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The Philippine Northern Negros Geothermal Project: Transformation from Forest Vs. Power Conflict to Forest and Power Coexistence

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ABSTRACT

The Northern Negros Geothermal Project in the Philippines is the government's solution to the projected power crisis by year 2011 in the Negros Island. The geothermal resource is however located within a buffer zone at the edge of the Kanla-on Natural Park resulting in strong opposition of some sectors of society. The paper discusses the conflict resolution process undertaken by Energy Development Corporation to turn around the "power vs. forest" issue into a situation of coexistence by: a) securing local permit for firm regulatory framework, b) stakeholder mapping, c) proactive engagement of stakeholders, d) communication plan using a robust database, e) building confidence in EDC through its track record in forestry, f) imposition of stringent permit conditions, g) assurance through an operation beyond environmental compliance and h) transparency via third party monitoring through an oversight body. Lastly, the issue of social acceptability of power projects in forest environments is examined in detail.

1. INTRODUCTION

The Renewable Energy Law (Republic Act 9513) was promulgated by the Philippine Congress on December 16, 2008 after a 16-year of campaign of the government (Philippine Congress, 2008). It became effective on January 30, 2009. Leading the renewable energy (RE) movement since 2003 is the province of Negros Occidental with the goal to make their province an RE model for the country.

Since 2007, Negros Occidental has been experiencing intermittent power outages for the past 2 years. By 2008 the province appealed to the National Government for the dispatch of diesel generators to avert the growing power problem (Visayan Daily Star, 2008a and b). It is during this time that the Negros Occidental Government evaluated several RE options like solar, wind, geothermal, hydro and biomass. The review showed that the RE resources of the province were either not delineated or were projected to have prohibitive prices, leaving coal and geothermal as the remaining power options for the province. Both power sources were found to meet the timing, baseload requirement and competitive pricing demanded by the Negros publics.

The Energy Development Corporation (EDC), then a government owned and controlled company offered to augment its Northern Negros Geothermal Project (NNGP) by expanding into the buffer zone of the Mt. Kanla-on Natural Park to address the current energy deficiency in province that is projected to deteriorate by 2011. The situation in Negros Occidental is complex because while a few sectors oppose power from coal and demand that their power be derived from RE sources, they also oppose geothermal from Mt. Kanla-on due to its environmental setting. The geothermal resources of the province lie within the margins of the Mt. Kanla-on Natural Park which is a protected forest since 2001 by virtue of Republic Act 9154 due to its rich biodiversity (Philippine Congress, 2001).

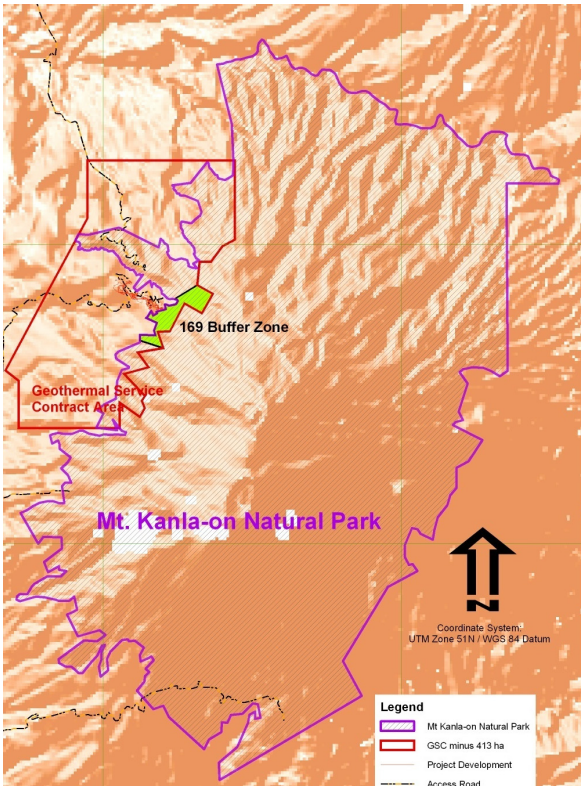

Figure 1: Geothermal resource at the edge of the Mt. Kanlaon Natural Park.

2. ENTRY TO MT. KANLA-ON BUFFER ZONE

To access the geothermal resources in Mt. Kanla-on, EDC participated in a legislative process that lasted for 5 years and 4 months from February 1996 to August 2001 resulting in the passage of the Mt. Kanla-on Natural Park Act which allocated a 169-hectare geothermal area as a buffer zone at the edge of the park. The geothermal buffer zone was delineated after an extensive technical and social assessment involving all stakeholders and guided by government and third party experts. The buffer zone was conceived as a multiple-use area that could provide economic opportunities to forest communities. These forest settlers shall be managed in place so that they will have no more need to encroach the richer parts of the park, thus fulfilling the protective function of buffer areas.

