GENESYS
FOUNDATION, INC.
GLOBAL ENVIRONMENT &
NATURE ECOSYSTEMS SOCIETY (PHIL.)

"Sustaining Support of Ecosystem for Human Well-Being and Economic Growth"

ANNUAL REPORT 2016

Our **VISION** is to be a nationally recognized intermediary organization envisioning an ecologically balanced and sustainable environment in San Carlos City and surrounding municipalities where present and future generations enjoy an enhanced quality of life through the rehabilitation, preservation and responsible management and development of its natural ecosystems.

Our **MISSION** is to initiate, develop and implement viable environmental programs with the participation of urban, coastal and upland communities in San Carlos and neighboring ecosystems.

Our **VALUES**

- Integrity
- Leadership
- Environmental Concern
- Excellence
- Care for People
- Innovation
- Social Responsibility
- Cooperation

Highlights

2015

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February
Enlisted as one of Panasonic Corporation's recipient of 30 solar lanterns during the launching of its "100 Thousand Solar Lanterns Project"

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April
Turn-Over of 30 Solar Lanterns to Off-Grid Rural School-Communities

2016

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January
GENESYS commences Joint Nursery Project with San Carlos Biopower, Inc.

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February
Partnership and Collaboration for Escuela Socio Deportiva SIPA @ San Carlos with Fundacion Santiago and the City Government of San Carlos

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May
Conduct of studies on the various characteristics of the baled and loose sugarcane trash for biomass fuel

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June
GENESYS receives the Gold Seal for Good Environmental Governance

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August
Participation to Negros Island Region First Protected Area Management Summit

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September
GENESYS backs the San Carlos Economic Zone Drainage Plan Formulation

PRESIDENT'S MESSAGE

Over the years, GENESYS has seen the foreshadowing of global threats in the environment and it has addressed such concerns by its "stewardship, care, preserve, restore and protect" programs for the environment, habitats and people. The Foundation in partnership with its various stakeholders has well established its own sustainability projects since its inception. Not only have we implemented programs geared towards protection, restoration and development of our environment but also have helped in the empowerment of people as good stewards of the environment, natural resources and their habitat. The directions taken so far assure that our projects continue to strengthen off-grid readiness, preparedness, resiliency, self-sufficiency and ingenuity in coping with environmental challenges. The year 2016 for GENESYS saw the implementation of a new breakthrough in our environment protection agenda.

We feature GENESYS' initiatives on restoring biodiversity with the production of more than 200,000 thousand seedlings of *Eucalyptus camaldulensis* and *Leucaena leucocephala* for biomass production in 92 hectares of land at Hacienda Socorro. This project was made possible in partnership with San Carlos Biopower Inc. (SCBP) which is the proponent and GENESYS as the project implementor, especially on the management of the operation of a nursery for the plant species. GENESYS continuously conducts studies on biomass and its moisture content as well as provides inputs in the formulation of a drainage plan for San Carlos Ecozone to address recurrent flooding and increase public awareness on the risk and effects of climate change.

GENESYS' partnerships with various stakeholders have been on nurturing communities that are now on the path to self-reliance. Key to their progress is our strategic investment on knowledge-based initiatives and awareness to biodiversity and environmental sustainability vis-a-vis the use of renewable energy alternatives particularly solar and biomass. Included in this is the Sport for Everyone – the SIPA project with Fundacion Real Madrid and Fundacion Santiago with the objective to educate and train sports talents and create a pool of players that will bring recognition and pride to the city as well as provide a social climate for the communities through sports.

Over the years, GENESYS has been consistently reaping awards and recognitions for its environmental advocacy and sustainable practices. It bested the Gold Seal for Good Environmental Governance, this year's highest recognition given by the Provincial Government of Negros Occidental - Provincial Environment Management Office.

> ***"We are in an environment where the industry dynamics are favorable – a demand to develop clean power, lack of technical expertise, developers seeking partnerships with GENESYS and government support for renewables and a drive to a greener ecosystem."***

A self‐evident and equally important strategic area is our continued commitment to strong administrative, financial and human resource management. This remains an absolute priority and is a precondition for everything else we want to realize. I would like to congratulate our staff for their progressive thinking, dedicated work, and their endless passion for our drive in protecting our environment. GENESYS also operates in a healthy balance sheet to support its various initiatives and projects. We are in an environment where the industry dynamics are favorable – a demand to develop clean power, lack of technical expertise, developers seeking partnerships with GENESYS and government support for renewables and a drive to a greener ecosystem.

