

2017  
Annual  
Report







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## You and SOW---together we protect our land.

SOW has brought a group of dedicated people together in protecting the wilderness of Taiwan.

2017 was a sad and busy year for SOW. The documentary filmmaker Po-lin Chi, who brought us "Beyond Beauty: Taiwan from Above", passed away in a tragic accident. But as usual, we're still occupied with habitat protection and environmental education.

In terms of protecting the habitats of Taiwan, we took to the streets and held protests for the Datan Algal Reefs, Asia Cement Cooperation mining operations and air pollution issues. We lobbied diligently for the local autonomy regulation that forbids the use of herbicides in non-agricultural areas, thereby preventing wildlife from survival crisis. We also actively advocated eco-friendly farming to protect farmland green tree frogs, Sauter's brown frog and other forms of wildlife. In addition, we conducted a survey on the Indian Sundews, Mortonagrion hiroseis and the other species of Shuanglianpi; all of which are endangered. In terms of data, we managed to collect relevant data for Chihpen wetland, 52 Jah wetland, Shalun farm, Yuanjhong harbor wetland, Lotus temple wetland, Shuanglianpi wetland, Gaomei wetland and Fata'an wetland.

A group of our fellow volunteers walked upstream and downstream to keep track of each section of the rivers-from the mountains to the sea. In the scorching heat of summer, they worked together to remove Milea-minute weed, Common Water Hyacinths, Hong Kong whipping frogs and Anolis sagrei. All of efforts came from our love for our country - Taiwan.



Regarding environmental education, we have promoted ways of achieving energy conservation and carbon reduction, while also assisting with electric checkups. We hope that energy saving can be achieved through everyday tasks. We urged the public to reduce plastic usage, and have invited people to join us in coast and river cleanups. Furthermore, we have encouraged people to bring their own bottle, food containers, utensils and reusable bags. Only by addressing our plastic usage in everyday life, can we reduce ocean plastic at the source.

We have also advocated the nature observation, caring for every piece of land in Taiwan, starting from the surroundings of our own homes. We held an "Environmental Action Forum" to share our stories, and to exchange experiences with international attendees.

Every effort and action towards environmental protection derives from the love for our homeland - Taiwan!

Thank you for your efforts and participations.

Come 2018, let us stand strong in our commitment to environmental protection.

Chairman

Yueh Mei Liu





## The achievements of SOW in cultivation & conservation

It is the time of the year for us to express our gratitude to all SOW volunteers. Thank you for your long-term commitment the society' s dedication for environment protection. During the first half of 2017, SOW took part in the global energy-saving activity "Earth Hour" initiated by WWF (World Wide Fund for Nature) and developed diverse and creative activities that can be used to promote environmental protection education and actions, thereby enhancing protection of natural habitats. Different environment experience exercises such as species surveys, eco-friendly farming, climate change, as well as initiatives regarding energy conservation and carbon reduction, forest sustainability, biodiversity, etc. were adopted in natural habitat observation locations all around Taiwan with significant results.

In terms of ocean related initiatives for the second half of 2017; aside from using ICC (International Coastal Cleanup) table to continue our long-term beach cleanup educational activities, we hosted a social network campaign - "Plastic-Free Life in September" on our official website and our Facebook page in accordance with the annual topic: "Plastic free Oceans" & "Love for our Oceans" . Our campaign content has reached out to 120,000 viewers, empowering a new wave of people' s movement toward plastic reduction.

We have made environmental issues our duty for the past 22 years. Those issues include the detrimental impact of "Asia Cement Corporation land development" on state-owned forests, the potential destruction of the 7600-year-old natural habit by the "Datan algal reef" project; in addition, pushing for the legislature of "Herbicide Autonomous Regulation" , which effectively prevents harm on both the environment and human health. In recent years, several branches of SOW have continuously adopted countermeasures against forest destruction and improper river remediation, which have caused ecological imbalance. Earth is but one planet, which is why addressing and solving major environmental issues should be a shared responsibility among us.

As the new year is upon us, we will organize a "Coastal Walks" pilot project focusing on the coastal environment issues such as wind turbines, wave-breaker structures, garbage, overall landscapes, etc. As an island nation, our people will be given a better understanding of the sea in addition to the good and the bad of our environment. "Environmental education" and "Habitat protection" are the two primary focuses of SOW. Our strategy has always been to utilize diverse environmental education as a means to protect natural habitats as well as to attract passionate supporters in joining SOW and committing to something worthwhile.







## From actions, we see hopes.

Just a few days before the second “Homeland Caring Consensus Camp” kickoff, the entire west coast of Taiwan was shrouded by unprecedented smog or red alert air pollution. Taiwan’s environmental problems are too complex to explain in a few sentences, which changes only being apparent through direct actions. For most people, exactly what we can do to help correct the situations?

People are sometimes oblivious to their own advantages and only see the strengths of others. In 2016, the first “Homeland Caring Consensus Camp” was held in Taichung, where our fellow volunteers from different branches and groups gathered to share the progress of their environmental protection actions as well as to focus on one another’s expertise and advantages through discussions. A summary of the characteristics and strengths of SOW’s volunteer-based partners are as follows:

- SOW’s volunteers are all optimistic and rational. They address environmental issues through communication and coordination.
- SOW has many volunteers and members who are good at using photography as a form of documentary.
- When dealing with environmental issues, we can adopt methods which let us exert our influence, e.g. environment surveys and records.

