

THE MALVAR CODE: AN EVALUATION OF THE RURAL ENVIRONMENTAL POLICY FRAMEWORK OF MALVAR, BATANGAS, PHILIPPINES

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Abstract

This paper aimed to evaluate the existing environmental code of the municipality of Malvar in Batangas. Specifically, this paper aimed to evaluate the quality, relevance and effectiveness of the existing policies on water resources particular on water pollution abatement in the three river systems of Malvar. It made use of triangulation of methods: observation, interview and survey. A total of 40 samples were adopted and proportionately distributed to Bagong Pook and Poblacion-barangays considered as major pollution contributor. Twenty household-respondents from each barangay were selected from the list of households living along the river since Malvar- MENRO reported that household use and dumping of solid waste were critical in these areas. Results showed that quality in terms of activities and resources was not elaborated in the three ordinances; though these policies were relevant; River Protection Ordinance had the least level of awareness; effectiveness of implementation was constrained by politics. The study concluded that historical developments of the three ordinances revealed of a policy framework which is top down approach. These ordinances were of great relevance to the need to protect San Juan River and its tributaries. However, the absence of Implementing Rules and Regulations (IRR) for River Protection and Anti-Littering Ordinances affects the extent of their implementation.

Keywords: policy framework, municipal environmental code, water pollution, river protection, river systems

I. INTRODUCTION

Many factors affect the quantity and quality of water around the world. These include increasing population, rapid urbanization, agricultural developments, globalization, industrial development and

poor wastewater regulation. These activities have not only depleted existing water resources but also generated pollution of water (Saravanan, and Gondhalekar, 2013) and eventually environmental degradation. Environmental degradation is the deterioration of the environment through

depletion of resources such as air, water and soil leading to the destruction of ecosystems, affecting health, quality of food, and the air of humanity Sherif, Aaref (2015).

Water pollution is a global problem because of its severe impacts on the usefulness and value of water resources and negative impacts on ecosystems, fisheries, food production, health and social development, and economic activities. Likewise, pollution of freshwater resources is a result of negligence in wastewater management and poor sanitation (UNICEF,2004). Laxity in wastewater management is comprised of effluents from municipal wastewater treatment plants and surface runoffs. Rural non-point sources of water pollution include fertilizer runoff, pesticide runoff and discharges from intensive animal production enterprises .The problem is compounded by trans-provincial water pollution where river systems run through several provincial administrations.

On the other hand, poor sanitation and a lack of hygienic household practices is the major cause of water contamination (Okurut,2015). Sanitation is a key dimension of urban poverty and is composed of a wide-ranging set of processes ranging from safe disposal of human waste, cultures of hygiene, environmental cleaning practices, and the ways in which animals are kept. In fact, at least 23 percent of the 2.6 billion people lacking adequate sanitation are usually the informal settlers. These people are poor, underserviced, and urbanizing faster than cities (Davis,2006, Neuwirth,2006).

Though clean water is a public or common good, the effectiveness of water pollution control depends in large part on the suitability, stability and adaptability of governance structures and institutions. That is why the need to formulate policies and apply instruments to encourage sustainable water use and consumption remains a major challenge both in industrialized and in

developing countries (Kraemer, Choudhury, and Kampa, 2001.). Also, water resource and wastewater management were weakly captured or ignored; wastewater management was neither covered under environmental sustainability nor addressed. Indeed, natural resource management as well as institutional and societal changes was perceived as receiving too little attention (Langford, Malcolm & Winkler, ,2014).

In the Philippines, the Local Government Code of 1991 aiming to devolve power and authority to local political units is considered a major breakthrough in the Philippine legislature. Local governments have the authority to administer the affairs of government and have granted full trust to manage and take care of all matters under its authority through the planning, execution, control, and evaluation (Ahmad, Jamaluddin & Sri Rahayu Bardan, 2015). Among the basic services that were devolved from the national government to local government units (LGUs) is environmental management LGUs have the primary responsibility to protect and promote sustainability of all water within its territory for the benefit of the present and future generations, as well. So to address the issue of water pollution, part of government's response to the problem is the formulation of various policies (Elazegui, D., Rola, A. and Coxhead, I., 2001).