By drawing upon the continued support of our stakeholders represented in our Management Board, and by engaging local and international networks in which we participate in, we look forward to delivering fully our work programme towards sustaining Support of Ecosystem for Human Well-Being and Economic Growth.

GENESYS will continue to be a driving force in environment protection and will always support the development and sustainability agenda of our partners and collaborators. With renewed vigor and spirit of cooperation, I enjoin all to move the vision forward so the coming generations will carry on the care of our Earth as we do.

JUAN XAVIER P. ZABALETA
President

PROJECT WITH PANASONIC:

Solar for Off-Grid Solution

The "100 Thousand Solar Lanterns Project" of Panasonic Corporation launched in 2015 as one of its corporate citizenship activities had brought positive impacts to education, health, income generation and safety of the recipient upland communities in San Carlos living off-grid. GENESYS while positioning for the green-age challenge through solar development solution in partnership with San Carlos Solar Energy was enlisted as one of Panasonic Corporation's recipient.

The Launching of Panasonic Corporation's 100 Thousand Solar Lanterns Project attended by Ms. Ma. Rosa Solis, GENESYS Executive Director

INGENIOUS SOLAR PROJECT IMPACTING THE COMMUNITIES IN RURAL, OFF-GRID AREAS

A total of 30 solar lanterns were received in February 2015 and turned over to seven (7) organizational beneficiaries including five (5) upland barangays in April 24, 2015. The choice of community-recipients was based on the criteria and assessment made by GENESYS in partnership with San Carlos Solar Energy, Inc. (SACASOL) and with the cooperation of the City Government of San Carlos, as to the City Mayor's priority areas, considering the 10-year timeframe of NONECO's electrification plan for unlighted public schools in the city.

These seven (7) recipients are composed of the following: 1) Mabato Elementary School in Brgy. Buluangan with four (4) lamps; 2) Gigalaman Elementary School in Brgy. Guadalupe with four (4) lamps; 3) Handalago Elementary School in Brgy Nataban with four (4) lamps; 4) Ansulag Elementary School in Brgy. Rizal with four (4) lamps; 5) Rizal Elementary School in Brgy. Rizal with four

The solar lanterns from Panasonic Corporation, expert in solar energy technologies, and are continuing to evolve to respond to the needs of people living in areas without electricity.

Turn-over of solar lanterns to seven (7) barangay beneficiary-representatives with GENESYS Executive Director Ma. Rosa Solis and SACASOL Manager, Ms. Riza Ferrer on April 24, 2015.

(4) lamps; 6) Brgy. Punao Council (Host barangay under Brgy. Captain Paquito Abadies) with four (4) lamps; and 7) Mag–Amihan Health Center – Brgy. Punao (Host barangay) with six (6) lamps.

Indeed, the solar lanterns have been put to effective use for various activities in the community, lower its energy costs while reducing carbon footprint. It brings positive change to their lives through small lighting devices powered by solar energy including children's and teachers' studies, quality public health services, income-generation and improved quality life of people living in rural, off-grid areas.

SCOPING OF SCHOOLS TO LIGHT UP EDUCATION FOR CHILDREN

While, the areas with easier grid access are utilizing grid connectivity, the places where utility power is scant or too expensive to bring, have no choice but to opt for their own generation or in most cases, use fossil fuel or simply, with no electricity at all. Most schools in far-flung rural areas are no exception.

GENESYS hopes to further accelerate its efforts to cover more schools and barangay communities in need of lighting and likewise strengthen efforts to alleviate the problem by providing clean, sustainable solar light and eventually contribute to the achievement of "Sustainable Development Goals (SDGs).

Solar light to more off-grid areas is what GENESYS aims for to help improve living conditions and education of children.

NURSERY PROJECT:
A Cornerstone of Ecological Restoration

Nurseries play a key role in helping the preservation of biodiversity. Mindfulness of appropriate local genetics and diversity allows for nursery work to be of enormous benefit for the environment, the community, and future generations of plants, animals, and people. With this premise, GENESYS has partnered with the San Carlos Biopower, Inc. (SCBP) in the management of the operation of a nursery. This joint BRI-GENESYS nursery was made under the guidance of an Australian forester, Malcom Baxter, who is a nursery expert with over 40 years of experience. This project aims to sustain ecologically balanced environment, protect ecosystems from hazards and provide economic viability in San Carlos City and surrounding municipalities that are at risk.

