

Society of Wilderness

Annual Report

2019

WILDERNESS

FARM

LAND

GIVE

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"Addition" and "Subtraction" to Treat Nature Better

Undone chores always pile up at home: dirty laundry, dishes, trash that needs to be taken out, as well as dusty floors and tables. To address this issue, someone needs to do the laundry regularly to ensure the whole family will have clean clothes to wear. This way, dirty laundry will no longer pile up and the need to buy new clothes will be reduced. This is "subtraction".

Every family needs someone who is willing to make efforts to keep the house clean. However, this kind of person is often neglected as s/he may work hard behind the scenes without ever being acknowledged. If no one steps up to do what's necessary, then the home environment will only worsen. It's the willingness and contributions of these people to make a house clean and comfortable that keeps a home together. This is "addition".

Unfortunately, nature faces a similar problem, and these issues have everything to do with humans.

One example is marine waste on beaches. Beach cleaning which removes waste is a "subtraction" task. However, as long as people continue to dispose trash, no beach cleaning will be sufficient. Therefore, cutting the amount of daily waste must be the priority. Then with the help of beach cleaning, the beaches will have a fighting chance to return to their original state.

Another example is the mountain areas: trash scattered on the sides of roads, algae growing on traffic lights, ads plastered all over utility poles,

and even areas of grass withered by herbicide. The same principle of "subtraction" also applies in this situation. By cleaning up the trash, wiping off the algae, removing the ad posters, and banning herbicide, the mountain areas will have clean roads, clear traffic lights, and fresh air for all creatures to live with delight.

How about filthy rivers and smelly creeks? How can humans resolve the pollution? Can "subtraction" restore the rivers and creeks, too?

The answer is yes. We, Society of Wilderness (SOW), are a leading organization in protecting Taiwan's environment by conducting habitat surveys, participating in beach cleaning and river cleaning, as well as promoting environmental education, energy/water conservation, carbon/plastic reduction, forestry conservation, and animal protection — all about a lifestyle of "subtraction".

The nature needs our "subtraction" – actions to remove factors that harm the environment, and it needs our "addition" – more attention and care given to the nature's pain and suffering. "Addition" and "subtraction" are how humans express our love for the nature. If we treat the nature properly, it will treat all creatures happily and nicely in return.

In Chinese, the character "野 (wilderness)" comprises "田 (farm)", "土 (land)" and "予 (to give)". "田" and "土" provide the nature everything it needs to sustain all lives. Only if we treat the nature properly, preserve its original state and its characteristics of "野", the nature will reciprocate by nurturing us. Let us work together to protect the precious natural environment of Taiwan so that it can be passed down for the future generations to enjoy. We look forward to you joining us.

I have "野 (wilderness)" in my heart at all times. How about you?

Yueh-mei Lin

Chairman of The Society of Wilderness



The Society of Wilderness

Society of Wilderness (SOW) was founded on June 25, 1995 with the purpose of conserving Taiwan's natural ecology and environment through education and habitat protection. Headquartered in Taipei, we have eleven chapters across Taiwan, one chapter preparatory office, nine liaison offices, five SOW partners overseas, and more than 20,000 current civilian members who are committed to environmental protection.

Purpose of SOW

SOW acquires legal guardianship and management rights of waste lands through purchases, leases, commissions or donations, with the intent of protecting habitats and letting Mother Nature repair damaged lands while restoring the vitality within them. By doing so, future generations will have the opportunity to explore the mystery of nature as well as the meaning of life.

Mission of SOW

- Preserve natural species in Taiwan.
- Allow natural succession in the wilderness.
- Promote ecological conservation.
- Provide opportunities of ecological education for the public.
- Assist the government with water/soil preservation and natural resources protection.
- Develop talent in ecological conservation.

Committees and Task Forces

- | | |
|------------------------------------|---|
| ☆ Interpreter Education Committee | ☆ Local Care and Guardian Committee |
| ☆ Promotion Education Committee | ☆ Climate Change Education Committee |
| ☆ Family Education Committee | ☆ Green Life Map Development Task Force |
| ☆ Children's Education Committee | ☆ Special Education Task Force |
| ☆ Habitat Work Committee | ☆ Nature Center Development Task Force |
| ☆ Research & Development Committee | ☆ Aboriginal Task Force |
| ☆ International Affairs Committee | |



Bond with the Nature

Wei-Wun, Lee, our former chairman, once shared a story: George Santayana, a philosopher who taught at Harvard, suddenly put down his chalk during a class one day and said to his students, "I have a date with Spring". Then he left.

I believe every one of us must have had a similar moment when we suddenly had the urge to bond with nature. Such an urge is like a seed in our heart waiting for the right time and place to sprout.

Nowadays the majority of people care more about their own health than the environment. But rarely do people realize how crucial the environment is to our health. Health, based on the definition of the World Health Organization, is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." According to Maslow's hierarchy of needs, the most basic human needs are fresh air, clean water, and safe food. These three needs are, without a doubt, closely tied to nature! More importantly, the quality of nature completely depends on people's mindset: how we develop lands, raise environmental awareness, and take

actions to protect the environment.

As nature has struck back against humans, our greedy exploitation of nature is to blame. Nature will only allow us to enjoy its excellence if we are humble and respectful, follow the laws of nature, and cherish its natural resources.

Of course, it is impossible for anyone to face environmental issues alone. But by expanding our relationships and gradually building a community full of like-minded people who share the same passion for protecting the environment, together we can certainly make a difference. This is a relationship concept that Society of Wilderness (SOW) has been actively pursuing, starting with our relationships with ourselves and progressing to relationships with other people, communities, and, finally, nature.

Peter Drucker said, "It is more important to do the right things than to do things right." Since health promotion and environmental protection obviously bear the same weight, now is the time to let the seed in your heart sprout. Are you ready to bond with nature and start making a difference?



Invisible but Still Exists — Public-Private Partnerships Go On



It is said that Google has the answer to every question. So I Googled "invisible but still exists", and voilà! There **are many results related to "invisible but still exists", including faith, art, love, literature, and ultraviolet rays. When it comes to something that is invisible but still exists, what comes to your mind?**

We, Society of Wilderness (SOW), are an organization devoted to environmental protection and conservation. We rely heavily on people who take actions voluntarily behind the scenes to continuously protect the environment and natural habitats of all creatures. In fact, not only humans, many other species are also doing the same thing, but some humans simply choose to ignore their responsibilities.

