

asean BIODIVERSITY

Volume 14, Number 1 • January-April 2015



Championing ASEAN's Biodiversity



ACB and ASEAN Member States
Years of Cooperation for Biodiversity Conservation

**ACB and ASEAN Member States:
Two Decades of Cooperation
on Biodiversity Conservation**



ASEAN photo contest zooms in on biodiversity

Experience the beauty of our biodiversity, the source of all our basic needs! Help us photograph Southeast Asia's biodiversity!

Join the Third ASEAN Zooming in on Biodiversity Photo Contest. Organized by the ASEAN Centre for Biodiversity (ACB), the contest aims to capture the beauty, richness, and values of our biodiversity through vivid pictures of living creatures and their habitats.

The contest is open to all citizens of ASEAN Member States: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam.

Biodiversity has been providing humans with basic needs – food, water and air; materials for medicine, clothing and shelter; air and water purification; soil enrichment; protection from harsh climate change; and many more. However, our biodiversity is under threat from irresponsible human activities, climate change, pollution, illegal wildlife trade, habitat degradation and conversion, overexploitation, and invasive alien species, among many others.

This year's theme is "One ASEAN. One Biodiversity," to demonstrate that the ASEAN Member States are linked through biodiversity.

A total of 3,000 USD in cash prizes awaits the winners. Their photo entries will be published in the ASEAN Biodiversity Magazine and other international publications, ACB website, as well as featured in an exhibit.

Deadline of entries is on 31 August 2015. To download the official entry form and contest mechanics, log on to www.aseanbiodiversity.org/zoomingin2015.

CONTENTS

VOL. 14 ■ NO. 1 ■ JANUARY-APRIL 2015



The cover features the winners of the search for the Second ASEAN Champions of Biodiversity.

SPECIAL REPORTS

Why the world needs biodiversity champions 6

Sparking change among the youth 9

Twins share passion to conserve endangered animals 12

Newspaper prioritizes biodiversity reportage 16

Lessons from our Asian journeys 19

SPECIAL SECTION

ACB's 10th Year Celebrating a decade of cooperation on biodiversity conservation 22

ACB's 10th year Building capacity for biodiversity conservation in the ASEAN region 24

Bridging biodiversity information gaps in the ASEAN region 26





FEATURES

<i>World Wetlands Day, February 2</i> Wetlands for our future	28
<i>World Wildlife Day, March 3</i> It's time to get serious about wildlife crime	29
<i>International Women's Day, March 8</i> Women and the environment	30
<i>International Day of Forests, March 21</i> The good provider: Celebrating the role of forests in the world of life	31
<i>World Water Day, March 22</i> Water and sustainable development: A crucial connection	32
<i>World Health Day, April 7</i> From farm to plate, make food safe	33
World Malaria Day	34
<i>April 22: Earth Day</i> A time to reflect	35

PROFILES

<i>Viet Nam</i> Bai Tu Long National Park	36
<i>Lao PDR</i> Phou Hin Poun National Protected Area	40

UPDATES

ACB and Germany launch programme on biodiversity	44
Conservation financing to boost Southeast Asia's environment	45
ASEAN-Japan cooperation on nature parks management	46
UP grants land lease to construct new ACB HQ	47
Global report highlights human health benefits from protecting biodiversity	48
Sharing lessons from biodiversity and climate change projects in ASEAN	49
ACB strengthens taxonomy in ASEAN	50
Viet Nam steps up wildlife protection in airports	51
BIODIVERSITY NEWS	52

FOCUS

Jungle Cat	56
Borneo Bay Cat	57
Fishing Cat	58
Flat-Headed Cat	59

Publisher
ASEAN Centre for Biodiversity

Editor-in-Chief
Rolando A. Inciong

Designer, Graphic and Layout Artist
Nanie S. Gonzales

Infographic Artist
Eisen V. Bernardo

Circulation Assistant
Angela Rose Crissie A. Metin

Editorial Board
Clarissa C. Arida
Rolando A. Inciong
Roberto V. Oliva
Sheila G. Vergara

ASEAN Centre for Biodiversity

Headquarters
3/F ERDB Building
Forestry Campus
University of the Philippines
Los Baños, Laguna, Philippines

Telephone:
+6349.536.3989; +632.584.4210

Telefax:
+6349.536.2865

E-mail:
contact.us@aseanbiodiversity.org

Website:
www.aseanbiodiversity.org

Disclaimer: Views or opinions expressed herein do not necessarily represent any official views of the Association of Southeast Asian Nations (ASEAN). The authors are responsible for any data or information presented in their articles.

Letters, articles, suggestions and photos are welcome and should be addressed to:

The Editor-in-Chief
ASEAN Biodiversity Magazine
ASEAN Centre for Biodiversity
College, Laguna

E-mails:
rainciong@aseanbiodiversity.org
sbbarrer@aseanbiodiversity.org



ACB and ASEAN Member States: Two Decades of Cooperation on Biodiversity Conservation



26 September 2015 (Saturday) • Mt. Makiling, Los Baños, Laguna
Gun starts: 5:30 AM (21k); 6:00 AM (10k); 6:15 AM (5K); and 6:30 AM (3k)
in front of Baker Hall, UP Los Baños.

	CATEGORY	REGISTRATION FEE
	21K	PHP 650
	10K	PHP 550
	5K	PHP 400
	3K	PHP 350

Registration Period: 13 July to 20 September

For more information, log on to www.aseanbiodiversity.org/biorun



WHY THE WORLD NEEDS BIODIVERSITY CHAMPIONS

By Lilay Castillo

Harrison Ford is known as Indiana Jones and Han Solo. What many people do not know is that this Hollywood star sits on the board of Conservation International as vice chair. He promotes the protection of endangered species, supports biodiversity research, and persuades corporations to support conservation efforts.

Fellow Hollywood heavyweight Leonardo DiCaprio has been praised by no less than United Nations Secretary-General Ban Ki Moon for his longstanding commitment to fighting for environmental causes. In 2014, the Titanic star was designated as UN Messenger of Peace.

Edward Norton is the UN's ambassador for biodiversity. Brad Pitt, Robert Redford, Salma Hayek, Ethan Hawke and Julianne Moore are also contributing their time and resources for conservation efforts.

In Asia, Vietnamese pop diva Hong Nhung, Chinese-American actress Bai Ling and Filipina actress Angel Locsin form part of a growing list of celebrities who are using their popularity to spark change in the environment sector.



The 2014 ASEAN Champions of Biodiversity with the awards organizers and judges.

Beyond the glitter of stardom, there are individuals and organizations – young and old, big and small – who are working in their own spheres of influence to help conserve biological diversity. They are championing biodiversity in whatever way they can.

In Southeast Asia, also known as the Association of Southeast Asian Nations (ASEAN) region, the ASEAN Centre for Biodiversity (ACB) and its partners are recognizing efforts to conserve the web of life through the *ASEAN Champions of Biodiversity*.

The ASEAN Champions of Biodiversity

Launched in 2009, the *ASEAN Champions of Biodiversity* is a recognition program for outstanding initiatives on biodiversity conservation and advocacy in the ASEAN region. The program is

aimed at generating greater leadership, public and media awareness of the problems facing the region's rich but highly threatened biodiversity and the need for a concerted effort in biodiversity conservation and advocacy. There are three awards categories: Business Sector, Media Sector, and Youth Sector.

The first staging of the *ASEAN Champions of Biodiversity* was conducted between 2010 and 2011 and supported by the ASEAN Foundation, the Asian Institute of Journalism and Communication, the European Union, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the Secretariat of the Convention on Biological Diversity, and the United Nations Educational, Scientific and Cultural Organization.

Declared as *ASEAN Champions of Biodiversity* were HSBC Brunei, PTT of Thailand and Chevron Philippines for the Business Sector; Green Community,

Sahabat Alam and ASAPHIL-UP for the Youth Sector; and Born to be Wild TV program, The Brunei Times and BusinessMirror for the Media Sector.

To recognize the efforts of more individuals and organizations, ACB and the ACB-GIZ Biodiversity and Climate Change Project (BCCP) held the second staging of the ASEAN Champions of Biodiversity between August 2013 and August 2014, and announced the winners in November 2014.

"Only a small fraction of Southeast Asia's over 600 million people know what biodiversity means. There is a dearth of information materials on biodiversity, resulting in low public awareness of the values of biodiversity and conservation. Resources for conservation are limited, often translating into lack of information, education, and communication materials," said Atty. Roberto V. Oliva, executive director of ACB.

This problem, he says, is worsened by the fact that biodiversity is not considered a hot topic. “We need champions who will raise public awareness for the need to mitigate the problem, and mobilize support from many sectors. We need increased awareness to create a groundswell that will catalyze all sectors of society to promote biodiversity conservation. Biodiversity urgently needs champions that people from various sectors can identify with – modern-day heroes who can bring biodiversity closer to everyone, and inspire them to take action and conserve biodiversity,” Director Oliva emphasized.

According to Dr. Berthold Seibert, Project Director of the BCCP, “The *ASEAN Champions of Biodiversity* seeks to become a force multiplier by identifying and engaging leaders among the business, media, and youth sectors who will spread awareness for the urgent need to conserve biodiversity.”

Rolando Inciong, director of communication and public affairs of ACB, explained that the *ASEAN Champions of Biodiversity* aims to recognize outstanding initiatives of business, media and youth which have clear impacts on biodiversity conservation; identify leaders among these sectors from which a cadre of champions will be selected to serve as Ambassadors of Goodwill for biodiversity-related themes; promote awareness of the values of biodiversity among ASEAN leaders and the public; promote corporate social responsibility in biodiversity conservation and advocacy; and encourage the private sector, youth, and media to participate in biodiversity conservation initiatives.

Champions 2014

In 2014, three youth leaders from Indonesia and a business newspaper from the Philippines were honored as the new *ASEAN Champions of Biodiversity*. The awarding ceremony was held in the Philippines.

The winners in the Youth Category were Indonesia’s Adeline Suwana of

the Sahabat Alam youth organization, and twins Giovanna and Gabriella Thohir of The Bekantan Twins Project. The Philippines’ BusinessMirror was recognized as the Media Champion of Biodiversity.

The awarding ceremony was addressed by Secretary Ramon J.P. Paje of the Philippines’ Department of Environment and Natural Resources; Dr. Bráulio Ferreira de Souza Dias, Executive Secretary of the UN Convention on Biological Diversity (CBD); Director Oliva; and Dr. Seibert.

Adeline Suwana founded Sahabat Alam, an internationally known youth environmental organization with thousands of members all over Indonesia. Adeline and Sahabat Alam generate awareness of biodiversity conservation through school seminars, events, talk shows, films, and various activities to encourage young people to conserve biodiversity and protect the environment. In a span of five years, Adeline has blossomed from a 12-year-old girl who organized a small mangrove planting trip with her classmates to a 17-year-old advocate who is recognized as a credible voice of the youth in Indonesia’s environment movement.

Twin sisters Gabriella and Giovanna Thohir and The Bekantan Twins Project are championing biodiversity by inspiring fellow youth and the public in Indonesia to conserve the endangered bekantans (proboscis monkeys). Gabriella and Giovanna have taken a crucial step in keeping the bekantans alive. With the overflowing support from partners, colleagues, friends, communities and the media, their supporters say that their dream will soon become a reality.

BusinessMirror, one of the leading newspapers in the Philippines, prioritizes biodiversity reportage by devoting a full section to biodiversity-related stories each week. Living up to its commitment of providing a ‘broader look at today’s business,’ the BusinessMirror is promoting biodiversity conservation through its day-to-day reportage and special reports. The newspaper contin-

ues to promote biodiversity as no less than the business of living.

Delivering the keynote message, Secretary Paje said the *ASEAN Champions of Biodiversity* shows that the region is not only home to biologically significant species and ecosystems, but also to globally significant and worthy individuals and groups who can champion the cause of conservation. “I urge our fellow Filipinos and our friends from the other ASEAN Member States to join us in our efforts to conserve biodiversity. Fighting biodiversity loss and its impacts is a shared responsibility among all of us who stand to lose so much – our planet and its natural treasures that sustain our very existence.”

In his video message, Executive Secretary Dias of the CBD said the ASEAN Champions of Biodiversity contributes to the attainment of Aichi Target No. 1 which states that “by 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.”

“You have selected biodiversity champions from the youth and business sectors – key participants that we need to mobilize if we are going to ensure sustainable consumption and production. It is proof that biodiversity conservation and advocacy is not the sole turf of the environment sector. People and organizations from all walks of life have their stories to tell on how they are conserving our web of life,” Mr. Dias said.

“So, why do we need biodiversity champions? The answer is simple. Biodiversity needs urgent saving. The *ASEAN Champions of Biodiversity* recognizes and brings to the spotlight people from various sectors that can bring the cause forward so others would be encouraged to act. These champions can bring biodiversity closer and more meaningful to everyone, and motivate people to conserve and preserve the dwindling biological resources,” Mr. Inciong said.

He added, “Now the most important question is – can biodiversity count on you to be the next Champion?” □

SPARKING CHANGE AMONG THE YOUTH

By Adeline Tiffanie Suwana*



The warm atmosphere of mid-July 2008 was breezing across my neighborhood, as it was time for the change of season in Indonesia. It was supposedly only an ordinary transition from sunny to rainy season, but the changing season seven years ago turned out to be an unforgettable memory.

I could still vividly remember that it was a hot summer day and I was only 12 years old. My parents were about to drive my friends and I to the local pool, but then it started to drizzle. They decided to wait until the rain settled down, but it never did. Little did I know that the rains would last the whole week. Soon, the water sewers started to overflow and a massive flood submerged my entire neighborhood, reaching its peak of more than ten feet. Other districts suffered worst – floods reached up to their roofs and lives were lost. As I sat down in an evacuation jeep, the weather anomaly piqued my curiosity.

After a relentless pursuit of answer about this irregularity, I learned all about climate change and global warming. I soon realized that I wanted to actively participate in taking care of our environment. I figured that if I want to make a change, I should start with myself. After adopting an eco-friendly lifestyle, I decided that it was time to trigger actions, spreading the cause of volunteerism to anyone I knew. The reaction was amazing. I first started my environmental journey by planting mangroves in a nearby swamp with a handful of friends, and later, with more than 100 volunteer kids from three different schools. With enormous support and positive feedback from my peers, the activity has become the first of many environmental projects to come. This initial activity gave birth to *Sahabat Alam* or Friends of Nature.

The environmental project started with one main goal: to foster a sense of awareness among children and youths about the need to care for the environment and biodiversity. I believe that the youth of today holds the key in solving the climate crisis. With an early understanding of environmental problems, as well as passion and care for the environment, young people can be actively engaged in environmental activities. This is similar to planting seeds that will eventually blossom into trees. Engaging young people could potentially become a turning point in the fight against the global environment problem. More im-

portantly, it is crucial that individuals have an integrated principle value and initial response to weigh human's negative impacts on the environment before taking any action or decision in their lives.

A single step, a giant leap

Today, *Sahabat Alam* has become a well-established non-governmental organization transcending places beyond Jakarta. In our journey, *Sahabat Alam* has become a youth platform with more than 25,000 youth leaders, teachers and other activists actively participating, organizing and volunteering in environmental projects. More than 100 different activities ranging from simple actions such as biking to school and making biopores in local parks to nationwide-scale projects such as coral reef conservation and hawksbills turtle conservation have been implemented.

Sahabat Alam established a website, www.sahabat-alam.com/en, and work with media to reach out to young people nationwide. Continuously aiming for improvement, we are currently working with more youth representatives in other cities and creating new pioneers, as the role of proliferating environmental awareness should never begin from only one core, but from multiple individuals dispersed in various areas.

Core activities

Among a myriad of activities, five central projects remain the core of *Sahabat Alam* activities.

Tree planting. Trees are vital resources that will ensure the sustainability of our planet. By engaging young people in tree planting activities, *Sahabat Alam* promotes the importance of trees as an integral part of life. These activities also boost the youth's awareness of trees and the role they play. In an attempt to introduce these values, we invite children in regular planting activities at home, their schools and communities. With easy access to tree planting areas, young plant-

ers can continue to visit and care for the trees they planted. This helps ensure the longevity of the tree's lifespan.

'Save the Planet' School Seminars. Thorough education on the environment remains a key goal of *Sahabat Alam*. To do this, we visit schools to reach more young people. The school seminars aim to provide a platform for young individuals to take action for the environment. We provide them with fundamental understanding of possible environmental actions they can take in their schools and their communities. Since 2001, *Sahabat Alam* has reached over 25 schools throughout the city to engage students in conducting environmental actions and to provide a forum for active communication and discussion among their peers.

National Forest Expeditions. With around 50 national forests within Indonesia, the entire biosphere contains a wide array of biodiversity. Unfortunately, this abundance of natural resources remains widely unknown among Indonesian youth. *Sahabat Alam* aims to change this lack of awareness by engaging young people in expeditions to Indonesia's national forests. Students and youth are gathered to explore the wilderness and the biodiversity within it, as well as to understand the important value of the crucial link between the environment and our lifestyle.

Conservation Efforts. Since centuries ago, a vast amount of animals have been listed as endangered. Indonesia's wildlife is not an exception. Alarmed by this crisis, *Sahabat Alam* invites children and youth to recognize the problem and to take active conservation actions to save various species. Continuous efforts are being made to conserve the hawksbill sea turtle, coral reefs and the Bawean deer.

Electric Generator Water Reel. Beyond the extravagant city lights of Indonesia lies a bitter truth within the depths of villages isolated from the cities. The World Bank has estimated that 1.6 billion people, roughly equivalent to 20 percent of the entire global population,



With Dr. H. Gusti Muhammad Hatta, Minister of Environment, Indonesia



With Dr. H. Gusti Muhammad Hatta, Minister of Environment, Indonesia



With Mr. Stanislas Kamanzi, Minister of Environment and Lands, Rwanda



Receiving the ASEAN Champions of Biodiversity 2014 Award

do not have access to electricity. Among those numbers, more than 70 million people reside in Indonesia. Thousands of youths are deprived of possible opportunities for growth, a better quality of life, and access for education and health facilities because they have no access to electricity. This is worsened by the daily struggles they face such as the exhausting commute to school, crossing rivers, and walking on worn-out wooden planks and fragile lines of rope.

Their struggles prompted *Sahabat Alam* to initiate a sustainable development project in villages. Our goal is to harness potential renewable resources in each distinct village into electrical energy. The first attempt was held in Cilulumpang Village, where the designated best approach in cultivating energy was through the hydropower energy re-

leased from a nearby waterfall, known as *Curug Dendeng* Waterfall. Coping with a limited budget, a personalized self-engineered turbine was integrated with the waterfall, generating more than 6,000 watts that could power up more than 100 lightbulbs. This attempt was integrated in two main villages, with high hopes that the manifestation of renewable resources could be integrated in many more villages.

Continuing the journey

Today, *Sahabat Alam* has developed into a wide platform for youth to join hands with like-minded individuals in implementing environmental activities that combat the climate crisis. We share advanced knowledge about the climate crisis and diverse environmental issues.

Most importantly, *Sahabat Alam* fosters a sense of camaraderie among young people in sharing the same conviction and in becoming constant supporters of environmental efforts. Throughout the journey, *Sahabat Alam* has also been fortunate enough to engage with various government institutions and environmental organizations, among which is the ASEAN Centre for Biodiversity, a tremendous supporter of *Sahabat Alam* in our efforts to grow and inspire more young people to safeguard biodiversity.

In 2014, *Sahabat Alam* was recognized as the ASEAN Champion of Biodiversity. Prior to this, it was awarded the second place in the 2011 ASEAN Champions of Biodiversity. □

**Ms Suwana is the founder of Sahabat Alam.*

TWINS

SHARE PASSION TO CONSERVE ENDANGERED ANIMALS

Although Gabriella Aliifa Thohir (Gabby) and Giovanna Aanisa Thohir (Ghea)* may seem like any other young and busy high school students, they are actively campaigning to conserve one of the ASEAN region's endangered animals – the Monyet Bekantan or *proboscis monkey*.



The twins receiving a grant for their projects.

* Gabby and Ghea are founders of The Bekantan Twins project.



Releasing the Bekantan to its natural habitat.