The Nursery Project establishment at Hacienda Socorro with the guidance of Australian Forester Malcom Baxter.

THE NURSERY ESTABLISHMENT

GENESYS' participation covers from planning and preparation stage, implementation to the commissioning phase that took off in January until December of this year. Seed sourcing, collection and selection for rootstocks production are part of the preparation stage from January to April which GENESYS considered as crucial activities in achieving healthy seedlings. The nursery operation started in May with two plant species, *Eucalyptus camaldulensis* and *Leucaena leucocephala*; both have been considered for biomass production and are known to provide shade and can withstand drought, stabilize river banks and control erosion. A total of 225,000 seedlings were produced for the first 92 hectares located at Hacienda Socorro.

No standard blueprint for designing a plant nursery exists. On the contrary, each nursery will have a unique design based on distinct needs, resources, and requirements. With this project, the design's main feature is the use of benches made of pipe to raise the seedling trays to a comfortable height for ease of maintenance and management. Benches are paired to allow

Eucalyptus camaldulensis specie for outplanting

hoops to be installed for the installation of net shading needed during the first three weeks of the seedlings' growth. The nets are gradually removed to expose the seedlings to full sunshine. The mechanized system will allow the number of seedlings produced per day to increase to over 2000 per day - as compared to the manual method which peaked at 900 seedlings per day. On the other hand, labor is required for the construction of a nursery and subsequent nursery activities staffing is supplied by SCBP personnel.

SEEDLINGS FOR SUSTAINABILITY

The nursery is seen to be a long term project of the foundation vis-à-vis the management and operation. It is hope that through this nursery project more available lands can be converted to forest and reforested areas. GENESYS is committed to continue its participation on the various committees, councils and entities that have environment and its care as their advocacy.

Much needs to be done for ecological restoration and challenges may seem overwhelming. However, starting and operating a nursery is already a vital and positive endeavor of GENESYS, contributing to plant species conservation, ecosystem resiliency, cultural diversity, enhanced human livelihoods, and greater health and productivity of the land. And, clearly, such efforts targeting quality seedling production will go a long way in promoting sustainable agriculture and biodiversity conservation.

BALE SAMPLING:

Biomass Fuel Characterization

Sugarcane has significant importance for its uses: sugar as food commodity and its trash for electricity generation. The sugarcane crop has drawn global interest as a raw material for the production of energy, as it has high positive energy and greenhouse gas balances. However, baled tops and dry leaves in samples from sugarcane varieties still need to be studied further. The past year, GENESYS contributed technically in all stages of the research for sugarcane trash in windrows with San Carlos Biopower, Inc. Specifically, the study was designed to derive the moisture content of a windrow and make a general assessment of the biomass' quality if it can be used as boiler fuel. It was concluded in the study that the conserved integrity of the biomass during storage plays an important factor.

The use of Humimeter to determine the moisture content of baled or loose sugarcane trash for biomass fuel.

MOISTURE ANALYSIS FOR BALED SUGARCANE TRASH

The use of sugarcane crop residue may become a very attractive option for industrial use to generate electricity. GENESYS helps in figuring out the most cost-effective and efficient way to store biomass with the least amount of loss by continuously conducting studies on the various characteristics of the dry matter with the use of a moisture meter called Humimeter, a device for moisture content analysis of baled and loose trash and to determine the characterization of biomass fuel. With humimeter biomass moisture meters, it is easy to determine the water content of biomass quickly and reliably.

Bale samples for moisture content analysis

Outer bale samples were observed to have mud and stones present and with wet and dry texture.

GENESYS ASSSESSMENT OF BALE SAMPLES FOR BIOMASS FUEL

On July 2 and 8, 2016, results of the study on the inner and outer bale samples that were compressed and stored in uncovered, wrapped stacks using twine from May 15 to June 2, 2016, located at the San Carlos Biopower site revealed presence of mud and stones in the biomass and it showed a darkened, dry, moist texture. It can be concluded that moisture content highly determines the quality of baled or loose sugarcane trash for biomass fuel and likewise directly affects their heating values.

