

## **Sustainably Developing City by its Leaders and Community, Case of Puerto Princesa City of Island Palawan the Philippines**

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### ***Abstract:***

Former mayor Edward Hagedorn has set his vision “To see Puerto Princesa as model city in sustainable development.” This paper discussed how people have committed to accomplish this vision and also how they have contributed to recognize Puerto Princesa City as the City in the Forest in Philippines. The objective of this study was to describe, how leadership and locals have committed to create sustainably developing city. Findings of increased mangrove forest, increased forest cover and sustainable tourism development in the city are being discussed in this paper. Research findings prove that tourism, mangroves and forest cover in Puerto Princesa has increased compared to 1992 records. A methodology of participative action research is used in this study. General discussions, formal and informal interviews, observations and secondary documents are being used in order to carry this study.

***Keywords:*** Carbon Neutral City, Community, Ecotourism, Leadership, Sustainable Development,

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### **1. Introduction**

This paper discusses how planning is conducted, stakeholders act, leaders lead and community supports in Puerto Princesa city towards creating a sustainably developing city. Contribution of tourism, protection of mangrove forest and forest covers of the city are introduced in this paper. Why people engaged in protecting environment are also discussed. This paper will answer the questions of “What is the unique development story of Puerto Princesa City and what are the components (ingredients) of such development?”, “Who are the stakeholders involved in the process of sustainable development in Puerto Princesa City?” and “How do community stakeholders and their leadership contribute to the development of community-centered development projects?”

#### **1.1. Puerto Princesa City**

Puerto Princesa is located in the country's last ecological frontier, Palawan Island. It is the land where one of the world's seven natural wonders can be found known as the Underground River. Puerto Princesa has a rich cultural heritage and it recognizes cultural minority groups and they are given extended education, livelihoods and modern technology without affecting their culture. The city owns a sanitary landfill, which serves as a model for the whole country to show how to manage trash without harming nature. Puerto Princesa is an exceptional place in the country and also in the region. It is quite often to experience floods and heavy rainfall in the Philippines, but compared to other places of the country, this place is not vulnerable to severe natural disasters. Based on the formal and informal discussions, locals are fully aware about their uniqueness.

In terms of environmental knowledge, Puerto Princesa has ranked high in the country. Community takes part in mangroves and tree planting activities. Leaders and policy makers of the city have transformed high environmental knowledge to their local people. Strategic Environmental Plan (SEP) is uniquely applied in Palawan. The city was attracted by migrants and 67 percent of them are from the outside of Palawan. People are attracted by the opportunities of the city especially green opportunities and very rich natural resources. This is a tourism destination full with biodiversity and maintains conservation. Puerto Princesa has a better air transportation service, protect natural resources and now this place is declared as a safe place to live peacefully with no tsunami and no earthquakes. Accessibility, infrastructure, urban centers, banks and Robinsons supermarket has increased the attraction. Furthermore, Hyundai, Nissan, Toyota, and Mitsubishi offices are situated here. Sooner there will be a place like Manila Ocean Park by a Singaporean investor. Aside from national laws Puerto have local government laws to protect its local environment. NGO's and local media participate in city government's efforts.

Tourists are interested to go to Puerto Princesa because of its rich, clean natural environment. Puerto Princesa is a place rich of clean beaches and rivers, that's why visitors come here and locals have a better understanding about it. Not only local politicians and planners see the exclusivity of the city, it has won several national and international awards during

the past two decades for its exceptionality. Visit Palawan website listed the following awards won by Puerto Princesa City as listed on Table 1.

**Table1: Awards won by the city**

Year	Award
1993	Earthday Award
1993	“Hoy! Gising” Award
1994	Best Local Government Unit Award
1994	Macli-ing Dulag Environmental Achievement Award
1994	Gantimpalang Panglingkod (GALING-POOK) Award for Bantay Puerto Program
1994	Award of Excellence: Cleanest and Greenest Component City of the Philippines
1994	Best Tourist Destination
1995	Peace Award
1995	Commerce and Conscience Award
1995	Cleanest Inland Body of Water, Region IV
1995	Nutrition Green Banner Award
1995	Award of Excellence: Cleanest and Greenest Component City of the Philippines
1996	Most Outstanding Performer of the Year
1996	Best City Police Station
1996	Best Local Government Unit
1996	Management Awards of Asia (for Development Management)
1996	Gawad Pamana ng Lahi (Heritage Award)
1996	Likas-Yaman Awards for Environmental Excellence
1996	Gantimpalang Panglingkod (GALING-POOK) Awards for: The Oplan Linis Program; The City Satellite Hospitals; and The City Satellite Libraries
1996	Most Active Proponent of Coastal Clean-up
1996	Hall of Fame Award (Regional Clean and Green)
1996	Award of Excellence: Cleanest and Greenest Component City of the Philippines
1997	Global 500 Roll of Honour Award (United Nations Environment Programme)
1997	Gantimpalang Panglingkod (GALING-POOK) Award for Carabao and Tractor Pool
1997	Hall of Fame Award (Asian Institute of Management)

Source: Visit Puerto Princesa website 2014

## 2. Methodology

The main objective of this study was to describe, how sustainable development is taking place and maintaining in Puerto Princesa City of island Palawan. In order to achieve this objective, several questions were answered, using a mixed research methodology. What is the contribution of leaders and planners of the city to achieve sustainable development? How does community involved in ongoing environmental projects? How these, community based projects contributed to achieve the vision of the city? And how city has achieved the milestone of becoming a carbon neutral city? Both qualitative and quantitative approaches were used in this study as a mixed methodology. Data were gathered from both secondary and primary sources. Data gathering techniques used in this study were desk research, interviews, case studies, observations, photography, focus groups, and surveys. The interviews were conducted at three different stages. Policy makers, including former city mayor, the current city mayor, high ranked city hall staff and city environment office staff were interviewed individually. Focus group discussions and individual interviews were conducted with faculty members of the Palawan State University (PSU), Palawan Council for Sustainable Development

(PCSD), city information, city planning and city agriculture offices. Three different questionnaires were used to interview people at different stages. Informal discussions and interviews were conducted among community leaders, university students, fishermen, tricycle drivers and participants at the Pist Y Ang Kagueban and Love affair with nature in 2013. The author participated in ongoing sustainable tourism and livelihood development programs. Author has visited relevant offices in 2010, 2011 and 2013 in order to conduct formal and informal interviews. Strict observations were made during these visits, and photography was used to record qualitative findings. Notes were taken during informal discussions. Participatory research methods were used throughout the study.