Having a large number of enthusiastic volunteers is one of our existing advantages. Nevertheless, enthusiasm without a focus can sometimes be a drawback. As there are a wide range of environmental issues, we should focus on the key points and truly exert our strength and influence. Taitung Wild Creek Survey Group conducted field surveys to collect data on ecological & environmental conditions of the surrounding area and presented them to the government offices, requesting intervention in the aggravating cementation of rivers caused by faulty construction. To prevent improper use of herbicides, the Hsinchu Herbicide Investigation team recorded

herbicide spraying over non-agricultural land, then submitted a petition, demanding the establishment of autonomous regulations on the use of herbicides. Parks are not just for people, but serves as dwelling for various creatures. “Find a Home for Squirrels”, conducted by the Parent-Child Group of Taipei branch, was a survey to ascertain the levels of naturalness in the 503 parks in Taipei. We hope that such surveys can be conducted annually to gather time-based statistics for examining the effectiveness of governmental efforts. Our actions were driven by the problems and issues we had seen. We admire what they have accomplished and hope that similar achievements can be made all around Taiwan.

In 2017, with prior experiences and consensus, we focused on the following subjects: wetlands and coasts, urban green spaces, rivers and mountains, regulations, policies and organizational development. For our second consensus camp, we decided to hold the conference in a different format. No themes were decided and instead, everyone would engage in discussions with one another. The ideas were integrated and compiled into the following:

- Core value statements: Core value statements were required for chosen issues.
- Rapid response mechanism: Establishment of a set of reference rules for the first-line fellow volunteers of all branches.
- Database of talented volunteers: Establishment of a database in order to find the right people for inquiry and experience sharing.



The first consensus camp allowed us to discover our consensus and strength. The second has helped us determine our focus of development. It is apparent that our fellow volunteers are no longer satisfied with just sharing or understanding related issues, but are motivated to transform into taking action.

*If I can see, I could easily distinguish between day or night  
I would then be able to hold your hand regardless of the a crowd*

*The darkness that lies before me is not darkness what type of white are you referring too  
The sky blue that people so often talk about, is the blue sky behind group of clouds within my memories*

These are lyrics from Hsiao Huang-chi' s "You are my eyes" . If we do not take action when it is so direly needed, how can we distinguish night from day? Kids these days feel no connection to the Chinese nursery rhyme "A small river in front of my house and a hill behind" . What if in the future, songs and rhymes are the only ways for kids to know that the sky is blue? This cannot be our future. We sincerely hope that others will join us in protecting the earth we live in.



## Environmental Focuses in 2017

Category	Subject
Wetland & Ocean Conservation	Taoyuan alga reef <ul style="list-style-type: none"><li>· Alga: supervisory &amp; control program for contaminant sources</li><li>· Tai Tan alga: The 3rd LNG Terminal &amp; harbor development by Chinese Petroleum Corporation</li></ul> Qieding Wetlands, Kaohsiung <ul style="list-style-type: none"><li>· 1-4 road development</li><li>· Advocating Upgrading Qieding wetland into national wetland</li></ul> Yongan Wetlands, Kaohsiung <ul style="list-style-type: none"><li>· Re-evaluating the rank of important wetlands</li></ul> Chipen Wetlands, Taitung <ul style="list-style-type: none"><li>· Advocating Upgrading Cihpen wetland into national wetland</li><li>· Solar power system equipment development</li></ul> Illegal factories on farmland <ul style="list-style-type: none"><li>· A plan for pastoralized production cluster</li></ul> Hualien : rivers & ocean <ul style="list-style-type: none"><li>· The 9th River Management Bereau: a plan for coastal protection</li><li>· Condition investigation of Hualien river system</li></ul> East rift valley national senic area office <ul style="list-style-type: none"><li>· Carp Lake: survey on terrestrial and aquatic ecosystem (including: contaminant sources), evaluation of water quality improvement</li></ul>
	Advocating self-governance articles on the use of herbicide <ul style="list-style-type: none"><li>· Hsinchu City &amp; Hsinchu County</li><li>· Kaohsiung City</li><li>· Taoyuan City</li><li>· Chiayi City &amp; Chiayi County</li></ul> Mining development <ul style="list-style-type: none"><li>· Mining law Amendment</li><li>· Hualien Asia cement corporation: mining rights extension</li></ul> Wild creeks rehabilitation <ul style="list-style-type: none"><li>· Soil and Water ConservationBureau: ecological investigation for project plannipgblicizion of information public participation mechanism</li><li>· Forward-Looking Infrastructure: aquatic environment Infrastructure</li><li>· Siouguluan river system rehabilitation plan</li><li>· Tungshih, Taichung: Shiwen creek and Dongmao creek rehabilitation projects</li><li>· Dulan, Taitung: groundsills improvement</li></ul> Aquatic resources and environment <ul style="list-style-type: none"><li>· Review of weir function</li><li>· Yufeng weir: industrial water management</li><li>· Reservoir watershed intensified conservation management</li><li>· The 9th River Management Bureau: overall management plan</li></ul> Waste landfill <ul style="list-style-type: none"><li>· Matou mountain, Qishan, Kaohsiung</li><li>· Ohsin, Longqi, Tainan</li></ul> Forests development <ul style="list-style-type: none"><li>· 369 Cabin Project Construction</li><li>· Hualien county route 193: widening project</li></ul> Casino <ul style="list-style-type: none"><li>· Kinmen casino referendum</li><li>· Offshore Islands Development Act: casino referendum</li></ul>
Urban Green Spaces	Eco Park <ul style="list-style-type: none"><li>· Taichung Beitun children park improvement plan</li><li>· Tainan Yongkang Sankantensya eco park planning</li><li>· Chiayi Hsianhu park characteristic plan</li><li>· Hualien: self governing bill on trees-protetion</li><li>· Hualien: Luchu Pine transplant and restoration plan</li><li>· Hualien: Ma-an creek environmental landscape follow-up planning</li></ul>
Ocean Conservation	Marine conservation & fishery resources depletion
Others	Laws,regulations and plans <ul style="list-style-type: none"><li>· National Homeland Plan</li><li>· National Sustainable Development Goals, Bill</li><li>· Advocating Environment Trust Act</li><li>· Environmental Impact Assessment Act (amendment), Bill</li><li>· Trade ban on ivory</li><li>· Air pollution control in Kaohsiung/Pintung</li><li>· Air Pollution Control Act, Bill</li><li>· Air pollution control in central Taiwan</li></ul>
Organizational Development	Wild Creeks Survey Group <ul style="list-style-type: none"><li>· Kaohsiung branch set up in February</li><li>· Taichung branch set up in August</li><li>· Tainan branch in preparation</li></ul> Homeland Caring Group <ul style="list-style-type: none"><li>· Set up in Taichung branch</li><li>· 11th training session completion in Hsinchu branch</li></ul>



