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Establishing Income Generating Activities **NEWSLETTER # 3**



ABRA DE ILOG, Occidental
Mindoro, **Philippines**
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As with our previous newsletters, we would like to share with you Ecotone Resilience (ER) progress through the first three quarters of 2017 and our prospects for the rest of the year and beyond.

With focus and determination, the team, composed of local and international volunteers, has been able to make substantial progress along our three main pillars:

- **Regeneration of marine biodiversity;**
- **Preservation of the land; and**
- **Improved livelihood for the local populations.**

Once again, we take this opportunity to express our utmost gratitude towards our sponsors and supporters who make this important work possible. We thank you for your trust.



Sedimentation flowing from the Udalo river into the VIP

Overview of progress achieved

- Approval of a fish sanctuary with full support from all the fishermen communities in Udalo.
- Set up of a local fishers organization.
- Government's willingness to realign the affected road section along Dumanod Beach to avoid the destruction of a major marine turtle nesting site.
- Reforestation assessment.
- Completion of a comprehensive agriculture survey with recommendations and implementation plan.
- Demonstration farm project in Dita.
- Set up of a farmers' cooperative.
- Plan to build three Materials Recovery Facilities.
- Income generating activities: handicrafts and virgin coconut oil.
- Feasibility study for the solar electrification of Latag, a remote indigenous village.
- Publication of several scientific papers.

To go further

Marine biodiversity:

The Marine Protected Area (MPA) achieved a critical milestone in spring 2017 with the **official full support of all the fishermen communities in Udalo**. A town hall meeting was held in June with all the fishermen communities represented, the Barangay authorities and ER to approve the final MPA plans.



Having the community support is key to the MPA success, as the community itself will help safeguard the protected area. In the end and interestingly, the community voted in favor of the most protective characteristics proposed by the scientists, encompassing four coral reefs, habitat for most marine life and fish sanctuary status, which is the maximum protection, forbidding any human activity.



The final step is the proclamation of the MPA through an ordinance drafted by the local government. ER is assisting all the stakeholders for this very final step with an aim to complete it before year-end.

Furthermore, and very importantly, **a local fishers organization is currently being set up entirely through the initiatives of the residents of barangay Udalo**, with advice from ER and the scientific community.

Fidel Silan has been assisting with research in the field for several years now. They will soon register the organization with the Department of Agriculture and the Department of Labor and Employment. The purpose of the organization would be to help implement the fish sanctuary while ensuring the fair interest and well-being of the entire fishing community through active consultation and participation.

Preservation of the land:

The road issue:

As we stated before, our project articulates itself around the completion of a circular road on the island of Mindoro. The plan to complete the construction of this road remains the biggest and **immediate threat to the environment**, in one of the most biologically diverse areas of the Philippines and arguably in the world (as documented previously), and to the harmonious way of life of the local communities of Barangay Udalo.



We can consider that significant progress has been made as the **negative environmental impacts** resulting from the road construction have been **finally acknowledged by the government**, in particular that the original road plan encroaches on turtle nesting grounds (Dumanod Beach). After obtaining the stoppage of the road project in 2016, the inclusion of

environmental concerns at the highest level represents a second victory. It should result in a new road plan, partially diverted from the coast using an existing inland logging road and thus avoiding the destruction of biologically diverse beaches.

Despite this victory, we need to stay mobilized on the ground, as bulldozers have already tried to advance illegally.



A significant recent development is a communication dated 13 September 2017 from an Undersecretary of the Department of Environment and Natural Resources informing the Office of the Executive Secretary of the President of the Philippines that they have coordinated with the Department of Public Works and Highways (DPWH). The DPWH

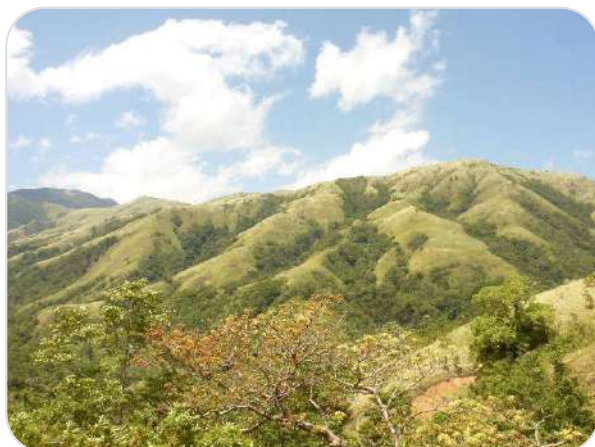
*regional office (in charge of Mindoro, among others) “**has expressed willingness to realign the affected road section along Dumanod***

Beach to avoid [the] marine turtle nesting site.” They are now “awaiting submission of the new detailed engineering design.”

This welcome development is made possible through the vigorous efforts of the local leadership (the municipal mayors and their staff) and local residents with the advice of the scientific community. ER had active participation in this.

Reforestation assessment:

As we all know, at the heart of most environmental issues is the forest. Its destruction has had multiple catastrophic consequences from soil erosion, land slides, sedimentation leaking into of the ocean affecting the health of coral reef and as a consequence fish reproduction.