When it was time to implement the geothermal expansion project in 2008 due to the impending power crisis, concerns

on the entry to the buffer zone surfaced. Despite its possession of a 1995 Environmental Compliance Certificate with the required consultations, a second round of social acceptability process was deemed necessary to secure the local permit for the expansion project.

Today, well drilling in the Mt. Kanla-on buffer zone is on-going with a target power generation schedule of year 2011. The process to gain social acceptability for the utilization of geothermal resources in the Mt. Kanla-on buffer zone and the transformation of NNGP from a conflicted situation to one of coexistence are discussed.

2.1 Issues Raised on NNGP

A number of legal and technical issues were raised against the NNGP in 2007, namely, the unconstitutionality of the Mt. Kanla-on Natural Park Act, the reduction of forest cover, the loss of habitats and biodiversity, alteration of ecosystem services and the possible profit objectives of EDC because of its planned privatization at the time.

The concerned sectors articulated their issues against NNGP through various modes. They attended government-led public hearings, sponsored their own public fora, administered signature campaigns, conducted internet discussions and called for mass rallies against EDC.

Figure 2: Rally against NNGP's entry to the buffer zone.

These initiatives put tremendous pressure on the environment and energy regulatory agencies as well as on local government officials that facilitated the consultation process on the proposed entry to the Mt. Kanla-on buffer zone. Only a minority of the population joined these social mobilization initiatives against NNGP. Finally, on July 10, 2008 the opposition filed an appeal for Temporary Restraining Order (TRO) with the environmental court in Bacolod City, Negros Occidental to stop the geothermal operation in the Mt. Kanla-on buffer zone. Although regular hearings have been conducted on the case, the request for the TRO has not been granted by the court to date.

2.2 Response to Concerns on NNGP

In crafting the response to the emotional campaign against NNGP's entry to the Mt. Kanla-on buffer zone, EDC as the geothermal developer accepted the issues of the opposition as manifestations of legitimate sentiments of a segment of the Negros society. From January to July 2008, the company embarked on a systematic approach to gain social acceptance and secured the Permit to Operate from the local government. In brief, EDC's multi-pronged approach consisted of a proactive stance, the implementation of a comprehensive communication plan and the continued stakeholder engagement

2.2.1 Local Confirmation of the Buffer Zone Legislation

While the national legislation through the Mt. Kanla-on Natural Park Act is the legal instrument for NNGP's entry into the buffer zone, the company found it prudent to seek local approval by filing for a Permit to Operate with the Negros Occidental Provincial Government on December 5, 2007 when it was apparent that the existing NNGP needed to be expanded to address the power deficit in the province by 2011. The decision was assessed by the Provincial Council as not necessary. However to EDC, it is a demonstration of respect for local authorities and the local public. From the operational standpoint, the local permit was secured to provide a clear basis for the geothermal operation and to serve as a firm regulatory framework for the project.

During the deliberation on EDC's permit application, the Provincial Council delegated the decision on the technical aspects of NNGP to the relevant government agencies, the Department of Environment and Natural Resources (DENR) and the Department of Energy (DOE) which both issued their approval of the NNGP operation in the buffer zone. These were received by the Provincial Council from DENR and DOE on March 26, 2008 and April 2, 2008 respectively. With this confirmation of the technical soundness of NNGP, the attention of the Provincial Council in their subsequent public hearings focused on the social acceptability of the project and how it could balance the twin need for power and environmental protection. The company fully cooperated with the social review as it believed it is not enough for NNGP to be scientifically credible and economically beneficial for without public understanding and support, the project will not be sustainable.

Figure 3: Public hearings were held by the Provincial Council on NNGP entry to the buffer zone.

2.2.2 Developing a Robust Database

To resolve the issues on NNGP, the company recognized the need to understand the risks surrounding the main conflict on forest and power. There was a need to unbundle the catalysts, causes and outcomes observed. The exercise required the gathering of accurate, objective and realistic scientific and social information on the ground as bases for the company's action plans. This requirement was communicated to all groups of NNGP and thereafter, information from employee volunteers was regularly obtained. The information sources included objective

scientific studies, private researches from networks and face to face interactions during public dialogues and hearings to clear out assumptions.