The teens are working hard to raise awareness about the declining number of Bekantan monkeys left in the wild. They have shown that even in their very young age, it is possible to make a difference. Through hard work, determination and innovation, they founded The Bekantan Twins Project, a non-profit organization that aims to conserve the Bekantan monkeys through habitat revival. The twins may be getting a lot of recognition and support now, but they recall that establishing the project was not easy. It was a challenging journey. This is the story of their journey on transforming a simple school project into an award-winning movement.

A unique species

Hidden deep in the tropical Indonesian rainforests is a unique animal species called proboscis monkey, known locally as Bekantan. The Bekantan are endemic species found only in the Borneo Islands. This unique animal is re-

nowned for its one-of-a-kind long nose and its outstanding ability to swim – as they are one of the only primate species known to be prolific swimmers. Not only brilliant swimmers, the Bekantan are also naturally exceptional climbers. Their long tails enable them to jump far distances from tree to tree to eat young leaves. With their thick reddish-brown fur and large bellies, these monkeys are indeed rare and unique.

Unfortunately, the natural habitats of these creatures are continuously threatened by the clearing of the region's rainforests for timber, settlements and oil palm plantations. As the number of trees diminish, the Bekantan monkeys are forced to descend from trees more frequently and travel longer distances in search of food. This puts them at greater risk of being caught by land predators such as alligators and native people who consider proboscis monkeys as a delicacy. In addition, the increasing number of settlements mean that litter is almost always evident in their habi-

tat. Sharp glass and metal cans make it even more dangerous for the monkeys to walk on the ground. Despite being the mascot of Southern Kalimantan, people are unfortunately still unaware about the Bekantan's current state. The International Union for Conservation of Nature recently declared the Bekantan as an endangered species threatened into extinction. The Bekantan's estimated number was 260,000 in 1987, but the numbers have since drastically declined to only 25,000 in 2008.

Time to move and act

Realizing that there are very few people who care about the Bekantans, Gabby and Ghea immediately started to think of ways to make a change. After brainstorming many ideas, they decided to create and launch a campaign dedicated to saving the Bekantan. Initially, this campaign was part of a school project at Global Jaya School in Jakarta. As they put their hearts and minds into the project,

the twins were able to turn it into a significant conservation movement. Gabby's and Ghea's spirit in campaigning for the project was based on their concern for the environment, especially endangered animals like the Bekantan.

To create a significant impact, the girls knew they needed to fully understand the Bekantan monkey and the reasons for its diminishing numbers. To do this, Gabby and Ghea visited one of the Bekantan's natural habitat, Kaget Island in South Kalimantan. To their surprise, the island was no longer filled and inhabited by groups of Bekantan like it used to be. Instead, the island has been reduced to barren land, ready for settlements and developments. After witnessing the pathetic condition of the Bekantan at Kaget Island, the twins gained further resolve in working to conserve the species and its habitat. The girls learned crucial information about the Bekantan after talking to Professor Dr. Ir. H. M. Arief Soendjoto, a Bekantan expert. They found out that the Bekantan is the only species in the *Nasalis* genus. This means that if the Bekantan were to become extinct, the world's biodiversity will suffer a big loss, as there are no other species under the *Nasalis* genus.

Although the Bekantan is as unique as orangutans and komodo dragons, which have drawn great attention from people all over the world, these poor creatures are neglected and left to survive on their own. Hence, Gabby's and Ghea's first step was to raise people's awareness towards the sad condition of the Bektantans.

Turning ambition into reality

A dream is just a dream without any action to realize it. The girls realized that to raise the awareness of the people, they would need to establish a medium to connect to them. To do this, the twins created an informative website called www.thebekantantwins.com. Through this website, the girls were able to establish their presence as The Bekantan

Twins Project. Launched in late 2013, the website not only helps generate awareness through the sharing of informative articles and details about the Bekantan, but also shares Gabby's and Ghea's interesting experiences while conducting many conservation activities. Through this website, people can join the movement and donate to the Bekantan rehabilitation fund by purchasing The Bekantan Twins Project merchandise. All funds raised are used in the girls' re-plantation program in Kalimantan. This website is accompanied by several social media platforms to spread and update their experiences.

To launch the project and its website, Gabby and Ghea held an activation event on June 15, 2014 in Jakarta. Supported by numerous partners, the event was held in Kota Kasablanka, one of the biggest malls in Jakarta, and targeted the youth. The mall administration supported Gabby and Ghea by providing mall space for free.

The launching of the project was accompanied by volunteers from many schools and universities who were inspired by Gabby and Ghea. Students from Global Jaya School, Mentari School, University of Indonesia and Bandung Technological Institute all lent a helping hand. The event was attended by hundreds of people who showed their support by donating and buying Bekantan project merchandise. From this event, Gabby and Ghea earned some IDR 100.000.000 or USD 10,000 to be used for future project activities.

Bringing in the power of collaboration

Gabby and Ghea worked under the guidance of Professor M. Arief Soendjoto who works in the Forestry Faculty of Lambung Mangkurat University. He said that the girls' actions are truly inspiring and he proudly took part in guiding them throughout the project.

"The numbers of Bektantans have continuously declined over the years and has become a critical concern. The

Bekantan Twins Project gave us a big help. It's such a blessing to see young people taking part in conserving our endangered species. I have taken part in guiding the twins throughout the project. From taking them around Bakut Island to providing research information on the Bekantan, it has been truly an honor to be part of this movement," Prof. Soendjoto said.

Gabby and Ghea also collaborated with another like-minded group, Sahabat Bekantan Indonesia, based in Banjarmasin, South Kalimantan. Amalia Rezeki, head of the organization, said "The twins are truly an inspiration to us. They have successfully shown how age does not matter. Despite your age, you can take a stand on something you believe in. The number of Bekantan to this day is worrying. I encourage every young person to follow the twin's footsteps. We thank them tremendously for helping us spread the word on the importance of keeping the Bekantan alive."

The team approached the Indonesian Natural Resources Conservation Office, the administrator of Bekantan conservation area in Bakut, an island located in Banjarmasin, South Kalimantan. They presented a grand design in building Bakut Island as a pilot project for the Indonesian Natural Resources Conservation Office. The project is envisioned to be completely built and well-managed as a structured rehabilitation and tourism area in a few years' time. Aside from building strong networks to ensure the project's sustainability, the twins are conceptualizing more creative conservation programs using charity funds collected for this project.

H. Zulfikri Hasan, S.E., M.M., Minister of Forestry, Indonesia, expressed appreciation to the twins for taking the lead in saving the Bekantan and expressed support for the project. "They have chosen a very good strategy by focusing on awareness creation among youth and engaging partners to ensure the sustainability of the project. I know their fight has just started." He highlighted the importance of supporting the project.

South Kalimantan Natural Resources Conservation Center regional head M. Ridwan Effendi, S. Hut says he appreciates their fighting spirit to help us conserve the Bekantan as an endemic animal." He added that "the project will certainly give us lots of benefits and greatly help the government especially the Ministry of Forestry, in this case, the Natural Resources Conservation Center of South Kalimantan, in rescue efforts and the preservation of the Bekantan."

Aside from establishing strong networks, the twins are now in the midst of establishing more creative conservation programs using charity funds. On September 21, 2014, they launched a habitat expansion program by planting 500 trees in Bakut Island. They invited many important stakeholders such as the Indonesian Natural Resources Conservation Center, Prof. Arief, Sahabat Bekantan Indonesia, and many youth volunteers from the local area of Banjarmasin. Many kinds of trees, including fruit and rambai trees, were planted to provide food, shelter and places for the Bekantan. The trees will serve as home for the Bekantan and many other species of monkeys and exotic birds. This movement also contributed in improving the number and variety of trees around the Bekantan's natural habitat.

Championing Southeast Asian biodiversity

By establishing this project, Gabby and Ghea hope that they can improve the lives of the Bekantan and increase its population. The twins desperately want the Bekantan to survive so that they can show future generations the beautiful biodiversity of Indonesia and the ASEAN region. They believe that it would be devastating if the Bekantan were to become extinct, as they are a unique example of the great Southeast Asian biodiversity. Gabby and Ghea hope that with recognition, they can help sustain this wonderful creature.

Due to their passion and hard work, the girls won the ASEAN Champions of



Using the media to reach out to fellow youths.



Posing after a hard day's work for biodiversity conservation.



Raising funds through selling souvenirs.

Biodiversity Award and Biodiversitas Indonesia Award in 2014. The Bekantan Twins Project endeavors to be a sustainable long-term project. To be awarded as Champions of Biodiversity in the youth sector at such a young age is beyond inspiring. The ASEAN Champions of Biodiversity is one of the biggest appreciations for The Bekantan Twins Project.

However, the girls are not satisfied. In the near future, we can certainly expect more from these girls. Their movement is an inspiration, especially for young people trying to make their own mark in the world. Gabby and Ghea show that change can be done no matter how young. Why delay your actions when you can start now?

NEWSPAPER PRIORITIZES BIODIVERSITY REPORTAGE

By Lilay Castillo

***L**iving up to its commitment of providing a 'broader look at today's business,' the BusinessMirror is promoting biodiversity conservation through its day-to-day reportage and special reports, as well as its evaluation and presentation of stories across all sections. The newspaper continues to promote biodiversity as no less than the business of living.*



The biodiversity-loving BusinessMirror team.

Impact, timeliness, prominence, proximity, bizarreness, conflict, and currency – a story on biodiversity may have most of these news values, but that does not guarantee it a space on the main page of a newspaper or a slot on primetime television.

According to a number of Southeast Asian media practitioners who responded to the Biodiversity Awareness Survey for Media Practitioners in the ASEAN Region conducted by the ASEAN Centre for Biodiversity, a major factor affecting the limited reportage on biodiversity is the fact that it is not seen as a priority topic. There are always other priorities like political and economic news and biodiversity is seen as a secondary news item.

Half of the respondents said their media organizations do not see biodiversity as a priority topic. “Media organizations are businesses like any other; while we do have a duty to our readers, that duty is often constrained by the bottom line. Media organizations must be shown how environmental issues can affect everyone’s bottomline,” one editor polled said.

One newspaper that considers biodiversity a priority is the Philippine-based BusinessMirror which devotes a full section to biodiversity-related stories every Sunday.

Bridging the gap between scientists and readers

Founded on October 3, 2005 by the Cabangon Chuas, an experienced publishing family, the newspaper seeks to provide readers with a broader look at the nation’s business in these challenging times. It covers not just economies, industries, companies or markets, but all the people and elements whose dynamics influence developments, movements and trends.

It raises for the reader—the business sector—as well as other sectors, including the policy-makers, the academe, the young professionals and students—the question, “What does this mean to me?”



BusinessMirror makes the complex topic of biodiversity easily understood by the man on the street.



A regular Sunday treat on biodiversity through a variety of stories on biodiversity conservation.



and provides the means to understand why data and related information are what they are, what they mean in concrete terms, and what are the challenges they pose. The newspaper provides readers an idea of how government goals and targets can influence their personal objectives and directions.

BusinessMirror provides the means for interaction at every level, across all fields: government with private sector; policymakers with ordinary citizens, corporations with workers, executives with subordinates, big businesses with

small businesses, entrepreneurs with fellow entrepreneurs, the encounters are limitless. Mirrored here, they provide the dynamism that makes coverage so much more exciting and far broader than that of an ordinary business paper.

“It is for this reason that BusinessMirror gives premium to issues on the conservation of environment and biodiversity, among other concerns in the Philippines, in the Southeast Asian region, and other parts of the world. It believes that biodiversity and environment conservation is important and should be

a concern not just of scientists and environmentalists but also of other sectors, including business—because biodiversity is the source of raw materials for business, agriculture, pharmaceuticals and ecotourism, among others,” Ms. Lyn Resurreccion, Green Section editor of BusinessMirror, said.

Giving premium attention to biodiversity issues

The newspaper started publishing environment and biodiversity issues in its pages since its establishment in 2005. But since more and more issues on biodiversity and environment crop up, the newspaper decided in 2011 to have a dedicated section on biodiversity and environment every Sunday—the Green, Biodiversity, Science and Faith pages—although BusinessMirror still prints such issues in other pages when the need arises.

The newspaper publishes articles, interviews and photos concerning environment and biodiversity in the ASEAN region, including the Philippines, and other parts of the world in order to inform the public about the problems, issues, concerns, solutions or initiatives on environment and biodiversity conservation, protection and advocacy.

The pages of the BusinessMirror’s Green section highlight many biodiversity and environment stories.

“Through this section, we allow the readers to appreciate and understand how environment and biodiversity issues impact on health; the effects of progress on biodiversity and of biodiversity to progress; the economic value of biodiversity; the initiatives of the business sector; how biodiversity could mitigate climate change and how climate change affects biodiversity; the illegal wildlife trade; the discovery of new species and loss of existing ones; the significance of heritage and national parks and protected areas; effects of pollution on biodiversity; the role of business and entrepreneurs in environment and biodiversity conservation; and the participation of indigenous peoples, women and other sectors in environment and biodiversity conservation, among others,” said Ms. Resurreccion.

BusinessMirror’s Metro Manila-based and provincial reporters, correspondents and contributors contribute to the rich wealth of stories that were published in Green section. Other stories are also culled from foreign wire stories and other sources.

“The newspaper is proud to say that its earlier printing of biodiversity and

environment issues—before it came out with its Green section—was already recognized by the biodiversity conservation community in the ASEAN region by bagging the third place in the Media Category in the first ASEAN Champions of Biodiversity Media Award in 2011,” said Ms. Resurreccion.

The BusinessMirror also won two Newspaper of the Year (2006 and 2010) awards and one Business Paper of the Year (2013) award from the Rotary Club of Manila for its comprehensive coverage of issues. The Publishers Association of the Philippines Inc. likewise recognized the BusinessMirror as the Best Business Newspaper of the Year in 2008. It also received Special Citation from the Department of Science and Technology in 2013 for its extensive coverage of science and technology, including environment and biodiversity issues. It also won recognition from the United Nations and the biotechnology and business sectors, among others.

Making biodiversity a ‘sexy’ topic

Our efforts to report on biodiversity, however, is not without challenges. “When we started focusing on biodiversity issues, we faced the unique challenge

of making it a ‘sexy’ topic, which could hook readers and generate public support. Our reporters and editors also had to be constantly encouraged to embrace the subject and appreciate the seamless connection between biodiversity, climate change and the very stake of human survival. It’s not exactly a simple topic to handle; some biodiversity-related issues are complex and can’t be written simplistically, or without careful research and extensive interviews with multidisciplinary experts,” Ms. Resurreccion said. □



Sustaining excellent biodiversity reportage.



LESSONS FROM OUR ASIAN JOURNEYS

By Annalyn Ardoña*

It was a sunny day in December when our *BORN TO BE WILD* television program team, together with Dr. Nielsen Donato, one of our two veterinarian hosts, went to the Tiger Temple in Thailand to observe their tiger interaction program. There were about eight to nine adult captive-bred tigers roaming freely, jumping and pouncing on each other. We were put in a flimsy cage that even a toddler can topple, just a striking distance from where the animals were playing.

It was magnificent to imagine what it would be like if they were in the wild. And as we witnessed their amazing strength and power, we also realized our own vulnerability. The tigers, being tree-climbers, can easily pounce on us if they wanted to. But the attack never came.

The temple started as a rescue center for illegally traded tigers. From one tiger, the temple now houses more than a hundred. The tigers are being bred in captivity because cubs keep the tourists coming; tourists sustain the facility. Some groups criticize the temple for not having any real conservation motive for breeding; they have no release program for the tigers. But the situation of these tigers may only be a reflection of the state of wildlife today. In the wild, they find their habitats continually destroyed, while in captivity, they find themselves living in less than ideal conditions.

"I have mixed views about the Tiger Temple," Dr. Donato recalls. "In the wild,

tigers have been losing their habitat to human encroachment and development, and finding a suitable release site will be a big challenge should the temple decide to have a release program. Just the same, there are a lot of options for them to make their operations more meaningful for conservation and I hope that they focus on these, too, alongside making profit to sustain their existing tigers."

Yearly, the *BORN TO BE WILD* team sets out on long expeditions across Asia to learn about the threats and issues facing biodiversity in our neighboring countries. We've found similar challenges, especially when humans and wildlife cross paths and territories.

In Indonesia, Dr. Ferds Recio, our veterinarian host, visited a community that fears man-eating tigers in their area. "Residents told me of an incident when a mother witnessed a tiger drag and chew her daughter to pieces. It was a tragic scene to imagine," Dr. Recio recounts. "If

we continue to destroy the tigers' habitat, these animals will look for ways to preserve themselves, and the smaller their environment becomes, the more dangerous it becomes for humans. This is a common story throughout Southeast Asia—humans and animals would cross paths, and both sides have to fight for survival." True enough, several tiger species have become some of the most endangered animals on the planet, in spite of their known strength and ferociousness.

Dr. Recio also visited an orangutan rescue center in Indonesia. Orangutans are continually displaced in Indonesia because of expanding palm tree plantations that replace forest habitats. "I saw one orangutan that suffered several bullet wounds. He was shot for trespassing into a palm tree plantation. Luckily, the primate survived. In our travels, we've witnessed similar scenes that seem to show that the world is becom-





ing smaller and smaller for the wildlife. Fortunately, the orangutans are given a second chance through the people who work in the orangutan center in Indonesia. Throughout our Asian journeys, we also find individuals and groups who work hard to preserve remaining wildlife populations and habitats.”

In Viet Nam, Dr. Recio met the people behind Wildlife at Risk, a non-profit organization that aims to rescue abused Asiatic and sun bears. “I felt sorry for the bears. All their lives they live in cages, with tubes in their stomachs for bile collection, so they are living like zombies. They are alive but they’re actually dead; they can’t move because they are kept in cramped cages. They just keep growing for as long as they can give bile to collect, so it’s really a miserable condition for them.”

The Vietnamese government has long banned collection of bear bile, which is believed to have medicinal benefits. But some bear farms were still operating at the time of our filming. Together with Wildlife at Risk, Dr. Recio helped rescue some pet bears. “The bear was inside the cage for so many years. We sedated the animal and transferred him to a rehabilitation center. It’s always a good feeling to be able to rescue an animal as large as the bears,” he recounts.

There are more hopeful wildlife stories in our Asian expeditions. In Thailand, Dr. Donato encountered hundreds of city-dwelling monkeys. Monkeys enter temples and commercial establishments in Lopburi City, often jumping on people and stealing food and other goods. But in spite of their mischief, residents continue to respect the monkeys.

“Lopburi is an example of people and wildlife coexisting in the city. This is one of my dreams for our country; that we realize that these animals have very little natural habitat left. Should there be an overlap of dwelling spaces, we must not hunt or hurt them,” Dr. Donato says.

In the Philippines, *BORN TO BE WILD* continues to champion the cause of conservation through our documentaries. Our program has led and taken part in hundreds of wildlife rescue and release missions to help repopulate forests with native species. “After seven years on the air, we see a change in people’s attitudes towards wildlife. Our viewers are taking part in reporting the illegal wildlife trade, and we can see from their feedback that they’re genuinely interested in biodiversity,” says Senior Program Manager for GMA Public Affairs, Angeli Atienza. “We understand that we have a long way to go, and we’re committed to this mission of spreading the word

about conservation in the Philippines and across Asia.”

Through our Asian journeys, we were able to compare our culture from that of our neighbors and learn about practices that can be applied for our own conservation work. “I think it’s very important that we learn from each other in Southeast Asia,” says Dr. Recio. “We share almost the same kind of climate and topography. We have diverse species of plants and animals, so the issues that we face are not so different. We can learn from the solutions that each community is able to find. We can learn from each other’s successes and even from each other’s failures.”

Our Asian journeys not only awed and fascinated the Filipino viewers, but imparted crucial truths as well, including the truth about our common struggle to attain development without sacrificing conservation. Ours is a region naturally blessed with a rich biodiversity. And through the efforts of institutions, and dedicated people on the ground, we are hopeful that *BORN TO BE WILD* television program will be able to film and share more stories that inspire people to protect our region’s biodiversity. □

**Annalyn Ardoña is senior producer of Born to be Wild, GMA Network Philippines.*

ACB's 10th Year

Celebrating a Decade of Cooperation on Biodiversity Conservation

By Rolando A. Inciong



Governments of ASEAN Member States have increasingly recognized biodiversity's extreme importance to human survival. National and local governments are taking individual steps to preserve flora, fauna, and other biological resources.

