

Borneo Orangutan Survival Foundation (BOS)

About BOS

The Borneo Orangutan Survival Foundation (**BOS**) is an Indonesian non-profit environmental organization. It was established in 1991, near the city of Balikpapan in East Kalimantan, started and financed for the first three years by the school children, their pocket money and their fund raising efforts. The programs operating under the BOS "umbrella" are: The Samboja Lestari Forest Rehabilitation Program, The Orangutan Reintroduction Project Wanariset in East Kalimantan, The Nyaru Menteng Orangutan Reintroduction Project, The Mawas Wildlife Reserve in Central Kalimantan) and The SarVision Satellite Natural Resources Monitoring Centre in East Kalimantan.

Here is a brief look at the various projects operating within the **Samboja Lestari** Area:

BOS Wanariset Orangutan Reintroduction Project

BOS Wanariset (part of the Orangutan Reintroduction Project) was the very first project of BOS. It was established to help the many orangutan orphans confiscated by the government and to attempt to rehabilitate and release them back into the forest. Most of the orangutans in the rehabilitation centre were either confiscated by the Department of Forestry or handed over voluntarily to the project by local people who held them as pets, while not insignificant numbers were returned from other countries like Taiwan, Hong Kong, Thailand and others. Once at the Wanariset Rehabilitation Centre, the orangutans follow a strict procedure, e.g. quarantine period, learning socialization skills, etc. before they are considered for release. Once ready, rehabilitated orangutans can only be released into suitable forested areas where no viable wild orangutan population currently exists.

The Orangutan Reintroduction Project formulated a new approach to the rehabilitation and return of once captive orangutans to the wild, which has been sanctioned and approved by the Indonesian Government.

The main aims of the project are:

- a. To assist the Indonesian Ministry of Forestry in enforcing existing laws for the protection of this endangered species. This assistance enables orangutans formerly kept as pets to be officially confiscated by the government and brought to the Centre.
- b. To operate a local grassroots public awareness campaign for nature conservation.
- c. To study in detail the adaptation of the orangutans in their new environment and to study the influence of their renewed presence upon forest composition. This aspect ties in with other forestry projects conducted at Samboja Lestari.

A. The Reintroduction Process

The figure below shows the various flows and movements and placements of orangutans through the system used by BOS.

1. Quarantine: All the orangutans that arrive at the Centre are placed in quarantine. They are given complete physical and clinical examinations, are fingerprinted for identification and tested for infectious diseases like Hepatitis A, B,

C, and tuberculosis and a variety of other problems such as bullets, parasites, etc. The period of time spent in quarantine is usually two or three weeks, dependent upon laboratory test results. Healthy orangutans can then continue on to the socialization stages. Orangutans that do not pass the medical check are kept in quarantine or transferred to the clinic for treatment. Infant orangutans are transferred to the Babies Room for one-on-one care until they are old enough to move to the socialization stages.

2. Socialization: Once they have cleared the medical check, the orangutans are placed in Forest Schools (or forest socialization cages for those too big for Forest School) with animals of a similar age and temperament. The vast majority of orangutans arriving at the Centre are under ten years of age; therefore they are still in need of some social interaction and learning. For young babies, the socialization stage gives them companionship with other youngsters as well as the care from substitute human mothers. During this period they are given leaves to encourage nest building and are introduced to many wild fruits and leaves eaten by wild orangutans in the forest. The animals are observed and records are kept of individual development. Orangutans may spend between three to ten months (sometimes more) in the socialization phase's dependent upon individual needs and physical development.

3. Forest Schools (Sekolah Hutan): The Forest Schools are areas within Samboja Lestari that have been designated for use by orangutans for skill learning in a natural forest. During the daylight hours orangutans are free to move in the trees (under supervision as data is collected daily) to gain much needed forest expertise. They are taken to sleeping cages only at sundown, where a motivating evening snack is awaiting them and where they eagerly and voluntarily walk towards the sleeping cage. Orangutans typically spend 6-9 years at the forest school.