2.2.3 Stakeholder Mapping

An important element of the EDC's conflict resolution plan was a comprehensive communication initiative. The process commenced with a stakeholder mapping of NNGP's various publics to understand what they valued most in order to ascertain their point of view. The profile of the concerned sector was an important guide in matching the messages to the audience to facilitate their better appreciation of the company's position. The objective of the exercise was to empower the various Negros publics with information as basis for their informed decision on the NNGP issues.

2.2.4 Gathering and Strengthening Support for NNGP

The main feature of the strategy for NGPP's social acceptability was the communication of the environmental and social soundness of the project which were validated during the legislative process of 1996-2001 and to complement them with updated information. Research-based data formed the core of the information disseminated by the company. Techniques in communicating and analyzing scientific information also helped in developing the information plan (Jakes, 2007). The company embarked on a proactive stance engaging all sectors and conducted an aggressive information campaign tapping the company's own technical staff that could provide local information, explain what was happening on the ground and validate the implementation of the environmental measures committed by the company. NNGP was also opened for visitation for all sectors to observe the company's operation.

2.2.5 Building Confidence in EDC

For stakeholder engagement to succeed, inter-personal and institutional trust is important. In the case of the NNGP conflict, EDC depended on its record in managing the well-preserved forests and ecotourism sites in the 266,625-hectare reservations that it is administering for the government. The company's confidence in its commitment to reforest the Mt. Kanla-on buffer zone was based on its establishment of 9,500 hectares of forests with 7 million trees in other geothermal sites years before its proposed entry to the Mt. Kanlaon buffer zone.

2.2.6 Shift in the Driver of the Information Process

An important approach adopted by the company was to shift from an implementer-led to the government- and publicly led information efforts. Instead of leading the discussion, EDC became a participant of fora and dialogues among experts and regulatory agencies. These served as venues where third parties communicated their best practices and these third party experiences educated the public on the issues as well as reinforced the company's arguments.

The third party-sponsored dialogues emphasized the need for the public to accept that there is no zero risk and that there was a need for the public to determine and agree with the government what is the acceptable level of risks for NNGP. This joint decision on NNGP considered the emerging power crisis, environmental protection and economic development for public welfare. The underlying principle that evolved during the discussions was the respect for various world views and the acceptance that there are legitimate divergent interpretations where no one framework is more rational than the other.

2.2.7 Imposition of Stringent Conditions

After the prolonged 6-month consultation on the NNGP issues, the Provincial Council decided to issue the permit. While the council assessed that there is a need to tap the geothermal resources in the buffer zone for the greater good, it also recognized the concerns of some sectors and imposed stringent conditions that were contained in the July 17, 2009 Memo of Agreement between EDC and the Provincial Government (2008). The conditions included the: a) sale of power to the province at a price lower than competition at the time of NNGP's commercial operation, b) 100% inventory and marking of all trees to be affected, c) submission of a weekly cutting plan and for the Oversight Committee or their representatives to witness the cutting operation, d) limiting the cutting of trees with diameter beyond 100 centimeters to only 34 pieces, e) reforestation of 400 hectares in 5 years with at least 160,000 trees, f) preferential employment of residents and g) quarterly reports to the Oversight Committee.

2.2.8 Installation of an Oversight Body

In tandem with the conditions of the permit, the Provincial Government created an Oversight Committee to monitor the operation of NNGP in the buffer zone. The Committee is composed of the Chairmen of the 3 committees of the Provincial Council, namely, the Environment, Energy and Laws. They are joined by the Provincial Legal Counsel, the Superintendent of the Mt. Kanla-on Protected Area Management Board and the head of the Negros Forest Inc., a respected Non-Governmental Organization (NGO) in the province. The Oversight Committee was observed to have provided the regulatory vacuum in the Mt. Kanla-on Act.

Figure 4: Chairman of the Oversight Committee inspecting the marked trees in the buffer zone.

2.3 NNGP Gained Multi-Sectoral Support

The company's communication initiatives, the third party sponsored dialogues, the sectoral visits to NNGP, the stringent permit conditions and the installation of the Oversight Committee to regulate the geothermal operation in the buffer zone resulted in the current stakeholder support for NNGP, emergence of new NNGP advocates from the participants of the various consultation activities and positive public reports on NNGP. These are the bases for NNGP's social license to operate.