Where should we even begin, seeing that there are never ending issues with the environment? SOW has been playing a long indispensable role in combating environmental challenges. For instance, we found that tall embankments, ground sill works, check dams, armor blocks and similar facilities that are meant to protect humans have jeopardized the ecosystem of many rivers. To reverse the situation, we first conducted investigations on wild creeks

and rivers, the ecosystems that rely on them, and nearby man-made constructions. Then we presented the documented data to competent authorities and successfully convinced them to reduce improper flood prevention constructions or change the construction operation/method to mitigate the harmful impact on the environment.

Such success can be attributed to the continuous collaboration between all stakeholders. In the early stage of our investigation of river ecosystems, we found that river basin management falls under the hands of various authorities. Therefore, we communicated with different government agencies and established an inter-authority platform which integrated river basin management. In addition, our actions inspired many individuals and private organizations who also care about the challenges that river habitats face to follow suit, proving that partnerships between the government and the general public is indeed possible. In this joint effort, the Hualien Forest District Office under the Forestry Bureau, which had been actively promoting the plan of building a "national ecological green network", acted as a leader



and invited other governmental sectors such as the 9th River Management Office of Water Resources Agency, Hualien Branch of the Soil and Water Conservation Bureau, and Environmental Protection Bureau of Hualien County to collaborate with scholars, local communities and groups. Scholars and communities were also involved in the discussion of recovery works, water quality and quantity, ecological restoration and rural regeneration. These partnerships helped end the old recovery plan of Bie River in Hualien's Fuli Village, allowing the management and recovery of this river to restart from scratch, which was what the local residents wanted. Later this year, we, SOW, shared this experience during the National River Day & NGO Water Ditch Forum to highlight the importance of forming partnerships between public and private sectors, as well as cross-authority collaborations in water environment treatment.

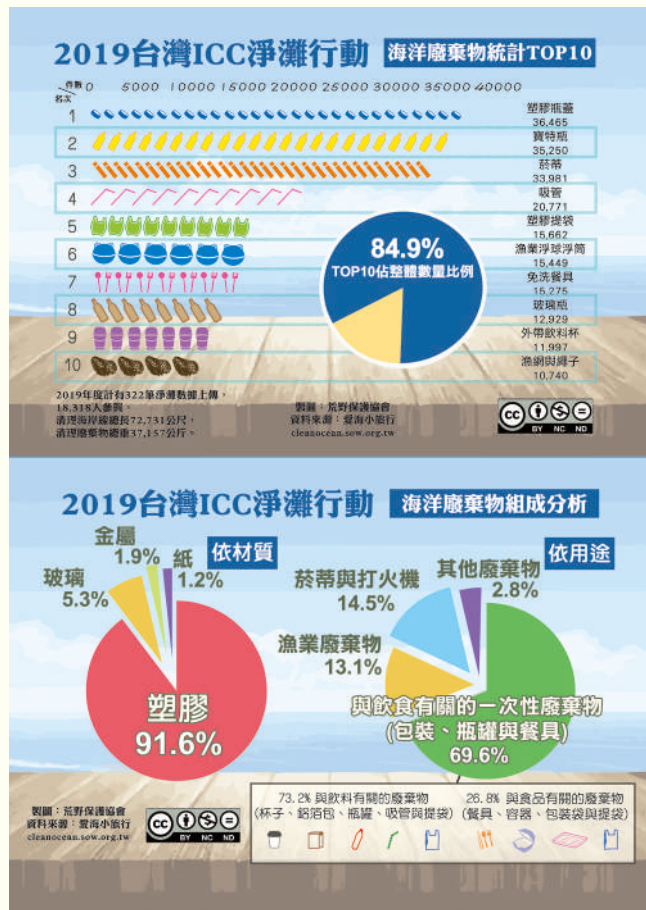
Other than the problem of the unsuitable constructions, the wastes along the river banks will eventually flow into the ocean, which are also one of the biggest threats to river ecosystems. Rivers

are like the blood vessels of nature; water flows throughout Taiwan, nourishing all creatures and meeting people's daily. To raise social awareness on environmental issues, SOW has been promoting eco-friendly farming. Youluotian in Henshang Township of Hsinchu County is an example of environmentally-friendly farmland. We continue to organize crop cultivation, farmland maintenance, and post-harvest activities for the general public to experience the elaborate connection between food and agriculture in their daily lives. To protect the ecosystems that rely on farmlands, we have also been encouraging cities and counties to formulate their own herbicide management rules, disseminating information about the danger of using herbicides, and teaching people the practical use of wild grass. Hopefully through these efforts, more people can become responsible users of the environment.





Promote Ocean-Friendly Policy One Step at a Time



Pick up and reduce plastic waste together

Pick up and reduce plastic waste together According to statistics on the Clean Ocean website, a total of 18,318 people participated in 322 beach cleaning events and removed 37,157 kilograms of waste along 72,731 meters of coastline. The top 10 most common waste (from the most to the least common) are: plastic bottle caps, plastic bottles, cigarette butts, straws, plastic bags, fishing floats, disposable tableware, glass bottles, plastic cups and fishing nets. Plastic accounts for more than 90% of ocean waste and nearly 70% is single-use tableware/drink containers.

In light of this issue, Society of Wilderness (SOW) has been taking the initiative to lead the public to clear out the waste on the coastline and to urge people — the consumers — to reduce plastic usage, which has been considered in recent years the key solution to the ocean waste problem. Hence, we have been holding beach cleaning events over time. In these events, our experienced volunteers would first explain the concept and meaning of beach cleaning to the participants, and then keep records of the quantity of the 19 most common ocean waste by using the International Coastal Cleanup (ICC) data card. We hope that after the participants finish cleaning up the beaches, they can



reflect on their current lifestyle while thinking about adopting a different lifestyle that reduces waste.