### **3. Planning and administration of Puerto Princesa City**

Even before Agenda 21 became a popular document, Puerto Princesa City has established environmental protection of its own. Mayor Hagedorn was a high school dropout. He was not aware about Agenda 21 or any of the environmental governance when he started his term at the office. The development model is his pure thinking. His family was destroying Puerto Princesa by conducting mining, logging and illegal fishing. His target was to replace what has been destroyed. The concept of sustainable development became a globally famous and accepted concept through the application of Agenda 21. In Puerto Princesa, majority of the people don't know about the principles of sustainable development and concepts behind that. But in practice, what happened is the practical application of this concept. The city's plans, programs, and policies are always considering its vision. Puerto Princesa City's vision is in practice and it was announced a decade ago: "Puerto Princesa: A model city in sustainable development, exhibiting the character of a city in a forest and demonstrating the proper balance between development and environment" (City Planning 2013 p.2). Three major roles of Puerto Princesa to play in the region extracted from the vision are:

1. As an eco-tourism destination.
2. As exemplar of healthful recreation.
3. As a center for applied research in ecology, ecosystems, marine and terrestrial flora and fauna; in indigenous knowledge systems, practices and folkways; and in environmental governance initiatives (City Planning 2013 p.2).

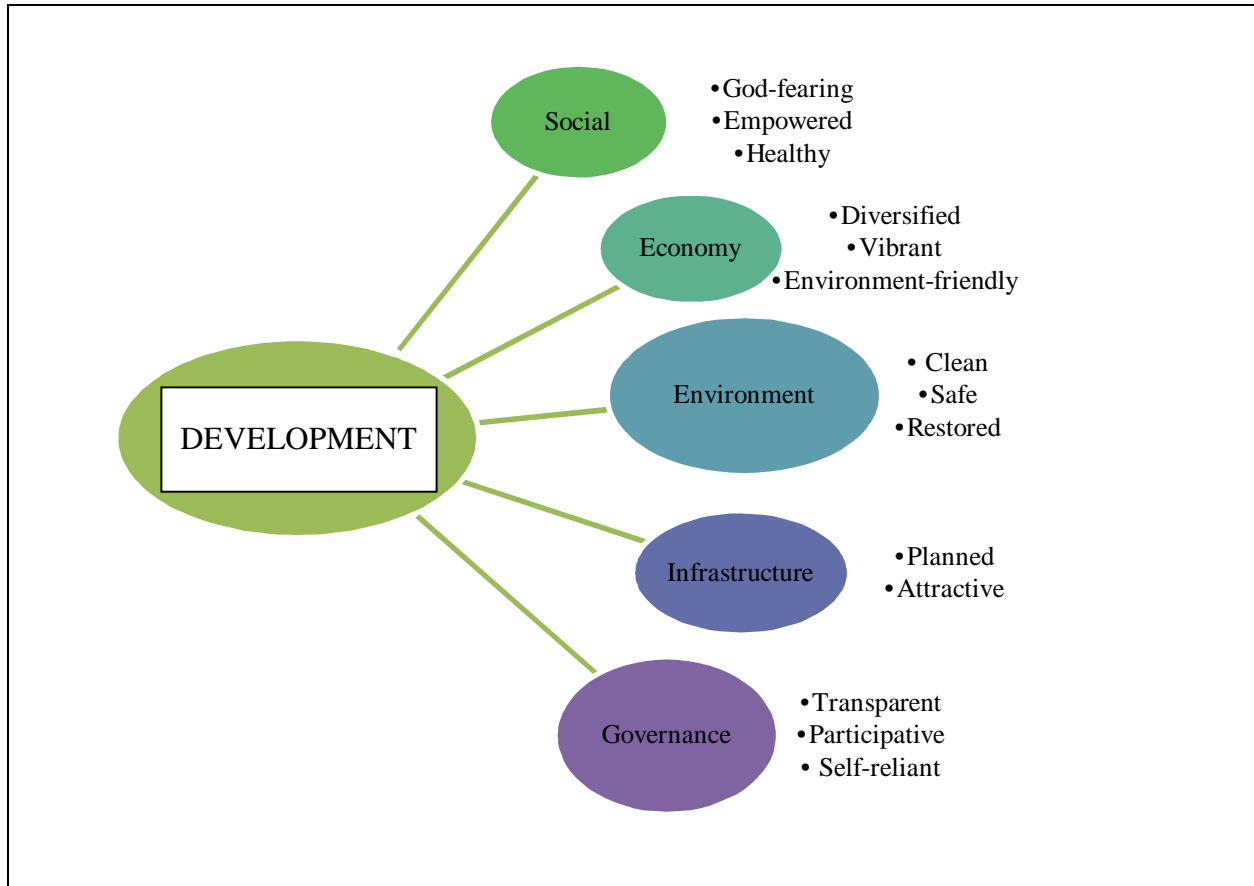
Guiding principles to achieve the vision are:

1. Protect what is left of our resources
2. Rehabilitate what has been destroyed
3. Plan for intelligent utilization (City Planning 2013 p.3).