Today, NNGP has the support of the majority of sectors consisting of the concerned government regulatory agencies

(DENR and DOE), the local government units (province, city, town and village), some selected legislators, known environmentalists, local and national environmental NGOs, farmers and Peoples Organizations (POs), a few church leaders, business leaders and a number of national and local universities. Despite this wide band of support, the project continues to address the issues of a few remaining concerned groups. EDC continues to open avenues of reconciliation with these groups to promote the smooth of NNGP.

2.4 Examining the Social Acceptability of NNGP

The NNGP case involved a conflict on the desired land use for the Mt. Kanla-on buffer zone. It was a decision between conserving the forest versus the use of the forest to support geothermal operation. The conflict was a result of competing values, little scientific agreement on facts and incomplete information as basis for decision by the opposing groups. The evolution of the successful NNGP social acceptability process was analyzed.

2.4.1 NNGP's Science-Based Approach to Social Acceptability

The original approach of EDC on the NNGP forest issue is from the viewpoint of ecosystem management which is based on scientific analysis with the assistance of experts from the academe and the company's experience as administrators of 4 geothermal watershed reservations for the past 25 years.

In order to use 12.5 hectares of the 169-hectare geothermal buffer zone in Mt. Kanla-on, EDC proposed to replace the trees in the affected area with indigenous trees characteristic of the forest in the buffer zone at a level that will maintain if not augment the baseline ecosystem services. These ecosystem services were measured from the original tree biomass in terms of volume of water stored, volume of carbon dioxide absorbed from the atmosphere to protect man from greenhouse gas effects and volume of oxygen released to the atmosphere for the respiratory use of man. The replacement of the ecosystem services will ensure that the area will continue to provide forest products and services to the various Negros publics.

In designing NNGP, the use of every inch of natural forest was assessed as the company submits that while forest ecosystems are dynamic and can absorb changes introduced by man, there are limits to their ability to withstand change to maintain their integrity, biodiversity and productivity. To monitor if this balance is met, the company entered into a joint project with the Institute of Biology of the University of the Philippines for regular biodiversity surveys of the buffer zone since 2008 at the start of activities in the buffer zone.

The original thesis of the company was that all sectors of society would accept NNGP because of its ecological compatibility and its economic objectives. However, EDC's experience in NNGP demonstrated that gaining social acceptability in a protected area like Mt. Kanla-on was a challenge.

2.4.2 Progression of NNGP Position to Non-Utilitarian and Social-Based Approach

The difficulty of the NNGP forest issue lies in the concept of social acceptability itself. It is important to understand the reason for securing the social acceptability of NNGP and any other development project. Social acceptability is a requisite for any decision concerning natural resources because of the public's right of access to information and because the NNGP case concerns a forest patrimony which is common natural resource. Beyond this obligation, securing a social license had its operational value. Social acceptability connotes cooperation which will reduce harmful conflicts, minimize project implementation cost and share the risk of the decision with the stakeholders.

The elements making up social acceptability are well studied (Brunson, 1996; Brunson and Reiter, 1996; Endter-Wada et al., 1998; Shinder et al., 2002; and Stankey and Shindler, 2006. The key in facilitating social acceptability is to identify who is the public and to determine what is known as the public's interest. Since we have a plural society with individual interests, we can view social acceptability as an aggregate expression of shared judgements among discrete sectors of society. As social acceptability is ultimately based on individual values, the respective individual judgments must consider the individual's experience and ethical concerns in addition to scientific information offered by the project developer.

Another critical concept of social acceptability is that judgment is temporal and not final (Shindler et al., 2002). This means that public acceptance may change. Continuous discussion leads to learning of project alternatives, stakeholder perspectives and values and scientific information. All these information are bases for decision.

The main hurdle in the social process of NNGP stems from the firm belief of opposing sectors in the spirituality of nature and the need to preserve its biological integrity, evolutionary stability and beauty similar to the Leopoldian forestry principle (List, 1996). This position conflicts with the utilitarian concept of developing Mt. Kanla-on buffer zone to support the geothermal operation for power security and economic development.

Because of the divergent views on the use of the Mt. Kanla-on buffer zone, the government adopted the concept proposed by Gobster (1996) where the suitability or compatibility of the introduced change is judged relative to the management goal for the forest. In this concept, the judgment is cognitive and contextual as to what is appropriate rather than perceptual and personal as in the Leopoldian forestry principle. This approach is a middle ground between pure conservation and pure economics. Kuentzell (1996) alternatively calls this approach as socially acceptable forestry. He refers to this concept as a sociological consensus that seeks an optimal mix of values of the forest ranging from spiritual, historical, aesthetics, material use, recreation and for knowledge.