Rich and diverse, warm and positive

"We want to provide a rich, diverse, warm and positive atmosphere, and spread goodwill through our actions. We don't teach or blame others. We only teach ourselves and practice what we preach. This is the initial purpose of SOW, and has also become our culture." ---excerpted from written recordings of Lee Weiwen, the former chairman of SOW.



When SOW was first established, environmental awareness had not yet gained public recognition. Therefore, we faced various challenges during the promotion processes. Sometimes we engaged in arguments or exchanged opinions. Most of the time, people expect environmentalists; like us, to come up with a universal solution for everyone to follow.

Why is everybody so naive? The environmental problems are so complex; there' s no single solution for such complex. Most of the time, the easy way out is either irresponsible or impractical.

The ideal environmental education should be inspiring and thought-provoking, causing people to delve into or reflect on the relationship between environment and ourselves. Therefore, for the purpose of sustainability, people will opt for more eco-friendly actions. In my opinion, there' s no standard answer when it comes to environmental education which should be updated constantly. Any relatively eco-friendly solution is the proper choice.

Therefore, after the founding of SOW, volunteers initiated committees and groups for environmental education, promotional speech, the education for the disadvantaged, parent-child education, children education, climate change, etc. We hope to create a rich, diverse, warm and positive ambience in terms of environmental education, which allows the public to join us whenever they deem appropriate.



2017 SOW Environmental Education Achievements

For a long time, SOW has adopted environmental education to achieve habitat protection. The 11 branches in Taiwan periodically conduct indoor promotion lectures, nature promotion activities and volunteer training courses. We design different lessons for each type of participant, including “parent-child” , “children” , “general public” and “handicapped” etc. We also arrange relevant volunteer training courses for each type of participants prior to te actual activities.

Participants type	Program	Volunteer Training		Environmental Education Activity	
		Number of sessions	Number of Participants	Number of sessions	Number of participants
Parent-Child	Parent-child group	15	587	786	5,540 participants from 1,727families
	Green living, Energy saving. Parent-Child Summer Camp	/	/	66	1,933
Children	Environmental Education for Children by Wistron, Summer Star, 319 School Nature Education Projects	3	60	423	17,969
General Public	National promotion speech Promotional lectures, meetings between different SOW branches, lecture on ecological applied materials	6	88	951	89,810
	Nature promotion activities (Docents at booths)	11	267	410	13,218
	Nature and Humanities Courses Introduction to Animals and Plants, Green Roof, Handmade Soap, Photography, Woodworking, Natural Farming	/	/	34	459
	Entry-level volunteers	8	88	/	/
	Mother Earth	/	/	10	1,032
	Ocean Initiative	16	418	34	7,139
	Training/promotion programs for energy-saving volunteers (lectures, community/school workshops)	8	155	599	27,572
The Handicapped	Handicapped Activities	2	35	23	378
Total		69	1,698	3,336	165,050



## To SOW a seed of hope

For 22 years, SOW has committed to habitat protection and environmental education. We have always believed that changes don't come easy. From love of the homeland, we promote environmental education, connect people with nature, motivate people to speak out for mother earth, guide people to understand and care about our environment. We also believe we can protect and restore our environment and achieve our goal of "habitat conservation."



### Nature interpreter--- Nature's Mentor

Nature interpreter--- Nature's Mentor  
In recent years, nature interpreters, combined with experiential learning and ecological psychology, has promoted EEE (experiential environmental education) and nature activities for the mind. The goal was to expand on fields of study that were seldom discussed by domestic environmental education. We believe that creativity and dedication will definitely lead to more changes and possibilities. In 2007, with the help of SOW docents, 188 training courses were held for 392 trainees. 361 nature promotional activities were offered and 12,873 people were benefited.