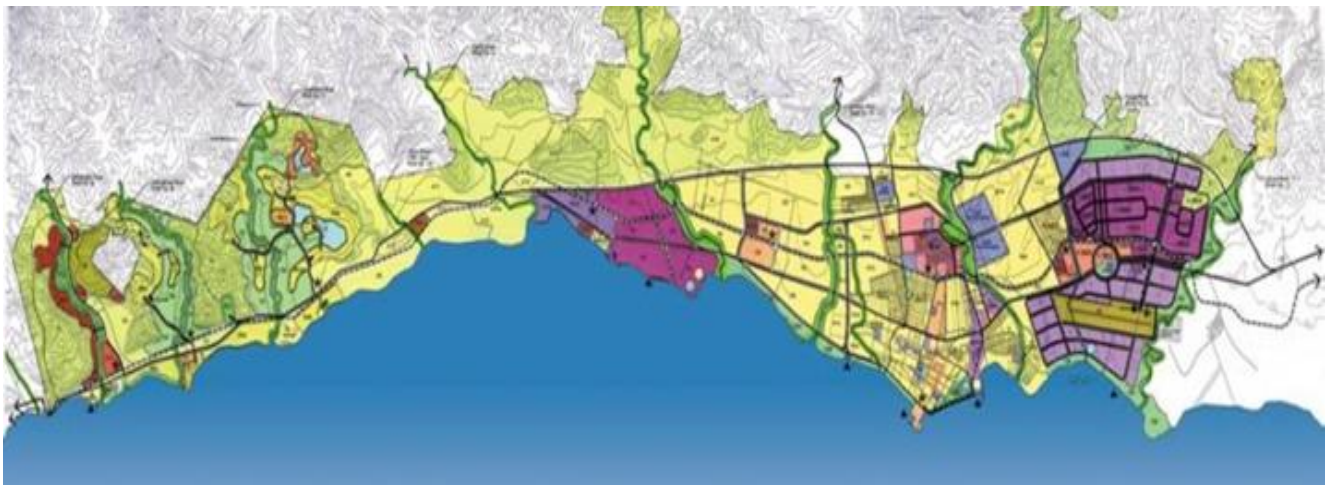
GENESYS considers that thorough analysis about biomass characteristic features needs to be explored such as moisture content and heating value for getting better potential of their use in future context of their availability as per the geographical conditions.

Inner bale samples showed dry, wet and darkened moist biomass.

SAN CARLOS ECOZONE:

The Drainage Plan

Economic zones are vital to the growth of a city as these encourage international trade and contribute to the city's economy. San Julio Realty, Inc. (SJRI), a real estate development and construction company caused the development of a 405-hectare San Carlos Economic Zone (SCEz) located in Barangay Palampas and Punao which is the first and only Ecozone in the Province of Negros. The property is a mixed-use development taking inspiration from the form of sugar for which the City is very well known for. The SCEz's master plan includes provisions for industries and manufacturing with complimenting residential communities, commercial and recreational facilities, airport, parks, school and other establishments. Through the SCEz, it is expected that the quality of life of people in San Carlos will improve, enhance economic opportunity and provide a strong social support. It also aims to contribute to the sustainable growth of the Philippines as a whole.



The San Carlos City Corridor where the 405-hectare economic zone lies on the north eastern most part with a balanced urban and rural development, economic growth, social development and environmental protection.

THE DRAINAGE PLAN FORMULATION

Historically, San Carlos City has long been vulnerable to flooding where flood water courses through the vicinity of the Ecozone affecting the neighboring downstream barangays (Barangay Punao, Palampas and I). Flood waters flow out from the Tongo, Vasconia and Socorro watersheds, as well as from the large Talave River that drains an even larger watershed. Indeed, flooding poses an additional challenge for the City now and, more so, in the future.

Identifying initiatives that will prevent and minimize floods at the affected areas are considered. SJRI commissioned hydrology experts: GHD (Guttering, Hawkins, Davey) for a hydraulic analysis of the Socorro Canal and Talave River and Hydronet Consultants Inc. to conduct a hydraulic analysis of the entire San Carlos Ecozone. In so doing, GENESYS facilitates the collation of data and various reports as inputs into the study that will provide an overall strategy and guiding framework to

The San Carlos Solar Power Plants are just one among the industries that are at risk due to flood waters from the three (3) watershed catchments of Tongo, Vasconia and Socorro and the Talave River.

protect lives and property, maintain a thriving economy, and improve quality of life by making the City more resilient to recurrent flooding and even sea level rise.