A quick survey around Taiwan found more than half of the waste on 10% of the coastline

A "quick survey of ocean waste along Taiwan's coastline" is when the surveyor evaluates the coastline to mark areas with the most ocean waste. This survey evaluated 1,139 kilometers of the coastline with data from 121 observation stations. The result estimated that the amount of waste along all coastline can fill up to 153,400 80-liter trash bags, weighing a total of 646 metric tons, equal to 13 bags of trash (equivalent to a 53-kg refrigerator) every 100-meter of coastline. The statistics indicated that the coastline in New Taipei, Keelung, Taoyuan, Changhua, Yunlin, Chiayi and Tainan had the most waste. The three dirtiest sections of the coastline are the Northeast Coast, Dacheng Township in Changhua, and Qingcaolun in Tainan. More than half of the waste is on 10% of the coastline. Therefore, properly allocating a budget to clean up this 10% will be the most efficient method.

"Ocean Walk" documents the beauty and sorrow of Taiwan's coastline

"Ocean Walk" is another survey which sends out photographers with 3D cameras to walk along and document the western coastline. In the process, we found that the problems of marine waste, excessive construction, armor blocks and landfills still exist. This year, we even uncovered suspected illegal waste disposal on the Hsinfun coastline in Hsinchu. We then immediately sent an official letter to the responsible authority, asked them to formulate a monitoring mechanism and to allocate a budget for managing the coastline, and prompted the government to clean these beaches. In response, Taoyuan City Government established its Coast Administration Office to deal with the marine waste problem.

Thanks to "Ocean Walk", the partners who participated in this survey were encouraged to take further actions for the beaches, including cleaning beaches without generating trash, collaborating with charities, communicating with traditional markets and schools about reducing plastic usage, and establishing a plastic-reduction promotion team to continuously disseminate this idea.





Environmental Action Forum–Rise to Action

Taking actions is the best way to protect the environment. Therefore, we always encourage our volunteers and everyone else to discover environmental issues in their surroundings: seek, implement and revise possible solutions, and share their experience at the Environmental Action Forum, an annual event that allows the general public to present their plans and actions about environmental protection.

Society of Wilderness (SOW) co-hosted the 5th Environmental Action Forum with Tung-Hai University this year. A total of 63 teams with 906

people participated in this forum, including youth, teenagers, adults and English presenters. The final presentation session was designed to share and exchange experience for mutual learning. We not only have accumulated much experience in organizing this event, but we are also gradually expanding its scale. As more innovative solutions are expected to be proposed with more contribution from overseas teams next year, hopefully this forum will develop into an internationally multi-organizational platform for everyone to share their environmental action experiences.



Habitat Protection Never Ends

"Society of Wilderness (SOW) acquires legal guardianship and management rights of waste lands through purchases, leases, commissions or donations, with the intent of protecting habitats and letting Mother Nature repair..." This is the purpose of SOW that everyone is familiar with. Thanks to the efforts of all our partners, our 8th and 9th Habitat Work Committee has completed the handover this year. Given SOW's long-established consensus that each chapter should acquire one new habitat each year, our Habitat Work Committee's main responsibility has always been assisting all chapters to form their own habitat task forces, as well as obtaining ownership or management rights of lands. Protecting habitats by taking action and being more involved in habitat-issue discussions still remain our priority in the future. In fact, SOW has been putting lots of effort in the following areas: habitat ecological conservation, environmentally-friendly farming, and project research.

Regarding habitat conservation, we will continue the ecological observation at SOW No.1 Land and work with the public sector to safeguard the Wugu Wetland Eco Park, Fuyang Eco Park and the frog conservation area in the Hengshan Township in Hsinchu. At Wugu Wetland Eco Park, waterbird habitat expansion will continue; preventive measures will be taken to keep the hatching rate of *Threskiornis aethiopicus* (埃及聖鸚) at 0%. At Fuyang Eco Park, maintaining the ecosystems inside with the least human intervention, protecting the natural habitats, conducting field research, and removing invasive species have remained our major goals.

As for promoting environmentally-friendly farming to protect the ecology, SOW continues to commission farmers and cultivate leased farmlands at Youluotian in Hsinchu, 52-Jia Wetland and Shuanglianpi in Yilan. We have not only invited the general public to spend some intimate time with the land and learn by participating in farming, but have also worked



with schools, businesses and other groups to invite external partners to experience farming. We hope that such farming experience could raise the public's awareness as well as encourage more people to join in environmental protection.

Regarding project research, we have been working on the following three: First, we organized the *Mortonagron hirosei* (四斑細蟥) Conservation Strategy Forum. Experts, scholars and competent authorities from the government were invited to discuss and exchange ideas on formulating the conservation strategy. Second, the carnivorous plant habitat at the Lotus Temple of Chubei was flooded after a landslide caused by heavy rain this May. After endless cleaning by our partners, we were finally able to find brand new sprouts of *Drosera indica* (長葉茅膏菜). Third, we switched to the iNaturalist platform for the habitat survey this year, which has made it easier to present and verify our ever-growing survey data. And we plan to participate in the City Nature Challenge next year to compete with major cities worldwide in documenting wildlife in order to showcase the beautiful biodiversity of Taiwan.

In sum, SOW has become an influencer in habitat protection. We expect to see more people being called on to make donations to help us obtain more land guardianship and protect more habitats. We believe that with everyone's relentless efforts, SOW will soon receive the first piece of donated or entrusted land in the near future.



Habitat protection is unquestionably a massive and complicated task, involving monitoring, surveying, construction, and management. These tasks require the joint efforts of volunteers, but more importantly, the collaboration with other environmental groups, businesses, media and even the public. Participating in more environmental works and expanding collaboration opportunities will be our future priorities. Society of Wilderness (SOW) hopes to, based on existing achievements, establish more partnerships with competent authorities and local communities. We also expect each chapter to establish and run its own Habitat Task Force to attract more partners who share the same love for the wilderness to join us. Let us put our beliefs in practice. Let us protect habitats with our hands and feet!

Protect Habitats with Our Hands and Feet



Assist landowners and businesses with environmentally-friendly land use planning

One example is the Flying Cow Ranch. The Flying Cow Ranch requested the Society of Wilderness (SOW) to conduct species surveys in the surrounding mountain areas because they needed to inventory all the biological resources to formulate a plan for nature interpretation. We agreed to support their proposal since it was in accordance with the purpose of the SOW. The first field survey was conducted this year in February, which marked the beginning of a year-long ecological census that included mammals, amphibians, reptiles, birds, insects, and plants. Three quarterly surveys have been completed so far and once the fourth survey is done, we will provide suggestions on land-use planning to the ranch based on the survey data.