4. Halfway House (Forest school 2): The older orangutans who have exhibited forest skills such as nest building, climbing trees, etc. are moved to the Halfway House. The Halfway house is a small forest where orangutans continue to learn more about finding foods on their own and living in a 'real' forest. The average time an orangutan spends in the Halfway House is 6 months (sometimes more dependent upon the availability and suitability of release sites).

5. Release: The final release phase occurs when a suitable site is found and orangutans have shown the required elements to survive in a natural forest. Orangutans that are release candidates are grouped according to correct sex ratio and size/age. All release sites are studied initially to ensure the availability of fruit trees and fallback foods. As an important official requirement and recommendation under the IUCN (International Union for the Conservation of Nature) there should be no viable wild populations of orangutans in any release site and the site should be geographically isolated from wild populations.

BOS Samboja Lestari Project

Samboja is a small village with some 10,000 inhabitants, located on the East coast of Borneo, about 35 km north of Balikpapan, the provincial capital city of East Kalimantan. It was established about one hundred years ago when oil was discovered and was once covered in lush forest. The first mechanical logging in all of Indonesia took place in the 1950's near this village, which opened the door for illegal logging and human encroachment. The forests disappeared, and the landscape became a patchwork of regenerating secondary forest and barren fields. In 1982-1983 and again in 1997-1998, severe El Nino conditions in East Kalimantan caused two of the worst ever destructions by fire in a tropical rain

forest region. Since those disastrous droughts the area has burned every year and as a result *alang-alang* (*Imperata cylindrica*) grassland vegetation took over the area, all without any benefit to the local people. In 2001 **BOS** started buying barren pieces of grassland in Samboja and began an ambitious project to bring the local forests back to this area.

Reforestation/Rehabilitation

Reforestation/Rehabilitation is the core of the Samboja Lestari project with thousands of indigenous species to be planted. By the middle of 2006 more than 740 different tree species had already been planted, not yet including the special collections of other species in the arboretum (see below). Our present wish list includes 1716 selected tree species and every week we manage to get more species from this list. This huge and worldwide unmatched biological diversity is already supporting hundreds of animal species, including nine species of primate, of which 7 showed up spontaneously in this quiet refuge of food rich greenery. This is truly amazing for a project that started from virtually nothing.

Plant Nursery

The reforestation process and all associated activities begin in the nursery. The general activities of the nursery include fruit, seed and seedling collection and selection, soil treatments for media, pest and disease control, and a wide range of techniques for vegetative propagation. Along with the timber and fruit tree species, **BOS** Samboja Lestari also houses a collection of medicinal plants as well as trees that yield resins, perfume, soap, edible fats, etc.

Planting

The Samboja Lestari program focuses on fruit tree species in order to develop a wildlife sanctuary in the near future, especially for the orangutan. Actually many of our trees were grown from the seeds extracted from the excrement of free-roaming orangutans, so are a guarantee that they will support orangutans and other wildlife. The carrying capacity of the Samboja Lestari area for wildlife will be many times greater than the natural forest thanks to the relative much higher abundance of food plants in this new rainforest. Planting of other tree species increases the biodiversity of the area and also benefits research activities and helps the local communities.

The rehabilitation of the area begins by planting shade trees, such as fast-growing pioneer trees which are normally the first to cover open spaces in the natural forest. These trees help us in Samboja to gradually reduce and out-shade the *alang-alang* and they help also to reduce soil erosion, improve infiltration of water into the soil, slow down the outflow of water from the area thereby preventing floods and keeping streams alive during dry seasons. The planting of climax species, which are species only growing in a adult rainforest, follows a year later when the pioneer trees, just like in the patches of regenerating rainforest, have recreated a suitable microclimate with light shade and better humidity that these original rainforest species need. Rehabilitation activities include field maintenance such as weeding, hoeing, fertilizing, mulching, thinning, pruning, etc.