With biodiversity knowing no boundaries, countries acknowledge that working together is crucial to addressing common problems.

In the mid-1990s, the need to establish an ASEAN institution to promote knowledge sharing about best practices and common efforts in the biodiversity sector had become apparent. It led to the first European Commission-funded project: the ASEAN Regional Centre for Biodiversity Conservation (ARCBC). This regional project started in 1999 with a grant from the European Commission.

Before the end of the five-year ARCBC Project, stakeholders agreed on the need for a permanent institution, as against a mere time-bound instrument. This promptly translated to the creation of a regional center of excellence to strengthen the capacity of ASEAN Member States in formulating and coordinating bio-

diversity-related policy, strategy and action; fulfilling relevant multilateral environmental treaty obligations; and promoting and advancing common positions on matters related to biodiversity conservation and the management and sustainable use of natural resources.

It was in 2005 when the ASEAN Member States formed the ASEAN Centre for Biodiversity (ACB). Their goal: create a regional mechanism in response to the challenge of biodiversity loss.

The ACB is being hosted by the Government of the Philippines through the Host Country Agreement signed in 2009. Since its establishment, the ACB has undertaken various actions across a range of thematic areas of global and regional importance, including Access and Benefit Sharing, Agro-Biodiversity, Biodiversity Information Management, Business and Biodiversity, Coastal and Marine Biodiversity, Public Awareness, Ecotourism, Global Taxonomy Initiative, Invasive Alien Species, Protected Area Management, The Economics of Ecosystems and Biodiversity, Urban Biodiversity, Wetlands Biodiversity and Wildlife Law Enforcement.

Over the years, the ACB has contributed to the enhancement of policy cooperation on biodiversity across the ASEAN region; strengthened institutional capacity within the ASEAN on regional and global biodiversity issues; promoted biodiversity information management and sharing; and boosted public and leadership awareness of the values of biodiversity and the need for conservation and sustainable management.

In the area of Programme Development and Implementation, ACB has undertaken various actions in the field of policy coordination and capacity building which included, among others, regional workshops on access and benefit sharing, the Global Taxonomy Initiative, protected area management, wildlife enforcement, and other thematic areas.

The Secondment Programme for ASEAN Member States, which has been instrumental in promoting and facilitating the direct participation of government officers and representatives from academe from the ASEAN Member States in carrying out selected regular functions of ACB through short-term assignments, is also a key achievement.

ACB has strengthened the capacity of ASEAN Member States in conserving and sustainably managing their biodiversity and in meeting their commitments as parties to various multilateral environmental agreements.

The ACB has leveraged support to the ASEAN Heritage Parks (AHPs) through the ACB-GIZ Biodiversity and Climate Change Project's funding of pilot project on AHPs and KfW's Small Grants Programme for AHPs in Indonesia and Myanmar. The Centre has likewise leveraged technical cooperation support with the European Union, India, GIZ, and the Japan-ASEAN Integration Fund to support capacity building on AHP, regional biodiversity conservation, and ACB organizational development.

The Centre continues to develop new pipeline projects in support of ASEAN Member States.

In the area of Biodiversity Information Management, the ACB developed applications which enable users to access AHP information from the web, online and from mobile phones running on android platforms. It has significantly increased the content of its electronic-

library. The Centre is also equipped with interactive graphs for which data is being sought to support monitoring the Aichi Targets. The ACB continues to support ASEAN Member States on data management.

The Centre has established and strengthened its partnerships with global biodiversity data holders in order to populate the species and protected areas databases, keep abreast with global developments, and conform to globally accepted formats in recording species and protected areas data. These collaborations have paved the way for sharing financial and technical resources.

In the Communication and Public Affairs front, the ACB continues to promote Aichi Target No. 1 which states that "by 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably." Apart from implementing key communication initiatives like the ASEAN Biodiversity Magazine and the ASEAN E-News Updates, the Centre conducts regional activities like the ASEAN Champions of Biodiversity awards,

which recognizes individuals and organizations who promote biodiversity conservation in the business, media, and youth sectors. Capacity building activities are conducted for government information officers and media practitioners to ensure that the message of conservation will be spread to more people.

"At the core of these accomplishments is our strong collaboration with the ten ASEAN Member States. We thank the ACB Governing Board for providing us the much-needed policy guidance and support and the ASEAN Working Group on Nature Conservation and Biodiversity for giving us technical guidance. We also express our gratitude to our National Contact Points for their active participation in ensuring the success of ACB activities in their countries," Atty. Roberto V. Oliva, executive director, ACB said.

"Partnerships will continue to be a key cornerstone of the Centre's operations in 2015. The Centre will continue to explore partnerships with other international and regional institutions to sustain its operations and the implementation of priority programs," Atty. Oliva said. □



ACB's 10th Year

Building capacity for biodiversity conservation in the ASEAN region

By Rolando A. Inciong

Conserving the ASEAN region's rich but threatened biodiversity remains a key challenge among those working in the conservation arena. Countries and their environment workers have varying levels of expertise when it comes to performing their tasks and providing solutions to biodiversity-related issues.

To contribute to efforts of the 10 ASEAN Member States in safeguarding habitats and species, the ASEAN Centre for Biodiversity (ACB) is implementing a capacity development program that seeks to deliver capacity-building services and technology transfer by engaging relevant and appropriate expertise.

"Focusing on capacity building enhancement initiatives forms part of ACB's overall strategy since its establishment 10 years ago. All multilateral environment agreements have stressed the critical importance of capacity building as a cross-cutting action which should be pursued at all levels of management and involving all sectors of society," said Ms. Clarisa Arida, Director, Programme Development Unit, ACB.

"It is the Centre's mandate to build the capacity of ASEAN Member States on priority thematic areas on biodiversity as guided by regional and international frameworks such as the ASEAN Socio-Cultural Blueprint and the Convention on Biological Diversity (CBD). Despite having limited resources, ACB fulfills this commitment by tapping its strong network of partners that offers a mix of technical and financial support," Director Arida explained.

A forest ranger who learned more about wildlife crime enforcement and conservation, a budding taxonomist who benefited from the knowledge of vet-



eran taxonomy experts, an ASEAN Heritage Park manager who participated in an exchange of experiences and ideas with fellow park managers, a journalist who gained a deeper appreciation of biodiversity reportage, an environment worker who benefited from enhanced capacity in managing available information on species and protected areas, a junior biodiversity officer who enjoyed the opportunity to be exposed to how an intergovernmental biodiversity conservation organizations works – these are only some of the more than 2,700 individuals that ACB has touched over the years through its capacity development initiatives.

For Engr. Mardrono P. Cabres-tante, Jr., Project Development Officer V and Division Head, ECAN Policy/Monitoring/Knowledge Management, and Palawan Council for Sustainable Development Staff, ACB's workshop on biodiversity information management,

provided a "clear picture and understanding of how data is organized and managed, and what a Clearing-House Mechanism is all about." He explained that "the trainings were beneficial to us because we are now guided on how to organize our accumulated data and information which can be easily accessed by the staff, while providing a venue for our partners to share the information they have. As another offshoot of the trainings, we were able to collaborate with data generators and providers in Palawan, such that we are ready to launch the *Palawan Knowledge Platform for Biodiversity and Sustainable Development*."

Another ACB workshop alumna is Ms. Sommanussa Saengrit, Forestry Technical Officer at the Forestry Herbarium of the Department of National

Parks, Wildlife and Plant Conservation of the Ministry of Natural Resources and Environment, Thailand. She attended



the training course on Monocot Plants of the Japan ASEAN Integration Fund-supported project on Taxonomic Capacity Building for the Sustainable Use and Governance of Biodiversity held in the Research Center of Biology, Institute of Sciences in Bogor, Indonesia. The taxonomic skills and information that she obtained from the training course have enhanced her capacity to identify the monocot plants. She has become well aware of the monocot plants and has included them in her field collection activities.

"We are proud to have touched the lives of so many conservation professionals in the past decade. Trainings and workshops have contributed toward strengthening the implementation of National Biodiversity Strategies and Action Plans (NBSAPs) and facilitate common understanding of global biodiversity issues and concerns so that they can meet their obligations to the Convention on Biological Diversity (CBD) and other relevant multilateral environmental agreements," Director Arida said.

She added that, "as ACB celebrates its 10th year anniversary, we will strengthen our efforts in leading and engaging in partnership arrangements with appropriate institutions at the national, regional and international levels involved in various capacity building programs and initiatives that would enhance the capabilities of institutions in ASEAN Member States for sustainable management of biodiversity resources."

Today, a key focus of the Centre's capacity development program is mentoring a new generation of biodiversity professionals in ASEAN Member States by providing them opportunities for practicing the skills and lessons learned.

In 2013, ACB and GIZ launched the ACB Secondment Programme under the Biodiversity and Climate Change Project. It is a capacity building initiative that promotes and facilitates the direct participation of government officers and staff from the ASEAN Member States in carrying out selected functions of ACB through short-term assignments. The

program aims to foster shared understanding and appreciation of ACB mandates and the capacity building needs of the ASEAN Member States; familiarize the ASEAN Member States on the institutional setup and work processes of ACB and vice versa; bolster mutual learning through exchange of information, expertise and lessons learnt; and enhance coordination and interaction processes between ACB and the ASEAN Member States.

"The direct involvement of the ASEAN Member States in ACB operations through the participation of their nationals is a pro-active approach to capacity building. Learning experience is maximized by face-to-face interactions and hands-on application, making the program effective," said Mr. Norman Ramirez, Capacity Building Specialist, ACB. He added that the program provides an alternative approach to complementing usual ACB work processes.

"Cooperation between ACB and the ASEAN Member States will also be strengthened. Country-specific inputs will enable ACB to work in a more targeted, demand-oriented and efficient manner," he explained.

To date, countries which have sent secondees to ACB include Indonesia, Lao PDR, Thailand, and Viet Nam. "From our secondment experience, we realized that ACB provides the right platform and environment for work – life balance, career growth, recognition and job satisfaction. Although we joined ACB for only two months, we were able to participate in a truly motivating international workplace to develop our diverse knowledge base on biodiversity conservation," said Huyen Pham Anh, a junior biodiversity officer from Viet Nam.

For Ms. Somawan Sukprasert, Environment Official from the Office of Natural Resources and Environmental Policy and Planning, Ministry

of Natural Resources and Environment, Thailand, "The Secondment Programme benefits both ASEAN Member

States and ACB. It provides AMS with the opportunity to contribute their ideas to ACB's projects and activities. In this process, the ACB can benefit from the experience of AMS. Ensuring a clear understanding among AMS and ACB is very important because ASEAN is one community. Thus, the environment platform of AMS, especially the biodiversity platform, will be strengthened."

ACB attributes the success of its capacity building initiatives to its partnerships with like-minded organizations. During the past 10 years, ACB has partnered with the European Union, Germany, Japan, India, Republic of Korea, People's Republic of China, France, Asian Development Bank, ASEAN Foundation, East and Southeast Asia Biodiversity Information Initiative, British Foreign and Commonwealth Office, United Nations Environment Programme (UNEP)-Global Environment Facility, United Nations University-Institute of Advanced Studies, UNEP World Conservation Monitoring Centre, the Group on Earth Observations-Biodiversity Information Network (BON), the Asia-Pacific BON, Global Biodiversity Information Facility, ASEAN-Wildlife Enforcement Network, Freeland Foundation, Partnerships in Environmental Management for the Seas of East Asia, Secretariats of the Ramsar Convention and the Convention on Biological Diversity, Southeast Asian Regional Centre for Graduate Study and Research in Agriculture, Global Partnership on Business and Biodiversity, Japan Business Initiative for Biodiversity, Sirindhorn Foundation of Thailand, Economy and Environment Program for Southeast Asia, and the East Asian Australasian Flyway Partnership, among others. □



Bridging biodiversity information gaps in the ASEAN region

By Rolando A. Inciong

Biodiversity Information Management (BIM) is quite a mouthful and at times, intimidating. However, a broader view can give one the realization of the importance of having a BIM facility in place. What biodiversity is available? Are there any left? Where are they? How is biodiversity changing? What threatens biodiversity? Can I have these data and information accessible through my phone? There are just some of the few questions that may be answered by BIM.

Dissecting BIM

As its name denotes, BIM is a system or a group of systems that enable the management of data related to biodiversity. These data may consist of common and scientific names of living things, where they are found, when they were discovered, their threat status if any, and where data is available, the circumstances where they best survive, such as temperature and habitat type. These information can be put together in several ways and it is amazing to later find out how many species can be common

among several countries, how many species are threatened in each country or across a region such as the ASEAN, and how some species can be concentrated in a few localities.

"Having more information can tell more stories about biodiversity. Information on recently discovered species in a country can inform about new discoveries or introductions of species from elsewhere. It is important to know the whereabouts of these recent discoveries as some species may have been brought in from other areas and may prove non-beneficial or competitive to native species. In the opposite manner, globally changing environmental circumstances or human vectors may cause some species from the region to move to areas where they may disrupt local species interactions, modify the environment, or cause the extirpation of native species," said Dr. Sheila Vergara, Director, BIM Unit, ACB.

The Centre presents helpful information about invasive alien species on its Clearing-House Mechanism (CHM): <http://chm.aseanbiodiversity.org>. Even the list of potentially invasive alien spe-

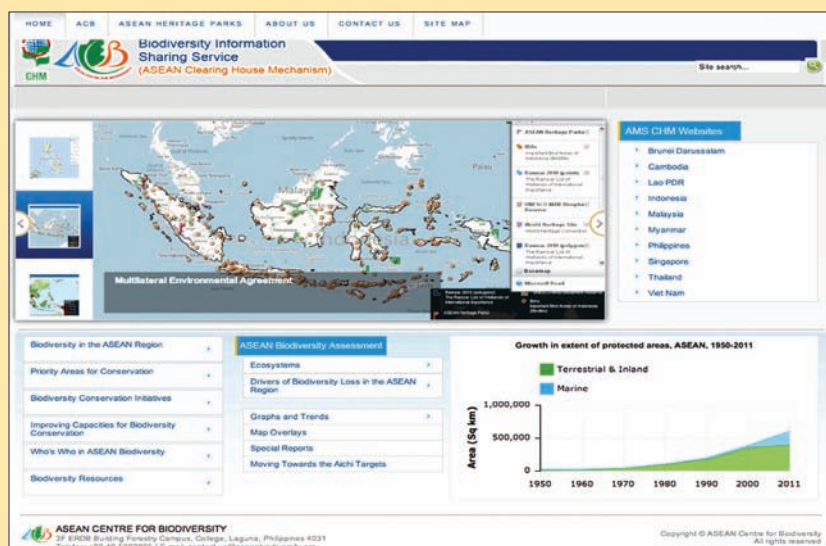
cies can be viewed in the same CHM to allow stakeholders to come up with pro-active steps on this biodiversity concern.

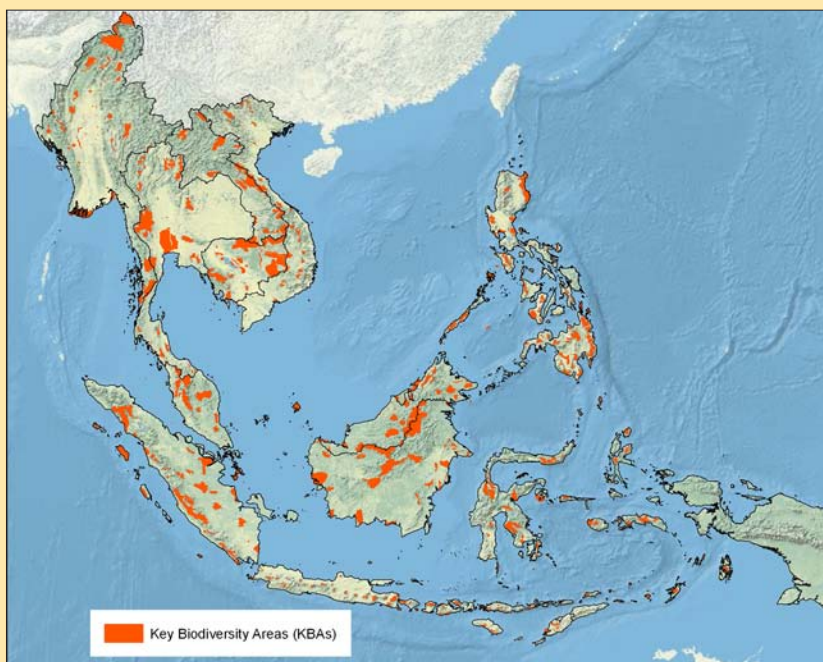
According to Dr. Vergara, increasing the number of species listed incrementally will provide a real time idea on a country's diverse biological resources. Extremely biodiverse countries, especially those in tropical regions, may make it to the list of *megadiverse countries* defined by Conservation International as countries that harbor the majority of the earth's species.

Using biodiversity maps

Biodiversity information can also be presented through maps. Such visual representations can inform environment managers and policy makers where it will be ecologically feasible and most cost effective to conserve biodiversity and, at the same time, provide a repository of natural resources such as plants and plant parts to provide for local livelihoods, traditional medicine, materials for housing, food preparation, as well as places for worship.

ACB maps on different information can be put together to produce yet another set of information. Temperature regimes painted on a map placed over information on the distribution of hard corals in the region show where corals are most likely vulnerable to extreme temperatures. Unsworth, et al (2008), found out that there are more fish on adjoining set of coastal habitats such as seagrasses in affinity with mangroves as opposed to more distant circumstances. BIM can take such information and develop a regional picture and locate where mangroves, seagrasses, and coral reefs occur together to inform marine conservation prospects.





"The value of the BIM Unit at ACB is in its ability to develop and showcase knowledge products and tools to bring about a better understanding of biodiversity and the responsibility to conserve natural resources," Director Vergara said.

The e-library contains nearly 11,000 references, all related to biodiversity and is available for download as an E-Lib Mobile App on your Android Phone; enable downloads from 'Unknown Sources' which can be facilitated through the mobile's Application Settings; then download the E-Lib App from http://chm.aseanbiodiversity.org/templates/regional_chm/apps/E-Lib.apk while using your mobile's web browser. Upon downloading, you have to locate the .apk file and install it manually.

From the collection of species and protected areas information and based on information found in the e-library, ACB has produced videos on the marine and coastal environment, on threatened species, and an overview on how the ASEAN is faring in conservation. These knowledge products help in promoting the various concerns on biodiversity among relevant stakeholders.

Director Vergara said that ACB is committed to improve capacity of ASEAN Member States to develop, pop-

ulate and maintain their own CHMs. A CHM for biodiversity is a website that provides information to better contribute to the implementation of the Strategic Plan for Biodiversity 2011-2020 and the achievement of the Aichi Biodiversity Targets.

The CHM is maintained by a team composed of the CHM focal point, the CHM manager, other technical team members and a stakeholder constituency to provide ideas on the CHM site

development and subsequently contribute to data to populate the databases of the CHM.

ACB's BIM team

The BIM team of ACB, composed of programmers and research and knowledge management personnel, are equipped to assist the preparation of national CHMs, specifically, support the development of CHM websites, facilitate CHM stakeholder discussions, and aid the preprocessing of species and protected areas information into common database formats and train encoders.

In addition, they can provide orientation sessions on simple mapping processes and assist in preparing draft national reports. The BIM advocacy is for all ASEAN Member States to establish their CHMs, develop their biodiversity databases, populate them, and share the information to enable a regional analysis useful for conservation focus, alignment of national policies, and transboundary conservation arrangements. Effective data sharing, after all, serves as one of the pre requisites of sustainably managing the region's rich yet threatened biodiversity. □



World Wetlands Day, February 2

Wetlands for our future

By Angie Metin

Do you know what a wetland is? By looking at the word, you will probably guess that it is a piece of land that has water. That's easy. But do you know what wetlands actually do? That's the interesting part.

Swamps, marshes, lagoons, deltas, and bogs – they are collectively known as wetlands. People see them yet they fail to recognize their values. Many do not realize the fact that wetlands are important ecosystems that support vital ecological functions, and provide valuable products and services for human survival.