### Tutoring--- Saving the barren hearts, before saving the barren land!!!

Most people are unaware of the environmental damages because they do not know how precious and fragile Taiwan's ecology is. That is why lecturer addresses a 90-minute speech to the audience by showing them one hundred of slides of wonderful images, from mountains to ocean, from forest to wetlands. The lecture leads people to discover the beauty of Taiwan and to realize that they must cherish and care about their motherland.

SOW emphasizes that education is vital for environment protection. That is why SOW has trained promotional lecturers since 2007, with 71 classes up to date. These lecturers head to schools, institutions or corporate communities and promote topics such as "The Beauty of Nature & Ecology in Taiwan", "Re-discover the Oceans", "Discover the Beauty of Wetlands", "Befriend with Nature", "Energy-saving & Carbon-Reducing Green Life", "Challenges and Actions under Climate Change". In 2017, 951 lectures were given and have influenced a total of 79,211 audiences.

Education is a long-term commitment and there is still a long way to go. We must keep on sowing the seeds to persuade the audience in becoming guardians of our homeland, Taiwan.





## On-campus environmental education for children

The Children Education Committee divides daily volunteer service into two main categories: one-time children outdoor experience activities and multiple-time activity at campuses with nine main environmental education courses. The one-time children outdoor experience activities include "Nature Experiencing Course", "Nature Observation Course", "Parent-child Learning Course" and children camp, etc. A total of 82 activities were held and 5,391 students participated. As for the activity at campuses, 259 courses were conducted at 50 campuses where 6,815 teachers and students participated. This year, three volunteers training programs were held island wide, with over 60 fresh bloods joining SOW.

The Wistron Humanities & Cultures Foundation sponsored the "Local Guardian Seeds" program to help the disadvantaged children. The Hsinchu

Rolling Group, the Yunlin Flying Cloud Group and the Chiayi Flying Butterfly Group all carried out local environmental education, completing 21 activities and serving a total of 555 people. The Summer Star Foundation for Nature and Humanity sponsored the "Local Nature Learners" program to benefit the children in remote Areas in Hualien. A total of two camps were held with 38 children participant. As for campus lecturers, 47 lectures were held, attracting 5010 people. 160 people attended 12 "nature experiential courses" in Guangfu and Yuli elementary schools.

In the future, we will introduce environmental education concepts and activities from Earth Education; an institute from USA, and develop new environmental education programs, as well as recruit and assist more volunteers. We look forward to planting an environmental education seed in all of Taiwan's students.



## Parent-child effort in creating a better future

The SOW Parent-child Group is composed of parents and children from kindergarten to high school and has been operating for 12 years, revolving around the following three subjects: Ecology, Living and Life. The objective is to allow parents and children to learn and grow alongside with each other through environmental education. In 2017, 15 instructors training programs were held with a total of 587 participants. 786 environmental education activities were held; and successfully reached out to 5,540 people from 1,721 families.

This group was invited to participate in the "Future Education, Taiwan 100" campaign, hosted by Global Views Educational Foundation and co-organized by "Future Family" media. They were the award winners of this event.

## Special Workshop & special love for the special you

Special Workshop & special love for the special you Over the years, the "Special Education Team" (referred to as the Special Workshop) understands that the needs of outdoor activity for the disadvantaged are no less than the general public. So the team started to train volunteers tailor for the disadvantaged. The volunteers have helped them enjoy the beauty of mother Nature and adjust to fit their specific needs. The volunteers must outnumber the disadvantaged participants by a factor of two to three; therefore, this team has to conduct more training courses to satisfy its manpower need.

So far, nine training courses have been completed with close to 250 participants and have served more than 2,500 people. Through the efforts of SOW's fellow volunteers, Special Workshops had open new chapters in both Hsinchu and Taichung. Hopefully, our motto: "Special Love for the Special You" can be realized as we give back to this blessed land.



## **"Few in number but great in power" --- Standing firm--- " Climate Change Team " marches on**

The Climate Change Team were composed of energy-saving volunteers. Now the team is hosting different workshops regarding climate change, energy-saving and green-living.

Based in the Taipei Branch, the team' s goals are to internally integrate volunteers and resources, to externally promote ideas and to consistently conduct training programs. This year, Taoyuan Branch has recruited a group of volunteers who care greatly about climate change. Through monthly sharing conventions, the branch has progressively planned their future endeavors. Taitung branch has also completed similar training programs and has planned energy-saving workshops for B&B (bed and breakfast) owners. In addition, they offer energy-saving diagnosis for B&B owners. Furthermore, they have invited our fellow volunteers from Taipei to partake in tree survey exchange training.

In face of the next year, the climate change team will: 1. Motivate senior volunteers to work toward recruiting new ones through training programs in all of SOW' s branches. 2. Carry out promotional course improvement, through more information about daily life the general public shall understand and be willing to change. 3. Screening out verbal arguments, focus on energy issues, and practice energy-saving in daily life. 4. Continue update the news regarding climate change and utilize acquired information for future promotion.



## **Diversified volunteer development**

Aside from those fruitful results, the Research and Development Group continues to host training programs for advanced volunteers and for journalist volunteers. With their expertise, SOW can empower existing volunteers and intensify media communication ability. Through in-depth humanities and cultures courses, the public acquire a better understanding of mother Nature with ease. Bearing the great love and faith, the volunteers continues to spread their eco-friendly faith and to accumulate positive energy in people' s hearts. Despite any minute efforts toward environmental protection, we shall guard this planet with citizen movements.





