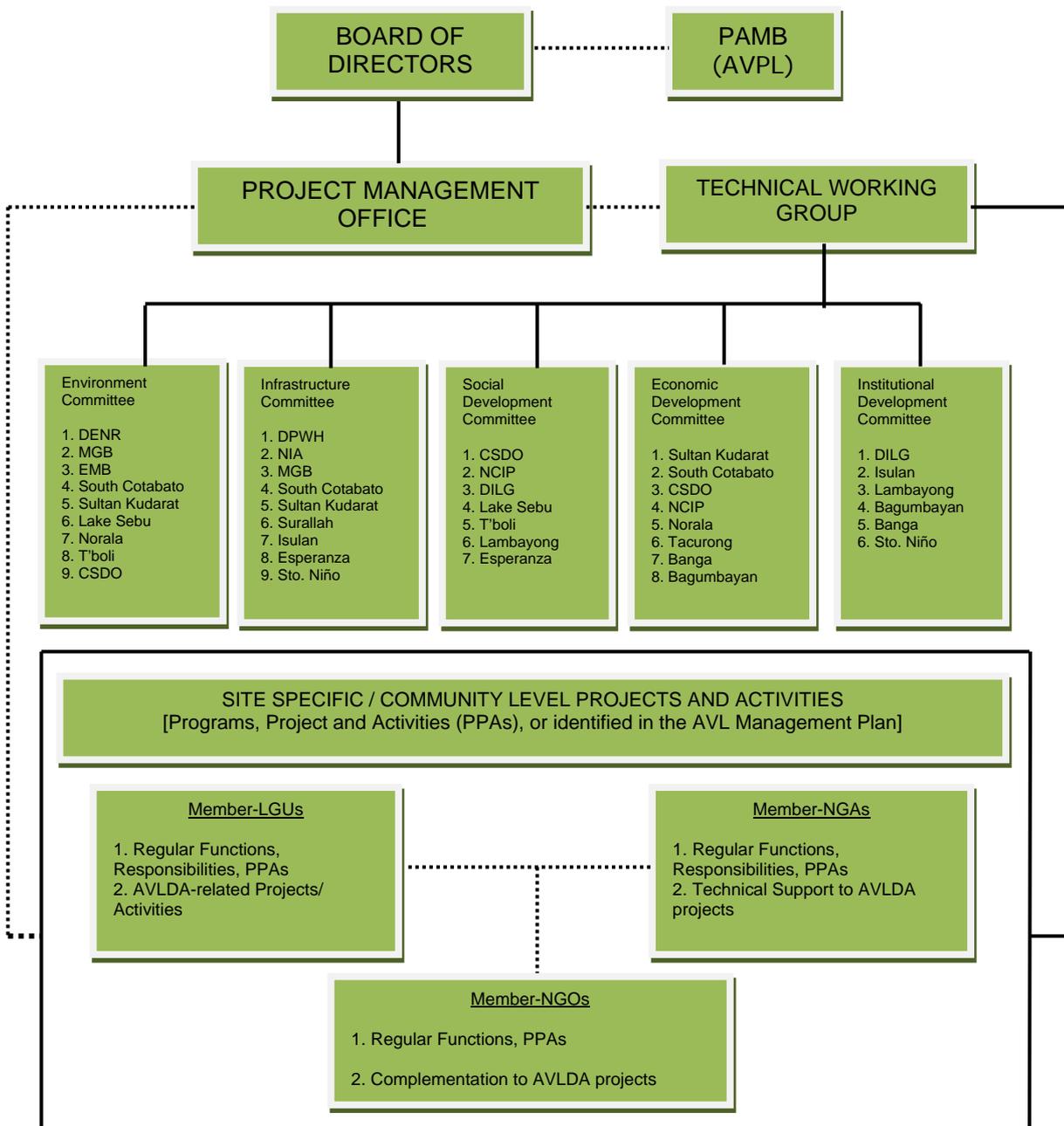
Diversity of members. AVLDA is essentially an LGU cooperation, but to enhance LGU operational effectiveness in relation to environmental programs, other stakeholders were decided to be involved. It is basically composed of LGUs, National Government Agencies (NGAs) and Non-Government Organizations (NGOs). See Figure 2. At the start, members were only seventeen (17). This eventually expanded to nineteen (19) with two LGUs joined the alliance in 2006. Each member continues to exercise their functions and implements their regular and special programs. Specific concerns and issues on river management and watershed programs are being discussed and resolved at the level of Alliance during Board and Technical Working Group (TWG) quarterly meetings and special conferences.