Wetlands provide people with water and fish. As one of the most biologically productive natural ecosystems comparable to coral reefs, wetlands serve as habitat for plants and animals, including many endangered or threatened species. Mangroves, freshwater turtles, waterbirds, crabs, monitor lizards, river dolphins, lobsters, and crocodiles are among the many species that thrive in the wetlands.



Wetlands also support agriculture. Many family farming operations rely on the soils, water, plants and animals found in wetlands to provide food security and improve their livelihoods. Wetlands feed millions.

Wetlands also help in water purification and waste treatment, flood control and storm protection, as well as provide recreational opportunities. They are also crucial in recharging groundwater reservoirs. According to the Secretariat of the Convention on Wetlands of International Importance (Ramsar Conven-

tion), these services have been valued by economists at US\$14 trillion annually.

Wetlands also serve as a natural sponge against flooding; they protect coastlines.

"This long list of benefits derived from wetlands tells us an important message. Wetlands is one of the keys to human survival," said Atty. Roberto V. Oliva, executive director of the ASEAN Centre for Biodiversity (ACB).

Every second day of February, people from around the globe celebrate the many services that wetlands render humanity. "The ACB and our partners and stakeholders in the ten ASEAN Member States join the rest of the world in celebrating World Wetlands Day," Atty. Oliva said.

World Wetlands Day marks the adoption of the Ramsar Convention, an international treaty for the conservation and sustainable use of wetlands, on February 2, 1971, in the Iranian city of Ramsar. Since 1997, various organizations all over the world have undertaken actions aimed at raising public awareness of wetland values and benefits in general and the Ramsar Convention in particular. The ASEAN region takes part in this global event as majority of the ASEAN Member States have recognized the special attributes of the wetlands and are Parties to the Ramsar Convention.



The theme for 2015 is *Wetlands for Our Future*. According to the Secretariat of the Ramsar Convention and partners Danone and Evian, "The general public are largely unaware of the vital benefits brought by wetlands. If anything, wetlands are equated with wasteland; something to be filled in or converted to other uses. In fact, scientists estimate that 64 percent of the world's wetlands have disappeared since 1900. For World Wetlands Day 2015, we're asking for your help in turning the tide and helping to create awareness of just how essential wetlands are for our future."

Organizers of World Wetlands Day 2015 are specifically taking aim at the target group of tomorrow: youth aged 15-24. "Why youth? Teens and young adults have a growing interest in environmental issues, are tech savvy, and have a strong belief in their own ability to make a difference. Crucially, they also act as 'transmitters,' spreading the word to their families and friends, causing a ripple effect that reaches the wider public," the Ramsar Secretariat said.

"As a partner of the Ramsar Secretariat and supporter of wetlands conservation, ACB encourages all citizens of the ASEAN region especially the young people to take part in efforts to protect wetlands. This is a shared responsibility among all of us who stand to lose so much," Atty. Oliva said.

He added, "Humans are misusing and abusing wetlands. Already, large areas of wetlands have been lost mostly to agricultural development. Those that remain are heavily degraded due to the combined impacts of mismanagement, over-exploitation and pollution. The effects of climate change further exacerbate the situation. This poses a real threat to biodiversity. We have to realize the crucial link. When wetlands are degraded, the species that live in them face serious trouble. What does this mean to us? Two basic needs for human survival are taken away from us – food and water. Our future." □

World Wildlife Day, March 3

It's time to get serious about wildlife crime

UN Secretary-General Ban Ki-moon's Message for World Wildlife Day 2015

The United Nations General Assembly has proclaimed March 3 – the anniversary of the adoption of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) – as World Wildlife Day. On this second observance of the Day, the UN system, its Member States and a wide range of partners from around the world are highlighting the simple yet firm message that "It's time to get serious about wildlife crime".

Illegal trade in wildlife has become a sophisticated transnational form of crime, comparable to other pernicious examples, such as trafficking of drugs, humans, counterfeit items and oil. It is driven by rising demand, and is often facilitated by corruption and weak governance. There is strong evidence of the increased involvement of organized crime networks and non-State armed groups.

Illegal wildlife trade undermines the rule of law and threatens national security; it degrades ecosystems and is a major obstacle to the efforts of rural communities and indigenous peoples striving to sustainably manage their natural resources. Combat-



ting this crime is not only essential for conservation efforts and sustainable development, it will contribute to achieving peace and security in troubled regions where conflicts are fuelled by these illegal activities.

Getting serious about wildlife crime means enrolling the support of all sections of society involved in the production and consumption of wildlife products, which are widely used as medicines, food, building materials, furniture, cosmetics, clothing and accessories. Law enforcement efforts must be supported by the wider community. Businesses and the general public in all countries can play a major role by, for example, refusing to buy or auction illegal ivory and rhinoceros horn, and insisting that products from the world's oceans and tropical forests have been legally obtained and sustainably sourced.

On this World Wildlife Day, I urge all consumers, suppliers and governments to treat crimes against wildlife as a threat to our sustainable future. It's time to get serious about wildlife crime. □



International Women's Day, March 8

Women and the Environment

By Eisen Bernard Bernardo

Women have made milestones in various sectors such as business, health, education, media, and peace and security. Through the years, women have achieved so much in their fight for gender equality, but still many serious gaps remain.

To uphold women's achievements, recognize challenges, and focus greater attention on women's rights and gender equality, the International Women's Day is celebrated every March 8. Started in 1975, the United Nations declared this special day to rally support for women's rights and greater participation in the political, economic, and social arenas.

For 2015, the theme of the celebration is "Empowering Woman, Empowering Humanity: Picture it!" This year also marks the 20th anniversary of the signing of the Beijing Declaration and Platform for Action – a roadmap that sets the agenda for realizing women's rights. The blueprint, which was signed by 189 governments, focuses on 12 critical areas of concerns and envisions gender equality in all dimensions of life.

Women and the environment

The worsening environmental conditions, such as pollution, climate change, resources depletion, biodiversity loss, and natural systems degradation greatly affect the vulnerable sectors of society, most especially women.

One of the 12 critical areas of concerns stated in the Beijing Declaration is the role of women in environmental conservation. The Declaration stated that "women have an essential role to play in the development of sustainable and ecologically sound consumption and production patterns and approaches to



natural resource management."

The Beijing Declaration pushes for governments to follow development paradigms that integrate environmental sustainability and gender equality. Women, considered as educators and caretakers of families, play an important role in promoting sustainable development through "their concern for the quality and sustainability of life for present and future generations."

Women's participation and leadership are essential for sound environmental management. The Declaration rallies for women to be actively part of policy formulation and decision-making in natural resources management and environmental conservation.

Women as champions of biodiversity

"As we celebrate the International Day of Women, we should recognize the achievements of women in different areas, including the environment and biodiversity," said Atty. Roberto V. Oliva, Executive Director of the ASEAN Centre for Biodiversity (ACB).

In ACB's 2014 Search for the ASEAN Champions of Biodiversity, three young

women emerged as winners. Adeline Suwana of the Sahabat Alam youth organization; and twins Giovanna and Gabriella Thohir of The Bekantan Twins Project won in the Youth Category, all from Indonesia.

Adeline founded Sahabat Alam, an internationally known youth environmental organization that promotes biodiversity conservation through school seminars, events, talk shows, films and various activities to encourage young people to do something for the environment.

Twin sisters Gabriella and Giovanna and The Bekantan Twins Project are championing biodiversity by inspiring fellow youth and the public in Indonesia to conserve the endangered bekantans (proboscis monkeys).

"These young women are modern-day heroes who bring biodiversity closer to everyone, and inspire people to take action and conserve biodiversity. They are exemplary women who have led groundbreaking environmental movements," according to Atty. Oliva.

"However, there should be a move to mainstream women's voices into the overall decision-making process in issues concerning the environment," he added.

For centuries, women have been recognized as primary custodians of traditional knowledge of biodiversity. The Beijing Declaration stated that women, especially indigenous women, have particular knowledge of ecological linkages and fragile ecosystem management.

"Because of this knowledge, which is fundamental to food security and conservation, women should also be involved in the decision-making process in the use of biodiversity resources," Atty. Oliva stressed.

"While various international conventions on gender and the environment continue to encourage the inclusion of women in all aspects of the management of biodiversity, governments should incorporate gender concerns into their national biodiversity strategies and action plans," he added. □

International Day of Forests, March 21

The Good Provider: Celebrating the Role of Forests in the World of Life

By Karen Lapitan

Your alarm clock wakes you up at 6:00 a.m. but you choose to snooze it for another 15 minutes before eating a quick yet hearty breakfast, reading your favorite newspaper, taking a bath, getting dressed, and driving or commuting to your workplace.

Looks like an ordinary daily routine and could be something similar to what you do each day. But have you ever stopped and thought how we are able to get the things that we need? It may sound trivial to some, but most of our basic needs have forests as the direct or indirect sources. Forests are giving us so much each day, but have we done something to reciprocate them?

It is good to note that the United Nations (UN) has declared March 21 as the International Day of Forests and the Tree, which promotes the importance of forests and trees in our lives. More than an occasion on the calendar, however, the day also serves as an important event that promotes public awareness of the protection of forests.

Around the world, activities such as photo exhibits, tree planting, and social media campaigns are held to increase awareness on the role of forests and trees, as well as initiate debate on the issues that surround the protection of forests.

Vital Source

The chair you are sitting on now and the tissue paper you use when you go to the toilet came from forests.

The food you had this morning might have come from forests as well. More often than not, rural communities near forest areas are assured of a good food supply. The role of forests on food security



seems underrated. Forested areas are known to be ideal as habitats for a number of animals that could be consumed by humans. Green, leafy vegetables are also a common sight in these areas.

Forests cover a significant fraction of the world's landmass. Its one-third coverage is enough to provide livelihood to more than 1.6 billion people, including indigenous cultures.

The long list of benefits from forests include provision of shelter to more than half of terrestrial species of animals, plants, and insects; protection of watersheds; and maintenance of the ideal balance of oxygen, carbon dioxide, and humidity in the air. Forests have always been there providing safety nets to plants and animal species.

Forest areas have also become a favorite spot for travelers who are into ecotourism. If sustainably managed, forests as ecotourism sites could bring in strong economic benefits.

Challenges Remain

Despite the efforts and campaigns to promote the protection of forests, much still needs to be done. The goal to protect the forests and the trees, however, does not end in this one-day celebration.

As humans directly or indirectly contribute to carbon dioxide emissions, forests also suffer because this often leads to conversion of forest lands into other use. For instance, the UN estimates have shown that deforestation alone ac-

counts for 12 to 20 percent of global greenhouse gas emissions. These figures mean adverse effects on livelihood and food security. This also spells threats to plants and animals, which need to co-exist with humans in the world of life.

If unabated, illegal logging and deforestation could lead more people to famine and poverty and could affect billions of people, animals, and plants around the world.

Fortunately, international and inter-governmental organizations have been working to empower local communities as stewards of forests in some countries. These communities, most of which are dependent on forests for their food and livelihoods, are also given the chance to find a way out of poverty by sustainably exploring the benefits that forests can provide.

According to Atty. Roberto V. Oliva, executive director of the ASEAN Centre for Biodiversity, addressing the problems concerning forests, specifically in the ASEAN region, is not just about holding exhibits, organizing public fora, or posting infographics on social media. He said that the solution to the multi-faceted problem requires the collective effort of concerned stakeholders and the willingness of those concerned to take the necessary steps.

The UN first marked the International Day of Forests on March 21, 2013, and since then has posed a great challenge to protect the forests from existing and potential harm. □

World Water Day, March 22

Water and Sustainable Development: A Crucial Connection

By Angie Metin

Growing crops, protecting one's health, generating energy, and manufacturing products – what do they have in common? They all need one key ingredient: WATER. Imagine the power that a single drop of water holds. It ensures survival. It holds the key to life.

Water is used in massive amounts in agriculture to grow crops and sustain livestock, industrial processes, mining, energy, transportation, medicine, and others. This same resource is used extensively in more recreational products and activities, including bottled water, liquor, sodas and juices; swimming pools, golf courses, and others.

Every year on March 22, through World Water Day, people across the world celebrate the power of water and the many benefits it brings. This day is marked annually to celebrate water and to make a difference for the members of the global population who suffer from water-related issues. "It's a day to prepare for how we manage water in the future," the United Nations stated in its World Water Day website.

For 2015, the theme is Water and Sustainable Development.

"Water is at the core of sustainable development. Water resources, and the range of services they provide, underpin poverty reduction, economic growth and environmental sustainability. From food and energy security to human and environmental health, water contributes to improvements in social well-being and inclusive growth, affecting the livelihoods of billions," according to the United Nations Inter-Agency Mechanism on All Freshwater Related Issues, Including Sanitation.



In a statement, ASEAN Centre for Biodiversity (ACB) Executive Director Robert V. Oliva said, "As we celebrate World Water Day 2015, we are reminded of the need to protect our precious water resources – the source of life for all of us. For us at the ACB, we see the crucial need to remind people about the critical link between water and biodiversity."

Highlighting that water is an integral aspect of agriculture and ecosystem, Director Oliva said, "Food production is constrained when the availability of water is reduced, thus exacerbating hunger and poverty. Poor water quality also has serious effects on human health and biodiversity. Clean water is essential for healthy environments."

Conserving biodiversity to ensure water security

Saving water is not just simply turning off the tap while brushing teeth, fixing leaks, or recycling water in the household. Governments, concerned communities and individuals need to protect water resources and biodiversity, which contributes to healthy wetland ecosystems.

Healthy forests retain both water and soil resources. When forests are plentiful, watersheds retain ample supply in water basins and prevent soil erosion that may cause siltation of water bodies. Healthy wetlands also recharge underground aquifers, providing ample drinking water to satisfy the needs of the world's population.

Conserving biodiversity to support healthy wetlands ensures a richer biodiversity of species. Intact and viable wetlands filter water and make it safe for drinking. Clean lakes, rivers and estuaries ensure the survival and abundance of nursery areas of fish, encouraging higher fish production. Clean water encourages plant growth and support richer marine life, which benefit humans since many freshwater and marine plants are used for a variety of purposes ranging from handicrafts to animal fodder. Healthy wetlands ensure the survival of various animals, especially those in danger of extinction.

"Water conservation is a global issue that needs urgent action. Conserve water at home, in school, at the office, and within your community. Prevent unnecessary water use. Encourage industries to recycle water. Conserve biodiversity, protect forests and watersheds, and prevent pollution of freshwater and marine ecosystems. Support action to protect water resources. Help efforts to prevent water scarcity and ensure a world with life-saving water," Director Oliva said.

He added, "Some say that the next world war will be over water. Fighting, however, will not solve water scarcity. The key is for each one of us to contribute our share in conserving water." □

World Health Day, April 7

From farm to plate, make food safe

By Sahlee Barrer

Who hasn't fallen prey to the enticing and slightly dangerous attractions of kwek kwek, isaw, and fishballs? Kwek kwek is boiled egg deep fried in eye-catching orange batter; isaw is pork or chicken innards marinated and grilled, dipped in sweet murky sauce – you can find these in any street corner in the Philippines and are deliciously quick fixes for snacking on the go.

But are they safe? You ask the question and happily eat them anyway, hoping that it's your lucky day and the vendor keeps everything clean or your stomach is strong enough to handle the abuse.

Street food is always an easy target for food safety concerns, but what about products from the local market? Or the large chain of supermarkets? In the past few years, a milk formula that may source ingredients from one country, produced in another, and eventually sold all over the world has been found to be bulked up with melamine, laced with mercury, or contained bacteria that may cause botulism, an infection that can lead to paralysis and death.

What's in your food?

In China in 2008, infant formula with melamine sent 300,000 children to the hospital and killed at least six children. Melamine is a compound composed of nitrogen, carbon, and hydrogen that is used to produce plastic. However, unscrupulous food companies also use melamine as a cheap and abundant filler substance for products ranging from livestock feed to pet food, and apparently, baby formula.

And it's not just baby formula, as fresh fruits and vegetables may be sprayed with insecticides, canned goods



may have gone past expiration dates, and spoiled meat may have been frozen and sold from supermarket freezers. Food safety and health issues now have people asking, "What's in your meal?" "Where did the ingredients come from?" "Has the food been properly handled at every stage?"

On World Health Day on April 7, the World Health Organization (WHO) is calling on producers, policy-makers, and the public to promote food safety. According to the WHO, over 200 diseases are caused by unsafe food containing harmful bacteria, parasites, viruses, and chemical substances. It is also estimated that two million deaths occur every year from contaminated food or drinking water. Food safety is thus a theme of high relevance, as safe food underpins food security, and protects food consumers and the public from risks of food poisoning and disease, and prevents a range of health problems.

Food safety and the environment

New threats to food safety are constantly emerging. Changes in food production, distribution and consumption; changes to the environment; new and emerging bacteria and toxins; antimicrobial resistance—these all increase the risk of food contamination. Increases in travel and trade also enhance the likelihood that contamination can spread.

According to Atty. Roberto V. Oliva, executive director of the ASEAN Centre for Biodiversity, "How we treat the environment, and not just food products, affects food safety all over the world. Climate change and other factors have changed agricultural practices and food production. Chemicals used in various industries find their way into land and water systems and eventually our food. Persistent organic pollutants from industrial processes accumulate in the environment and the food chain. Heavy metals from pollution may also contaminate air, water and soil."

"The point has come for everyone, from consumers to communities, environmental organizations and governments, to scrutinize food and how they are produced, from farm to plate, to ensure the safety of the public," Atty. Oliva emphasized.

Keeping food safe

Safe food supplies support national economies, trade and tourism; contribute to food and nutrition security; and underpin sustainable development. Globalization has triggered growing consumer demand for a wider variety of foods, resulting in an increasingly complex and longer global food chain.

The growing demand for food continues to intensify agriculture and animal production and increases challenges for food safety. Climate change is also predicted to impact food safety, where temperature changes modify food safety risks associated with food production, storage and distribution.

Food can become contaminated at any point of production and distribution, and everyone has a role to play to ensure that food is safe for consumption. □

World Malaria Day

By Eisen B. Bernardo

Malaria remains to be one of the world's leading health concerns. Being in existence for almost 100,000 years, this fatal disease remains prevalent in the poor countries of the world. In the 2013 report of the World Health Organization (WHO), there are 198 million cases of malaria globally with an estimate of 584,000 deaths.

To combat the massive impact of malaria, a global effort is a must. In 2007, during the 60th World Health Assembly, the World Malaria Day was established to promote the education and understanding of the disease. Every year on April 25, the world celebrates the global effort to provide effective control of the disease. The commemoration also provides a common platform for the affected countries to share experiences, showcase technologies, and collaborate in programs in the fight against malaria.

From 2013 to this year, the theme of the celebration is "Invest in the Future, Defeat Malaria." This year's celebration calls for stronger political commitments, new investments, and potent action towards total eradication of malaria.

The Dreaded Disease

Malaria is a disease caused by a parasite called Plasmodium. The disease is transmitted to humans by the biting of infected Anopheles mosquitoes. In the human body, the parasites multiply in the liver, and infect the bloodstream. The symptoms of malaria include fever, fatigue, vomiting, and headache, and in severe cases it can cause seizures, coma or even death.

The disease is widespread in tropical and subtropical countries in Africa, Asia, and Latin America. Malaria is commonly associated with poverty and has major impacts on economic development. People living in the poorest countries are the most vulnerable. In the 2014 report



of WHO, about 40 percent of malaria deaths occurred in Nigeria and Congo – two of the poorest countries, not only in Africa, but in the world.

The global fight against malaria requires a lot of resources. Every year, USD 5.1 billion is the required health expenditure for international and domestic funding for malaria. In 2013, only USD 2.6 billion was raised – less than half of what is needed.

Malaria and biodiversity

According to Dr. Filiberto Pollisco Jr, a forester and a policy and research specialist at the ASEAN Centre for Biodiversity (ACB) "the widespread changes on terrestrial ecosystems have resulted to the emergence of infectious diseases like malaria." He added that there is a relationship between forest quality and the incidence of malaria.