# SOW (The Society of Wilderness) – Faith and Action of Habitat Protection

It has been 22 years since SOW was first established. Habitat protection has always been our core value and focus. We believe in "Acquiring legal guardianship and management rights of waste lands through purchases, leases, commissions or donations, with the intent of protecting habitats and let mother nature repair damaged lands and restoring the vitality within them." The above is our motto, and our long-term objective.

In the past 22 years, SOW has been continuing to educate the public about the importance of habitat protection as well as attempting to obtain guardianship and management rights of land by the means of adoption, entrustment, and land lease.

Regarding habitat adoption, the Taipei Branch has adopted the "Wu Wetland Eco Park" and "Fuyang Eco Park" for a long period of 13 years, and has used the accumulated experiences to promote "Eco Tamsui River" and "Eco Parks". Taipei Branch also signed a memorandum of cooperation with the park authorities to actively promote the transformation of park habitats, volunteers training as well as education/publicity plans.

As for entrusted management, this year (2017), SOW was given a piece of land donated by our fellows of Kaohsiung Branch and a 20-year free service and entrusted management contract was signed. The land will be an important site for Kaohsiung branch to conduct programs of environmental education and habitat protection.

Furthermore, lease-related/contractual-farming conservation activities had been in conducted by local branches and volunteer groups. Habitat protection actions have been conducted at Hsinchu Dashanbei Yoritian, Yilan "52 Jah" Wetland, Yilan Shuanglianpi Farmland, Chiayi Jurassic Farm, etc.

Aside from obtaining use/management rights of lands, SOW also diligently trains habitat-protection volunteers and contributes to habitat rehabilitation/maintenance/management and environmental investigation/monitoring. The above mentioned efforts will extend the capacity for operations after obtaining land ownership.

## We finally bought our first piece of land

At the end of 2017, SOW bought its first piece of land located in the reserved hillside forest of Wulankeng, Yilan, which covers an area of over 1,760 square meters. This beautiful site is home to many species, including pangolins, crested serpent eagles, and *Anotogaster sieboldii*, etc. Thanks to the sponsorship from Taipei branch fellows, diligent field trips & evaluation process by our Yilan branch fellows, the land acquisition case was approved by the SOW's special meeting by member representatives at the end of last year and we finally won the bidding for government land this November. This victory was a new milestone for SOW's endeavors of habitat protection.

## What is the next step after land acquisition?

Land acquisition is only a start. SOW will now need to engage in land management/ monitoring. As every piece of land is different in terms of its attributes and environmental conditions, the adopted managing/monitoring methods will vary individually. As the Wuyikeng forest land is located within the hillside reserved area, acquisition of the land is limited to maintenance and low-development usage. To avoid the installation of unnecessary facilities, only some small-scale environmental maintenance and hand-made trails will be allowed. The site will be used for hosting training courses and educational programs.

On the other hand, local volunteers will investigate the environmental conditions of the land and the surrounding areas, then create a basic environmental database, which will then be important background information used as material for follow-up education promotion and evidence to against potential improper land development lawsuits in the future.





## Where will SOW purchase its next piece of land?

Land acquisition requires lots of hard works, such as assessing the level of ecological protection values/importance, the required maintenance manpower, resources as well as funding. For SOW, most of the funding comes from member donations or project sponsorships, so every dollar spent has to be cautious and used in the right way.

SOW is fast approaching its 23rd birthday. The major challenges in the future might be funding for land acquisition/management as well as the demand for manpower. In addition to sustain the precedent achievements, we should also embrace more new ideas and march forward in confident pace. With the collaborative contribution from our fellows, we' ll be able to preserve more and more natural heritages for the generations to come.



## Walk the talk—environment protection actions

For 22 years, SOW (The Society of Wilderness) has been striving for environmental protection and thanks to the precedent achievements by SOW' s fellows, we are able to protect 68 habitats island wide today.

### Earth Day—Nature Observation Activity

This year, due to database revision and course promotion, the number of participants and records has greatly increased. A total of 6,308 data items were collected from 39 habitats by the participation of 433 people, and increase of 86.5% compared to last year. The biggest recorded groups were plants and insects which are easy to observe. The new database contains Chinese interface and compilation function for individual data, which improves time efficiency. We will keep on optimizing the system and make it more user-friendly.

### Wazaiwei Wetland—A survey on breeding behavior of Oriental ringed plover

The Wazaiwei wetland is an important habitat for the breeding of ringed plover in northern Taiwan.

According to the surveys conducted from 2014 to 2017, the number of nests had been increasing. Given the wetland is a place for recreation & sports as well as the construction site of the Tamkang Bridge, ecological disturbance is inevitable in the future. The Taipei branch will continue to watch this issue closely and to propose this wetland be listed as a seasonal conservation area.

### Tamsui river basin—Survey on Mortonagrion hirosei and birds

Mortonagrion hirosei prefers living in reeds gown in brackish water areas. This year, hundreds of Mortonagrion hiroseis were spotted at Wugu wetland, significantly more than last year. It was speculated that the reappearance of tidal rivers was what contributed to the increase in numbers for the Mortonagrion hirosei. The population at the Huanggang creek estuary is estimated between 140-1,532 which is based on the method of mark and release, in collaborating with Endemic Species Research Institute. Both parties had worked together to monitor the population of Mortonagrion hirosei and suggested the Council of



Agriculture enlisting *Mortonagrion hirosei* in the conservation animals' directory. Although the application was not approved, it was a big step forward, and such attempt is worth continual efforts and appraisal.