FIGURE 2
Members of the AVLDA

Local Government Units (13)	
1)	Province of South Cotabato
2)	Province of Sultan Kudarat
3)	City of Tacurong
4)	Municipality of Lake Sebu
5)	Municipality of T'boli
6)	Municipality of Surallah
7)	Municipality of Sto. Niño
8)	Municipality of Banga
9)	Municipality of Norala
10)	Municipality of Bagumbayan
11)	Municipality of Isulan
12)	Municipality of Esperanza
13)	Municipality of Lambayong
National Government Agencies at Regional Level (5)	
1)	Department of Environment and Natural Resources 12
2)	Department of the Interior and Local Government 12
3)	Department of Public Works and Highways 12
4)	National Irrigation Administration 12
5)	National Commission on Indigenous Peoples 12
Non-Government Organizations (1Group)	
1)	Coalition of Social Development Organizations in South Cotabato

Not a layer of bureaucracy. The AVLDA is a special organization created for the specific purpose of inter-LGU, LGU-NGA-NGO program partnership through coherent coordination. It does not have inherent powers and authority because its legal personality is only made through the MOA. The legal mandate and legitimacy of the AVLDA reside with its members. However, because LGUs initiated this, the AVLDA is functioning and operating based on the LGU procedures. Policies developed during regular Board meetings are adopted and implemented by the members using common methods and strategies. The Board of Directors (BOD) is composed of governors, mayors, regional directors of NGAs and representative of CSDO. The Project Management Office (PMO) serves as the alliance secretariat and implements policies passed by the Board through coordination with concerned members. The alliance also works closely with the Protected Area Management Board (PAMB) of the Allah Valley Protected Landscape (AVPL). See Figure 3 below.

FIGURE 3
AVLDA Organizational and Program Management Structure



LGU-based operation and financial transaction. The operation of AVLDA through the PMO is lodged with the Provincial Government of South Cotabato to avoid complication and problems with government financial and auditing procedures. South Cotabato province was selected as the trustee LGU because the Chairperson of the Board is the Governor of the said province. Approval necessary for daily operation of the PMO is done by the Governor. The BOD is as well recognized legally by the provincial government as legitimate substitute of local legislative body. Funds for the operation are contributed by the LGU members. Every year, each of the municipal and city governments provides P200,000.00 (\$US 8,800) and each provincial government shares P500,000.00 (\$US 22,000), deposited at the AVLDA trust fund account. The NGA and NGO members do not directly contribute funding, but complement AVLDA projects using their own funds.

Water as an integrating factor and program focus. Flooding has been the central issue that built connection among stakeholders. It has lately been perceived as a very complex problem, and yet leaders and technical personnel realized the need to focus on it. In the last two years, the alliance has been dealing with the flooding problems within the contextual framework of water as basic element. Programs for riparian zone protection and watershed development were conceptualized based on water behavior and impact. Hence, there is now further realization for the need to understand upland and lowland dynamics in relation to flooding and river siltation.

Political commitment of local leadership. The AVLDA will never exist if local elected leaders coming from different political parties did not set aside their tendencies to promote and secure their political groups and domination. The elected leaders at the time of AVLDA formation all agreed to turn their serious attention to intensifying impact of flooding, thence political contest must be superseded by political commitment to serve and protect the public from disasters. Values and virtues for committed public service, high regard for environmental and ecological integrity, and extra strength for political alliance become clear elements for partnership agreement to come into fruition. The reputation of the alliance has gained high respect after signing of the MOA in 2003. With new leaders emerged after 2004 and 2007 elections, the same support commitment has been given by these elected officials to AVLDA operation. This year, some started to develop their forest conservation and riparian zone stability programs as their distinct contribution to the speedy, substantial attainment of alliance mandate.

AVLDA as a discussion, consultation, and integration venue. At the regional level, the alliance is the only and first structured institutional arrangement that centers and focuses on watershed protection and river rehabilitation. Before the alliance formation, each LGU is responding in isolation and most of its efforts in futility. Leaders keep on dealing with the problems only within their political boundary. Issue articulation is held only in some provincial and regional meetings, though specific problems are not very well discussed due to time constraints. The upstream LGU groups seldom get sufficient official information about the downstream situation, and vice versa.

The alliance formation became the immediate formal link between and among thirteen (13) provincial and municipal governments including regional NGAs and NGOs. They agreed to take actions based on partnership arrangements and roles. Members are now able to extensively discuss and listen among themselves about the upstream and downstream situations during quarterly meetings, special meetings and program activities. Leaders and TWG members appreciate the substantial learnings they get from the alliance activities – it keeps them abreast of NRM and environmental situation around them.

VI. Programs and actions of the alliance towards river system management

Technical personnel of government agencies and local leaders are fully aware of the huge cost of flooding. Local governments do not have enough financial and technical capacity to undertake structural-type of flood control measures. The Department of Public Works and Highways (DPWH) at the regional level lacks budget for construction of protection dikes. It is seemingly difficult to request funding from the central office because Allah Valley is not on the list of top priority areas for flood mitigation projects.