He explained that deforestation has an impact in the life cycle of the malaria-carrying species. Cleared lands are

prone to the formation of puddles that serve as breeding grounds for the mosquitoes' larvae. However, with the presence of forest plants and trees, which facilitate the faster absorption of moisture and water, puddles will be eliminated, depriving the mosquitoes' larvae of their habitat.

Dr. Pollisco said that deforestation changes the microclimate in an area. "Generally, the cooler the temperature, the less active the organisms. So, if you eradicate the forest, temperature will rise making some species more active. They become more active in terms of their feeding and reproductive habits," he added.

"Nature has its own checks and balances," Dr. Pollisco emphasized. He said that some species like frogs, bats, birds, and dragonflies in the forest ecosystem prey on these malaria-carrying mosquitoes. Deforestation and illegal hunting of wildlife eliminate these natural biological control mechanisms – leading to the proliferation of these disease-carrying insects.

He stressed that forest conservation is still a cost effective, long-term and ecological solution in controlling malaria.

Invest in Biodiversity

Atty. Roberto Oliva, the executive director of ACB, believes that malaria control will benefit from investments in biodiversity conservation.

"Forest conservation and biodiversity issues should be included in all malaria eradication programs," Atty. Oliva stressed.

"Biodiversity conservation may not provide direct and immediate relief, but it should be a major consideration for long-term solutions. Global health sectors, governments, and private groups must invest in biodiversity conservation to help implement sound and sustainable malaria control efforts," Atty. Oliva added. □

April 22: Earth Day

A Time to Reflect

By Pamela Q. Reblora

Try to look back ten years ago. How does your place look like? Were there buildings and establishments back then? Were there trees? Was it totally different as compared to how you see it now?

According to the United Nations Department of Economic and Social Affairs, the world population will reach up to 7.325 billion by July 2015. It was during the industrial revolution (1760-1840) that the human population rapidly increased and reached one billion (around 1800). Along with the continuing population growth and economic development are inevitable changes in the environment – both good and bad.

Biodiversity Loss

Increasing population entails increasing demands for biological resources. Keeping up with this rapidly increasing demand, often leads to overexploitation

of natural resources, massive land conversions, among other environmentally destructive human activities.

Habitat loss and degradation, over-exploitation and unsustainable use, proliferation of invasive alien species, and climate change, among other factors, result in biodiversity loss.

According to the International Union for Conservation of Nature (IUCN), the extinction risk of coral species increases most rapidly while amphibians are considered as the most threatened group.

“We should take biodiversity loss seriously because every species play a vital role in the ecosystem. Coral reefs serve as home for many species of fish, sponges, mollusks, crustaceans, among other life forms. Thus, continuous reduction of corals will increase the risk of extinction of species depending on them,” said the executive director of the ASEAN Centre for Biodiversity, Atty. Roberto V. Oliva.

Remembering Mother Earth

The greatest challenge that humankind is facing is how to achieve balance between economic development and environmental sustainability. “The biological richness of Earth makes it too convenient for humans to survive, making them overconfident that these resources will never perish. In the ASEAN region alone, 19 percent of all known plant and animal species thrive, despite occupying only three percent of the Earth’s surface,” said ACB executive director Roberto V. Oliva.

Every year on April 22, the world celebrates the International Mother Earth Day. It is an opportunity to pause for a while from our busy lives and observe what our world has become. Mother Earth has been providing us with all our needs. It is about time that we repay her. We have to make sure that future generations will still get to enjoy the nurturing hands of Mother Nature.

The International Mother Earth Day was established in 2009 by the United Nations General Assembly. This celebration was declared to commemorate and honor “Mother Earth” as an entity that sustains all life forms. This year’s celebration marked the 45th Earth Day anniversary. According to the UN, the International Mother Earth Day 2015 highlighted the need to take a stand together, take a lead, and make a difference.

Let us not just reflect on what is currently happening on Earth. Let us also ask ourselves: How do we want to see Earth a hundred years from now? □





VIET NAM

BAI TU LONG

National Park



Formerly known as the Ba Mun Conservation Park, Bai Tu Long National Park was established in 2001 and is a protected area zone in North Viet Nam, about 200 kilometers from Hanoi. It is located in Quang Ninh province and is adjacent to Ha Long Bay, a World Heritage Site.

The park is surrounded by gigantic rocky limestone mountains and covers 15,783 hectares (ha), including 6,125 ha of island land and 9,658 ha of tidal land on Ba Mun, Tra Ngo Lon, Tra Ngo Nho, Sau Nam, Sau Dong, Dong Ma, and more than 20 other small islands. Apart from its biological diversity, the park boasts wonderful natural landscapes, intact beaches, archaeological sites of ancient Viet Nam, and vestiges of the former busy trading port of Van Don.



Bai Tu Long Bay has hundreds of mountains and islands with hundreds of kilometers of coastal line with fine white sand beaches in Minh Chau, Quan Lan, and Ngoc Vung, running dozens of kilometers.

Habitats

The National Park includes five kinds of ecosystems: rain broad leaves forest, limestone forest, littoral forest, coral area, and shallow water area.

The rain broad leaves forest area is mostly secondary forest. The limestone forest area is forest growing in poor soil on limestone on rocky islands. The littoral ecosystem encompasses small areas surrounding the islands.

The coral reef area covers water depths of low tide to 10 meters deep and provides habitats and feeding areas for groupers, sea bass, crabs, snails, abalone, and seaweeds. The shallow water area covers a large area around the islands, beyond the tidal area and

extends from 1 kilometer (km) to around 4 km.

Wildlife

Bai Tu Long National Park is home to 672 species of terrestrial plants and 178 aquatic floral species, of which 11 species have been listed in Viet Nam's Red Book of endangered species. It also boasts of 170 species of terrestrial animals, including nine species listed as endangered in Viet Nam's Red Book; 119 species of fish; 132 species of invertebrate animals; and 106 species of corals.

Rare plant species found in Bai Tu Long include cycad (*Cycas balansae*), morinda root (*Radix marindae officinalis*), coralberry (*Ardisia sylvestris* pitard), and Chinaroot or sarsaparilla (*Smilax glabra*). Endangered mammals recorded in the park include leopard cat, Indian muntjac, small Indian civet, large Indian civet, serow, and rhesus macaque.

Legend has it that...

When the ancient Vietnamese people established their country, it was promptly invaded. The Jade Emperor sent Mother Dragon and her Child Dragons to land to help fight the enemy. Invaders' boats were rushing to the seashore, just as the dragons landed on earth. Dragons immediately injected numerous pearls that swiftly turned into thousands of rock islands in the sea, forming a solid wall suddenly blocking the advance of enemy's boats. The boats crashed into the rock islands or into each other and shattered.

After the victory, the Mother Dragon and Child Dragons did not return to heaven but stayed on earth, where the battle took place. The location Mother Dragon landed is called Ha Long and where the Child Dragons descended is now Bai Tu Long. Where dragon tails lashed, water white is Long Vi (presently Tra Co peninsula) with long fine sand beach stretching over ten kilometers.

The marine environment of the park is rich and highly diverse with 19 species of mangrove, 17 species of seaweed, 29 species of marine worms, 149 species of mollusks, 22 species of crustaceans, and 15 species of echinoderms.





Conservation and management

The park's management board, in coordination with relevant agencies, organizes training courses to raise local residents' awareness about the protection of forestry and maritime resources and integrates environmental protection into the curriculum of local schools. The board has allocated 13 ha of forests to local households for care and re-forested 50 ha on the largest island of Ba Mun.

To protect the park's fauna and flora, local rangers have coordinated with part-time employees to strictly patrol the forest to prevent poaching of forestry and sea products.

Park management also releases confiscated mammals back into the wild. Recently, more than 100 long-tailed monkeys, which were seized from smugglers by the provincial rangers, were released into the forests of Bai Tu Long.

Ecotourism and other attractions

In the past few years, Quang Ninh Province has stressed the importance of strengthening Bai Tu Long National Park as an ecotourism destination to attract both domestic and foreign tourists. There are plenty of attractions to enjoy in the islands with their beautiful mountain ranges, beaches, and abundant sumptuous seafood. Famous areas include the beaches of Uyen Uong and Bai Chay, which are known for their fine white sand and crystal clear blue waters.

Visitors can go island hopping and visit the islands of Minh Chau, Phat Co, and Ban Sen. They can explore the aegiceras (mangrove) jungles and admire the Thong Thien cave. Visitors can also view temples and pagodas constructed under Ly dynasty, see the ancient village of Cai Lang, and visit the rustic and hospitable villages of the Tay, Red Dao or San Diu ethnic minorities.

How to get there

Bai Tu Long National Park is not yet a common destination for travelers, although some travel agencies in Viet Nam offer Bai Tu Long bay as a stop on their Ha Long bay tour itineraries. Visitors are encouraged to check with different agencies regarding day trips or cruises that include Bai Tu Long National Park. □

References:

Hanoi Tourism (<http://hanoitourism-info.gov.vn/bai-tu-long-bay-national-treasure>)

National Park Tours (<http://vietnamnationalpark.org/2743/bai-tu-long-national-park/>)

Vietnam Beauty (<http://www.vietnam-beauty.com/top-destinations/destination-in-the-north/145-enjoying-fascinating-scenery-in-bai-tu-long.html>)



LAO PDR

PHOU HIN POUN

National Protected Area



Phou Hin Poun National Protected Area (NPA) in central Khammouane Province is a unique combination of stunning limestone karst landscapes honeycombed with caves, fast-flowing rivers, and fascinating cultural and archaeological sites. Also widely known as “Khammouane Limestone”, Phou Hin Poun NPA was established on October 29, 1993 and covers 225,000 hectares (ha).



Habitats

About 51.8 percent of Phou Hin Poun NPA is rugged limestone karst terrain with jagged peaks up to 1,500 meters high. It is relatively inaccessible thus providing some degree of natural protection for wildlife, particularly in the interior. Flat bottomed valleys or kouan range in size from a few hundred hectares to 40 square kilometers. Major rivers include the Nam Hinboun in the north and west, and the Nam Pathen, Nam Pakan and Nam Don in the west and south. Many of these rivers flow through underground caves, the largest of which is between Konglo and Natan on the Nam Hinboun and is navigable by boats.

Main forest types in the park are semi-evergreen forest, vine and bamboo forest, mixed deciduous forest, and deciduous dipterocarp forest. The vegetation of the large kouans is heavily modified and dominated by secondary species.

Wildlife

Phou Hin Poun forms part of the range for one of Lao PDR's largest and most viable populations of Asian elephant and nationally important populations of Assamese macaques and gibbons. Other endangered species include the large-toothed ferret badger, sambar, gaur, East Asian porcupine, two bear species, large cat, wild pig, and squirrels. The NPA is part of an important tiger habitat and contains a nationally significant southern serow population.

Other significant fauna found in the park are the endemic Lao langur (*Trachypithecus laotum*), a sub-species



of Francois' langur, and two recently described species, the Laotian rock rat or kha nyou (*Laonastes aenigmamus*), a new genus of rodent described in 2005, and the bare-faced bulbul (*Pycnonotus hualon*), which was first described in 2009.

With its extensive range of limestone peaks, Phou Hin Poun NPA offers roosts and nesting sites for a huge number of birds and bats. The sooty babbler (*Stachyris herbertsi*), a limestone endemic bird present in Phou Hin Poun, is found in only a limited area in central Lao PDR and Viet Nam. The limestone leaf warbler (*Phylloscopus* sp.) is a possible new species recorded in the area, which is also restricted to the Central Indochina Limestone subregion. Other significant birds recorded in the park include the red-collared woodpecker, wreathed and great hornbill, barn owl, Siamese fireback, and coral-billed ground cuckoo. Trekking within the dramatic landscape is a wonderful opportunity to watch and listen to flocks of birds.

Threats

Principal threats to the protected area include logging of remaining mature forest areas adjacent to Phou Hin Poun NPA; limestone quarrying; impacts from hydro-electricity development on rivers and elephant migration routes; and new proposals for road development. Increased village populations and resource use, hunting and wildlife trade, fires, and uncertain protected area boundaries also have negative impacts on the conservation of the park's resources.

Conservation and management

In 2012, the management of Phou Hin Poun NPA was transferred from the Provincial Agriculture and Forestry Office to the Conservation Unit within the Provincial Office for Natural Resources and Environment. The NPA is supported by five main district offices in Hin Boun, Khounkham, Thakhek, Gnommalath and Nakai.

Biodiversity richness of Phou Hin Poun National Protected Area

- 113 species of mammals
- 160 species of birds
- 81 species of reptiles
- 47 species of amphibians
- 43 species of bats
- 14 species of turtles
- 145 species of fish

A number of activities can be undertaken to strengthen conservation and management of the park, including assessment and finalization of park boundaries; preparation of the management plan; capacity building for staff; patrolling/ranging activities and monitoring; and developing conservation awareness activities.

Other relevant project Initiatives can also focus on improved natural resource information; park extensions to protect important habitats; co-management with local communities; ecotourism development; and production of signage and other public information materials.

Phou Hin Poun NPA also works with various international organizations in conservation. Since 2010, the International Union for Conservation of Nature and Fauna & Flora International, with support from the Arcus Foundation, have been collaborating to support gibbon conservation in Lao PDR. They initially supported the government in the preparation of the national gibbon action plan, and since 2011 supported the conservation of biodiversity at Phou Hin Poun NPA, with gibbons as a flagship species.

Ecotourism and local culture

The most popular activities in the park are trekking, rafting, kayaking, and visiting the caves. Phou Hin Poun NPA

also has numerous temples and shrines in the limestone caves; sacred forests and other areas; archaeological sites; as well as war sites and trails.

The Khammouane Ecoguide Service organizes locally guided ecotours to the province's amazing natural, cultural and historical attractions, offering visitors a real insight into this unique environment. Guides from Thakaek and Na Hin speak English and Thai and are trained in natural and cultural interpretation.

All tours provide significant benefits for villagers and assist in natural resource conservation through the purchase of food from villages, employment of village guides, overnight stays in community guesthouses and homestays, and fees paid to village development funds.

Interesting destinations include the Konglor Cave, which is an amazing 7.5 km-long limestone cave formed by the Hinboun river, which flows through the cave all year round. Visitors can take a boat ride through the main cave, which is up to 90 meters wide and 100 meters high. The Kampaeng Yak (The Giant Wall) is a 15km-long giant wall, which, legend has it, was erected in the 9th century by the Sikhottabong kingdom. Some say, however, that it is a natural sandstone formation which was incorporated into the civilization's defense system. The best place to visit

the Giant Wall is 8 km north of Thakaek on Route 13 where it reaches a height of 16 meters with an unbroken section 75 meters long.

There are a number of interesting caves to see, such as Tham Xang (elephant cave) and Nong Paa Fa (Buddha Cave). One of the most important religious sites in Khammouane Province. The cave contains over 200 ancient Buddha images that had lain forgotten for hundreds of years.

In Ban Na, visitors will find the remains of an extensive town called Alan, which covers more than 20 hectares and has the remains of a number of buildings built of brick. Ban Nakhu also contains the remains of a brick stupa built 300-400 years ago.

How to get there

The gateways to Phou Hin Poun NPA are Thakaek town and Ban Na Hin/Khoun Kham. From Route 13, take Route 12 east at Thakaek to explore the southwest of the NPA to enter from the north of the NPA to Konglor cave go to Ban Na Hin/Khoun Kham from Route 8 (leading east off Route 13 towards Lak Sao). Local buses and songthaews are available on all roads. □

References:

ASEAN Clearing House Mechanism (<http://chm.aseanbiodiversity.org/chm-laopdr/images/Protected%20Area/Phoun%20Hin%20Poun%20NBCA.pdf>)
Ecotourism Laos (http://www.ecotourismlaos.com/directory/protected_areas/phouhinpoun.htm)
 Phiapalath, P. Bousa, A. and Insua-Cao, P. 2012. *The status and distribution of gibbons in Phou Hin Poun National Protected Area. Fauna & Flora International/IUCN Lao PDR, Vientiane, Lao PDR*
Phou Hin Poun National Protected Area Visitor Guide and Map
 Sabaidee Laos (http://tourismloas.org/show.php?Cont_ID=373)





ACB and Germany launch program on biodiversity

A PROGRAM that will protect the biological diversity, promote the sustainable management of natural ecosystems, and improve the livelihoods of the local population in the ASEAN region was launched on April 17, 2015 by Germany and the ASEAN Centre for Biodiversity (ACB).

The launch of the program on “Protection of Biological Diversity in the ASEAN Member States in Cooperation with the ASEAN Centre for Biodiversity” was held during the program’s planning workshop I Jakarta, Indonesia.

The new German support to the ASEAN region combines three modules – the “Institutional Strengthening of the Biodiversity Sector in ASEAN (ISB)”, the “Small Grants Programme (SGP)”, and the “Biodiversity-based Products as an Economic Source for the Improvement of Livelihoods and Biodiversity Protection (BBP)”.

The ISB, with funding from the BMZ, will continue the gains of the first German Technical Cooperation between ACB and GIZ – the Biodiversity and Climate Change Project (BCCP). A five-year initiative which concluded in March 2015, the BCCP institutionalized ACB’s core program on biodiversity and climate change, contributing to an ASEAN-wide biodiversity conservation strategy to mitigate climate change.

ISB will support the ASEAN Member States in developing and enhancing their strategies to appropriately address the governance institutions of biodiversity in the region; strengthening the ASEAN Heritage Parks Programme; valuing of biodiversity and its ecosystem services; monitoring and evaluating the Convention on Biological Diversity Targets; establishing a regional biodiversity information platform; and developing the capacity of the ASEAN Member States in negotiations in international conventions and other multi-lateral environmental agreements.

The ISB is also supporting the ASEAN Member States by implementing sustainable development options for selected ecosystems, and utilizing the concepts and instruments devel-



oped by the ACB on enhancing the use of economic and financial tools for ecosystems and biodiversity.

With funding support from KfW, ACB is implementing the SGP in selected ASEAN Heritage Parks (AHP). The five-year programme, as a flexible funding mechanism, seeks to improve biodiversity protection and the livelihood of the local population directly dependent on selected AHPs and adjacent areas; address the problem of unsustainable livelihoods and over-exploitation of scarce natural resources in protected areas which threaten Southeast Asia’s rich biodiversity; and strengthen the role of ACB in promoting biodiversity protection among the ASEAN Member States.

Funded by the BMZ, ACB will jointly implement the BBP with GIZ. Examples of BBPs are natural cosmetics, pharmaceutical and food products, additives, leather, textiles, flowers, fish products, handicrafts and other agricultural and forest based (non-timber) products. Promoting BBPs is a priority of ASEAN Member States as such products help improve livelihoods and the conservation of biodiversity.

The BBP aims to enhance biodiversity conservation and sustainable utilization of biodiversity resources; improve livelihoods; and add value to BBPs along local, regional and international value chains by increasing the recognition of BBPs in Southeast Asia.

The planning workshop in Jakarta enabled stakeholders and relevant parties to review the program’s concepts; and ex-

change views on perspectives, interests, and concerns in each module, leading to a consistent program structure and framework. The workshop also discussed approaches and strategies on how the program can effectively support and contribute to the ASEAN integration process.

Participants were staff from ACB and the three program modules; members of the ACB Governing Board; representatives from the ASEAN Working Group on Nature Conservation and Biodiversity, the ASEAN Working Group on Marine and Coastal Environment, and the AHP Committee; delegates from the Indonesian Ministry of Environment and Forestry, ASEAN Secretariat, German Embassy in Jakarta, EU Delegation in Jakarta, GIZ Offices in the Philippines and Indonesia, and KfW Office in Jakarta; and the ACB National Contact Points in the ASEAN Member States.

The workshop's opening program was addressed by H.E. Alicia de la Rosa Bala, ASEAN Deputy Secretary General for the ASEAN Socio-cultural Community; Atty. Roberto V. Oliva, Executive Director, ACB; Mrs. Jessica Engel of the Development Cooperation Division, Embassy of Germany in Indonesia; and Dr. Berthold Seibert, Program Director, GIZ.

Deputy Secretary-General Bala emphasized ASEAN's commitment to enhance policy and capacity development and best management practices to ensure ASEAN's rich biological diversity is conserved and sustainably managed toward enhancing social, economic and environmental well-being.