GENESYS is particularly more sensitive to the effects of climate change and believes that flood risk can be alleviated by improving the design and maintenance of the city's drainage assets, coastal defences and the delivery of new infrastructure projects, others by increasing public awareness of the risks and working with communities.

Four watersheds as sources of floodwaters affecting the downstream SCEz and barangays with Tongo as the largest watershed catchment that conveys runoff passing through the SCEz area with ongoing developments.

Football is an integral part of global society and, as arguably the world's most popular sport, it has an invaluable role to play in driving social development and bringing its influence to the sports arena. Locally, San Carlos City is known undeniably to be the cradle of Philippine Football. With this premise, Fundacion Santiago established its presence in San Carlos City with the help of GENESYS, which paved the way to collaborative partnership of its agenda with the City Government of San Carlos.

The kicking-off of "SIPA: A Football Clinic to Inspire" with a Trainors Training conducted by Fundacion Real Madrid.

THE PROGRAM PARTNERSHIP

Fundación Santiago is a private, not-for-profit organization established in 1993 and has an exclusive mandate with Fundación Real Madrid to conduct Escuela Socio Deportiva SIPA @ San Carlos as a development intervention instilling the values of sport in a manner that is rooted in the practice of football and promote social inclusion as well as appreciation for the local heritage and traditions of the local community.

The Fundación Real Madrid on the other hand is an instrument by which Real Madrid that has established itself as a major force in both Spanish and European football during the 1950s, is present in society and develops its social and cultural awareness programmes. GENESYS' approach to social responsibility is carefully structured and designed to both create and retain long-term benefits for society, in this case, through football which paved the

"Weekly Training Session for "They Play, We Educate" Programme of Fundacion Real Madrid integrating sports for everyone.

partnership and collaboration between the City Government of San Carlos and Fundacion Santiago. Hence, "SIPA: A Football Clinic to Inspire" kicked off in summer with a Trainors Training conducted by Fundacion Real Madrid. By means of four (4) socio-sporting football schools, almost 200 boys and girls in San Carlos are educated in weekly training sessions with the "They play, we educate" programme in response to Fundación Real Madrid's socio-sporting football schools' standards for education, integration and inclusion in a Sport for Everyone.

GENESYS Foundation, the City Government of San Carlos and Fundacion Santiago shared a common belief that partnerships between and among public sectors, business and civil society constitute empowering, efficient and effective ways to build better, more progressive and more equitable communities.

San Carlos LGU's collaboration with Fundacion Santiago and Real Madrid for Escuela Socio Deportiva SIPA @ San Carlos.

#NIRPAMS:
First NIR Protected Area Management Summit

The Negros Island Region Protected Area Management Summit is an attempt to further strengthen biodiversity conservation in Negros. This was organized by the Department of Environment and Natural Resources - Negros Island Region as the first summit held on July 28-30 in Bacolod City which highlights the biodiversity protection and conservation in the island region.

Northern Negros Natural Park, a protected area in NIR as one of GENESYS' focus of intervention.