For this year' s birds survey, we teamed up with eight organizations and total of 114 volunteer participants. The survey records contain 30 families, 63 species, and 4,352 samples, including four level-2 protected rare species (*Pandion haliaetus*, *Oriental Pernis ptilorhynchus*, *Elanus caeruleus*, *Milvus migrans*) and 14 endemic species and subspecies (*Hirundo rustica*, *Bubulcus ibis*, *Threskiornis aethiopicus*, *Pycnonotus sinensis*, *Passer montanus*, etc.)

## Songshan Community — Terrace Protection

SOW and Songshan Community collaborate to protect the terrace fields, the endeavors including terrace biological resources surveys, community services and hands-on practices in removing invasive species. The project consisted of 11 events, with 794 participants and managed to remove approximately 43 kilograms of *Pomacea canaliculata* (apple snails). The survey documented 43 species of terrace plants, 29 species of insects, 11 species of birds, 29 species of other animals and a variety of other rare aquatic plants and protected animals.

The documented records illustrate the biodiversity of the terrace habitat.

## Hsinchu Lotus Temple Wetland—Carnivorous Plants Habitat

In order to promote the awareness of conservation of carnivorous plants, we co-hosted courses and exhibitions with the Natural Museum of Natural Science and National Taiwan Museum. For ongoing wetland rehabilitation, two pieces of land that were covered in mud a result of storms last year had been replanted. The variety protected plants were on the increase, and the number of rare *Drosera burmannii* have grown several times.



## Hsinchu Dashanbei—Frogs Conservation Activities

More and more people began to concern about “frog crossing the roads safely” after accumulative promotion and publicity. Therefore, 12 frogs Conservation activities were held during weekends this year, with 536 volunteers and 840 participants. During the monitoring period on weekdays, 2,378 live bodies and 78 dead bodies (road kills) were recorded.

## Yilan—52 Jah Wetland

The climate conditions have resulted in bad rice harvest of contract farmers; the harvest of water caltrop (for experimental purpose) was also poor because of being nibbling by apple snails (*Pomacea canaliculata*) and without fertilizers. Regarding bird survey, the following birds had been put on the record list: *Platalea minor*, *Ardea purpurea*, *Circus spilonotus*, *Rostratula benghalensis*, *Elanus caeruleus*, and *Fregata andrewsi*. This indicated that the environmentally-friendly farming at “52 Jah” wetland has attracted many waterfowls.

## Chiayi—Zhuluo Farm

After years of dedication, local communities have started to recognize the value and importance

of SOW' s environment protection actions. Farms use full-manual ploughing techniques in dealing with bamboo forests, preserving old bamboo forests and offering tree frogs a more private living space. In alignment with the ploughing of bamboo forests and the thinning of Guava trees, a compost site was established. This allowed more temporary water areas to be used for educational purposes. In the future, we hope to enhance our influence so that we can expand on the amount of land that have adopted environmentally-friendly farming.

## Future Vision

The 2017 SOW Habitat Conservation Green Paper was officially launched online. The Green Paper records the current situations of the 53 habitats that SOW is concerned with. Such records illustrate the history of habitat conservation in our homeland. All the precious memories will motivate us to further our conservation scope and mission in the future.





## "Nature Centers" --- Empowering the local communities and protecting with heart

In addition to providing periodic environmental education and habitats protection, SOW (The Society of Wilderness) has established the "Nature Centers" for educational purposes. These Nature Centers are located in the natural habitats with the purpose of protecting the local environments, and hopefully to thrive with the local communities. Hsinchu Natural Valley, launched in 2011, was the first example of environmental trust in Taiwan<sup>1</sup>. We look forward to establishing a wider variety of Nature Centers in the future and collaborating with the communities on improving effectiveness of environmental education and guardianship.

### Yilan County Shuanglianpi Environmental Education Site

In 2000, SOW set up the "Shuanglianpi Ecological Classroom" as an educational site to promote wetland environmental education, ecological rehabilitation, eco-friendly farming etc. It also serves as a body which invites the public to protect this aquatic plants paradise. Looking back on this year, we have proceeded to improve native habitats through 26 working holiday events, and have established an aquatic plants shelter area as well as optimization test area at northern lakeside. Meanwhile, we're happily surprised at some

long-gone aquatic plants re-appearing in our rehabilitation area, which was a significant progress.

We have held 212 environmental education activities this year, which has attracted 9,749 visitors. In terms of giving back to the local communities in Yilan, we have held 21 off-campus education activities, leading 596 local students to learn about the precious wetlands in their hometown. In order to meet the demands from internal/external cooperation programs, we have hosted 8 ecosystem camps with 260 attendees. Our efforts and devotion have been recognized and encouraged by the public and academic sectors. Therefore, at the end of 2017, we were selected again to host the "2018 Yilan County Dahu elementary school Shuanglianpi Ecological Classroom", this program was extended from 2 years to 3 years for each term.