The mobilization of the majority of the Negros publics to support NNGP was the result of a public consensus empowered by complete information coming from all sources. It is an indication of the accommodation of divergent views. This accommodation is however premised on a system that will ensure check and balance in support of public interest.

2.4.3 Mechanism of NNGP's Social Acceptability

Brunson (1996) defines the complex concept of social acceptability as a result of "judgmental process where individuals perceive the reality with its alternatives where they decide if the alternative offered is superior or sufficiently similar to the most favorable alternative". In addition, Firey (1960) concluded that the success of natural resource programs relies on 3 requirements, namely: a) physical feasibility based on ecological compatibility, b)

economic viability and c) cultural adoptability based on the perception of the public.

A review of the evolution of the NNGP forest conflict demonstrates the adherence of the NNGP social process with the findings of Firey and Brunson. Based on the prescriptions of Firey, the NNGP forest management plan which calls for the replacement of ecosystem services and the development of forest for watershed recharge fulfills the requirement for ecological compatibility. Further, the power generated by NNGP will provide economic support in the province. Lastly, a consensus on what is best for the greater good and what is the appropriate forest plan to support this decision were the key elements of the social acceptance of the project.

Similar to the Brunson findings, the Negros publics had to choose the most superior option from several power alternatives in terms of its utility in addressing their needs while at the same time minimizing the impact on the Mt. Kanla-on forest in the buffer zone. The long and emotional consultations were welcomed as they were symptoms of exchanges of all viewpoints. But the empowerment of the Negros publics with information from EDC, government and other organizations, inclusive of the concerned sectors led to a greater appreciation of the EDC arguments and a favorable consensus on NNGP. The social process for NNGP was assisted by the rigor that EDC inputed into its scientific analysis on how geothermal operation can be made to coexist with a forest environment.

2.5 Maintaining the Social Acceptability of NNGP

2.5.1 Assurance Through an NNGP Operation Beyond Environmental Compliance

The sustainability of NNGP's operation depends on its technical competence and equally on its continued social acceptance. The latter can be reinforced by delivering all environmental commitments to the government and the Negros publics. NNGP continues to measure to this performance parameter by operating beyond environmental compliance as evidenced by the following on going NNGP activities: a) The geothermal operation is limited within a 12.5-hectare versus the 169-hectare geothermal block allocated in the Mt. Kanla-on buffer zone, b) EDC saved 30% of the trees allowed under its tree cutting permit, c) EDC pre-invested in ecosystem services by planting 535 hectares before its entry into the buffer zone, d) It is undertaking the 400–hectare reforestation in compliance with the permit to replace the ecosystem services affected in the area and e) The replacement reforestation was accelerated and it will be completed in 2 years instead of the 5 years as required under the permit.

The following table shows the build-up of ecosystem services in the Mt. Kanla-on buffer zone as a result of NNGP.

2.5.2 Government Role in NNGP Social Acceptability

Decisions will continue to be made by government during the life of NNGP and because personal judgments and social acceptability tend to be temporary especially when new information are received and new interests are formed. Therefore, government must continue to develop instruments that will facilitate decisions which will serve the multiple interests of society. The framework must address the twin concern for ecologically responsible forestry which is based on good science and socially acceptable forestry that supports the needs of the community. The process experienced by NNGP confirms the need for a governance system to control the evolutionary dynamics of the project (Miller and Lessard, 2007).

Table 1: Build Up of Ecosystem Services in the Buffer Zone.

Ecosystem Service	Cleared Area (12.5 has.)	Replace-ment Forest (400 has.)	Previous planting (535 has.)	Total Services
Water storage	71 gal.	2,280 gal.	3,050 gal.	5,401 gal.
Absorbed carbon dioxide	55 tons	1,748 tons	2,338 tons	4,141 tons
Released oxygen	147 tons	4,692 tons	6,276 tons	11,115 tons

At the start of the NNGP evaluation, there was a dilemma by the local government in owning the process. This is a major factor that needs consideration by the government. Because social acceptability is also a political activity that concerns choices by the people, there is a tendency for groups from all camps to influence the process. Thus, the will and the capacity of government to function as a regulator is crucial to the continued operation of any approved project in the locality.

2.5.3 Maintaining Good Relations with Stakeholders

As in any other development project, the proactive establishment and continued relationship by the company with the community will reinforce the social license of NNGP. In 2000, Joyce qualifies that an effective relationship is one that is based on respect, inclusion and consultation. EDC strives to practice these by encouraging community participation in the monitoring of NNGP since inception and in the sharing the benefits from the geothermal project through its various community socio-economic programs since 2001.