The term "land use" does not only mean building houses or facilities. Instead, one should also consider the advantages and environmental load while planning land use so that it can highlight the local features as well as promote common growth and prosperity with the community. Only in this way can the most appropriate land use plan be developed and sustainability maintained.

Conservation and eco-friendly farming on leased land

52-Jia Wetland("Jia" is a Taiwanese measurement unit of land area equal to 9,700 square meters) is an area of national prominence and an important habitat for migratory birds in the winter. More than 180 kinds of waterbirds forage and dwell in this wetland. SOW leased 1.3 jias of water area here and built four ecological floating islands as a habitat for waterbirds. Moreover, we contracted local farmers to conduct eco-friendly farming on 712 square-meters of farmland. These farmers grow rice and water bamboo without any chemicals, herbicides or fertilizers, which ensures the environmentally-friendliness for the wetland creatures and waterbirds, as well as food safety for human beings, making it beneficial for both man and birds. From the contracted farmland, SOW has acquired 2,400 Taiwanese kilograms (1 Taiwanese kilogram equals 0.6 kg) of Kaohsiung No.145 white rice, 833 Taiwanese kgs of black rice and 157 Taiwanese kgs of water bamboos. As for related events, SOW organized ten nature experiencing activities, nine working holiday sessions, fourteen point-count surveys, five volunteer fellowships and trainings, and two habitat conservation works with a total of 873 participants.



Current and future management of purchased preserved land

The example here is our No.1 Land in Dongshan, Yilan County. SOW will continue to observe and document the ecology on this land. According to our iNaturalist survey statistics, there have been 1,944 observations so far with 508 different species, which are 273 types of insects (including 121 types of butterflies and moths), 142 types of plants, and 39 types of spiders. Therefore, this land is a perfect location to develop environmental education in the future. This year alone, we have documented eight endemic species of Taiwan, including *Cryptocephalus taiwanus* (台灣筒金花蟲), *Miresa fulgida* (閃銀紋刺蛾) and *Aegista impexa* (薄鱗盾蝸牛). Looking forward, SOW No.1 Land will not add any man-made facilities. We will let nature run this land itself and use it as the field for habitat surveys and environmental education. SOW will invite more partners to join these surveys, lead our partners in observing and documenting species, and organize environmental education activities.



Management of entrusted land

SOW No.2 Land is a farmland of 35.59 square meters (equals 740 pings), located in Tianliao, Kaohsiung. Originally the old farmer in the neighborhood was harvesting ma-bamboo shoots on this farm so it has a large forest of ma-bamboos. In recent years, this land and its adjacent farms have been left uncultivated. Except for the nearby cemetery, SOW No. 2 Land barely has any human interference. So far two species surveys have documented 43 species of plants, 29 species of insects, 15 species of spiders, and 2 species of snails. Currently, this land is under the management of our Kaohsiung chapter, which has been mainly observing the natural succession in this area and documenting periodic surveys every year.

Building a habitat

Wugu Wetland is a destination for many waterbirds to avoid the cold and harsh winter. However, as the muddy areas are available for waterbirds in the Scolopacidae and Charadriidae families (鸕鶿科) to rest and feed on dwindle in the Tamsui River basin, these migratory birds are now fighting for their survival. Seeing this, SOW started working with the High Riverbank Construction Management Office of New Taipei City Government in 2017 to build muddy areas more suitable for these two families of waterbirds in the Wugu Wetland. Despite successfully attracting many waterbirds last year, the region was still insufficiently vast and suitable. So we used machinery this year to make it a bigger and more preferable habitat for them, which means more maintenance and management challenges. SOW hopes that, with our increasing experience in operating and managing wetlands, we will be able to formulate an effective management mechanism, continue to enlarge the muddy areas, and eventually turn this place into a world-class wetland.





Species conservation

Three examples are given as follows. First, SOW has held six training sessions in the past eleven years to teach volunteers how to protect *Rana sauteri* (梭德氏赤蛙) in the breeding season. So far, a total of 7,506 trainees have been mobilized in the frog protection events every October to protect 16,282 *Rana sauteri* frogs from being killed while crossing the roads. In addition, these volunteers also go to schools, markets and even organize their own events to help the general public understand the relationship between Dashanbei and *Rana sauteri*. Frog surveys and mountain cleaning at certain areas are conducted regularly. Eighteen species of frogs have been documented in the Dashanbei area, including the precious *Rana fukienensis* (金線蛙) and *Rhacophorus taipeianus* (台北樹蛙). This further validates the importance of protecting the natural environment.

The second example is the 1.2-hectare wetland at the Lotus Temple in Chubei. Since 1998, SOW has been protecting the habitats in this area. Nine keystone species that grow here are our conservation priority, namely the four kinds of insectivorous plants: *Drosera indica* (長葉茅膏菜), *Drosera spatulate* (小毛氈苔), *Drosera burmannii* (寬葉毛氈苔) and *Utricularia caerulea* (長距挖耳草), and the five kinds of rare companion plants: *Philydrum lanuginosum* (田蔥), *Xyris formosana* (桃園草、黃蔥), *Fimbristylis nutans* (點頭飄拂草), *Juncus ohwianus* (大井氏燈心草) and *Murdannia spirata* (矮水竹葉). This May, a heavy rain caused mudslides that flooded the old river course in the Lotus Temple wetland. After months of dredging, removing tree branches flushed into the river, putting in place sand fences, cutting grass



and sowing seeds of *Drosera indica*, sprouts of *Drosera indica* finally appeared again in September. What's even more inspiring is that the sprouts of *Juncus ohwianus*, which was moved here from another location, *Eriocaulon sexangulare* (大葉穀精草), which was newly planted after the flood, and *Drosera indica* are already 5 cm tall. If they can blossom and bear fruit before the end of the growing season, then we'll be able to sow more seeds for the next season.