Malvar is a second class municipality of Batangas with nine rural and six urban barangays. Malvar, one of the 1,514 municipalities in the country presumed to have passed environmental protection ordinances to protect river systems within its territory. Malvar has enacted an ordinance called the Environmental Code of Malvar. For the protection of its three river systems, the River Protection Ordinance is enacted in 1998, the Anti-Littering Ordinance in 1999 while the Selective Plastic Ban Ordinance in 2011. However, very little is known with respect to the main objectives of these ordinances as well as the extent of their implementation in terms of the degree of

Table 1.
Basic Information of the Study Sites

River Systems in Malvar			
	San Juan River	Balete River	Alulod River
Drains toward	Laguna de Bay	Taal Lake	Taal Lake
Status	Polluted	Not polluted	Not Polluted
No. of barangay	7	2	4
Area covered	Santiago	San Pedro 2	Bulihan
	San Fernando	San Gregorio	San Isidro
	Luta Sur		Bilucan
	Luta Norte		San Gregorio
	Bagong Pook		
	Poblacion		
	San Pioquinto		
Major Contributor of pollution by household	Bagong Pook Poblacion		

enforcement, and cost-effectiveness of implementation process.

So this study was focused on the evaluation of the three ordinances: River Protection, Anti-Littering and Selective Plastic Ban in terms of quality, relevance and effectiveness to analyze the policy framework of Malvar Code.

II. METHODOLOGY

Polluted water and poor sanitation is still a problem in the peri-urban areas in developing countries despite national and local interventions though a number of laws because these laws tend to bypass the problem of informal settlements (UN-HABITAT; UN. 2011; WHO/UNICEF. 2012; (Okurut, Kulabako, Chenoweth & Charles 2015). Thus, the respondents of this study were those informal settlers living along the river tributary. They were identified based on two criteria: 1) should be living near the river or tributary; and 2) should have lived near the river or tributary since 1998. The list of households was taken from the

barangay. Thirty percent of the total population of informal settlers living near San Juan River was surveyed. A total of 40 samples were adopted and proportionately distributed to Bagong Pook and Poblacion-barangays considered as major pollution contributor. Twenty household- respondents from each barangay were selected from the list of households living along the river since household use and dumping of solid waste were critical in these areas. Table 1 shows the basic information of the study sites.

The data were gathered through a survey using questionnaires, documentary research, observation and interviews with barangay and municipal officials. Secondary data (copies of the three municipal ordinances, status report of the three river systems) were gathered from the Office of the Municipal Environment and Natural Resources Officer (MENRO). The researchers were accompanied by one MENRO staff during the interview, observation and administration of the survey questionnaires.

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	Poblacion		



a. San Juan River



b. Balete River



c. Alulod River

Figure 1. River Systems in Malvar.

This study was limited to San Juan River only since its area was populated by barangay residents mostly indigent and migrants. Bagong Pook is directly affecting San Juan River with households living near it, washing clothes and dumping garbage into the river tributary (Figure 1). Poblacion, on the other hand, has two river tributaries

where household canal and small scale hog raising waste were directed to.

III. RESULTS AND DISCUSSIONS

3.1 Quality of the Municipal Ordinances

3.1.1 Historical Development

To document how these ordinances evolved, key informant interviews were conducted to relate the events that brought to the passage of these laws. Table 2 shows the historical development of the three municipal ordinances related to water pollution abatement.

3.1.2 Activities

River Protection and Anti-Littering Ordinances had no citation of activity or series of activities to be done in the implementation, only Selective Plastic Ban ordinance. MENRO shall monitor the implementation of this ordinance through the Municipal Solid Waste Management Board in coordination with barangay officials, market stalls with Market Administrator, food establishments, groceries and supermarkets. Upon approval, the Municipal Information Officer shall conduct massive information, education and communication campaigns using all possible media such as print, radio, television, and internet. However due to lack of resources, information & education campaign (IEC) was done using print such as posters and flyers only. If only local government can allocate resources in a more efficient way, quality of service provision can be improved (Van der Loop, 2002; Smoke, 2003; Siugzdinien, 2008; Ayele, & Bokuretsion, & Tekle. 2011).

Furthermore, activities for implementation should have been better if citizens' forum, public councils, consultation with the people and participatory compliant evaluations were done (JCIDA, 2007).

3.1.3 Resources

Budget is said to be an important instrument in setting development program priorities in the local levels and the most important economic policy instrument for government (Ohanele, C. 2010). It is the reflection of government's socio and economic policy priorities translating

policies, campaign promises, political commitment and goals (Ohanele, C. (2010), and of political decisions between the executive and the legislature which have a tremendous impact on the living standards of the public. Thus, budget is also a measurement tool to evaluate the government's support for its citizens (Sentanu, 2015).