3. CONCLUSION

The following lessons are derived from the company's experience in resolving the NNGP conflict:

a) A clear legal and regulatory framework will reduce the uncertainty of a development project.

b) Social acceptability is a process which is a result of an informed public forming a shared judgment that accommodates divergent views to come up with a decision that is for the greater good.

c) Since social acceptability is based on personal judgments, it is subject to change and is never permanent. This, equal care and efforts are needed to sustain it.

d) Government must develop a coherent institutional instrument to help facilitate the assessment of continuing social issues that will be faced by the project if it is to assist in its sustainable operation.

e) The company can maintain the social acceptability of NNGP by nurturing the trust and confidence of stakeholders by delivering all its environmental commitments and by maintaining its good track record.

f) EDC's license as a result of its technical sustainability and social acceptability is not an assurance for its continuous operation. The company must embrace all the risks as integral to the project and must be ready to mitigate to positively shape its evolution throughout the project life.

REFERENCES

Brunson, M.W: A Definition of "Social Acceptability" in Ecosystem Management. In :Brunson, M.W.; Kruger, L.E.; Tyler, C.B.; Schroeder, S.A., Tech. eds. Defining social acceptability in ecosystem management: a workshop proceedings; Gen.Tech.Rep.PNW-GTR 369. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, (1996), 7-16.

Brunson, M.W., and Reiter, D.K.: Effects of Ecological Information on Judgments about Scenic Impacts of Timber Harvest, *Journal of Environmental Management*, **46**, (1996), 31-41.

Endter-Wada, J., Blahna, D., Krannich, R., and Brunson, M.: A Framework for Understanding Social Science Contributions to Ecosystem Management, *Ecological Applications*, **8**, (1998), 891-904.

Firey, W.: Man, Mind and Land, The Free Press, Glencoe, Illinois (1960), 256 pp.

Gobster, P.H.: Forest Aesthetics, Biodiversity and Public Appropriateness of Ecosystem Management Practices. In :Brunson, M.W.; Kruger, L.E.; Tyler, C.B.; Schroeder, S.A., Tech. Eds. Defining social acceptability in ecosystem management: a workshop proceedings; Gen. Tech.Rep.PNW-GTR 369. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, (1996), 77-97.

Jakes, P.: Social Science Informing Forest Management-Bringing New Knowledge to Fuel Managers, *Journal of Forestry*, (2007), 120-124.

Joyce, S.: Social acceptability and resource development in Latin America, *The Canadian Mining and Metallurgical Bulletin*, **93** (2000), 1-9.

Kuentzel, W.F.: Socially Acceptable Forestry: Mediating Compromise of Orchestrating the Agenda. In :Brunson, M.W.; Kruger, L.E.; Tyler, C.B.; Schroeder, S.A., Tech. Eds. Defining social acceptability in ecosystem management: a workshop proceedings; Gen. Tech.Rep.PNW-GTR 369. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, (1996), 49-63.

List, P. Leopoldian Forestry and the Ethical Acceptability of Forestry Practices. In :Brunson, Mark W.; Kruger, Linda E.; Tyler, Catherine B.; Schroeder, Susan A., Tech. eds. Defining social acceptability in ecosystem management: a workshop proceedings, Gen. Tech.Rep.PNW-GTR 369. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. (1996), 25-36.

Miller, R. and Lessard, D.: Evolving Strategy: Risk Management and Shaping of Large Engineering Projects, MIT Sloan School of Management, USA (2007), 38p.

Memo of Agreement of Negros Occidental Provincial Government and Energy Development Corporation (July 17, 2008).

Philippine Congress. 2001. Republic Act 9154 entitled the Mt. Kanla-on Natural Park Act.

Philippine Congress. 2008. Republic Act 9513 entitled "The Renewable Energy Act".

Shindler, B.A., Brunson, M. and Stankey, G.H.: Social Acceptability of Forest Conditions and Management Practices: A Problem Analysis. General Tech Report. USDA Forest Service (2002), 68p.

Stankey, G.H. and Shindler, B.: Formation of Social Acceptability Judgments and Their Implications for Management of Rare and Little Known Species, *Conservation Biology*, **20**, (2006), 28-37.

The Visayan Daily Star. DOE: Negros can afford geothermal delay (September 4, 2008 a).

The Visayan Daily Star. Guv seeks generators amid power shortages (September 5, 2008 b).