The third example is *Mortonagrion hirosei* (四斑細蟴). Ever since it was first spotted in Wugu Wetland in 2005, SOW has been keeping an eye on this rare species. We have organized surveyor training seminars, held dragonfly observation activities for the general public, monitored the area to accumulate precious ecological conservation data, and also conducted species distribution surveys in twelve potential habitats along the Tamsui River. With 198 participants and 967 hours devoted, we found that *Mortonagrion hirosei* only survive in very few locations, including Wugu Wetland, Huang-gang River and Shezidao, showing how precious their existing habitats are. Furthermore, SOW held the *Mortonagrion Hirosei* Conservation Strategy Forum in October with scholars, experts and government competent authorities to exchange opinions on core conservation strategy, habitat management, protected species directory, and implementation timeline. SOW has taken a small step forward in conserving *Mortonagrion hirosei* in the Tamsui River basin this year. We expect ourselves to take a big step forward in creating the protected species directory.



Alien species control

Threskiornis aethiopicus (埃及聖鸛) is an alien species with its population growing at such an alarming rate that it has become a national issue. To get its number under control, SOW has been managing the "Sacredibistw" Facebook page under the authorization of the Forestry Bureau to encourage the public to report any sighting of this species via the online platform. We also compile the information provided by our chapters and submit it to the Forestry Bureau for future reference and as a reminder for them to continue the effort of population control. Our commitment in this regard has gained acknowledgement from them. The Forestry Bureau issued an official letter to express their appreciation of SOW for providing the species nesting information and for our assistance in raising public awareness.



Mortonagrion hirosei



Habitat surveys

Habitat surveys are of significant importance in our habitat protection works, and we use iNaturalist, the best platform in the world, to document species. After nine training sessions on how to use the application, in April alone, 348 surveyors made a total of 11,026 observations of 2,237 species, which were verified by 402 partners. After the surveys in April ended, all observation records were archived in the "SOW Habitat Survey" project. As of November 10, fifty-five habitat watch projects were created with 47,723 observations, 5,034 species and 1,781 participants. SOW hopes that in the future, we can safeguard more habitats by continuously documenting species that thrive in them.

Nature Centers—Guarding Nature with Tenderness and Commitment

For any willing person or group, environmental education does not require a massive amount of funding or facilities. Promoting environmental education and conservation should never be restricted by traditional classrooms. Society of Wilderness (SOW) has managed to accomplish this through a variety of spaces, teams, and locations. Whether it is named a classroom, a center, a site or a park, these locations have matured in their ideology and missions, which are promoted through environmental education activities.

Wanli Wetland Education Center

For years, Wanli Wetland has been home to many of Taiwan's native aquatic plants. Annually at this education center, SOW organizes at least ten events with more than two hundred participants. We have also successfully transformed the wetland area into a suitable habitat for the native and endangered insectivorous plants, protecting them

from barren and humid environments. Our survey shows that this wetland has been sheltering at least 135 aquatic plants in fifty families, including seven endemic species in Taiwan, which are *Isoetes taiwanensis* (台灣水韭), *Salix kusanoi* (水社柳), *Salix warburgii* (水柳), *Nuphar shimadae* (台灣萍蓬草), *Ludwigia taiwanensis* (台灣水龍), *Hygrophila pogonocalyx* (大安水蓼衣) and *Aponogeton taiwanensis* (台灣水蓴).

After years of sheltering and restoration, we have observed and learned much about aquatic plants and wetlands. We hope to help more people understand the interdependence between the two, their importance to Taiwan's ecology, and encourage more people to participate in wetland conservation to ensure its continued survival and sustainability.



Wugu Wetland Eco Park

Ever since SOW adopted the Wugu Wetland (approximately 170 hectares), we have been safeguarding it in many ways, including conducting ecological surveys, building and maintaining habitats, promoting environmental education, in addition to patrolling and reporting problems from this area. We have been working with the High Riverbank Construction Management Office of New Taipei City Government to upgrade and maintain the park's software and hardware. Monthly bird and plant surveys have been conducted, and we have also been working with the Bat Conservation Society of Taipei to identify bats living in this park. This year, with the help of motion activated infrared cameras, we have even captured images of yellow weasels, which highlights the importance of habitat conservation.

Regarding habitat protection efforts, we have been working with the Forestry Bureau on the control of *Threskiornis aethiopicus* (埃及聖鸛). With the assistance from the High Riverbank Construction Management Office of New Taipei City Government, we removed the overpopulating *Eichhornia crassipes* (布袋蓮) with machinery. Moreover, we expanded the muddy areas for waterbirds, hoping to attract more migratory birds to Wugu Wetland for the winter. For environmental education, in addition to multiple interpretation events, our six swallow-watching events in the summer attracted 1,238 participants, allowing us to share our philosophy in habitat protection with more people.



Mangrove Ecocenter

SOW started assisting Luodong Forestry District Office to operate and manage Mangrove Ecocenter back in 2019. The Mangrove Nature Reserve mainly conserves *Kandelia obovate* (水筆仔) and its related ecosystem; the Mangrove Ecocenter mainly promotes and introduces the animals and plants commonly seen on the reserve and the estuary of the Tamsui River to assist the public in developing a correct understanding of ecological conservation. This year, the center held a series of activities, including eighteen environmental education events, two conservation booths, and insectivore plant exhibitions, which attracted a total of 94 groups and approximately 12,312 participants.



Youluotian Eco-Friendly Farming Center

This center has a rice farm of 8 fens, 4 fens for rice and the other 4 for dry farming (1 fen equals 970 square meters). To help maintain the farms, the center has organized a wide variety of events. The hands-on farming experience activities were designed for the general public with SOW staff ready to assist. The "Farming Classroom" allowed participants to grow yam, roselle, peanuts, and sweet potatoes. What's worth mentioning is that the center promotes a lifestyle of downshifting by teaching people how to use wild herbs and teas, weave silver grass, build solitary bee hives, process agricultural products at home, and enjoy the fun of doing things by hand. Whoever participates in Youluotian Eco-Friendly Farming Center's activities will be able to cook and live independently.