### Hualien Fata'an Wetland Education Center

This center was founded in 2010. Every year, it hosts 4 habitat camps and leads 30 volunteers in carrying out maintenance work. In terms of environmental education, it hosts seminars for schools, communities and teachers, as well as visitation activities for internal volunteer groups. As for promoting



"environmental education for local children," the center cooperates with Guangfu and Daxing elementary schools to manifest the ecological relationship between the Amis people and wetlands, through curriculum programs, outdoor experiences, interviews and practices. By doing so, the center can pass on the local cultural heritage to the new generations and increase public awareness of environmental protection. The center conserves habitats with diverse natural waterfront vegetation and dismisses the traditional concept of concrete waterfronts. The center's goal is to find a balance between economy and ecosystem, sustainability can be achieved for both humans and nature.

This year, thanks to the ongoing sponsorship of the "Summer Star Natural Art Charity Foundation", two activities were held – the "Long-term Accompanying Camp for Children" and the "Children Summer Camp." Therefore, 55 children got the chances to explore nature and immerse themselves in the outdoors. Twenty-four volunteers participated in the "SOW national children education volunteers training programs" this year, which helped building up volunteer capacity.



## New Taipei City Wanli Wetland Education Center

In 2003, the "Wetland Plant Shelter Center" was formally established with the assistance of the "7-eleven Green Fund". It has become the world's first aquatic plants conservation center, much like a "Noah's ark" sheltering the native aquatic plants. Chen Dehong (SOW trustee) offered his own family farmland to set up "Wanli Shelter Station". He and volunteers worked together to build shelter pools to accommodate endangered aquatic plants from destroyed native habitats. Another 2 shelter stations were set up afterwards---Yilan Kbalan and Taoyuan Shuanglong, but only Wanli Shelter Station is still in operation.

Even to this day Wanli Shelter Station still continues to shelter rare aquatic plants in Taiwan. Docents show visitors around, and tell them the beauty and sorrows of Taiwan's wetlands. The shelter station hosts monthly working holidays to manage and maintain the environment, and also gives public lectures of environment protection upon request.

Apart from working on the current missions, the station has also planned to transform the existing shelter centers into "SOW wetland

education centers", to expand software/hardware equipment for environmental education and to shelter not only aquatic plants, but also endangered aquatic animals. The station will aim for upgrading to "SOW wetland education centers" by enhancing hardware equipment, volunteer training, promotion programs, studying relevant laws/regulations and involvement in international exchange. The station is dedicated to keeping the sustainability of wetland ecosystems in Taiwan.



## Hsinchu Yorotian Friendly Farming Site

The site comprises paddy fields (about 4,000 square meters), upland fields (about 3,000 square meters) and experimental fields (about 1,000 square meters) for manual seedling/transplanting/harvesting and sun drying. The "Veggie Veggie Course" started in 2016, with the labor divided into two groups: Hand-planted vegetables & wild edible plants and extensive crops. The site cultivates with a friendly farming style (no pesticides, fertilizers, tea seed oil sediments and herbicides were used). Food and agricultural education was promoted by means of working holidays, work for free accommodation, farming experiences, and environmental education. After 4 straight years of friendly farming (no pesticides, herbicides, fertilizers), this site is now

home to 215 types of plants, 134 types of insects, 45 types of spiders, 17 types of birds, 16 types of amphibians (frogs), 4 types of leeches and 7 types of earthworms. This year, this site was granted by the "Water Resource Conservation Fund" of the Water Resources Agency, Ministry of Economic Affairs as a pilot site for the 2017 "Water Resource Conservation Environment Trust".

Looking back at the farming experiences this year, 5 families were recruited to conduct a field management of Chinese yam cultivation every 2 months. Farming experience "working holidays" and "work for free accommodation" were held once every month. The site also collaborated with Lala store, Chiao Tung University and Tsing Hua University to conduct experiences activities, workshops and related courses. In terms of promoting food and agricultural education, the site cooperated with Hsiang Shan Elementary School to host the on-campus activity, teaching students how to grow vegetables and cook, and introducing relevant food safety knowledge. The site also cooperated with the "Homemakers United Foundation" to introduce wild edible plants cooking to raise public awareness on the influence of herbicides. The site serves as a base to promote herbicide control Act/Regulations.



## Kaohsiung Namasia Utung Nature Classroom

The collaborative House-building Project for Utung Natural Classroom in Maya village, Nashua District, Kaohsiung started in 2008. The project has withstood many typhoons (including the devastating Typhoon Morakot in 2009). Despite all of the unexpected change/challenges, we have managed to complete some parts of the structure, such as wooden truss and roof. So far, with the help of visitors and our members, we have completed the foundation of the classroom walls. Apart from the activities of the volunteers group, the nature classroom has also cooperated with Namasia junior high school for five years to conduct the "Life Education Course".

Hopefully when the classroom repair is finished, it will be a perfect place for everyone to learn from mother nature, and will be able to protect it.



## New Taipei City Wugu Wetland Ecological Park

In this park, guided tours, outdoor teaching and various large-scale activities (including corporate activities) occur on weekly basis. Volunteers patrol the 170-hectare park according to a set schedule and will notify the relevant authorities if needed. In terms of the monitoring of species, the park also investigates birds, insects, terrestrial plants, aquatic plants and water quality in the Tamsui river basin and the park.