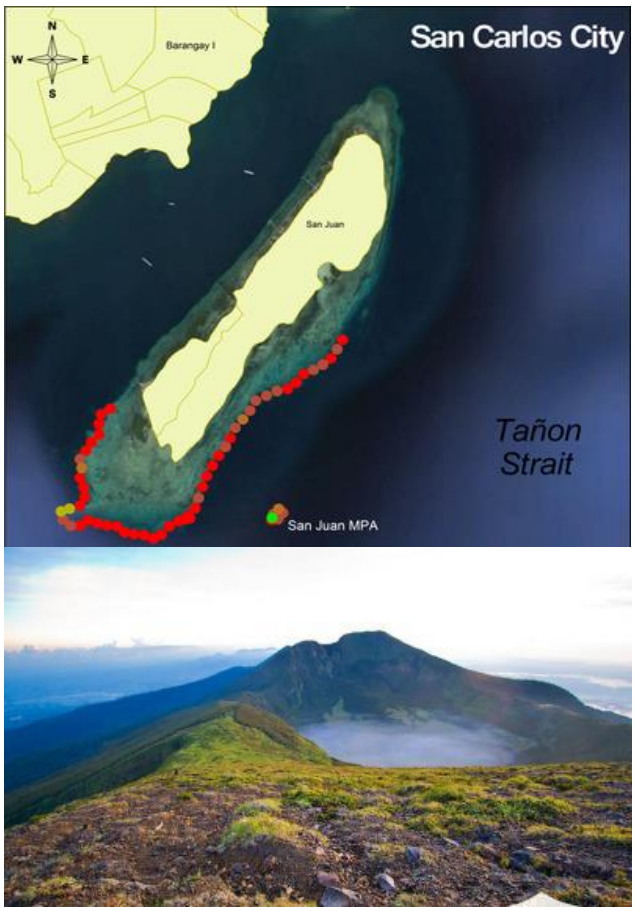
COLLABORATIVE ENGAGEMENT FOR NEGROS ISLAND PROTECTED AREAS

The six (6) protected areas in NIR include the Sagay Marine Reserve (SMR), Tañon Strait Protected Seascape (TSPS), Apo Island Protected Landscape and Seascape (AIPLS), Balinsasayaw Twin Lakes Natural Park (BTLNP), Mount Kanlaon National Park (MKNP) and Northern Negros Natural Park (NNNP). The primary avowed goal of the summit was to strengthen partnerships and sustain awareness of protected area managers and other stakeholders for a better collaborative engagement in the adoption of new strategies and innovations to improve the status of the Negros Island Protected Areas. GENESYS as an environment sustainability advocate was one among the civil society groups in the region that joined the holding of the event and was challenged to work together and share a

GENESYS Foundation joins #NIRPAMS as one of the environmental advocates in the region

common agenda with other stakeholders to make Negros Island an ecologically balanced region. It believes that the NIR summit is a good step for two (2) provinces to have a common agenda when it comes to environment and natural resources management since it both share the same mountains and seas. GENESYS' focus particularly, however, among the list of key biodiversity areas of the Philippines, is Northern Negros Natural Park (NNNP). GENESYS' collaboration will be in improving and enhancing the management, updating of the management plan and integrating it into local and regional development agenda and priorities.

The historic 1st Negros Island Protected Area Management Summit concluded with numerous recommendations, time-bounded targets, and quantifiable outputs to address issues, concerns, and challenges facing the protected areas in the region.



The Tañon Strait Protected Seascape and Mt. Kanlaon Natural Park are two of the Negros Island Protected areas considered in the development agenda and priorities of NIRPAMS.

AWARD:

The Gold Seal for Environmental Governance

GENESYS Foundation, Inc. stood out as one of the non-government organizations to have gained the Gold Seal for Good Environmental Governance, this year's highest recognition given by the Provincial Government of Negros Occidental and spearheaded by the Provincial Environment Management Office in celebration of its 24th Provincial Environment Week with the theme "Go Wild for Life". Ms. Ma. Rosa Solis, GENESYS Executive Director and staff received the award at SMX Convention Center, Bacolod City on June 24, 2016.

GENESYS was recognized for its exemplary performance for environmental governance for three (3) consecutive years.

In the past consecutive years, GENESYS has been consistently reaping recognitions for its environmental advocacy and sustainable practices. It bested the Bronze Seal in 2014, the Silver Seal in 2015 and the Gold Seal for 2016.

GENESYS has been recognized for its sustained and significant efforts for environmental solutions by helping improve the management of natural resources and raising awareness of emerging environmental challenges. The award is an invaluable means for groups and organizations, as well as local government units and academic institutions to share strategies in an effort to achieve lasting environmental impact and champion the cause of the environment.

DIRECTION:

Towards a Greener, Cleaner and Livable Environment

The directions taken so far by GENESYS are a stark realization of first, the vision to care and protect our environment, make the habitats livable and nurture communities which will symbiotically be active collaborators in this advocacy. Second, the goal may have been an insurmountable feat at first, but over the years, with determination the mission of stewardship, after overcoming challenges, has taken root and grown.

GENESYS is again taking a two-pronged initiative, in partnership with San Carlos BioPower, Inc., which is the nursery project for trees species *Eucalyptus camaldulensis* and *Leucaena leucocephala* which will play an important role for the production of biomass fuel for energy production, carbon sequestration and other ecological benefits for soil, water and biodiversity conservation .

GENESYS' nursery project will, from 2017 onwards, pave the way to delivering a concrete solution to the challenges that endanger our environment and lives.

Onward with the backing of our partners, GENESYS programme towards sustaining Support of Ecosystem for Human Well-Being and Economic Growth will be lived out and replicated, realizing a greener, cleaner and livable environment.

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