After six years of eco-friendly farming, our survey shows that this area has 584 species from 214 families (57 endemic species and 6 protected species), a biota superior to other farmland using traditional farming techniques. SOW has also been working with the Toxic and Chemical Substances Bureau to ban herbicide in non-farmland areas. Two sessions of a promotion campaign, called

the "Wild Grass Application Camp", were held at this center, which showcased wild herbs and teas cultivated without herbicide to the participants.

Utung Nature Classroom in Namasia

The name "Utung" came from the phrase "utung-nga-ung-ung" in the Tsou language, which means "gully with no sunlight" or "a humid and dark place." Such a place is always rich in ecological resources. This classroom started holding the "collaborative house-building project" twelve years ago in 2008. In order to help the youngsters experience the lifestyle in nature, the classroom has also already been working with Namasia Junior High School for seven years to design the "Life Education Course", in which the indigenous elders guide students to learn about their environment and ecology.

Vataan Wetland Education Center

The venue of this center was provided for free by a landowner who identifies with SOW's purpose to promote environmental education. The environmental education for local children here targets the elementary schools in Guangfu Township. Students conduct interviews, enjoy hands-on experience outdoors, and learn about the interdependence between the Amis people and the wetland. These activities aim to pass down the local culture and instill the awareness of environmental protection in these young minds. Unfortunately due to the brown root rot disease, the center was forced to shut down this year to treat the affected trees. In terms of building habitats, the applications of various types of coastal vegetation are demonstrated in this center by SOW. We hope that such a demonstration can shatter people's obsession with concrete embankments so that humans will be reconnected with the environment one day and move towards the goal of living sustainably with nature.



Shuanglianpi Environmental Education Site

This site, with the ideal of being a "wetland conservation school for all", promotes environmental education, habitat protection, and eco-friendly farming. Here, SOW held 46 habitat conservation working holiday events this year alone to reverse the ever-worsening wetland condition. In the meantime, we continued to reduce the quantity of *Salvinia molesta* (人厭槐葉蘋), a dominant invasive plant species, on the reserve. A total of 52 ecological surveys were conducted and the compiled monitoring data became the basis for restoration work at Shuanlianpi. Twenty-three aquatic plant species, one more from last year, are now on our list of protected species. In regards to farming, a total of 9 fens of farmland implemented eco-friendly farming, which has helped three local youths fulfill their dream of working as farmers in their hometown. This eco-friendly farmland is also used to grow water bamboo and develop experiential education. We even designed the "Healing in the Farm" activities and food/agriculture courses to support and ensure the eco-friendliness of the farms in the Shuanglianpi area.



When Environmental Protection has Become a Trend

We often get the question: "Are you an environmental education group or an environmental conservation group?" The goal of Society of Wilderness (SOW) is "acquiring legal guardianship and management rights of waste lands through purchases, leases, commissions or donations, with the intent of protecting habitats and letting Mother Nature repair damaged lands and restore the vitality within them. By doing so, the future generations will have the opportunity to explore the mystery of nature as well as the meaning of life." Briefly speaking, we are an environmental protection group, which includes both conservation and educational aspects.

When an environment (or habitat) is completely protected, all creatures in this environment will evolve according to the laws of nature, there would be no need to consider any species conservation strategy or restoration plan. For us, the meaning of protection is more comprehensive and holistic. But even if a habitat is completely protected as expected by the environmentalists, does it mean that SOW's purpose is fulfilled? Absolutely not! Because the biggest threat to the environment is human beings. When people do not consider the environment as part of their decision-making, habitats can suffer from all kinds of man-made disasters at any time. This is why many of our partners mistake us as an environmental education group because educating people about the environment is our eternal mission.

Ever since the founding of SOW, we have been laying the groundwork for environmental education by continuously providing volunteer training. After all, changing our habits in daily life is the most effective way to protect the environment.

Constantly, SOW tries to influence people around us by breaking through our echo chambers and comfort zones. Once there was enough momentum, we started to adopt different environmental education strategies for different categories of participants. Our volunteers spontaneously divided themselves into various environmental-education related committees and task forces, including interpreter education, promotion education, special education, family education, children's education and climate change. We hope that, with our environmental education, more people will have the chance to experience the wonders of nature. This is how our organization has operated for a long time.

As environmental protection has become a trend nowadays, we can't help but wonder: Is it good or bad for environmental education? We are glad that after years of hard work, environmental protection has become a universal value. But we are also worried that people will no longer take time to understand the true meaning of environmental protection or be willing to try a more environmentally-friendly lifestyle. Therefore, SOW must remain committed. Not only do we insist on offering the highest-quality environmental education in our various groups, but also aim at inter-disciplinary collaboration and attempt to take more realistic, innovative environmental actions. SOW will utilize the resources of our organization to carry out more long-standing, comprehensive, systematic environmental education and conservation plans.

Even when environmental protection has become a trend, environmental education must continue...



Environmental Education Achievements

The eleven chapters of Society of Wilderness (SOW) in Taiwan regularly organize indoor seminars, training sessions, learning courses, and outdoor experience activities for volunteers in various groups. We design content specifically for children and families, take part in environmental initiatives, and carry out actions to let the general public become more familiar with us. made disasters at any time. This is why many of our partners mistake us as an environmental education group because educating people about the environment is our eternal mission.

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Item	Number of Sessions	Number of Participants
SOW Family Group	1,200	92,000 1,854 families
Children's Environmental Education	118	3,169
Initiatives Earth Initiatives (Turn Off Lights on the Street, Turn On Your Night Vision Goggles, What is Climate Change, Remove Alien Species, Habitat Surveys), Ocean Initiatives, Earth Film Festivals, Beach Cleaning...	119	6,398
Environmental Actions Wild Creek Investigation, Ocean Walk, Learning by Walking, Environmental Action Forum...	107	2,586
Seminars Promotion Speeches, Weekly Meetings, Monthly Meetings, Guided Reading at Film Festivals, Issue Promotion, Campus Tours...	966	56,931
Volunteer Training / Advanced Courses How to be a Volunteer, Interpreter, Promotion Lecturer, Children's Education Guide, Leader of Beach Cleaning, Marine Waste Surveyor; Climate Change; Energy Conservation Promotion; Editing and Interview Skills; Habitat Conservation; A Heart with Ecology; Wetland Care; Ocean Volunteers; Special Education; Empowerment...	109	2,280
Learning Courses Nature Observation, Nature and Humanities, Ecology Interpretation, Carpentry, Photography, Painting, Indigo Dyeing, Board Game, Green Life Map, Energy Conservation Workshop...	213	5,011
Experience Activities Point-count Observation, Nature Experience, Special Nature Experience, Habitat Work, Working Holiday...	682	15,075
Others Market Booths, Visits, Chapter Celebrations...	99	6,198
Total	3,631	189,648