This year, we have made many breakthroughs concerning the habitat work, thanks to the support of Micro-Star International Co., Ltd and a number of Rotary clubs, the classroom space and the equipment were improved. When it comes to the optimization of habitats, we have collaborated with the Bat Association of Taiwan and parent-child groups in building the "Bat House". After consulting with the authorities, we have implemented the "Waterfowl Beach" for water birds (Scolopacidae & Charadriidae) to offer more space for recuperation. By creating more diversified ecological habitats, the biodiversity of the park is expected to increase.

The park will move towards becoming a "nature center," thus, with the improvement of hardware/software, more people will know and appreciate the core values and the efforts from SOW and the public sector. More optimization practices and a more diversified habitat will attract a large number of migratory birds and other rare species to forage and rest here, to make this park a real wetland paradise, a demonstration site to promote "Ecological Tamsui river". Hopefully someday this "national wetland" will be upgraded to an "international wetland".





## Tracing back to the source, launching a marine pollution survey

### Participating in the transnational marine pollution research project

SOW was invited by CSIRO (Commonwealth Scientific and Industrial Research Organization) to participate in the world's largest marine pollution survey, working with countries across the globe. The investigation team of Taiwan, consisting of 14 people from 5 cities/counties, completed the training program in Kaohsiung branch, then investigated waste distribution situation in various terrains in Kaohsiung/Pingtung in a period of two weeks (completed 394 traverses, including trawls, coast, river and land). For the first time, the team operated Manta Trawl, a specialized tool, in Kaohsiung/Pingtung sea area to obtain the first ever offshore microplastics statistics for Taiwan. This helped the academic community to clarify the issue - How does global waste end up in the ocean? With the newest technique, we can plan and accomplish a holistic investigation that covers Taiwan's entire coastline.

### Collaboration between the public and government in governing marine debris pollution

2017 was a year in which the public was really passionate in terms of coastal cleanup. In July, SOW allied with 7 organizations (non-governmental) concerned with marine debris and 6 offices within the Environmental Protection Administration to establish the "Marine Debris Governance Platform". On the 17th anniversary of implementing ICC movements in Taiwan, we tried a cooperative approach over a confrontational one. To tackle the immensely complicated issue that is marine debris, we joined forces with other organizations in adopting new concepts when it came to pollution governance, pollution reduction at the source and effective removal. After 7 meetings in 4 months, we came up with the following policies: Plastic bags ban extends to over 100,000 stores for 2018, marine waste monitoring of 19 coastal counties/cities in 2018. We also managed to achieve several milestones for marine waste governance, such as publish the Action Plan of Marine Debris Governance in Taiwan (1st edition) and even announced the timetable for reducing single-use plastic packaging.

### Show to everyone how do you reduce plastic usage?

The online campaign "No plastics in September" has received passionate support from 16 NGOs and 5 companies. There have been more than 700 Facebook posts which promote "Bring your own utensils" campaign. The campaign drew 23,000 people's attention, and reduced the use of 260,000 disposable products. The international coastal cleanup event in 2017 gathered 373 statistic entries into Taiwan Marine Waste Database. This event attracted 26,000 participants, an increase of 35% compared to last year.





## Be a “SOWer” , Act like a “SOWer”

The British well known consultant of modern management - Peter Drucker once said: "It is more important to do the right thing than to do things right."

Our mission of environmental protection in Taiwan has been encountering harsh challenges. In the past, people focused on pursuing local development and economic prosperity, however those so-called achievements are now proved disputable or a mistake of excessive ambition. Lots of people used to believe in the idea of conquering nature to gain prosperity. However, the major natural disasters in recent years have taught us a lesson: it's time for us to show modesty to mother nature.

Education on environment protection has always been one of SOW's most active areas of promotion. We believe that only through education, can society's greed for short-term benefits be fixed. SOW also wishes to plant seeds of hope within individuals that will soon become the future of our society. Our development plans regarding environmental protection education for children continues to train seed lecturers. This year, we have conveyed our ideas to 5,500 people through on-campus programs. Our parent-child programs can be dated back to 18 years ago, with a total of 88 sessions held and having acquired memberships from over 3,000 families. Those members come from a variety of professional backgrounds and are able to learn in a fun vibe. We will keep on upgrading ourselves, interacting by connecting the dots, and injecting the concept of environmental protection into the heart of everyone.

By the efforts of SOW, the following sites have gradually caught the attentions of the public/academic sectors: Yilan Shuanglianpi wetland, Yilan 52 Jah wetland, New Taipei Wugu wetland, Wanli aquatic plant shelter station and Hsinchu Yrotian water source protection area, etc. We have developed special environmental education projects held at different habitats where participants

can experience diverse working holidays with hands-on practices, thereby realize the importance of habitat protection, which has always been our purpose and goal.

The “Maslow's hierarchy of needs” theory indicates the discrete levels of human motivation. As shown in the hierarchy, the most fundamental levels for humans are safety needs and physiological needs which coincide with the goal we're striving for during the past 22 years; that is, a better homeland where everybody can breathe fresh air, drink clean water and have access to safe foods. These things are the basic needs for humans and should not be considered as luxuries.

We welcome more people those with the same values as us to join SOW, to provide encouragement and inspiration, to complement one another, and to provide available resources when appropriate. We're all on Noah's Ark with the same ideas and visions - dedicated ourselves to protecting the environment. May future generations happily inhabit this beautiful planet.