However, in the case of the three municipal ordinances, provision of resources was not stipulated. Resources where to get the fund in the implementation of the three ordinances were not mentioned.

3.2. Relevance of the Municipal Ordinances

Relevance is an indication of response to current needs and situation (SANREM, 2001). Based on key informant interviews, River Protection and Anti-Littering Ordinances were passed in response to a tremendous pollution along tributaries in Poblacion during the 1990s. They said "*Grabe ang basura dati doon, walang mabubuhay na isda dahil napakaitim.*" Selective Plastic Ban Ordinance, on the other hand, was passed because of the clogging problems due to heavy concentration of plastic in canals during rainy season.

3.3. Effectiveness of Implementation

3.3.1 Mechanism employed in the implementation process

In the implementation process, stakeholders' participation is a must. Stakeholders are individuals or groups (citizen groups, labor unions, political parties, government agencies, elected leaders, and policy analysts) who have a stake in the policies as they affect and are affected by the government's decision (Dunn, WN, 2003). Likewise, (Okereka, 2002) wrote that "projects implemented by most local government are

Table 2.
Basic Information of the Study Sites Historical Development of Municipal Ordinances

Municipal Ordinance	Historical Development
River Protection Ordinance	Municipal Ordinance No. 01 s. 1998. This ordinance was enacted on March 16, 1998. Though the ordinance had not mentioned specific law as basis for enactment, key informant said it was passed as ordinance in compliance of an existing state law. Since it was based from a national law, it prohibited acts like dynamite fishing, and other forms of destructive fishing, illegal logging and smuggling of logs, smuggling of natural resources products and of endangered species of flora and fauna which were not appropriate in the context of Malvar river systems. It covered all rivers, streams, creeks and all other man made canals leading to a river. Violations of this ordinance shall be punishable by fine not exceeding P2,500 or imprisonment not exceeding six months or both.
Anti-Littering Ordinance	Municipal Ordinance No. 01 s. 1999. Though not mentioned, this ordinance enacted on March 10, 1999 was again based on a national law. Violations of this ordinance shall be punishable by fine from P500 to P2,000, or imprisonment of two days to three months, or two to three days of community civic work.
Selective Plastic Ban Ordinance	Municipal Ordinance No. 01 s. 2011. This ordinance was enacted on October 5, 2011 based on Article II, Sec. 16 of the Philippine Constitution, Article III of R.A. 7160 (Local Government Code), and Article I, Sec. 2 (b) of R.A. 9003 (Ecological Solid Waste Management Act of 2000). Aside from non-renewal of business permits, any person found guilty of violating sections 5, 6 & 7 of the ordinance shall suffer a penalty ranging from P1,000 to P2,000 or imprisonment of not less than 30 days or both fine and imprisonment.

less a product of a well thought out bottom-up discussions with these stakeholders, hence, they withhold their support. After planning with the top management and providing an overview of the situation and the conditions of the organization including the mission, goals, objectives and available resources, the next step is to give authority to the bottom level of management to plan (Umar. H.2001,).

Nevertheless, both Poblacion and Bagong Pook had no barangay resolutions on the three ordinances. Chito

Vista, barangay secretary of Bagong Pook said *"Once we received the ordinance we just implement it. We have our information dissemination through barangay general assembly"*.

On the other hand, Polly Linatoc, barangay secretary of Poblacion explained that in the implementation of ordinances, they conduct barangay assembly and have flyers distributed through garbage collectors. He added that barangay captain had secret look out for violators but until now, there is no single record of violator.