Ending is Beginning Fight Together to Protect Environment



In 2014, Society of Wilderness (SOW) started a partnership with the Taiwan chapter of Alxa SEE (Society of Entrepreneurs and Ecology) to launch the "International Beach Cleaning and Marine Waste Watch" project. The project kept track of marine waste, which has been a popular topic these days, and was dedicated to marine habitat conservation. During the project, we held seminars, introduced the International Coastal Cleanup (ICC) data card, established the Clean Ocean website, and promoted various important environmental protection measures, including environmental education activities. For example, beach cleaning was a part of the environmental education experience. Through that, we showed participants the meaning of beach cleaning by measuring and analyzing the waste collected. We then compiled the data and worked with foreign scholars to examine the impact of marine waste on the environment, with the research result published in internationally renowned journals. The project also explored structured methods to reduce waste from diverse sources and discussed

fundamental ways to protect the ocean. Moreover, SOW invited other environmental groups to jointly lobby the government into establishing the "Marine Waste Management Platform". This platform allowed us and other groups to have a voice in the government's related policies and urged the government to build a citizen watch mechanism for marine waste. These achievements have helped the world's largest marine habitat conservation activity reach a new milestone.

Following the success of the "International Beach Cleaning and Marine Waste Watch" project, the Taiwan chapter of Alxa SEE was satisfied that SOW, as a member of this global village, shares the same commitment and long-term goal of environmental protection as them. Hence, they offered us more support and assistance in educating young children about environmental issues. They also expected us to apply our rich experience and core concept of environmental protection to initiate a special project to help Alxa SEE's other associated organizations and sponsored NGOs promote environmental education. In other words,



they wanted to work with us to lay the foundation for environmental protection for the future.

This idea was then shared across our organization and debated among our members, but eventually reached a consensus with our management. After over a year of evaluation, discussion, preparation and planning, SOW sent out a training team consisting of members from various committees in February to Shanghai to hold the first "Nature Guide Training", which followed a similar training principle of our Family Group. In October, in response to the invitation of Alxa SEE's Taiwan, Shandong and Sichuan chapters, SOW held the second and the third training sessions in Jinan and Chengdu, China. During the preparation of all three training sessions, our members had inter-group integration and discussion, thus strengthening our comradery. The collaboration among our volunteers, directors and full-time employees was the true testament to the concept of "collaboration" that SOW has always been promoting. We were pleased to know that our nature guide training inspired more people like us

to support environmental protection groups.

In June, we and Alxa SEE's Taiwan chapter co-hosted the "Ocean Guardian Forum" again in Penghu. The forum was attended by scholars and experts from China, Hawaii and Taiwan, members from various chapters of Alxa SEE, and representatives from environmental NGOs. Keynote speeches and discussions on marine conservation were covered in the event, including the previously sponsored project on marine waste monitoring and management. Forum participants were even given hands-on opportunities for beach cleaning and learned about environmental protection actions in light of the fish weir culture. Finally, the forum ended on a high note with an observation session at the ocean bottom of Four Island of Southern Penghu, emphasizing the concepts and actions of local marine conservation.

Yes, the forum has ended, but the journey of environmental protection has just begun...





Nature Interpretation — A Bridge between Nature and Mankind

Interpretation is the first step to help people understand nature, while interpreters are the key to open people's eyes. With nature interpretation, more people will realize the beauty and sorrow of our homeland, Taiwan. Thus, they will be more willing to take actions to protect the environment. After all, understanding leads to care; care brings out actions; only with actions will there be hope. Interpreters of Society of Wilderness (SOW) stand on the frontline of environmental protection. They can be spotted in guided tours, environmental education, habitat surveys, and point-count observation; their only goal is to make this world a more beautiful place.

2019 has been a fruitful year for SOW interpreters. Our Hualien chapter held its third interpreter training session; the full interpreter training was completed at Yilan chapter; our Experiential Environmental Education (EEE) group will soon publish its new book "Cherish Taiwan –



An Experiential Environmental Ecology Gamebook". Through these actions, interpreters connect people with nature, nurture people's love for this land, and step by step, infiltrate people's hearts with the belief that everyone can do something for the environment. They serve as a bridge between nature and mankind. Each of them is pouring their sweat and tears for Taiwan, while sharing their aspirations.

Promotion Lecture— Spread Environmental Awareness

Among various ways to promote environmental education, giving speeches can reach the most people in a short period of time. Therefore, our promotion lecturers play an essential role. They must be able to deliver a 90-minute keynote speech in front of ten to more than one thousand people from schools, communities, and businesses by using beautiful images, insightful slides, persuasive speaking and their own charisma to show the audience the beauty of Taiwan's natural environment as well as the challenges it faces. They are able to inspire people with their passion, convince the audience to make changes in their lives, and become environmental volunteers.

SOW's promotion lectures cover a wide array of topics from forests and oceans, to wetlands and climate change. We also update and improve the lecture content based on the latest trends and issues. This year, we updated two lecture series: "Be Nature's Friend" and "Reverse Climate Change." In addition, we worked with the Discovery Channel, national parks in Taiwan, the Forestry Bureau, and



other partners to hold the four-month-long "Earth Film Festival", displaying an excellent selection of fifteen documentaries related to Taiwan's environment at various venues to reach people of all ages and backgrounds. We even designed the pre-film introduction and post-film discussion sessions to help the audience reflect on the films and learn to appreciate Taiwan from different perspectives.

Special Love for the Special You

For the longest time, we receive feedback from the participants of our environmental education and nature experiencing guided tours, saying how much they have enjoyed such a relaxing time of observing nature. Indeed, when we build a relationship with nature, nature relaxes our body, mind and spirit in return. More than ten years ago, SOW's "Special Education Team" was formed under the efforts of our volunteers from the special education and social work fields. With the aim of sharing the wonderful natural world with our special friends, a group of willing interpreters designed a different kind of guided tour for them. Thanks to the founding partners and their successors, this beautiful tradition has continued throughout the years and we believe it will continue for more to come.