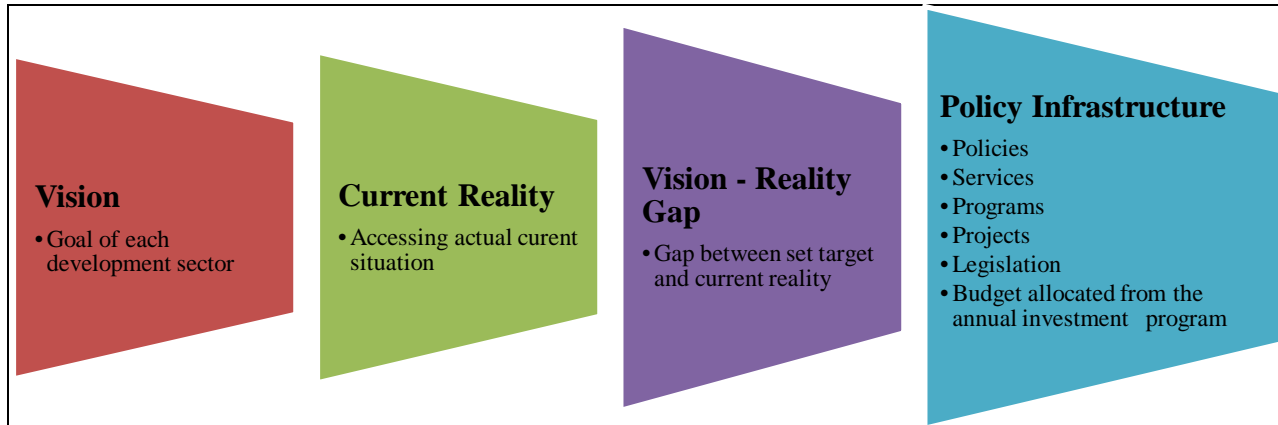
Before evaluating the achievement of the city's vision, it is important to know how it is practically implemented by the leadership and the policy makers of the city. City planning officer Ms. Jovinee shared the set plan of the city and she said they are looking at five major sectors to develop in order to achieve the city's vision. These sectors are social,

economy, environment, infrastructure and governance. Each sector has 2-3 key areas and each area has various set indicators. Development sectors and its main key areas are shown in Figure 1.

**Figure 1: Development sectors framework of Puerto Princesa City**



To achieve each set goals or to provide policy support for each parameter, the city has its own mechanism of planning process. The city planner further shared and said that they have ten year plans and their process consists of four steps. First is to set vision and goals of each development sector and to evaluate the current reality. Then they analyze the vision-reality gap and then they provide policy infrastructure in order to fulfill the gap. To make it practical they set up policies, services, programs, projects, legislation and accordingly allocate budget from the annual investment program. This process is shown in Figure 2.

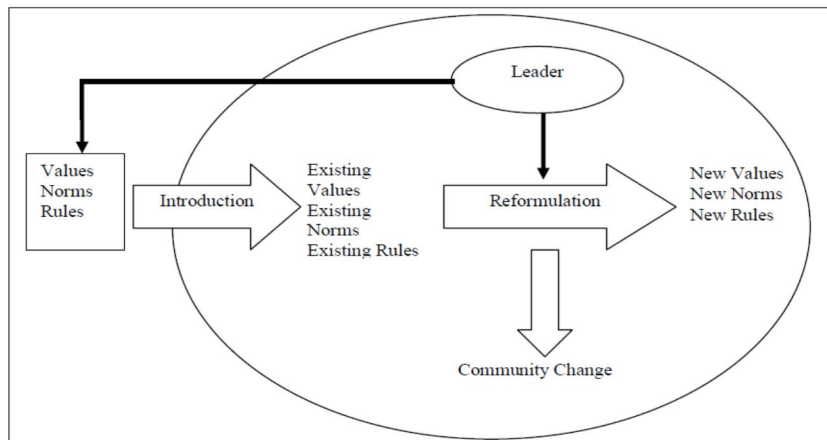
**Figure 2: Planning process of the city**

#### 4. Stakeholders of the sustainable development and their contribution

Stakeholders play a vital role in the sustainable development process. Barangay councils are the ones who lead community based sustainable tourism activities in the city. ABS-CBN foundation plays as a supporting media partner and also engaged as a key initiator of many tourism projects in the city. The city government and tourism offices help to start up projects. City Agricultural Office provides know-how and initial capital to set up alternative livelihood projects attached with tourism. People organizations, NGOs, business community, Armed Forces of the Philippines have a stake about environment. Local citizens expect economic development not through just tourism but through eco-tourism. Through these activities, job creation, employment and poverty reduction are achieved, thus guaranteeing an increased quality of life. The key stakeholders of city development are successfully passing the message of environmentally sound, people-centered development, to the locals. Locals believe that their leadership is accountable and very supportive especially during the initial stages of livelihood projects. Locals have a better understanding and they hold a huge stake in their development. They expect their leaders or the key initiators to provide front line training, livelihood training, skill training and technical skills development assistance. The stakeholder involvement and their commitment are the key factors for Puerto Princesa's development story. Peoples' organizations, local executives, barangay officials, NGOs, Palawan Council for Sustainable Development (PCSD), Department of Environment and Natural Resources (DENR) and the whole city government are the partners. Their concern is the protection and conservation of natural resources while economically developing.

##### 4.1. Leadership

One of the major highlight of Puerto Princesa City's astonishing story is its leadership. As Miyoshi 2006 describes, existing values, norms and rules can be turned into new values, norms and rules through the commitments of leaders. As a result, that will lead to community change. The role of a leader in a community changes and its process is introduced in following Figure 3. This process will enhance believers and followers. This model can be directly applied in the leadership model of Puerto Princesa City. In other words, similar characteristics of social change mentioned by Miyoshi in 2006 can be seen in Puerto Princesa leadership apart from very special features found in local leaders.

**Figure 3: The Role of the Leader in Community Change**

Source: Stenning 2013 and Miyoshi 2006

Not only the new values, new norms and new rules are being created through the leadership of the city, leadership has provided a role model or a character for locals to follow. An exceptional feature of Puerto Princesa leadership is that not only they talk, but they walk the talk. “Leadership by example” is a very common term among policy makers and government high ranked officials. The promising leadership in the city has resulted in stable politics and Mayor Hagedorn being in the leadership for more than Two decades is a great example for winning the hearts of the locals by action. Being very active is another feature of Puerto Princesa City leaders. The new mayor is also active and he is a part of previous administration’s projects.