When the alliance is already established, identifying workable response strategy is becoming a challenge. There have been several proposals and recommendations on how to proceed and sustain the work. However, given the wide arrays of interconnected issues and concerns, only specific, strategic and efficient actions could be undertaken.

Major programs and activities

The alliance has six major programs and activities directed towards effective river system management:

- advocacy and information dissemination
- partnership and linkages building
- integration process of policies, plans and actions
- land use through land cover status generation
- riverbank stabilization
- forest and upland resource management

Advocacy for the alliance promotion, partnership strengthening among alliance members and linkage building with new partners are continuing programs. Because of this, two more LGUs joined the alliance in 2006 completing the whole LGU representation in the AVL area. The alliance also established formal cooperation with many local private industries and NGOs to broaden responsibility and social commitment of stakeholders and resource users.

Watershed-based land use planning commenced when landscape mapping using remote sensing and geographic information system (RS/GIS) and community-based resource assessment and mapping (CBRAM) were conducted. However, despite the importance of land use planning in resource management, this has not influenced critical policy decisions of the members. Land use planning among LGUs is almost a compliance exercise, rather than a powerful policy instrument that would suppose to strike a balance in development and improve disaster preparedness. However, the AVL maps showing the AVL characteristics and land cover are publicly disseminated to awaken stakeholders and communities about the alarming condition of the watershed. There is also an effort to utilize the landscape maps to the on-going land use plan updating of LGUs.

Integration of LGU policies, plans and actions is more pronounced in the riverbank stabilization using vegetative type of intervention. Strategy on plan and policy integration needs to be further developed because of some differences on river protection concepts and approaches. But the riverbank stabilization initiative through riparian zone re-vegetation (RZR) has been gaining grounds owing to its cost effectiveness and potentiality in attracting partnerships on private sectors and in pooling community supports. For example, bamboo is used as species to protect riverbanks from soil erosion and collapse. This species is grown locally at a very affordable price. It has proven its soil holding capacity in some sections of the major river channels during normal flows, and even during flashflood events.

Private sectors and community participation in river system management

Private sectors from agricultural industries, mining industries, water districts, electric cooperatives, banking industries and civic groups shared their resources and committed to assist in river protection and rehabilitation programs by signing in a MOA with the alliance. Many of these private sectors were their first time to participate in LGUs led programs which for the alliance is a new and unique trend, though a crucial venture. Some of their officials admitted that contribution of efforts to such initiative increased their corporate social responsibility while engaging in government partnership for river and water programs. However, they all have seen the connection of their business and organizational interests to the RZR program. For example, in the banking sector, they have seen possible decreased of client transactions when agriculture sectors are oftentimes affected by flooding. As these concerns continued to circulate in the

corporate social circles, the alliance expects more private sectors involvement in the future activities.

Communities along Banga and Allah rivers and farmers who depend upon water supply from those rivers have great interest to the RZR program, although level of actual participation varies. The braiding nature of the rivers has categorically turned thousands of hectares of productive rice fields into shallow riverbeds and sandy floodways. Farmers and land owners attempted to regain their lands back and secure the remaining areas from reach of water effects. Many attempts failed, even with government assistance.

The alliance efforts in the fight against water related disasters will probably gain massive support. Getting many stakeholders and people into the program bandwagon in coherence and sustaining is a major accomplishment. Communities have again rebuilt their confidence to government programs, although the strategy for using vegetative-type of measures instigated many disputes and reservations. Despite hardships, failures and reservations, many farmers and land owners participated in the RZR programs, during its launching in September 2007 and up to this time. The primary reason for their participation is that they are convinced of the need to stabilize riverbanks in order to put a stop to further damage of their crops and cultivated rice farms. Second reason is that bamboo species can be grown cheaply and sustainably harvested with local markets ready to absorb quality produce.

Pushing ecological stabilization efforts in the uplands and forestlands

Due to difficulty to control flood flows, and while waiting for national government flood control projects, the alliance begins to look at the role of uplands being the sources of waters – waters at extreme volume. For many years, municipal leaders in the downstream section of the AVL observed that water volume and flow rates in the Allah River have significant relation to land cover alteration and forest recession in the upstream watershed. Although scientific study of this observation has to be established, the alliance believes the need to halt further forest cover thinning and increase percentage of tree cover while improving socio-economic condition of the upland people. This realization came from local governments that are beholden too long by improving urban centers and infrastructures. This shift of thinking is beginning to steer transformation of local development policy focus towards forest management and upland agriculture.