Family Group—Protect Environment with Children

SOW Family Groups aim to create a comfortable and safe "co-learning cluster" for families to share their experiences and ideas with one another. They are divided into smaller groups (ant, bee, deer and eagle) based on the children's ages. Family Groups and adult training groups then form a "compound group". Currently we have seventeen fully developed compound groups and another eleven that are still developing. Each month, these compound groups will gather outdoors at a natural site to learn together. Such a learning environment keeps children company, inspires them, develops their senses, and helps foster their belief that they can make a difference, so that the children can be optimistic, confident and passionate about the world.





Children's Environmental Education — From Taiwan to the Globe

SOW continues to promote children's environmental education on campus. This year, we added the course "Be Friends with Trees" to second-graders' curriculum in hopes of helping children better understand their relationship with the environment. We also held charity summer camps for children, designed self-guiding nature observation activities, launched the "Protect Local Seeds" project for children from low-income families to offer them companionship,



organized the "Ocean's Children" summer camp, and implemented the "Local Nature Observer" project for children in remote areas. In the future, we will introduce the "Earth Guardian" camp to help children in Taiwan join forces with the world to make the earth better.

Climate Change Literacy for All

SOW's climate change workshops aim to help participants learn and take actions about climate change. Once they experience it in daily life, they develop a perception of it, and then their awareness grows. Beginning in 2020, we will develop a climate change work plan with sustainability as its fundamental value in order to deliver environmental education and actions that are more professional, detailed, and of higher standard. This work plan will equip the citizens with tools to deal with the current and future challenges resulted from climate change by 1) teaching them to understand scientific evidence and how to predict climate change; 2) helping them to adopt a lifestyle that will reduce greenhouse gas emissions; 3) letting them be prepared for the inevitable impacts.



Make SOW Stronger and Known to the General Public

To improve the operations and management of SOW volunteers, we continue to organize training and other courses in all our chapters to build consensus and solidarity within the organization. As for getting more people to know us, we have arranged several editor and interviewer training sessions to encourage our volunteers to uncover stories about environmental protection and promotion and then publish them via our own media to make us more recognized by the general public.



Circular Economy for Environmental Sustainability

This year, SOW delivered talks at all chapters on the topic "Circular Economy: Economic Growth x Environmental Ecology = Sustainability" to urge people to reflect on their current lifestyle seriously, such as sudden changes in society, mass manufacturing, business-stimulated overconsumption, convenience over environment, and short product life cycle, and how these things that we take for granted have caused environmental problems: excessive waste, climate change, and depletion of natural resources.





Go and You Will Be There

Genghis Khan, whose empire reached from Asia to Europe, had a unique insight into "beliefs", which was proven by his remarkable achievements at the time.

Society of Wilderness (SOW), when founded, made a pact that all volunteers and partners will stick to the policy of "no politics", "no religion" and "no solicitation" while promoting environmental protection. In the past twenty-four years, we have been supporting habitat protection and disseminating the concept of being environmentally friendly with our diverse environmental education. Even though we stay out of politics and religions, our tenderness, reason, and sensibility have been our greatest allies as we lobby and communicate with politicians and the general public.

We hold strong beliefs in ourselves being the environment guardian. Should we make the effort to seek opportunities or wait for opportunities to come to us? This, of course, depends on our own beliefs. SOW has made our vision and objectives very clear since the very beginning. Starting with the first chapter, SOW has slowly earned the public's recognition as we expanded our scale and environmental operations. We have accumulated a considerable amount of precious experience, gained strong momentum, and achieved remarkable achievements. This year, SOW was rewarded with the National Sustainable Development Award and the Excellence Award in the Shuanglianpi Environmental Education Space Evaluation. We are tender and yet steadfast with "doing the right thing". This is the foundation of our beliefs.

In the book, "Visionary Leadership Tips from One Piece", there is a sentence: "The moon always

competes with the sun and faces the world with its bright side," which perfectly explains our actions, as well as applies to environmental protection. As an environment can break down in the blink of an eye, its restoration and recovery will be a long journey. Therefore, we have been working hard to help more people understand the significance of environmental protection and encourage them to take actions.

Nowadays convenience in our daily life has had an enormous negative impact on the environment. Improper development of leisure areas, excessive use of single-use tableware, problems resulting from wrong actions, greed over conscience, and poor judgment by policy-makers are just some examples. Mankind's continued strive for convenience has been at the expense of the Earth's natural resources.

Despite that, change can be a new beginning. Beliefs are not only a concept but also a strategy. If we are willing to take action, we can easily improve on the old lifestyle. Dear friends, if you have passion, you should consider joining SOW, where you can generate momentum, gain recognition, and build comradery. Our partners come from all walks of life with diverse experiences and skills. Based on the concept of "sharing for the common good", everyone can find a stage to shine and make a difference. Just like Noah's Ark, if everyone is suitably positioned, they can work together to preserve our natural world. Dear friends, come and join us. We look forward to working with you here at Society of Wilderness!

Financial Summary Report

In the twenty-four years since our founding, Society of Wilderness (SOW) has struggled financially multiple times but have always ridden out the difficulties. We are like a constantly evolving and growing living organism. We continuously revise our responsive strategy after surviving each crisis. To be honest, our success entirely relies on the generosity of and timely rescue from our members, volunteers and partners.

SOW will continue to "save for the land". In addition to gaining recognition and support for our environmental education, we will put more emphasis on experiential environmental education. Within our organization, there will be more exchanges and interactions among members and committees. With the general public, we will make our educational activities more widely accessible. In short, we will use diverse methods to promote our core values and break people's echo chambers.

At the time of writing this paragraph, the end of the year is just around the corner. Our protection and conservation strategies as well as financial planning, thanks to the hard work of all the partners that agree with SOW's vision, have proven effective. Our strict financial structure has met our expectations and followed our full disclosure principle. SOW hereby promises that every penny donated to us for nature and environmental protection can pass even the most stringent scrutiny.

Percentage of expenditure in January-November, 2019