She thanked the Federal Government of Germany for its continued confidence in, interest and support provided to ASEAN and in particular, to ASEAN environmental cooperation.

Director Oliva cited Germany for its long-term commitment to support biodiversity conservation in the ASEAN region. He said the new phase of ACB-German cooperation augurs well for ACB as it celebrates its 10th founding anniversary and ACB's decade of cooperation with the ASEAN Member States.

Mrs. Engel briefly explained the extent of technical cooperation between Germany and the ASEAN.

Dr. Seibert reiterated Germany's continuing collaboration with ASEAN in ensuring the conservation and sustainable management of biodiversity in Southeast Asia.

A side event of the workshop was an ASEAN Youth Forum on Biodiversity held at the University of Indonesia on April 10. The forum was organized by Sahabat Alam, the winner of the 2014 ASEAN Youth Champion of Biodiversity Awards. *RAInciong*

Conservation financing to boost Southeast Asia's environment

SOME 100 conservation finance experts, environmental policy makers, and renowned resource economists from all over Southeast Asia gathered in Manila on March 3-4, 2015 to discuss how conservation financing can contribute to environmental protection and conservation in Southeast Asia. The International Conference on Conservation Financing in Southeast Asia was organized by the US Agency for International Development (USAID) through the Philippines Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience (B+WISER) Program of the Department of Environment and Natural Resources (DENR), in cooperation with the Economy and Environment Program for Southeast Asia (EEP-SEA), WorldFish, and the ASEAN Centre for Biodiversity (ACB) through the GIZ Institutional Strengthening of the Biodiversity Sector in ASEAN Project.

The conference provided a venue for sharing of recent experiences on factors that have brought about successful conservation financing schemes in Southeast Asia; informed government officials on processes to develop conservation financing programs in support of sustainable management of conservation areas in the region; identified research gaps to enhance the role of conservation financing in protected area management; and gathered case studies and lessons learned on conservation financing. The conference was broadcasted live through web-cast technology to reach out to a larger group of participants engaged in biodiversity conservation and forest management.



Conference sessions included conservation financing mechanisms for global goods; conservation financing for ecosystem services with local benefits and as inputs to production; conservation financing for consumption goods, nature-based recreation, and coastal and marine ecosystems. A roundtable discussion on conservation fund and park management experiences was conducted.

Conservation financing is the practice of raising and managing capital to support land, water and resource conservation. It generates new, long-term, and diversified sources of revenue for conservation.

Conservation financing includes diversified funding mechanisms ranging from the traditional sources like grants, donations and government allocations to the emerging innovative financing strategies. Payment for ecosystem services, fees and charges for nature-based tourism and recreation, resource extractions permits and charges, debt-for-nature swaps, and conservation payments are some examples of innovative financing mechanisms.

In the recent years, conservation financing has been continuously developed to fund sustainable resource use practices, as well as provide incentives and other economic benefits to communities living inside and the vicinities of watersheds and many conservation areas. Thus, the greatest challenge of conservation financing is to develop mechanisms that generate funds for sustainable resource management and at the same time provide enough economic incentives to communities to wean them away from destructive farming practices.

The conference opening program was addressed by DENR Secretary Ramon J.P. Paje; Mr. Jeremy Gustafson, director, USAID Office of Environment, Energy and Climate Change; and Atty. Roberto V. Oliva, executive director, ACB. The keynote presenters were Dr. Herminia Francisco, program director, EEPSEA, WorldFish, on conservation financing schemes; Dr. Gem Castillo, researcher, EEPSEA and president, Resource and Environmental Economics Association of the Philippines, on fiscal gaps and financing of Southeast Asia's protected areas; and Dr. Benjamin Bagadion, Jr., professor, Asian Institute of Management, on best practices and innovations in conservation area management. *RAIncing*

ASEAN-Japan cooperation on nature parks management

MANAGERS and staff of ASEAN Heritage Parks (AHPs) met in Vientiane, Lao PDR to conduct an inception workshop for a project on strengthening the management of AHPs through capacity enhancement and information development. The AHPs is a network of Southeast Asia's best protected areas that represent the region's rich biodiversity and ecosystems.

The workshop was organized by the ASEAN Centre for Biodiversity (ACB) in cooperation with the Lao Ministry of Natural Resources and Environment.

Funded by the Japan-ASEAN Integration Fund and to be implemented in cooperation with the East and Southeast Asia Biodiversity Information Initiative of Japan, the one-year project will engage experts from the ASEAN region and Japan in en-



UP grants land lease to construct new ACB HQ



Proposed New ACB Headquarters Design



SIGNIFYING commitment to biodiversity conservation, the University of the Philippines (UP) has granted a land lease to the ASEAN Centre for Biodiversity (ACB) for the construction of its new headquarters building in UP Los Banos. The Contract of Lease (COL) was signed on April 27 at the Office of the UP President in Diliman, Quezon City. The term of the COL will be for 25 years.

ACB Executive Director Roberto Oliva and UP President Alfredo Pascual, representing the two parties, signed the lease agreement.

ACB will build its new carbon neutral and environment-friendly building within the UP Los Banos (UPLB) campus. The building will be funded by the Philippines as host country, through the Department of Environment and Natural Resources.

Director Oliva said, "ACB can contribute to achieving UP's

academic excellence worldwide by assisting as a platform for enhanced learning and advanced academic institution involving diverse biodiversity conservation stakeholders."

He added that hosting ACB within the UPLB campus is a good investment as ACB can boost the university's reputation not just as an academic institution, but as an advocate of biodiversity conservation.

Part of the COL is the sharing of knowledge between ACB and UP on biodiversity such as through joint collaborative research and human resource development activities. ACB will also allocate an office space for the Makiling Center for Mountain Ecosystems. This will be in line with the mutual goal of ACB and UP to increase the public's knowledge on biodiversity. The development and management of Mt. Makiling is being supported by ACB as it is Southeast Asia's 33rd ASEAN Heritage Park. *RAInciong*

hancing the capabilities of AHP park managers and staff in the understanding, analysis and applications of park management and development in the context of sustainable biodiversity conservation and management. These include updating and developing management plans of selected AHPs, in tune with current global and national policies to enable them to better respond to current and emerging biodiversity issues and concerns.

Staff of participating AHPs will also be trained in information management and databasing. The training module will focus on four areas of information technology and management: hardware upgrading, systems design and development, maintenance, and the identification of information management products. The databases of the AHPs will be standardized so that sharing of information between and among AHPs will be facilitated.

The project also includes training on assessment methodologies and data gathering. To effectively manage the parks, those in charge need to know and understand all the elements involved in their parks. The resources, the flora and fauna, the different ecosystems present in the parks including their social,

political and economic conditions, all contribute to the conservation of the parks' biological resources. Data have to be generated and analyzed using scientifically acceptable methodologies and standards, and transformed to more readily understandable and usable information so that they can be stored, shared and scientifically compared with other AHPs.

The project's communication component will develop information materials that will promote the AHPs, and train park management in using communication, education and public awareness strategies in promoting their parks as ecotourism destinations and field laboratories for biodiversity.

Overall, the project aims to capacitate AHP management staff in implementing the Regional Action Plan for AHPs and protected areas in Southeast Asia. This will eventually contribute to the conservation and sustainable use of biodiversity resources in the ASEAN region; increase public awareness on the relevance and importance of AHPs in biodiversity conservation, food security, health, and poverty alleviation; and update the AHP management and conservation plans. *RAInciong*

Global report highlights human health benefits from protecting biodiversity

(MONTREAL/ Kolkata, 13 February 2015) – A ground-breaking



report on biodiversity and health launched at the 14th World Congress on Public Health in Kolkata, India shows the significant contribution of biodiversity and ecosystem services to better human health.

The report, “Connecting Global Priorities: Biodiversity and Human Health”, demonstrates that the relationship between biodiversity and human health is extensive and complex. It outlines the ways that the conservation and sustainable use of biodiversity has positive impacts on human health, including through impacts on water and air quality, nutrition, non-communicable and infectious diseases, and medicines, among others.

Prepared by the Secretariat of the Convention on Biological Diversity (SCBD) and the World Health Organization (WHO), the report features contributions from numerous partners and over 100 experts, including Bioversity International, COHAB Initiative, EcoHealth Alliance, Harvard School of Public Health, United Nations University, Wildlife Conservation Society’s Health and Ecosystems: Analysis of Linkages and many others.

“We hope this joint report will increase awareness and understanding not only of the intrinsic value of biodiversity, but

also as a critical foundation for sustainable development, and for human health and well-being,” said Dr. Maria Neira, WHO Director for Public Health, Environmental and Social Determinants of Health. “In particular, it should serve as a useful reference for the definition of the sustainable development goals and the post-2015 development agenda, which represent a unique opportunity to promote integrated approaches to protect human and planetary health.”

Braulio Ferreira de Souza Dias, Executive Secretary of the CBD, and Assistant Secretary-General of the United Nations, said “Despite the clear role that biodiversity plays for human health, and thus for the Sustainable Development Goals, this linkage is not being made in policy forums. Hopefully this new report will help shed some light on this critical issue.”

The report provides specific examples of the relationship for a number of issue areas including: water; air quality and human health; biodiversity, food production and nutrition; microbial diversity and non-communicable disease; infectious diseases; medicines, including traditional medicine; physical, mental and cultural well-being; pharmaceuticals and biodiversity; climate change and disaster risk reduction; and sustainable consumption and production.

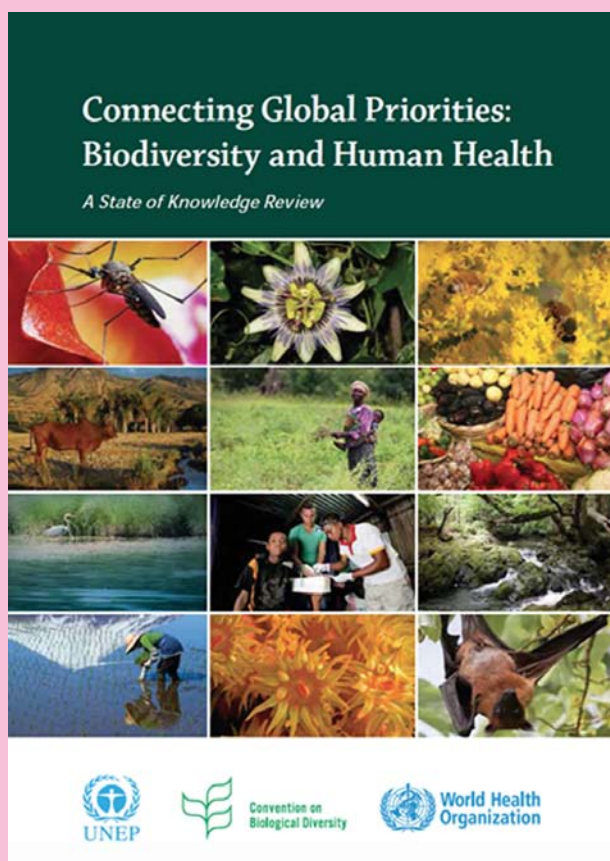
Biodiversity, Food Production and Nutrition

Biodiversity is the basis for crops, livestock and farmed fish and other parts of agricultural production and aquaculture. Genetic diversity within these ensures continuing improvements in food production, allows adaptation to current needs and ensures adaptability to future ones including climate change. The loss of biodiversity in agro-ecosystems is increasing the vulnerability and reducing the sustainability of many production systems with negative effects on human health.

The report also points out that a diversity of species, varieties and breeds, as well as wild food and medicinal sources (fish, plants, bushmeat, insects and fungi) underpins dietary diversity, good nutrition and health. For this reason, reduced access to and global declines in terrestrial, marine and freshwater systems will present major public health challenges for resource-dependent human populations, particularly in low- and middle-income countries. Some dietary patterns that offer substantial health benefits, such as diets characterized by reduced meat consumption could also reduce climate change and pressures on biodiversity.

Microbial Diversity and Non-communicable Diseases

Humans, like most living things, have a microbiota – ecological communities of commensal, symbiotic and pathogenic microorganisms that literally share our body space and outnumber our human cells ten to one. The majority of these microbes provide vital functions for human survival.



The report points out that interaction with microbes present in the environment are an important part of the healthy maintenance of our human microbiota. Reduced contact of people with the natural environment and biodiversity, and biodiversity loss in the wider environment, leads to reduced diversity in the human microbiota, which itself can lead to immune dysfunction and disease. Considering microbial diversity as an ecosystem service provider may contribute to bridging the chasm between ecology and medicine/immunology, by considering microbial diversity in public health and conservation strategies aimed at maximizing services obtained from ecosystems.

Infectious Diseases

Biodiversity plays a complex role in disease emergence, with benefits in some contexts and threats to human health in others. Human changes to and degradation of ecosystems, such as modified landscapes, intensive agriculture and antimicrobial use, may increase the risk of infectious disease transmission. While areas of high biodiversity may, in some cases, contain a high number of potential pathogens and contribute to the spread of disease, in some contexts biodiversity may also serve as a protective factor for preventing or reducing exposure to infectious agents.

Conclusions

The report concludes with recommendation for health and biodiversity strategies. It calls for the creation of coherent cross-sectoral strategies that ensure that biodiversity and health linkages are widely recognized, valued, and reflected in national public health and biodiversity conservation policies. They also need to be coordinated with programs and plans of other relevant sectors. Their implementation could be a joint responsibility of ministries of health, environment and other relevant ministries responsible for environmental health programs and national biodiversity strategies and action plans. In all cases, they should be developed and implemented with the involvement of local communities. Given the interconnected nature of these challenges, there is a need for policy makers to coordinate their responses.

The report suggests that the solution lies in uniting work in social and natural sciences through integrative and interdisciplinary approaches such as the ecosystem, eco-health, and One Health approach, in order to develop cooperation and mutual understanding that can lead to the production of knowledge and recommendations that can be used by policy makers and practitioners. The Executive Summary of the report is available online at: www.cbd.int/en/health/stateofknowledge.

SCBD News

Sharing lessons from biodiversity and climate change projects in ASEAN

PROTECTED area management has always had its challenges: habitat loss and destruction, poaching of wildlife, law enforcement, encroachment, and many more. In recent years, protected areas with increasingly fragile biodiversity had to contend with increasing pressures from climate change. This provided the impetus for the establishment of the Biodiversity and Climate Change Project (BCCP) by the ASEAN Centre for Biodiversity (ACB) and Germany's GIZ.

Addressing the interface between biodiversity and climate change, the project has supported ACB through studies in areas such as payment for ecosystem services and management effectiveness of protected areas; capacity building activities; organization of the 4th ASEAN Heritage Parks (AHP) Conference; and the funding of six pilot initiatives in selected AHPs and protected areas in Lao PDR, Myanmar, Philippines and Viet Nam.

The pilot initiatives are "Strengthening the Management of Nam Ha National Protected Area through the Development of Community-based Ecotourism" in Lao PDR; "Development of a Collaborative Management System for Indawgyi Lake Wildlife Sanctuary" and "Ecosystem Management and Biodiversity Conservation through Community Participation in Meinmahla Kyun Wildlife Sanctuary", both in Myanmar; "Improved Management of Mt. Malindang Range Natural Park through Participatory Approaches and Development of Ecotourism and Agro-based Production" and "Enhancing Biodiversity Awareness at the Makiling Botanic Gardens and Mt. Makiling Forest Reserve" both in the Philippines; "Development of Guidelines



for Biodiversity Management Plan to Mitigate and Adapt Climate Change in Bai Tu Long National Park” and “Adaptation to Climate Change Impacts in Marine Protected Areas”, both in Viet Nam.

The results, challenges, recommendations, and future steps upon the conclusion of these projects were discussed at the Closing Workshop for the ACB-GIZ BCCP Pilot Projects on February 7-10, 2015 in Ha Long City, Viet Nam. Organized by the ACB-GIZ BCCP and the Biodiversity Conservation Agency of Viet Nam, the workshop discussed good practices and lessons learned from the projects.

The projects provided insights to endeavors that sought to balance issues of biodiversity conservation, climate change, and local community welfare. Some successful initiatives include the introduction of firewood saving stoves in Myanmar to reduce dependence on firewood and lessen extraction of wood in protected areas.

The projects highlighted the significance of engaging multiple stakeholders to ensure the success of conservation actions, as well as the importance of strategic public awareness activities to generate greater appreciation for protected areas and biodiversity conservation.

During the workshop, the participants recognized that management of AHPs and protected areas needs to build staff capacity; develop strategies to reduce pressures on biodiversity; develop comprehensive data collection and management systems; and establish market systems for products and services. There should be clear mechanisms for policy translation across all levels, including a feedback mechanism to ensure that policies are appropriate and fully implemented.

The workshop participants concluded that the implementation of the pilot projects has been successful, with areas for improvement, such as timely release of funds; need for sound monitoring and evaluation; strategies for sharing lessons and experiences; and replication and up-scaling of successful project impacts. Valuable lessons and good practices from the BCCP pilot projects will pave the way for future collaborations that aim to further strengthen biodiversity conservation in the ASEAN region. *SBBarrer*

ACB strengthens taxonomy in ASEAN

TO STRENGTHEN the taxonomic capacity of ASEAN Member States, the ASEAN Centre for Biodiversity (ACB), with support from the Japan-ASEAN Integration Fund, the Ministry of Environment of Japan, and the East and Southeast Asia Biodiversity Information Initiative (ESABII) of Japan conducted a 10-day taxonomic internship programme on Bryophytes and Pteridophytes. Held at the Queen Sirikit Botanic Garden in Chiang Mai, Thailand, the workshop introduced the participants to the taxonomy of terrestrial plants particularly the mosses and ferns; familiarized them with the general biology of these plants; and provided an opportunity to apply the participants’ taxonomic



skills in methods of morphological observation; sample collection, processing and identification; and drafting of a Field Guide Book on Mosses and Ferns.

Dr. Filiberto Pollisco, Jr., workshop coordinator and ACB policy research specialist, said the lack of trained human resources and inadequate capacities on taxonomy has been stressed as one of the obstacles in the implementation of country commitments to the Convention on Biological Diversity (CBD), especially in the ASEAN region.

“Lack of scientific information on biodiversity in this region is a crucial issue in the assessment and prediction of biodiversity changes, caused mainly by the lack of taxonomic capacity in data collection and analysis,” Dr. Pollisco explained.

He emphasized that adequate taxonomy is one of the necessary fundamental tools required for the global community to be able to implement the Millennium Development Goals and the development targets from the World Summit for Sustainable Development.

“Without adequate long-term investment in the human, infrastructural, including important biological collections and information resources necessary to underpin the science of taxonomy, the now well-recognized taxonomic impediment will continue to prevent adequate implementation of sound, scientifically-based sustainable, environmental management and development policies,” Dr. Pollisco stressed.

The workshop’s opening ceremony was addressed by Dr. Piyakaset Suksathan, Director of Garden Department, on behalf of the QSBG Director Dr. Suyanee Vessabutr, who emphasized that bryophytes and pteridophytes play an important role in the ecosystem and that they are economically

important. He also mentioned that taxonomy will never die if there are still people interested in the discipline especially the young generation. Taxonomy may falter due to lack of interest by many, but as long as there are those interested in it, although they may be few, they would keep the discipline alive for years to come.

Joining Dr. Pollisco as resource speakers were Dr. Benito C. Tan, Expert on Bryophytes, University of California-Berkeley, USA; Dr. Boon-Chuan Ho, Bryophyte Taxonomy Expert, Singapore Botanic Gardens, National Parks Board, Singapore; Dr. Edwino S. Fernando, Taxonomy Expert, University of the Philippines Los Banos; Dr. Dedy Darnaedi, Expert on Ferns and Fern Allies, Research Center Biologi, LIPI, Indonesia; and Dr. Bayu Adjie, Taxonomy Expert of Ferns and Fern Allies, Bali Botanic Garden, Bali, Indonesia. *RAInciong*

Viet Nam steps up wildlife protection in airports

SEVENTY-THREE Vietnamese airport officials took part in a new global training program in Hanoi last January to help stop illegal wildlife trafficking through airports.

The Wildlife Friendly Skies workshop, organized in partnership with the Biodiversity Conservation Agency of Vietnam's Environment Administration under the Ministry of Natural Resources and Environment, and the Northern Airport Authority of Vietnam, focused on commercial flight routes connecting

Vietnam to other wildlife source, transit and consumer countries in Africa, Asia, Europe and North America.