The new mayor after mayor Hgedorn, is accepting previous administration’s projects. Current administration can continue all launched projects with the support of the people. All projects launched by previous administration were fully accepted from local community. New administration can continue those, hence all projects receives high support from the citizens. The government’s agenda is to keep a balance between both built and natural environment. Mayor is having regular meetings with stakeholders involved. Mostly the messages are spread from top to bottom. But there is always a space for ground level leaders to represent their locals’ voice. Priority for environment is a key highlight of any speech. Not only mayor, other city officials, policy makers convey the same story. Due to listening of the same story for a longer period repeatedly, all locals have a full understanding about ongoing environmental issues and positive contribution to challenge those issues. When discussing with local citizens about environment, “Sustainable Development”, Environment protection”, “Planting trees” and “Protecting forest” are common key words that everyone uses at any social level and any education level. Local officer have shared his view point on leadership as follows:

We have a continuation of the projects of the previous governments. Local government units are independent and people manage their resources. Our mayor is a good planner. He is capable and it is very easy to work with him. It is very easy because he handled most of the projects as the vice mayor in the previous administration. If

our leaders are not committed to prioritize protection and conservation, our efforts are in vain. We need political stability and contribution to support our work. (Mr. Alex of PCSD)

#### **4.2. Community**

Puerto Princesa Community has been enjoying all the blessings of the environment. The only choice of locals is to protect that environment. Original people of Puerto Princesa are a minority. Most of the population consists of migrants. The settlers appreciate this place as a heaven. Community has land to grow rice, sufficient amount of water and locals know that this is their only home, so they protect their home. Palawan State University is the first sustainable eco-friendly university in the Philippines and they got that award in 2009. This award was given after strict monitoring conducted by the Department of Environment and Natural Resources, Department of Education and Smart Communications. Environmental protection related development is the message send to locals through their University students. Amazingly people of Puerto are climate change conscious and that has driven them to create this exceptional city. During a presentation in 2010, Mayor Hagedorn stated, Success factors as: active participation and involvement of the various sectors of the community, economic impact of the policies and programs implemented, involved stakeholders in the policy/program development and implementation, coordination and transparency were maintained at various levels of implementation and political will and full commitment of the highest policy maker.

#### **5. Puerto Princesa City's Tourism Development**

Tourism is an industry that has boomed in Puerto Princesa city. Twenty years ago, a city that no one bothered to go has re-launched its image into a premier destination in the Philippines. City Tourism Office has played a major role in developing tourism. One of the key features of tourism in the city is that most of the sites are community based sustainable tourism sites. The mission statement of tourism of the Puerto Princesa city says;

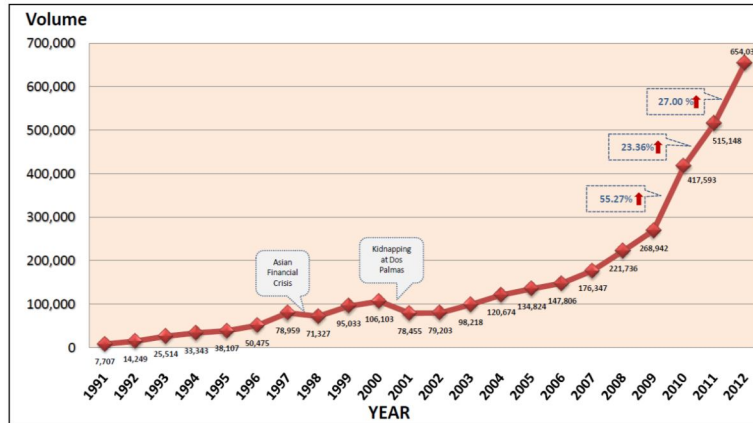
- Intensify tourism promotions and marketing campaign in both local and global.
- Develop high quality training programs for tourism stakeholders and front liners.
- Empower the community through community based sustainable tourism projects, protect its natural and cultural resources for future generation, and to uplift the dignity and improve the quality of life.
- Establish a well-organized, scientific database on tourism statistics.
- Maintain standards for all tourism businesses to ensure compliance for better and quality service (City Tourism Office, 2013, p.6).

There is a tourism code here in Puerto and the community can sustain the environment. Any community can develop their own sites. Balance of environment, people and development are the principals. People are motivated and their participation has created good governance. Leadership, political will and use of scientific knowledge has spiced up the tourism development of the city. There is a plan to expand the airport and foreign flights will come directly to Palawan. Hence the city has nice environmental protection laws; environment will be protected no matter how much it is developed. Puerto Princesa city's tourism has started to boom during the last decade and the turning point was in the



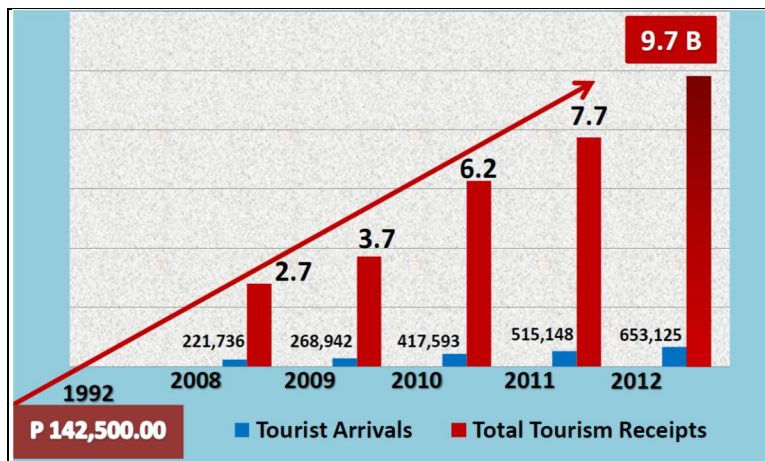
year 2002 as shown in Figure 4. Based on Tourist Arrival Reports of Accommodation Establishments in Puerto Princesa, the city is expected to go past 10 billion pesos income generated from tourism. Estimated income of tourism and related activities are shown in Figure 5.