Antoine Drouillard, a tropical forest specialist from the World Bank, has volunteered for a mission on the ground to design a reforestation plan and help ER find the right partners to conduct the critical reforestation effort. His recommendation is a two-prong approach.

Priority number one: protect the few forests that are left and then launch reforestation efforts in selected areas with a mix of local tree species.

For those interested, a full report of his reforestation mission is available: <http://www.ecotoneresilience.org/blog/reforestation>.

Agriculture assessment:

Agriculture is the main source of livelihood in the Barangay and, as fish stocks depletion remains an issue, we expect some fishermen to convert to agriculture. Please refer to the published study by a team of the University of The Philippines including Professor Helen Yap, one of ER's founders, on the conditions for a successful livelihood transition: *"Influencing rural livelihood switching through equipment assets for agro ecosystems to alleviate pressure on resources"*.

We mentioned our partnership with MASIPAG, the largest small farmers grass root organization, which continues to flourish through trainings of local farmers to help them improve their farming practices and yields.

In order to implicate further the local farmers in adhering to the agricultural change, ER has pushed forward with two important initiatives:

- A demonstration farm project was started on a piece of land leased in the village of Dita.
- The set up of a farmers' cooperative which goal is to deploy new farming methods and introduce new crops, which are more sustainable, and typically provide a higher yield, resulting in a better cash return for the farmers.



Setting up the nurseries in preparation of the demo farm

Both the land lease and cooperative are subject to the completion of intense paperwork. The slowness of the bureaucratic environment has been one of ER's challenges so far this year.

Elsa who is spearheading the agriculture component has released the results of a comprehensive farming study conducted this year. The data was collected in every village of the Barangay building a comprehensive picture of the farming situation.

The main elements of the agricultural practices study are:

- Illegal or precarious land situation for two thirds of the farmers who are either squatters or only have an oral agreement;
- Predominance of subsistence farming and small scale commercial farming with an average land size of 1.65 ha,
- Very low rate of equipment and limited market access;
- Low economical results and precarious financial situation: average income from farming activity is as low as 7,000 Php/farmer/year. Their major source of income is public subsidies elevating their global income to 12,000 Php/year only.

The study concludes however that the role of small-scale farmers in developing sustainable food systems should not be underestimated. And in fact, the area presents great opportunities and a high potential for building sustainable agricultural production units and food chains if farmers are accompanied towards more autonomy and helped out of poverty. With better organizational and managerial skills, with proper access to markets and secure access to farmland, viable sustainable agricultural systems could be developed in the barangay and therein contribute to uplift of the farming profession and to its greater social recognition.

ER is integrating all these elements in a holistic plan in order to empower farmers to break through the circle of precariousness, while limiting ecological damages.

Lastly Guillaume, a permaculture specialist, has joined the team on the ground. With his expertise and the cooperation of the agriculture representatives of local government, we are starting a kitchen garden initiative (small plots next to houses), which should help the nutrition of families. Malnutrition remains a key issue with one of the highest rate in the whole of the Philippines.

Waste Management:

The issue of plastic waste remains critical all over the Philippines. Scientists have analysed samples taken around Batangas one of the main ferry harbour, and even **at a depth of 1,000 meters, one third is plastic!**



Christine leading the way in showing best practices in Bugtong village

With Christine Evangelista in charge locally, ER is dedicating a lot of efforts to this issue with a two-fold approach:

- Educating the population who uses more and more mainstream consumerism products in individual plastic packaging, targeting kids and schools. We are actually expanding gradually throughout all the schools in the Barangay.
- Developing recovering and recycling capabilities within the villages with the construction of three Materials Recovery Facilities (MRF). It is important to highlight that the largest site has been granted by a prominent local landowner. Again our aim is to mobilise all levels of the community.

Unfortunately, there is a lengthy bureaucratic process to approve the MRF by the local authorities, a process which has been underway for the past five months.

It is important to ensure that all of the above initiatives mesh into improving livelihood throughout income generating activities.

Improved livelihood:

Income generating activities:

A key goal is to help local families improve their income. We have focused on two activities:

Handicrafts



Mangyans produce different type of weaved basket using a local fig tree called Nito that only grows in Mindoro. The baskets, which are very aesthetic, require intense manual labor, as much as several months for the most elaborate.

In order to help promote these beautiful handicrafts, ER will present them at the Bazar International in Luxembourg, a fair trade show, which takes place once a year in November.

Nemesisio with one of his bamboo handicrafts

Virgin coconut oil (VCO)

Claire Bossard, a chemistry engineer, volunteered for six months on the ground to study on the feasibility of a local production unit and train (mostly) women in VCO production. VCO requires a precise and clean process, as any contamination will result in an altered product.

As coconut is one of the most common resources, VCO represents one of the most appealing opportunities to move up the value chain in agricultural products.

In order to finance the VCO production unit, Ecotone is talking with impact funds and banks. We hope to be able to bring these financial discussions to fruition by year-end.



Claire and a group of villagers working on VCO

Solar energy:

The solar energy component is focusing on the electrification of remote indigenous villages. Last year, the local government (mayor's office) asked us to make it a top priority.