VII. Challenges of AVLDA on watershed and river management

The AVLDA was created in the wake of limited local government capability to respond to complex environmental problems. Although specific purpose at the beginning is to mitigate flooding effects, recent realization emerged that the actions necessary to achieve such purpose demand huge costs and responsibilities. As the members are learning to see and understand the whole complicated picture of the landscape and plunge deeper into the dynamics of environmental management, they are beginning to be responsible agents of ecological change and development. Local governments are challenged to become effective drivers to river systems management by searching for efficient strategy combinations. From myopic perception of river as the problem, other issues and concerns that are directly connected to river condition are emerging in discussion forums.

At the moment, below are major issues and concerns that are being raised, and being tried to be attended to, by the alliance:

- Limited technical capability in water resources management: What capacity building is important and who will provide training and studies?
- Climate change, flooding and river braiding: What mitigation and preparation measures are effective?
- Continuous flooding, infrastructures and property damages: Where and how to get enough funding that will complete flood control structures?
- Poverty in the uplands and forestlands: How culture of responsibility will turn and encourage poor people to protect watersheds?
- Increasing agricultural production: What production delivers soil and water conservation acceptable to upland farmers?
- Invasion of mining industry: Where does watershed protection and mineral exploitation strike into landscape sustainability?
- Community involvement: How to get massive support amidst poverty and limited access to other income sources?
- LGU responsibility and funding limitation: Where does the “satisficing” point will meet within the arena of devolution process?
- Pressure in the emerging responsibility to conserve 2nd largest marsh in the country: How to reduce and control heavily silted flashing water from entering the marsh?

VIII. Constraints and problems of local governments and the alliance

Persistence and hopes with all the best and good intentions of delivering service for public welfare are all there with local leaders. However, local governments are new in the field of environmental governance. Most of the LGUs in the Allah Valley had just recently been taking concrete steps to install permanent and significant NRM programs within their institutional structure.

The attempt to respond to complexity of water-related problems is almost desperation. Funds available for repairs and construction and for long term programs on watershed and river stabilization are very limited. There is realization now that devolution of powers from the national government to the LGUs did not come with sufficient funding. Hence, national governments are often called for support whenever a project requires prohibitive capital. But only initial and small funding is coming relative to needed repairs and constructions.

The action by the alliance members in the last four years is seemingly slow, and at best experimental and fundamental as search for effective solution never ends in debates. There is a dearth of scientific research to quantify important indicators of physical changes and their relation to social scenario. Technical capability is lacking to pursue scientific studies and recommendations, and to fit them in a workable context of local capacity.

Also, attempts for full plan integration are hampered by slow realization for governance efficiency and lack of clear direction of political back-up. Partnership is yet to take a meaningful value and essence to translate the comprehensive and integrated endeavor into a substantial, respectable outcome.

IX. Conclusion

The development of LGU intervention in NRM is partly a result of deficiency of national government to properly manage forest resources and partly due to devolution of state powers on some environmental programs. Current national government involvement through the DENR is generally concentrated on regulation, where in fact it should have a regular investment

program on watershed improvement and forest recovery. Affected by the adverse impact of watershed and river degradation, LGUs responded accordingly. Apparently, there is a gradual shift from the national government to local governments the challenge for immediate, and perhaps medium-term, response to flooding.

AVLDA operation is essentially framed within the LGU functions and responsibilities, supported by the national government at the regional level and civil society groups. Pressure to respond to water problems was the triggering concern which brought them together. The alliance building is a formal, structured coherent approach by stakeholders amidst limited LGU technical and financial capacities.

The 1991 LCG was the basis for cooperation, and the operation follows LGU regulations, policies, and procedures. To avoid overlapping of functions, LGUs implement projects at their respective levels and have been sharing funds for common environmental programs. As they gradually improve their performance in NRM, environmental governance continues to form new shape and strength along the process. Environmental offices at various levels have been recently created to effectively carry out programs responsive to community issues and problems, and to contribute to full attainment of AVLDA goals.

Limitation of LGU capability is recognized, and most local planners and technical personnel are increasingly finding ways to strengthen their ability in order to be effective in their duties. Investment for capability building has yet to be given priority in annual budget programs. Understanding of environment in consideration to upland and lowland dynamics requires specialized skills which so far are lacking with LGU technical staff.

Sustaining the alliance is one very critical issue because political terms of office of local leaders change every three years. Although two elections have passed, question still remains with how long this alliance will hold. Observations point out that the role of permanent local planners to influence their local elective leaders is significant. Many still believe that for as long the flooding problems remain unsolved, LGUs on the basis of their mandate would still be able to respect partnership as a basic political strategy. Many LGU members shaped and designed their programs and projects from AVLDA learnings and information generated along activity processes.

The AVLDA is likely to become more effective given recent realization of political leaders and technical people that it has significantly contributed to unique strength of local governance. Recently, it has gained prominence to President Gloria Macapagal Arroyo for the initiative. Likewise, Allah Valley is getting much attention with respect to preservation of the Liguasan marsh.

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