**Figure 4: Tourism arrivals to Puerto Princesa from 1991 to 2012**



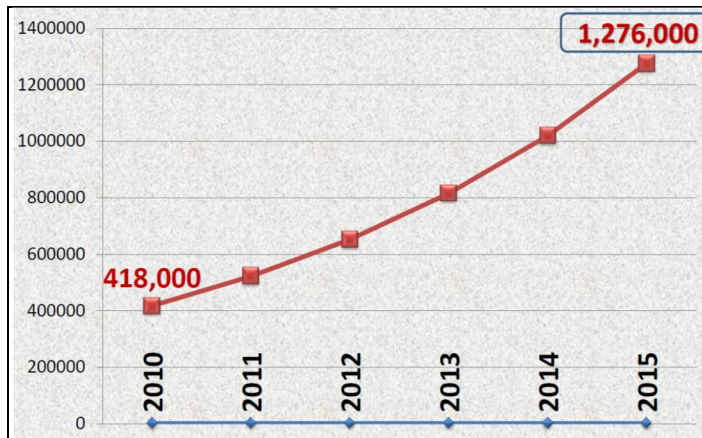
Source: City Tourism Office 2013

**Figure 5: Estimated income from Tourism in billion Pesos 2008-2012**



Source: City Tourism Office 2013

Citizens are optimistic about the city's tourism and economic development. Five years from now the community will have their own business. Several people are expected to join tourism related businesses. Locals are expecting a vibrant city with a rapid economic development. Compared to 2010 level, the City Tourism Office has set up plans to develop city's tourism in 3 times by the year of 2015. Following Figure 6 shows the forecast of expected tourist arrival.

**Figure 6: Target tourist arrival**

Source: City tourism office 2013

In Puerto Princesa city, the major tourism activity is based on the attraction of the underground river which is now considered as one of the seven natural wonders of the world. Now this underground river has the capacity to serve 1,000 tourists per day and both boat tours from land to Underground River and cave observation are community based sustainable tourism activities. Most of the tourists who visit Underground River are visiting either Sabang mangrove paddle boat tour or Ugong rock based on their tour package. Therefore, a huge portion from tourism based income is being generated through sustainable tourism activities. Also government charge an environment fee from tourists and that is also contributing for the protection and development of the nature of Puerto Princesa City. Also as a multiplier effect, those tourists who are coming to see the Underground River are enjoying available sustainable tourism activities and through that those communities can earn extra amount of income.

## 6. Puerto Princesa City's Environment

### 6.1 Increased Mangroves forest

Local policy makers strongly believe that in the country there is a negative growth of mangroves but it is increasing in Puerto Princesa. Section 46 of the Zone Ordinance No. 560 under coastal zone regulation requires every beachfront development to have an appropriate savage treatment to not to pollute the sea. The city has already integrated Environmentally Critical Area Network (ECAN) zones including mangroves. Locals believe not only the mangrove forest is being maintained, at the same time it is growing. Law doesn't allow removing any mangrove species or wildlife living in mangrove surrounding under any circumstances. It is a crime to cut down a mangrove tree in Puerto Princesa. Nobody wants to take that risk and cut down a mangrove. There are various court cases against illegal logging of mangroves during the past decade and some locals (about 10) are already being sent to prison. Not only organized

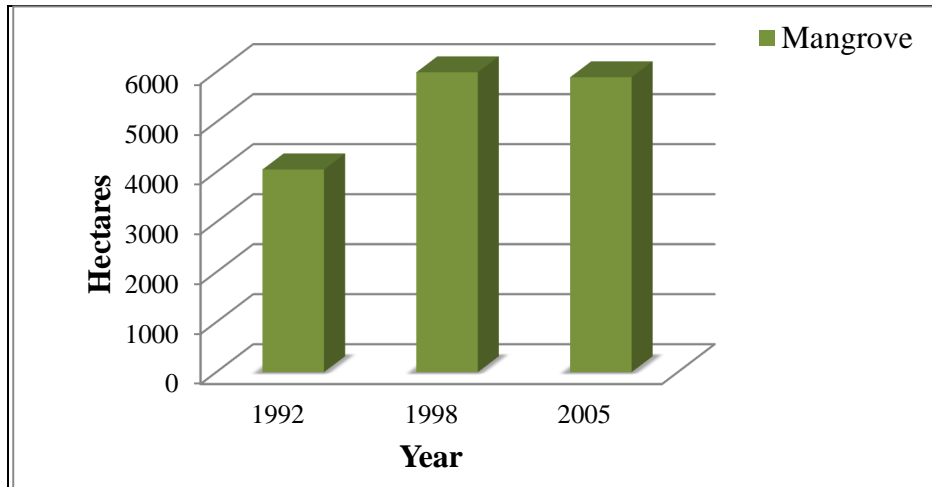
commercial businesses, but also the local community doesn't allow anybody to cut mangroves for commercial purposes or even for personal consumption. Throughout the last two decades, the local community has reforested mangroves in coastal areas. Locals have realized the importance of mangroves and also they have realized to give back for what have been destroyed during the early years. Every Valentine's Day, Love Affair with Nature (Mangrove planting event) is taking place in the city and now the concept has spread in the whole province. Mangroves are still declining in the country mainly due to human settlement, fuel extraction and pure greed but the story of Puerto Princesa is different, policy makers shared their thoughts:

Mangroves are being maintained. We have hired 8-10 people to look after our mangrove forest. Poor people cut them down to extract charcoal, wood and by providing livelihoods and increasing job opportunities, these activities can be stopped. (Mayor Bayron, Puerto Princesa)

I cannot say about other places. But in Puerto Princesa I am 100 percent sure that mangroves are growing. I was the city environment officer for 18 years. In total, I was in government service for 40 years and based on my experience of working in the city and administering environment, both mangroves and forest cover are increasing in Puerto Princesa city. (Former City ENRO Mr. Rogelio)

This exclusive story of Puerto Princesa mangrove forest is backed with ongoing educational campaign. In public places, various educational posters can be seen especially in the local language. The dangers of cutting and beauty of planting mangroves are shown in posters at the city hall and public places. There are three key reasons why mangroves are protected in Puerto Princesa. These have directly resulted with a growing trend. Implementation of Strategic Environment Plan (SEP), replanting mangroves while protecting and very selective cutting or almost no cutting are these reasons.

A study conducted by the PCSD in 2005, with the support of the Japanese government, is the most reliable updated data available to evaluate the mangrove forest cover in Puerto Princesa. This study showed that the current mangrove cover in Puerto Princesa is 5,896 hectares, compared to 4,052 hectares in 1992. There was a slight increase in mangroves in 1998 compared to 2005. An official at PCSD noted that the study in 1998 was conducted by a private organization using a different mechanism. Therefore, it is difficult to make a comparison because the mechanisms were different in 1998 and 2005. However, compared to the 1992 data, it is clear that in Puerto Princesa City, mangrove forest has increased during the last two decades as shown in Figure 7.