Table 3.
Extent of Implementation and Realization of Objectives

Barangay	Municipal Ordinance	Extent of Implementation and realization of objectives of Ordinances
Bagong Pook	01 s. 1998 River Protection	Sixty-five percent of the respondents were aware of the existence of this ordinance; 23% of them knew the fines and penalties for violators; 65% of them believed that this ordinance could be of help in protecting San Juan River; however, 65% of them obeyed the ordinance.
	01 s. 1999 Anti-Littering	Ninety percent of the respondents were aware of the existence of this ordinance; 78% of them knew the fines and penalties of violating the ordinance; 57% of them were informed in the barangay through general assembly and distribution of posters and flyers; 75% of them believed that this ordinance could be of help in the protection of San Juan River; 75% of them obeyed the ordinance with 100% compliance.
	01 s. 2011 Selective Plastic Ban	Respondents were 100% aware of the existence of this ordinance; 90% of them knew the fines and penalties of violating it; 84% of them were informed about the ordinance in the barangay through general assembly and distribution of posters and flyers; 80% believed that this ordinance could be of help in the protection of San Juan River; 90% of them obeyed with 83.3% using eco bags.
Poblacion	01 s. 1998 River Protection	Only 50% of the respondents were aware of the existence of this ordinance; 50% believed that it could protect San Juan River tributaries; and 50% of them obeyed.
	01 s. 1999 Anti-Littering	Respondents were 90% aware of the existence of this ordinance; 75% knew the fines and penalties of violating it; 87.5% of them were informed by the barangay through general assembly, posters/flyers and garbage collector; 95% believed that it could help in the protection of river tributaries; 95% obeyed and 47% would segregate waste for compliance.
	01 s. 2011 Selective Plastic Ban	Respondents were 95% knowledgeable of the ordinance with 95% knowledge on the fines and penalties; 55% of them were informed through the joint efforts of the barangay council in the assembly and garbage collector in the dissemination of information; 95% of them believed that it could protect the river tributaries and 95% of them obeyed with 32% use of eco bag and 5% non-use of plastic.

3.3.2 *Extent of implementation and realization of objectives*

With regards to the extent of implementation and realization of objectives of the ordinances, it could be noted in Table 3 that Selective Plastic Ban Ordinance has the highest level of awareness with regards to its existence with 97.5%, followed by Anti Littering with 90% and the least is River Protection Ordinance with 57.5%. Table 3 discusses the extent of implementation of the three ordinances.

3.3.3 *Facilitating and constraining factors in the implementation process*

A key area for the successful implementation of legislative measures for specific societal issue is the political will of the local government unit concerned. The leadership in the 1990s is far different from the present leadership for having his flagship program – 5K Agenda (*Kalusugan, Karunungan, Kabuhayan, Kapaligiran, Kaunlaran*). The existence of ordinances or laws, however, should be supported by government logistics for its effective implementation. From the point of view of the municipal government, implementation process was greatly affected by the system of a very long wait for the release of funds.

In the barangay level, a very strong public support system of the residents through attendance to general assembly facilitated the implementation of the ordinances. Posters and flyers distributed by MENRO were also of great help. On the other hand, politics was a major constraining factor. As Ahmad. J.(2011), Langford, Malcolm & Winkler, Inga (2014) pointed out *“If the policy does not achieve what is meant, then the fault is often not directed at the policy itself, but rather on political failure or management aspects in the implementation of the policy”*.

In addition, election of barangay officials changes the management and priorities. Therefore, continuity was usually derailed. But, if a keen political administrator who was elected and sworn into office, has positive attitude to serve his people and not himself, implementation of policy could be enhanced (Ayapere, Pere, 2015).

Likewise, poor sanitation can be solved by democratic politics. This suggests that goals and targets on democratic governance may be just as important as improving access to water and sanitation (Ahmad, Jamaluddin & Sri Rahayu Bardan, 2015.). This is supported by saying that the level of broader democratic governance and more specific water governance (including user participation and presence of civil society) has a high correlation with access to water and sanitation.

Then, Post-2015 Goal 6 which aims to universalize access to water and sanitation, treat all municipal and industrial wastewater prior to discharge and establish good water management practices (Krause, Matthias. 2009; UN, 2013) would be possible .

IV. CONCLUSIONS

Based on the discussion, historical developments of the three ordinances revealed Of a policy framework which is top down approach. These ordinances were of Great relevance to the need to protect san juan river and its tributaries. The Absence of implementing rules and regulations (IRR) for river protection and Anti-littering ordinances affects the extent of their implementation.

It is recommended that three important things to consider in the pursuit of reforms for local environment management should be relevance, enforceability, and sustainability (SANREM, 2001). Participatory approach is recommended so that the legal and institutional frameworks ensure that every one's responsibility is clearly defined;

thus, synergy among various entities is needed. It is also recommended that sanitation programs for the informal settlers be considered by the LGU because dwindling freshwater resources and polluted waterways bear witness to the limits of the system of sanitation (Environment Agency, 2006; Tse, 2015).

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