In less than a year, ER should be able to move from design phase to implementation in November 2017.



Fidel demonstrating solar equipment in Latag
Ecotone Resilience

Since the beginning of the year, ER has formed two critical partnerships. The first one is with Hybrid Social Solutions (HSS), a local social enterprise ran by Jim Ayala with extensive experience setting up solar solutions all over the Philippines. They were still missing a footprint in Occidental Mindoro, which

they are remediating with ER's solar project. The second partnership is with a French based independent renewable energy group, leader in its sector throughout Europe.

With the support of Paul who volunteered on this project, we have been able to make great progress. The first village to be electrified will be Latag, an emblematically beautiful indigenous village that is at a three hours walk from the coast, only accessible through a dirt trail.

More information on this project is available if you are interested.

To go even further ...

Scientific publications:

Aligned with ER's original goals to document the amazing richness of the local ecosystems and the issues pertaining to the local populations, the purpose of publishing in the primary scientific literature is to ensure that results are scientifically valid – they undergo rigorous, anonymous peer review by experts in the field. Hence, we can be reasonably confident that recommendations we put forward based on our research results have a sound basis, decreasing the risk of failure.

Under the leadership of Professor Helen Yap of the University of the Philippines (UP), several scientific papers have been published or are in the process of publication in major scientific journals.

The two studies so far undertaken with ER describe in detail the forest resources up into the mountain ranges inside the boundary of barangay Udalo (Locqueville and Yap), and the state of the coral reefs and their fishery resources (Servonnat et al.). The latter is serving as a basis for the proposal and establishment of the fish sanctuary.

The paper published by the UP (Labao et al. 2017) suggests that it is possible to induce households to switch from one type of livelihood to another by providing economic assets in the form of equipment. ER has documented that one severe constraint of rural households in Udalo is access to equipment. The major livelihoods investigated were fishing, rice farming and copra (coconut) production. By direct economic intervention in the livelihoods that rural households engage in, we hope to achieve a suitable balance between resource exploitation and conservation in order to realize long-term environmental preservation.

Here is a list of the current scientific papers produced:

Marine conservation imperatives in a threatened center of biodiversity.

Marine Servonnat, Ryan Kaye, Helen T. Yap, Fernando P. Siringan

(to be submitted to the journal "Coastal Management")

Landsat time series to monitor swidden decline in a center of diversity (Philippines).

Jonathan Locqueville, Helen Yap

(submitted to the journal "Remote Sensing Applications: Society and Environment")

Influencing rural livelihood switching through equipment assets for agroecosystems to alleviate pressure on resources. Agriculture, Ecosystems and Environment 248: 96-104. (Elsevier; impact factor > 4)

Labao AB, Naval Jr PC, Yap DLT, Yap HT (2017)

Let us know if you would like to receive these papers.

Thank you again for your kind attention, support and encouragements. We are still at the beginning of building a new world-class sustainable development model in cooperation with local communities and despite the challenges are confident that we are heading the right way.

ER is a registered NGO in Europe and currently in the process of registering in the Philippines.



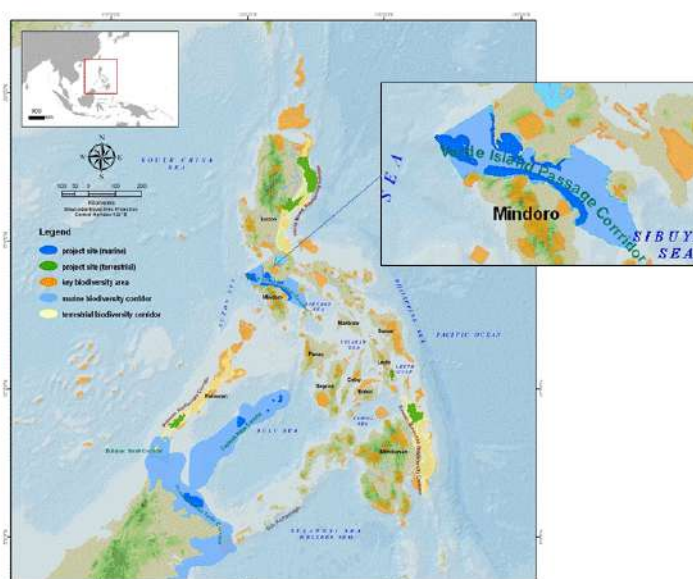
Bugtong basketball team!

Project location

The pilot project is situated in **Occidental Mindoro, Abra de Ilog, Philippines** on the **Verde Island Passage**.

Ecotone Resilience brings together scientists, development field experts and traditional communities willing to engage in profitable environmental projects through international cooperation.

All of this would not be possible without your financial help and the dedication of our team some of whom have lived in total immersion with the local communities. We have added new members to our team: Carina who is our translator, Christine who is in charge of rolling out the waste management initiative as well as the food feeding programs in the schools, with a particular attention to the Mangyans kids, and organizing the handicrafts for women, and finally Nemesio who will help with following up with the agriculture initiatives which aim to create market links, better agriculture practices and organize farmers groups with a view to create a cooperative.



To view the full team: www.ecotoneresilience.org

Thank you!