Carried out under the U.S. Agency for International Development (USAID) supported Asia's Regional Response to Endangered Species Trafficking (ARREST) program by USAID implementing partner, Freeland, the workshop took place at Hanoi's Noi Bai International Airport. Law enforcement and wildlife experts presented real case studies to illustrate the scale and seriousness of wildlife smuggling. Trainers also provided tips on how to identify wildlife species and products, how to profile traffickers, and examples of smuggling methods.

Participants included officers working in ground services, customs, cargo handling, quarantine services and other departments relating to the inspection and detection of wild animals. Participants learned more about the illegal wildlife trafficking issue in Vietnam and internationally, as well as how to detect and respond to wildlife trafficking cases.

Globally, the illegal trade in endangered species is estimated to be worth between US\$7 and US\$23 billion per year. It is recognized as a significant threat contributing to the rapid depletion of the world's biodiversity. Evidence also suggests the illegal trade is increasingly controlled by organized transnational criminal syndicates, with airlines commonly used to smuggle endangered species such as birds, primates and turtles.

The training course is part of a larger counter wildlife trafficking airport campaign in Vietnam, which will also include the placement of signs, banners, LCD screens playing public service announcements and inflight media targeting passengers travelling through airports.

Now in its fourth year, the USAID-funded ARREST program is the U.S. Government's largest counter wildlife trafficking initiative in Southeast Asia working to stop wildlife crime. *Freeland*



Biodiversity information at your fingertips!

Check out our website for information materials on biodiversity conservation in ASEAN! The ASEAN Centre for Biodiversity produces a number of public awareness materials on biodiversity in the region, including the quarterly newsmagazine ASEAN Biodiversity, as well as profiles of ASEAN Heritage Parks and endangered species.

Proceedings on workshops organized by ACB focusing on issues such as marine gap analysis, multilateral environmental agreements, and business and biodiversity, among others are already available. The Policy Brief Series focuses on ASEAN actions and recommendations on issues such as community conserved areas, ecotourism, and invasive alien species.

Visitors can access the Biodiversity Information Sharing Service (BISS) to check species lists and protected area network data in ASEAN. Links to biodiversity information in other ASEAN Member States can be accessed here as well.

ACB has also produced videos on ACB and its work in ASEAN, as well as the values and the need to protect our treasured natural resources.

For more information log on to www.aseanbiodiversity.org.





BRUNEI DARUSSALAM

Trading recyclables for rice. Over 5,300 kilograms of recyclable items were collected and 7,950 kilos of rice were distributed during the seventh Green Xchange (GX) program organized by the Society of Community Outreach and Training (SCOT). Residents flocked to the mosque in Kg Tamoi, where every kilogram of recyclables could be exchanged for 1.5 kg of rice. The recyclables collected included papers, plastic bottles, aluminum and metal cans, and large electronics such as television sets and refrigerators. Proceeds from the collection will go into SCOT funds and programs to help the underprivileged in Brunei. The GX program is one of the most successful green projects that also meets the needs of low income families in Brunei. The event was supported by Green Brunei and Kawan Bumi, and sponsored by Telekom Brunei Berhad.

The Brunei Times



HRH launches book on Tasek Merimbun. His Royal Highness Prince Mohamed Bolkiah, the Minister of Foreign Affairs and Trade launched Tasek Merimbun – The Black Beauty of Brunei Darussalam, which contains information and pictures of the park, its inhabitants, and local wildlife. The book is authored by the Curator of the Natural History Museum and Manager of Tasek Merimbun Heritage Park, Yang Amat Mulia Pengiran Muda Omar Ali, who worked with photographer Hj Ilham Rohaidi Hj Mashud. The book was released in conjunction with the park's 30th anniversary as an ASEAN Heritage Park (AHP). Tasek Merimbun Heritage Park was declared an AHP on 29 November 1984, the year Brunei Darussalam resumed its full independence. Tasek Merimbun is known for its rich biodiversity and



beautiful black water lake, the largest of its kind in Brunei. It is an important site for bird enthusiasts since the park is a breeding area for birds such as the Purple Heron and various egrets, and is a destination for migratory birds. The park was also one of the areas in the First Borneo Bird Race in 2013.

The Brunei Times

Sea turtles get second chance at life and freedom. Two endangered sea turtles, an eight-year-old Olive Ridley and a Hawksbill more than 10 years in age, were released back to their natural habitat during the launching ceremony of the Belait District Security and Social Performance Roadshow at the Liang Lumut Recreation Club. They were released by the Wildlife Division, Ministry of Industry and Primary Resources, to conserve the species and allow them to live and grow in their natural environment. Since 2000, the Wildlife Division has released more than 6,000 turtles into the sea. The government recognizes that conserving endangered animals is important to allow future generations to see and respect the creatures living in their natural surroundings. Ongoing efforts to strengthen wildlife conservation include expansion of the list of protected species; establishment of more wildlife sanctuaries; and increasing public awareness of the significance of biodiversity and endangered species. *The Brunei Times*



CAMBODIA

Cambodia confronts climate change. Experts say that climate change is likely behind much of the flooding, drought, rising temperatures, and cyclones that Cambodia has experienced in the



past, with major impacts on crops and other agriculture. It has become the fundamental threat to development and must be confronted to end poverty and promote prosperity in the country. The average temperature in Cambodia has increased by 1 degree Celsius over the last 40 years. Eight separate ministries and government agencies have prepared plans to deal with climate change, according to the Environment Ministry. Such plans include inputs from the private sector, civil society, and the vulnerable to decide which areas are worst affected by climate change. *Voice of America*



Fund for improvement of country's urban sanitation. The government will set up a \$5 million fund to allow Cambodia's 26 provinces and municipalities to take responsibility for waste management. The initiative aims to empower cities to tackle the growing social, health, and environmental consequences of poor sanitation. The first round of funding is earmarked for garbage collection and will include sewage management if the program is successful. Coordinated by the ministries of Environment, Interior and Economy and Finance, the program will allow municipalities to develop strategies for improving garbage management; provide the power to decide on contracts with collection companies; and facilitate technical support from the Ministry of Environment.

The Phnom Penh Post

Government cancels more land concessions. Since 2013, the Agriculture Ministry has canceled eight economic land concessions (ELCs) covering some 50,000 hectares belonging to companies that failed to honor their contracts with the government, and cut nearly 100,000 hectares out of four others. The release of new satellite data from the University of Maryland indicated that ELCs continued to be the main driver of rampant deforestation across Cambodia. The cancelled and reduced concessions were all located in the provinces of Kratie, Siem Reap and Stung Treng. The ministry is reviewing ELCs in other provinces as part of a nationwide review to root out firms that failed to develop the land they were granted or otherwise breached their contracts. The confiscated land comes on top of the 127,000 hectares the Environment Ministry had confiscated in 2014 by canceling or shrinking ELCs in its own jurisdiction, which covers protected areas such as wildlife sanctuaries and national forests. *The Cambodia Daily*



INDONESIA

International organizations to finance sea conservation project in West Papua. Conservation International (CI), the Nature Conservancy (TNC), World Wildlife Fund (WWF), and 15 local NGOs will finance a sea conservation project across the districts of Raja Ampat, Kaimana and Tambora in West Papua province until 2017. To implement the project, the three organizations and 15 local NGOs established a sea conservation team named Bentang Laut Kepala Burung (Bird Head Marine Landscape) of West Papua. The administration of West Papua province is set to seek further financial support in order to maintain the conservation project beyond 2017. *Antara News*

Riau police arrest ivory hunters. Riau Police have busted a group of hunters that slaughtered six elephants in Sumatra for their ivory tusks. The police arrested eight hunters in Pekan

baru and confiscated a pair of ivory tusks and hunting weapons. The two ivories that had been confiscated were from male elephants killed in the Mandau district in the Bengkalis regency. The suspects said they killed three elephants from Tesso Nilo National Park in Riau: one female and two males. They told the police that in September 2014, the suspects killed two elephants in Jambi and sold the ivories for Rp 8 million (US\$615). The suspects were charged under Article 21 of the 1990 Law on Natural Conservation, which carries a maximum punishment of five years in prison and Rp 200 million in fines. *Jakarta Post*

Rimbang Baling Wildlife Reserve to conserve 20 waterfalls. The Bukit Rimang Baling Wildlife Reserve located in Kampar and Kuantan Singingi districts, Riau, is preserving 20 waterfalls, with the potential to become ecotourism attractions. The Bukit Rimang Baling Wildlife Reserve spans 136,000 hectares and is well known for its rich biodiversity, which includes flora such as *Rafflesia arnoldii* and fauna such as jungle cat, clouded leopard, Sumatran golden cat, marble cat, and Sumatran tiger. The waterfalls include the Batu Dinding Waterfall in the Tanjung Belit Village, and the 100-meter Pangkalan Kapas waterfall, the highest waterfalls in the region. The Kampar District administration will promote the waterfalls as tourism attractions by simultaneously preserving local wisdom, known as Lubuk Larangan. The tradition of Lubuk Larangan forbids people from catching fish in the areas close to the waterfalls during certain seasons. *Antara News*



LAO PDR

Lao PDR, Japan to cooperate on anti-flood measures for Mekong. Japan and Lao PDR agreed to step up cooperation in enhancing flood risk management and mitigation in the Mekong River basin. The government sought Japan's assistance in developing advanced forecast and notification systems to remedy inefficient early warning and flood forecasting systems. The country aims to strengthen its preparedness for possible disasters, citing a United Nations study that economic loss would be reduced to about one-seventh if there are measures in place against potential calamities. To stimulate bilateral exchanges in tourism and other forms of business, Japan wants to cooperate with Lao PDR in launching direct flights between the two countries in line with an aviation agreement the two governments signed in January. Japan has been promoting ties with ASEAN, which is lowering barriers to the flow of people, goods and money across the borders of its 10 member states to launch a more integrated ASEAN Economic Community at the end of 2015. *Vientiane Times*



EU provides 5.55 million euros for upland development in Lao PDR. The European Union (EU) is offering 5.55 million euros through an open call for proposals in support of non-profit making organizations' initiatives contributing to sustainable, participatory, and equitable development in the uplands of Lao PDR. The objective is to directly contribute to achieving Millennium Development Goals on poverty and hunger through the support to rural

households for reducing vulnerability to food insecurity and malnutrition, as well as increasing wealth created by the agricultural sector. In 2011, the EU and other development partners including Germany, France, and Switzerland and the government of Lao PDR launched a 19.3 million euros Northern Uplands Development Programme (NUDP) aimed at securing and improving livelihoods of the rural poor in selected areas in Luang Prabang, Phongsaly, and Huaphan provinces, based on community-driven approaches to sustainable land management and agricultural production. The EU is now looking for opportunities to continue and strengthen the NUDP, which will support the National Nutrition Strategy and Plan of Action, 8th National Socio-Economic Development Plan 2016-2020, and the overall European Union Cooperation Strategy in Lao PDR. *Vientiane Times*



New big-fanged bat species found. Scientists have uncovered a new bat with stupendous canines in the rainforests of Lao PDR and Viet Nam, naming it *Hypsugodo lichodon*, or the long-toothed pipistrelle. Researchers say the bat is most closely related to the Chinese pipistrelle (*Hypsugo pulveratus*), which is found across much of eastern Asia. However, the new species not only sports longer fangs but is also bigger. The large canines may be important in grabbing prey such as larger insects or beetles with harder exoskeleton. The large fangs may also be due to niche segregation, which means that evolution may have allowed the new species to go after different prey or utilize a different habitat than its close relatives, essentially carving out its own ecological niche. Although the new pipistrelle is found in both Lao PDR and Viet Nam—including the

Dong Amphan National Biodiversity Area in Lao PDR and Cat Tien National Park in Viet Nam—it could be imperiled. One of the areas where the specimen was caught is currently being destroyed by the construction of a dam on the Xe Kaman River in Lao PDR. Bats are the second most diverse family of mammals (after rodents) with over 1,200 species and counting. Several new species of bat are discovered each year. Bats play huge ecological roles in the environment including dispersing seeds, keeping insect populations in check, and pollinating flowers. *Zoo Taxa*



MALAYSIA

Baby hornbills need extra protection. Nature lovers in Miri have called on state authorities to further secure the Piasau Nature Reserve where new baby hornbills have been found. There is a need to fence the forested areas where the hornbills are found and increase patrols to prevent poachers from attempting to capture or shoot the birds. The Piasau Nature Reserve, located 12km from Miri City, is the only place in urban Sarawak and perhaps the only one in Malaysia where hornbills can be found living in their natural state inside city limits. Formerly known as Piasau Camp, since the early 1900s the site has served as the residential estate for expatriates working for global oil giant Shell who were attached to Shell Sarawak's oil and gas upstream and downstream sectors in Miri. In 2013, there was a lobby to declare Piasau Camp a totally-protected area following the discovery of rare hornbills. The expatriates have since moved out and Shell Sarawak agreed to support the cause to preserve the area as a totally-protected nature park. *The Star Online*

Urgent action needed to prevent loss of Sambar in Peninsular Malaysia. An alliance of conservation organizations in Malaysia is calling upon the government to uplist the Sambar to a Totally Protected species in Peninsular Malaysia. Sambar, the largest deer species in Southeast Asia, is severely threatened due to constant



poaching pressure, and loss of critical habitat due to development and deforestation. Relentless poaching of Sambar has knock-on effects for other species, as they are an integral part of the ecosystem. Sambar are the most important prey species for the highly threatened Malayan Tiger—saving Sambar is thus critical to saving tigers. The study analyzed images captured by infrared camera traps during 23 studies carried out between 1997 and 2008. Sambar were rarely detected outside protected areas, which accounted for a mere 16 percent of the total available habitat for the deer in the Peninsula. Of 414 Sambar photos, 346 came from protected areas. No Sambar were recorded in 15 forest reserves studied. Experts also called for the Sambar to be uplisted to “Endangered” on the International Union for Conservation of Nature Red List. *TRAFFIC*

The fate of seized ivory in Malaysia. Every year, thousands of elephants in Africa are butchered for their highly-prized tusks to fuel a lucrative global trade and black market demand. The tusks are exported and smuggled into Asia, where they are turned into carved ornamental ivories. Malaysia is a transit point for some of the shipments but checks at immigration points have deterred several illicit cargoes. Since 2012, the Royal Malaysian Customs Department has made seven seizures valued at RM19,805,132. All seized tusks are kept by the department to facilitate investigations. Once investigations are completed, the ivories are handed over to the Wildlife and National Parks Department for disposal. Malaysia has developed a National Ivory Action Plan, which was submitted to the Convention on the International Trade of Endangered Species in 2013, with

measures to prevent illegal import and re-export of ivory from Malaysian ports and entry points.

The Star Online



MYANMAR

Deforestation in Myanmar threatens biodiversity and communities. A new report states that forest conversion for commercial agriculture is spreading at an alarming rate with devastating results for the country's ethnic minorities and biodiversity. According to a report by Forest Trends, a forest conservation organization, Myanmar's government has allocated at least 5.2 million acres forestland and identified a further 11 million acres of forest as suitable to be cleared for private agribusiness projects. This may result in the extensive loss of land for local groups and habitats for wildlife. Forests in the country are already being lost to accommodate rubber, biofuel, and oil palm plantations. Much of the forest earmarked for development also overlaps with historical land claims by ethnic minority groups, whose rights and traditional land use are not officially recognized. *DW*



Rare birds return to Gulf of Mottama. Conservationists say that persuading local people to be more welcoming has helped boost the number of migratory birds that winter in the Gulf of Mottama. The Biodiversity and Nature Conservation Association (BANCA) said the overall population of migrant birds in the area has soared from 30,000 in 2012 to 90,000 in 2015. The number of critically endangered spoon-billed sandpipers that migrate to the gulf near Bilin and Kyaikto townships in Mon State has more than doubled from 74 in 2010 to 155 in 2015. The increase in the birds' population is attributed to the cooperation of local

people. BANCA has raised awareness about conservation by forming local conservation groups to keep residents informed and deter hunters from killing birds, including a "Wetlands Day and Welcome to the Birds" ceremony at Khintan village, Paung township, Mon State. About half the global population of spoon-billed sandpipers congregate in Mottama during the rainy season. According to BANCA surveys, the number of spoon-billed sandpipers spotted in the area was 48 in 2008, 47 in 2009, 74 in 2010, 49 in 2011, 100 in 2012, and 155 in 2015. There are only an estimated 500 spoon-billed sandpipers in the world.

Myanmar Times



20 new bird species found.

According to the Myanmar Bird and Nature Society (MBNS) 20 new species of birds can be found in Myanmar, including seven species never previously spotted in Southeast Asia. These new findings bring the total of bird species in Myanmar to 1,114, from 1,094 bird species based on the work of Craig Robson, the world-renowned Asian bird expert who has compiled the field guide to the birds of Southeast Asia. The new species were found by members of Myeik University, MBNS, Wildlife Conservation Society, Bird Tour Asia, Wildlife Sanctuary (Putao), and Flora and Fauna International between 2010 and 2014. *Myanmar Times*



PHILIPPINES

DENR classifies 23 water bodies to protect their quality and specific uses. The Department of Environment and Natural Resources (DENR) has classified 23 more important water bodies across the country, including three possible sources of

drinking water in Romblon province, for purposes of protecting their quality and specific uses. This brings to 974 the total number of water classifications completed so far by the DENR since the enactment of Republic Act No. 9275 (Philippine Clean Water Act of 2004). The purpose of water classification is to set goals for water quality and promote management of water bodies, especially those identified as possible drinking water sources. The classification standards establish designated uses, related characteristics of those uses, and criteria necessary to protect the uses, and establish specific conditions for certain activities such as the discharge of wastewater. *DENR*

PH reaffirms commitment to water preservation and addressing aridity.

DENR Secretary Ramon J.P. Paje reaffirmed the Philippine government's commitment to preserve the country's water resources and address aridity brought about by climate change. Paje led the Philippine delegation to the 7th World Water Forum in Gyeongbuk, South Korea, and stated that the country strongly recognizes the inherent role of water in sustainable development and climate change adaptation. At the forum, Paje said that the country is focusing its efforts on programs to protect its water resources and make communities more resilient to climate change, as well as infrastructure improvements to increase access to clean water. He underscored the need for appropriate financing, infrastructure and relevant technologies for water regulation and management to ensure the availability of water to areas and communities. He added that the government also vows to incorporate major objectives and outcomes of the forum into the country's national program for water management. *DENR*

DENR optimistic on achieving 'Zero Illegal Logging Hotspot' target by 2016.

The DENR is optimistic that the government's "zero-illegal logging hotspot" target will be achieved by 2016 through continued imposition of the total log ban. The

DENR reports that an evaluation on the progress of Executive Order No. 23, which declares a moratorium on the cutting and harvesting of timber in the natural and residual forests nationwide, indicates a positive trend in its implementation. Signed in February 2011, EO 23 aims to uphold intergeneration responsibility to protect the environment and prevent further destruction wrought by natural disasters. Prior to EO 23, only a total of 6.4 million board feet were seized by the DENR. Confiscations have significantly increased by 59 percent at 10.28 million board feet as the government's intensified anti-illegal logging operations went into full swing in 2012. Many of the seized "hot logs" have been converted into essential school furniture like armchairs and desks for use in public elementary and high schools. *DENR*



SINGAPORE

Nominations open for President's Award for the Environment 2015. Members of the public are invited to nominate individuals, educational institutions and organizations for the President's Award for the Environment 2015. The award is the highest environmental accolade, which recognizes significant contributions towards Singapore's environmental and water sustainability. Nominees should have an excellent environmental track record and be exemplary role models for growing an active and gracious community for a sustainable Singapore, according to the Ministry of the Environment and Water Resources. *Straits Times*

Mass fish deaths overnight hit Changi farmers. Thousands of fish have died in coastal farms off Changi, in a repeat of last year's nightmare for farmers. The mass deaths occurred through the night, so farmers had no opportunity to try to save their fish. The Agri-Food and Veterinary Authority of Singapore (AVA) attributed the deaths to gill damage caused by plankton. Lab tests conducted so far did not detect biological toxins in the fish, and fish

from local farms remains safe to eat. At around the same period in 2014, 160 tons of fish died suddenly, also after being poisoned by plankton, and the 39 affected fish farms lost hundreds of thousands of dollars. Fish farmers said they hope to get more support and training in modern farming methods that can minimize pollution and bacteria growth, particularly since the authorities are encouraging the trade to help boost Singapore's self-sufficiency in food production. AVA had advised farmers to take precautions since February, when elevated plankton levels were detected in the East Johor Strait.