**Figure 7: Mangrove forests cover in Puerto Princesa City**

Source: PCSO 2010

## 6.2 Increased Forest

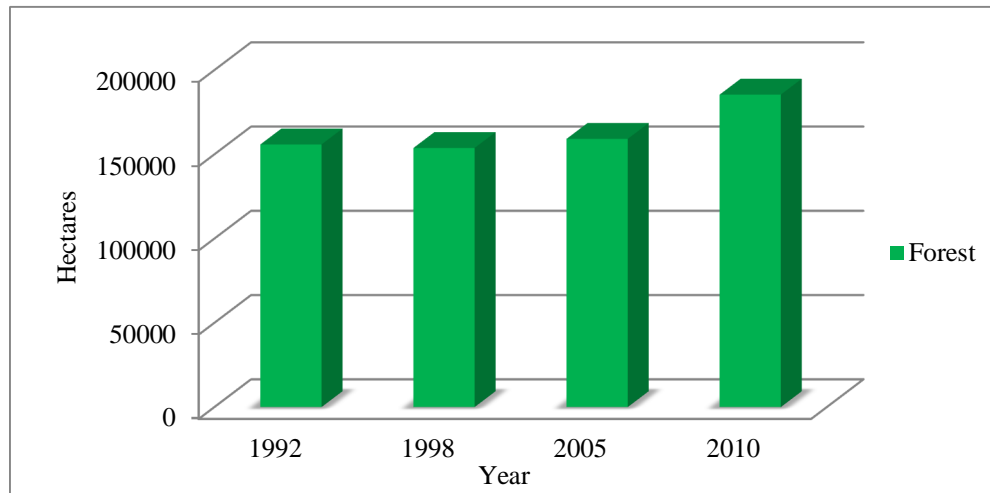
Puerto Princesa is a very exceptional place in the country and also in the region in terms of its forest cover. People know that they are blessed with lush green forest all over the city. They have a pride in that uniqueness. Locals are fully aware about their city's uniqueness in terms of being the greenest city in the country. City authorities and locals being interviewed said forest cover is declining everywhere except for Puerto Princesa, and they think that's why the other places suffer from landslides and floods. But a policy maker shared her thoughts during an interview and stated that in the Philippines, forest cover is declining in the past, but due to national greening program, there can be a growth in the country. There is a growing awareness among people about the importance of conserving forests for people and also for wildlife. Academia of the city shared her views on Puerto Princesa city's forest cover as follows:

In Puerto Princesa, every year we have 'Pista Y Ang Kagueban' (annual tree planting festival takes place in June) and we plant trees. Now this concept is being implemented by the other parts of the Philippines. People are the ones who plants, protects and also destroys the forest. Slash and burn agriculture is still being practiced in small scale. Therefore we lost our forest, but annually we plant more trees and our forest cover is gaining for sure. (Former PSU Vice President Dr. Ganapin)

Not only due to continuous planting, but also due to environmental education, protection and proper management, the forest cover of Puerto Princesa is showing an increasing trend. Maintaining and planting are the main reasons behind the growth of Puerto Princesa's forest cover. Replanting, banning of slash and burn agriculture while being practiced at a low rate by indigenous people and promotion of timber extracting as an illegal activity has supported the maintenance. Many organizations celebrate their important anniversaries by planting trees, and the city Environment Office (ENRO) provides seedlings. After making tree planting activities as a social event, many people have joined as representatives of their respective organizations. Continuous planting projects and strict monitoring has increased the survival rate of the

planted trees. People's organizations have the responsibility of protecting their local area, and forest rangers paid by the DENR or city government are also working to monitor the area. Manpower, such as forest rangers, is in short supply due to low budget allocation. Despite the negatives, Puerto Princesa forest cover has shown a positive growth trend as shown in Figure 8.

**Figure 8: Forest cover in Puerto Princesa**



Source: PCSD 2010 and City Information Office 2013

## 7. Findings

Planning, Implementation, monitoring, ongoing livelihoods and environmental projects of the city, directly or indirectly support the creation of a sustainable city. Puerto Princesa is using the strategy of ECAN (Environmentally Critical Areas Network) to manage sustainable development projects. Puerto Princesa is very particular in ecotourism industry, therefore the city gives more emphasis on not relying on natural resources for development. The city depends more on ecotourism industry and not on primary resources business such as logging.

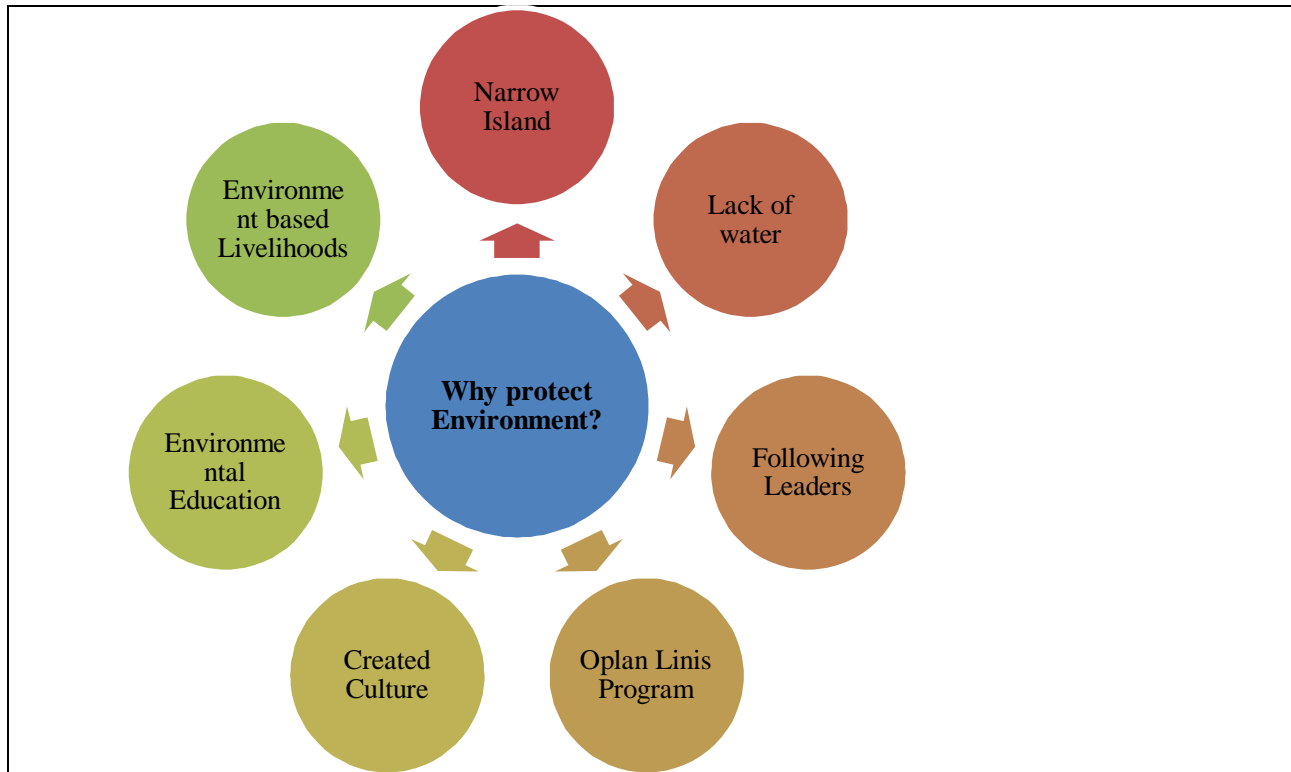
Local development projects of Puerto Princesa Began in 1992 with the leadership of Mayor Hagedorn. Community Based sustainable tourism and livelihood activities were not introduced and by 2002 some projects were initiated. Forest plantation and management were practiced by local community since 1991. By 2012 almost all projects were established and some have marked its tenth and twentieth anniversaries. Through sustainable tourism and livelihood activities local income was increasing and city's economy has started to develop. Many giant corporation's and both local and foreign tourists started to flood in to city. Even though the government leadership and administration has changed, sustainable development practices continue to grow. Table 2 shows the summary of the historical development of the city. Local community, City government, Mayor, ABS-CBN foundation, City Environment office Department of Environment and Natural Resources, Palawan State University and Palawan Council for Sustainable Development play the major role as key stakeholders of sustainable development.

**Table 2: Local Development of Puerto Princesa City**

<b>Year</b>	<b>community-based sustainable-tourism</b>	<b>livelihood and capacity-development programs</b>	<b>community-based forest management practices</b>	<b>remarks: social, economic and governmental events</b>
1992	Not yet established	Not yet established	Tree plantation was established	Economic development is not yet started
2002	Just at initial stage	Babuyan weaving and many projects started	Love affair with nature initiated un-officially	Economic development has begun to start
2012	Well established	Several projects under operation	Projects are brining positive outcomes	Government is fully backing up all environment and social projects
2014	Setting up alternative livelihood projects	New projects will begin	Projects are continuing	Community is keen about city's sustainable development

## 8. Discussions

Based on the data available and also through the interviews conducted in Puerto Princesa, clearly shows that both mangrove and forest cover are showing positive growth trends. It is partially due to examples set by political leaders. Mayor Hagedorn has actively participated in conservation activities and people followed him. Now it turned out to be more of a habit. It is because the people know the advantages of protecting the environment. Oplan Linis Program of cleaning the city is another reason why the environmental sustainability is maintained in Puerto Princesa. Palawan is the only place in the country that is free of typhoons, earthquakes and tsunamis. People know that Puerto Princesa is a heaven for tourists and they want to maintain its natural beauty and cleanliness so that it will help them to continue their livelihoods. Basically, because of the consciousness and environmental education they have understood that 'if there are no trees, no water'. People realized that if they abuse environment they cannot survive. People engaged in tourism have realized that "better the environment, the more the tourists". It is part of their culture and it is the way of life. "The leadership by example" is what the people follow. When people see any violators, they are the ones to report. Based on the interviews, focus groups, surveys and observations Figure 9 can introduced and summarized why people protect the environment and that has led to sustainable development in Puerto Princesa.

**Figure 9: Why citizens protect environment**

As many respondents said, people are well educated and environmental awareness is very high among them. It is extremely important to find out how people are educated. It is observed that the education campaign starts at the very ground level especially children up to university are educated and they are the ones who teach their parents. Environmental education campaign starts at the elementary level. There is a small book with pictures showing the importance of Mangrove trees. Elementary school kids come to tree planting and mangrove planting campaigns with their teachers. Same observations can be seen at other levels of education. For instance, based on suggestions of the author's master's work, a faculty member of the Palawan State University has requested his 3<sup>rd</sup> and 4<sup>th</sup> year Environmental Science students to submit reports after joining 'Love Affair With Nature' Mangrove plantation and 'Fests of the Forest', Tree planting projects. Education campaign and creating awareness among local citizens has not happened overnight, it took decades to create this concept to be established in the mindsets of locals.

Former Mayor Edward Hagedorn has provided his excellent leadership for the city government for more than 14 years. He has worked continuously on various projects, focused on environment, people, economy and education since taking the mayor ship. All locals have supported and followed their leader. Javelosa 2010 stated that:

The story of Puerto Princesa Mayor Edward Hagedorn is a common knowledge. Bad boy enters politics in 1992 for the first time in a place he didn't even grow up in. Bad boy turns around to transform first himself to