Straits Times



Dry spell ahead may see water rationing. Water rationing could be one way for Singapore to deal with a predicted dry spell. Government agencies, environmental groups and representatives from the water industry held a discussion on how the nation can do more to conserve and appreciate the resource. The National Environment Agency (NEA) said total rainfall for January and February is expected to be below average, due to the early onset of the dry phase of the northeast monsoon. In 2014, Singapore experienced a record-breaking dry spell that lasted from mid-January to mid-March. February 2014 was the country's driest month in 145 years. Although NEA had said the upcoming dry period is not likely to be as bad as the 2014 drought, experts have warned that the haze could come earlier this year, if the dry weather in Malaysia should trigger wildfires there and winds bring the smoke to Singapore.

The Sunday Times



THAILAND

Ocean Mysteries to highlight Thailand's environmental conservation projects. The Los Angeles and New York offices of the Tourism Authority of Thailand (TAT) lent their support to the filming of *Ocean Mysteries*, a television show from US broadcasting corporation ABC, which shot a documentary about Thailand's environmental conservation and marine environments. Hosted by well-known conservationist and marine life expert Jeff Corwin, *Ocean Mysteries* features marine animals and the importance of preserving the world's oceans. The show won two Emmy Awards in 2014 for Most Outstanding Travel Show and for Outstanding Directing. Jeff Corwin has produced programs all over the world for Animal Planet, Disney Channel, and CNN to promote environmental conservation. The show features Phuket, which is famous for its coral formations; Pattaya, where important sea turtle conservation and release projects are taking place; and the Anantara Elephant camp in Chiang Rai to show how elephants are being protected through the preservation of its natural habitat. The group also went to Ko Samui to film in Ang Thong Marine Park. The Thailand episodes of the *Ocean Mysteries* series are expected to air on ABC around September 2015. *TAT News*



Thailand's drive against illegal ivory trade bolstered by forensic tools. A collaboration between the Department of National Parks, Wildlife and Plant Conservation (DNP) and TRAFFIC, the wildlife trade monitoring network, has trialed forensic DNA examination of ivory products to assess the

origin of elephant ivory products commonly available in local markets. One hundred and sixty items of small ivory products legally acquired by TRAFFIC researchers primarily from retail outlets in Bangkok were subjected to DNA analysis at the DNP's Wildlife Forensics Crime Unit (WIFOS Laboratory). Forensic results show that African Elephant ivory accounted for a majority of the items tested and indicates that African Elephant ivory is prominently represented in the retail outlets in Bangkok. This capability supports the enforcement component of the revised National Ivory Action Plan submitted to CITES in September 2014. The plan was developed to control ivory trade in Thailand and strengthen measures to prevent illegal international trade. It focuses on law enforcement and regulation, and the execution of a robust ivory registration system. Using and highlighting opportunities for DNA testing to determine the elephant species behind the ivory products found locally for sale represents a new front in the country's capability to police the local ivory market and meet the requirements of CITES. *TRAFFIC*



International conference on climate change and water and environment management in Bangkok. THA2015, an international conference on climate change and water and environment management in monsoon Asia, was held in Bangkok on 28-30 January 2015. Topics covered include climate change and uncertainty in hydrology and meteorology; participatory management for water and irrigation project; emerging technologies in water and environment management; and water related disaster management. *THA2015*



VIET NAM

New iTHINK Global Online Wildlife Conservation Forum in Viet Nam.

The iTHINK Global Online Wildlife Conservation Forum (www.ithinknow.org) is designed to provide the conservation community and the general public with tools to support biodiversity conservation. The forum is available in Vietnamese and English and allows users to engage in wildlife conservation issues, while also inspiring conservationists to showcase projects and share knowledge. Users can access and upload information including conservation news, events, photos and videos, grant opportunities, job vacancies and more. The website is part of the Asia's Regional Response to Endangered Species Trafficking program under the Lower Mekong Initiative and will be used to promote its achievements and the work of its partners around the region.

USAID/RDMA Regional Environment Office Weekly Update



Vietnamese youth embrace environmental activism. Viet Nam's transformation from poverty to a fast growing economy has taken its toll on the environment, but many of the country's young people are taking action to change things. For instance, the Carp Team is a group of young people encouraging the public to refrain from dropping nylon bags with fish from the Long Bien Bridge. In Viet Nam, seven days before Tet (the lunar New Year), it's traditional for Vietnamese to release three fishes to accompany the Kitchen God, a deity that lives in every family's heart, when he returns to report back to the Jade

Emperor. Unfortunately, many people toss the fishes into the river along with the plastic bag they came in. This not only pollutes the environment but can kill the fishes. The Carp Team's solution is to collect the plastic bags to recycle and lower the fishes down to the waterside in a basin. Other efforts include supporting Earth Hour and a cycling event to raise awareness of water pollution. Their work is just part of the grassroots activism that has grown alongside increasing concern over environmental issues.

Voice of America



Populations of rare langur found in Quang Binh Mountain.

Rare Ha Tinh langurs were found on a mountain in central Quang Binh, according to the local Forest Ranger Department. The Ha Tinh langur (*Trachypithecushatinhensis*) is an endangered primate species, according to the International Union for Conservation of Nature and Viet Nam's red list. Also in Quang Binh Province, Phong Nha - Ke Bang National Park authorities have announced a new species of Ceylon caecilian (*Ichthyophis glutinosus*) found in the park. The amphibian lives on rotten forest floors near rocky streams, and can be found near Cha Lo Village in the province's Minh Hoa District. With the discovery of the new caecilian species, researchers have recorded the existence of 51 amphibian species in the park.

Vietnam News





Bali Catshark (*Atelomycterus baliensis*)

The Bali Catshark (*Atelomycterus baliensis*) is a recently described species, and its biology and habitat is largely unknown. The species is presumably reef-dwelling, inhabiting holes and crevices on reefs, like other related catsharks. It is a relatively small catshark and attains 52 cm total length with mature males. They are presumably oviparous, or produce eggs that mature and hatch after being expelled from the body, as is the case with birds, most reptiles and fishes, and monotremes. There is little information about their diet, but is probably dominated by small invertebrates as with many other inshore scyliorhinid species.

Endemic to Bali, Indonesia, the species is known only from off Jimbaran Bay in southern Bali. It possibly has a very restricted range, with an estimated extent of occurrence potentially limited to less than 20,000 km², as none have been recorded during extensive surveys at localities on neighboring islands such as Lombok.

It is caught irregularly by demersal fishers off the island of Bali or fisheries operating over coral reefs. The species is utilized for its meat. Since the Bali Catshark is presumed to be a reef-dwelling species it is likely to be adversely affected by dynamite fishing. It is categorized as Vulnerable due to a continuing decline in the area, extent and quality of its habitat, as well as the number of individuals.

References:

FishBase (<http://www.fishbase.org/summary/62191>)

White, W.T., Fahmi & Dharmadi 2009. *Atelomycterus baliensis*. The IUCN Red List of Threatened Species. Version 2014.3. <www.iucnredlist.org>. Downloaded on 07 April 2015.

White, W.T., P.R. Last and Dharmadi, 2005. Description of a new species of catshark, *Atelomycterus baliensis* (Carcharhiniformes: Scyliorhinidae) from eastern Indonesia. *Cybius* 29(1):33-40. (Ref. 54850)



Bentfin Devil Ray

(*Mobula thurstoni*)

The Bentfin Devil Ray, also known as the Lesser Devil Ray, Smoothtail Devil Ray, Smoothtail Mobula, and Thurston's Devil Ray, has a distinctive disc-like body with large, triangular pectoral fins that function like 'wings', propelling it swiftly through the water column. The mouth is located on the underside of the head, while the front of the head is equipped with two distinctive paddle-shaped lobes that channel food towards the mouth. The moderately long tail is flattened towards the base, and lacks the barbed spine exhibited by some ray species. Above, this devil ray is dark blue to black, while the underside is white, becoming silvery towards the tips of the 'wings'.

There is little information on the natural history of the bentfin devil ray although they appear to have a highly specialized diet, with euphasiid shrimp or krill, and, to a slightly lesser extent, mysid shrimp (small shrimp-like crustaceans) being the main prey items. It is not known to form large schools, a behavior exhibited by some of its close relatives, but instead is usually observed solitarily or in small groups of two to six.

Mating, birthing, and juvenile life predominately take place in shallow waters. It reproduces ovoviviparously, where an egg develops within the mother's body but emerges alive after hatching. The gestation period is around 12 months and each female produces just a single pup per litter.

The bentfin devil ray is probably circumglobal in tropical and sub-tropical waters. It is native to Australia (Queensland), Brazil, Chile, Costa Rica, Côte d'Ivoire, Ecuador, El Salvador, Eritrea, Guatemala, Honduras, India, Indonesia, Japan, Mexico, Nicaragua, Oman, Philippines, Senegal, South Africa, and Thailand.

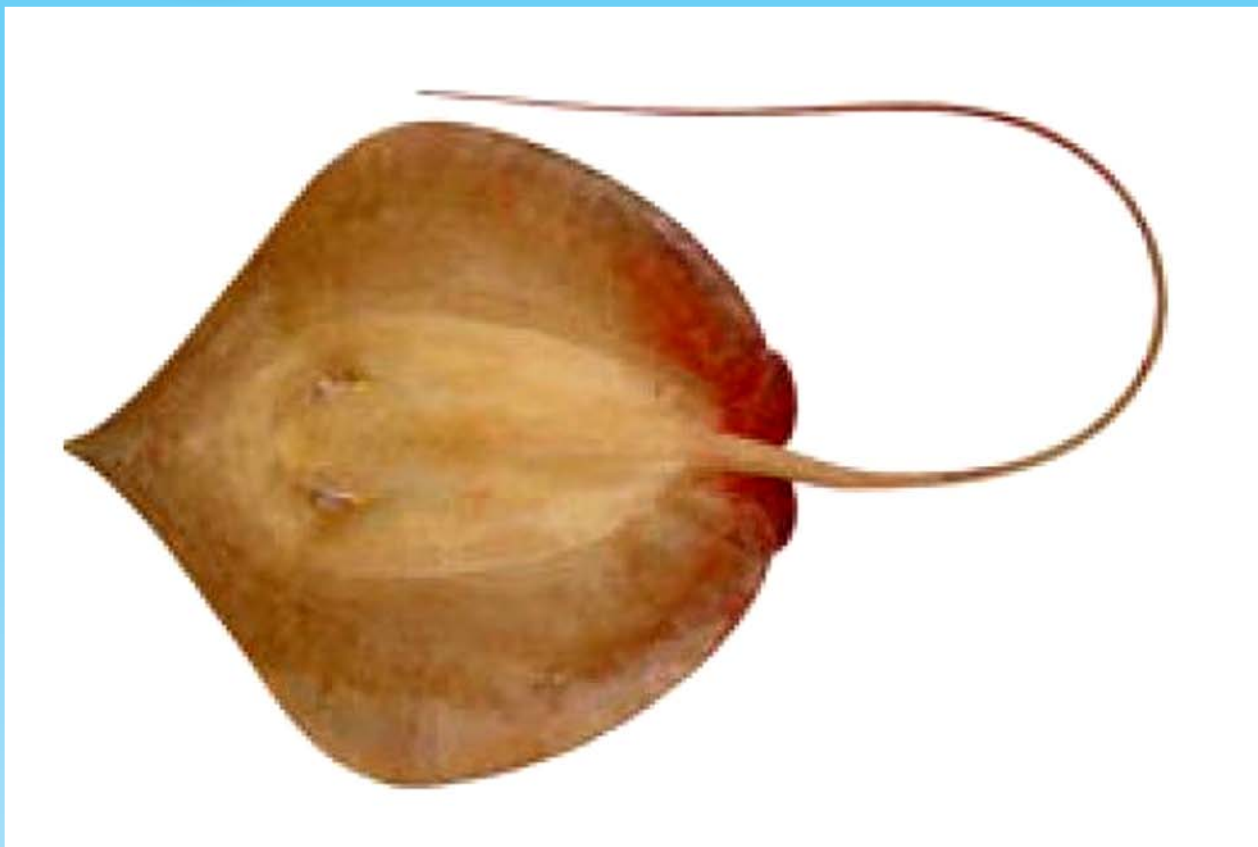
The bentfin devil ray is taken as both a target species and as bycatch, and is almost certainly landed in other countries across its range. In the Philippines, a ban on fishing for devil rays is presently in place, but enforcement is insufficient and landings still occur. The greatest concern is in Southeast Asia, where catches and demand are increasing, owing in particular to a rise in the value of gill-rakers in the Asian medicinal market. Given its low reproductive potential, this species is unlikely to be able to tolerate the current levels of exploitation.

Mobula thurstoni is assessed as Near Threatened globally, but Vulnerable throughout Southeast Asia where catches and demand are increasing. The vulnerability of mobulids and increasing catches requires urgent international conservation measures, particularly focusing on harvest and trade management.

References:

ARKive (<http://www.arkive.org/smoothtail-devil-ray/mobula-thurstoni/>)

Clark, T.B., Smith, W.D. & Bizzarro, J.J. 2006. *Mobula thurstoni*. The IUCN Red List of Threatened Species. Version 2014.3. <www.iucnredlist.org>. Downloaded on 07 April 2015.



Hurtle's Whipray (*Himantura hortlei*)

Hurtle's whipray is a little-known species of stingray in the family Dasyatidae, occurring in shallow estuaries (up to 10 meters) and mud flats off Papua (Irian Jaya) and possibly southern Papua New Guinea. The species is named after Kent Hurtle, a biological consultant at the Freeport mine in the Indonesian province of Papua, who provided the first photographs and fresh specimens of the ray to biologists.

Hurtle's whipray species grows up to 71 cm across and has a heart-shaped pectoral fin disc with a long, pointed snout and minute eyes. It has a wide dorsal band of placoid scales or dermal denticles (similar to small teeth) extending from in front of the eyes to the tail, as well as scattered sharp denticles on the snout. The underside of the disc is a distinctive bright yellow in color, sometimes with darker markings around the nostrils, mouth, and gill slits.

Hurtle's whipray is viviparous, giving birth to live offspring that develop within the mother's body, with histotrophy. Histotrophy is a form of matrotrophy (form of development in which the embryo is supplied with additional nutrition from the mother) exhibited by some live-bearing sharks and rays, in which the developing embryo receives additional nutrition from its mother in the form of uterine secretions, known as histotroph (or "uterine milk"). Size at birth is less than 20 cm disc width. The species presumably feeds on

crustaceans, molluscs, and small fishes and is utilized for its meat, and possibly also for its skin and cartilage.

Seine net fishermen targeting prawns are the main fishing threat to this species. Fishers try to avoid catching it, but it is still a regular incidental catch. Habitat destruction is another major threat. The removal of large areas of mangrove forest and mining practices are most likely heavily impacting this species' shallow water habitat. Estimated mangrove area in Papua New Guinea fell from 545,000 hectares in 1980 to 380,000 hectares in 2005 (a reduction of more than 30 percent). This was caused primarily by human pressures for rural livelihoods, commercial activities and overexploitation of mangrove forest for timber for housing and carvings. Pollution from the rivers also poses a significant threat.

Hurtle's Whipray is assessed as Vulnerable on the basis of suspected declines as a result of continuing high levels of exploitation and declines in extent and quality of its habitat.

References:

Last, P.R., M. Manjaji-Matsumoto and P.J. Kailola, 2006. *Himantura hortlei* n. sp., a new species of whipray (Myliobatiformes: Dasyatidae) from Irian Jaya, Indonesia. *Zootaxa* (1239):19-34. (Ref. 58025)

FishBase (<http://www.fishbase.org/summary/Himantura-hortlei.html>)

White, W., Manjaji, M. & Fahmi 2009. *Himantura hortlei*. The IUCN Red List of Threatened Species. Version 2014.3. <www.iucnredlist.org>. Downloaded on 07 April 2015.



Spinetail Devilray (*Mobula japonica*)

The spinetail devilray is a large and graceful ray, with a very long, whip-like tail, which has a sting at the tip, a spine at the base, and a row of small white 'teeth', known as denticles, along each side. The upperside of the body is dark blue or black, with slit-like spiracles and white areas behind the eyes. The body of all *Mobula* species is flattened into a disc that is much wider than it is long and is rhomboid in shape. Small denticles are present on the upperside of the disc, as well as on the cephalic fins, lower jaw, gills, abdomen and the underside of the pelvic fins.

The underside of the *Mobula japonica* is white, and features two cephalic fins, one on either side of the mouth. The cephalic fins protrude forwards and are silver-grey on the inner surface with black tips. The mouths of *Mobula* species have teeth in both jaws.

Juveniles and newborns have white shoulder patches. Adult males grow up to 310 cm disc width, and females up to 240 cm disc width. The adult spinetail devilray can weigh up to 115 kg. Their diet is mostly composed of plankton, krill and other euphausiids although copepods (group of small crustaceans), small fishes, and crustacean larvae are also occasionally taken.

The spinetail devilray may occur both singly and in small groups, but is not thought to form large schools. In certain areas, the species mates in spring and summer, after which the female gives birth to a single litter containing one pup. The

species is ovoviparous, meaning that the eggs hatch inside the female's body and the young are born live. The female has just one functional ovary and during the first stage of internal development, the embryo is initially enclosed within an egg and nutrients are gained from the yolk sac. After hatching from the egg inside the female, the embryo continues to develop and obtains its required nutrients from the fluid in the female's uterus until the pup is born live.

The spinetail devilray occurs in both inshore and offshore waters and is usually found close to the surface of the water. It is found in the warm temperate and tropical waters of the Pacific and Atlantic Oceans.

The species is commonly caught as bycatch throughout its range and targeted in Indonesia, Mexico, the Gulf of California and the Philippines, where it is used for its gills, cartilage, skin and meat. The slow reproduction of the spinetail devilray puts it under particular threat from overfishing, while unsustainable fishing practices may be reducing its worldwide population size. The species is classified as Near Threatened on the IUCN Red List.

References:

ARKive (<http://www.arkive.org/spinetail-mobula/mobula-japonica/>)

White, W.T., Clark, T.B., Smith, W.D. & Bizzarro, J.J. 2006. *Mobula japonica*. The IUCN Red List of Threatened Species. Version 2014.3. <www.iucnredlist.org>. Downloaded on 07 April 2015.



Mt. Makiling run promotes biodiversity conservation

Marathoners and fun runners will have a chance to test their running skills in an undulating race course in Mt. Makiling during the Second ASEAN Biodiversity Run (BIORUN) on September 26 in Los Banos, Laguna.

BIORUN is organized by the ASEAN Centre for Biodiversity (ACB) and Makiling Center for Mountain Ecosystems (MCME), in cooperation with Laguna de Bay Running Team, as part of ACB's 10th anniversary celebration, themed "ACB and ASEAN Member States: A Decade of Cooperation on Biodiversity Cooperation."

BIORUN aims to promote the values of biodiversity and increase public awareness on the importance of biodiversity conservation and highlight the relationship between health and the environment by personally experiencing the beauty of Mount Makiling, one of the 35 ASEAN Heritage Parks.

The course categories and their registration fees are as follows: 3k (P350), 5k (P400), 10k (P550) and 21k (P650). The top three finishers in these categories will receive cash prizes. Assembly will be in front of the UP Los Banos Baker Hall. Runners are expected to arrive an hour before the gun starts at 5:30 am for the 21k runners; 6:00 am for the 10k runners; 6:15 am for the 5k runners; and 6:30 am for the 3k runners.

Proceeds of the BIORUN will go to the ASEAN Biodiversity Fund, an endowment fund established to support biodiversity-related programmes in the region. Contributions to ABS are open to governments, organizations, the private sector, and individuals.

For more details, log on to www.aseanbiodiversity.org/biorun.