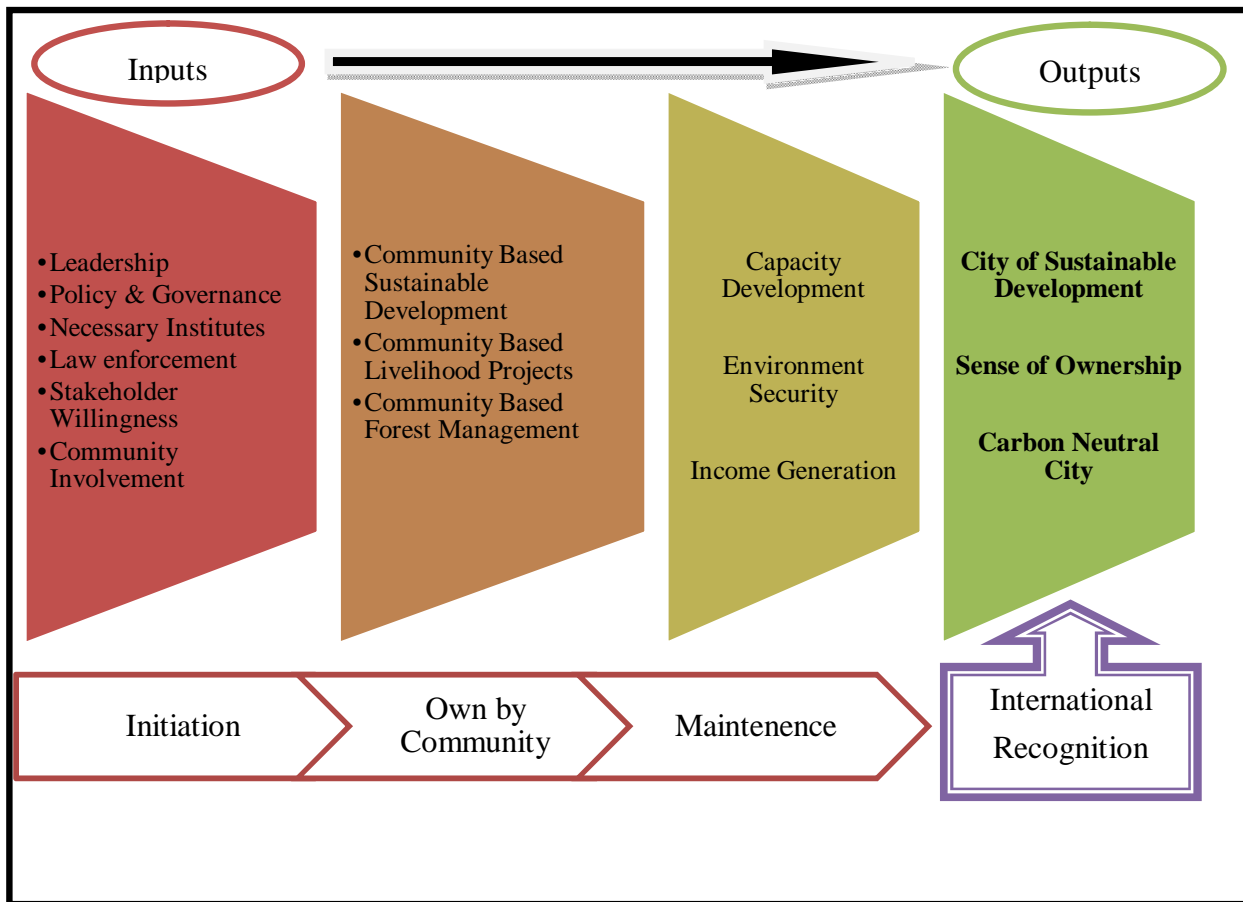
follow an inner vision as he looked at a corrupted, polluted, dirty, poverty ridden backwater of a place. What his story, alongside that of Puerto Princesa's, the capital of the island of Palawan, has shown is the rise of the successful, progressive, visionary local leader with the passion and dedication towards the protection of the environment alongside countryside development.

This behavior has resulted in achieving the best award that city has ever achieved and that is becoming the first carbon neutral city in the Philippines and also in the ASEAN region. Montenegro (2012) states,

Puerto Princesa City is the first city in the country and Southeast Asia to be declared carbon-neutral under guidelines set by the Intergovernmental Panel on Climate Change. Puerto Princesa has a net carbon dioxide emission of 1,456 kilotons (kt) and removes 1,662 kt of CO<sub>2</sub>, technically making it carbon-negative. The emissions come from two sectors—electricity generation (52 percent) and road transportation (30 percent)—with no emissions from industrial processes. Forests and croplands, on the other hand, account for nearly 99 percent of the removal of greenhouse gases.

Puerto Princesa has started its sustainable development activities with “Oplan Linis Program” and Information Education Campaign (EIC) started in school for children. Children teach their parents and discipline among the citizens. Ecological principals are being conveyed through radio, prints and songs and also through community consultation. Attitudes have drastically changed during the past two decades. Media is seeing the development and democracy is very much in place in Puerto Princesa. Media supports a lot to pass the message to citizens and they have the willingness to accept it. The story of Puerto Princesa sustainable development is not easy to describe in one study and introduce as a one model but the exclusive story can be summarized as follows. The summarized model of Puerto Princesa development case can be introduced as shown in Figure 10.



**Figure 10: Creation of sustainably developing city**

Leadership by example, necessary policy and governance backing up projects and involvement of necessary institutes are a key inputs found in Puerto Princesa city's development model. Stakeholder willingness and community involvement in all ongoing activities is a very common feature in Puerto Princesa. Also these activities resulted in increased earnings of local citizens. This increased income has supported to increased life standards of the citizens. Now community members of all the rural areas have access to education and they are very proud about their increased capacity. All income generation activities are focused in environment and environment protection is very common in Puerto Princesa. Throughout these continuous environment conservation activities, environment security in the city has increased anonymously. All projects in the city are initiated, maintained and owned by local community. Throughout the years Puerto Princesa City has gained recognition in both local and international levels. The city has achieved the milestone of becoming the first Carbon Neutral City of ASEAN and a model city in Sustainable Development. Local community has a sense of ownership on this achievement.

## 9. Conclusion

The goals of Puerto Princesa City's government and its achievements are introduced in this paper. The target of development sectors and planning process are discussed in brief. Stakeholder's contribution, leadership and why the local community contributes in through planning and implementation, evaluation and maintenance of current projects are discussed with the viewpoints of key stakeholders involved in the sustainable development process. Status of community based sustainable tourism, mangrove forest cover and forest cover are introduced with relative data to show their continuous growth. The question of why people protect the environment is answered in this paper. Application of the globally recognized criteria and checklists such as 'European Environment Agency criteria for environmental integration' and 'checklist on sustainable development' are applied to Puerto Princesa City and it shows that the city follows globally accepted standards and also in practice it shows the model of true sustainable development. After introducing various community based sustainable tourism development projects, community based sustainable livelihood projects and community based forest management projects, the city's social and economic development has taken place throughout the last two decades and the city is continues to grow. These projects have immensely contributed for capacity development of locals and gained both local and international recognition to the city

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