Arboretum

A total area of 159 hectares, located in the centre of Samboja Lestari, has been allocated for the establishment and development of an arboretum, a huge scientific tree garden twice the size of the famous Bogor Botanical Garden, in which some 5,000 indigenous tree species and their sub-species, most from Borneo, will be planted, along with many other smaller herbaceous plants. The purpose of the development of this botanical garden is to make a collection of indigenous tree species, to facilitate research especially on the growth and

development and phenology (flowering) of the species, and to facilitate environmental education programs for the local communities as well as for school children and older students. Inside the Kukar botanical garden (named after the district in which Samboja Lestari is located), we will also preserve the superior trees that were selected over 20 years of forestry research in East Kalimantan. Some of these are now only left in Samboja Lestari and extinct in the wild. These trees are selected from the offspring of superior-growing individual trees from important commercial tree species that were collected over many years during the Tropenbos project. The latter was a forestry research program set up by Dr Willie Smits.

Orangutan Reintroduction Program

The Orangutan Reintroduction Project at Wanariset has moved to Samboja Lestari. Several Forest Schools have already been established. Forest Schools are areas that will provide natural, educational playgrounds for the orangutans in which to learn forest skills. Here they roam freely (but supervised) and are returned to sleeping cages for the night. There is a brand new Clinic and quarantine area as well as many new forest cages for larger orangutans and a Nursery for the smallest infants.

Wildlife Sanctuary

Moving the Wanariset Orangutan Reintroduction Project to Samboja Lestari is only the beginning of what we hope to develop here. The plan is to create a wildlife sanctuary not only for orangutans but for other species as well and provide them with a safe haven with abundant natural foods from rainforest trees. The sanctuary area will be used to house orangutans that can never be released, such as blind or other severely disabled orangutans. In addition Samboja Lestari has already established 6 **Orangutan Islands**, covering a total area of 6.52 hectares, with feeding sites and extra enrichment for a special class of chronically-ill orangutans that otherwise would have to spend the rest of their lives in cages (the Islands currently hold a small population of Hep B orangutans). Many more islands will be established in the new lakes under construction, where more orangutans and other wildlife that cannot be returned to the wild can live under almost completely natural conditions.

Sun Bear Sanctuary

Expanding on our wildlife sanctuary promise, the Sun Bear Sanctuary covers a total area of 58 hectares inside Samboja Lestari. It is fenced in by electric wiring and divided into several compartments to accommodate different groups of bears. The sun bears have their own staff, consisting of a team that monitors their behaviours, diet and behavioural enrichment needs. Sun bears are brought in from all over Indonesia, confiscated from the trade (people use their gall bladders, claws, teeth, skin, skulls and paws) or from people who kept them as a status symbol or handed over by people voluntarily.

Other Sanctuaries

There is a chance that we will also release other confiscated wildlife, such as birds that the Ministry of Forestry has entrusted to us, and we may also house a turtle centre, and perhaps also soon a number of elephants. We will keep you informed and up to date on these developments through our website.

Community Development

The Samboja Lestari Program participates strongly in community development through a wide range of activities including providing employment within our various projects, giving opportunities to the local community by involving them in agro-forestry practices (people are allowed to grow fruits and vegetables in

between the newly-planted trees in Samboja Lestari and sell part of their harvest to the project) and providing training on skills such as making handicrafts produced from Samboja Lestari's waste wood. BOS helps sell these items around the world to create many more environmentally-friendly local jobs for what was until recently the poorest district in East Kalimantan.

We also support and host events for local people, for example, providing electricity and sound systems for celebrations. We also sponsor many social activities like the school programmes, tree-planting outside Samboja Lestari, sport events, etc. These activities allow us to communicate a strong conservation message to the local community, which has begun to appreciate BOS and to understand and value the benefits of maintaining and protecting their forest environment. This is the basis for their support of the many efforts of Samboja Lestari. One good indicator: thanks to the fire-fighting teams with the local people, BOS Samboja Lestari has not lost a single tree to fire!

The parameters for social well-being we are using (through a local NGO helping BOS to assess the socio-economic impacts of our work) are amongst others the jobless rate, the crime rate and the people's general health condition. Since the forest regeneration activities began in Samboja Lestari, the unemployment rate in the village of Samboja has decreased dramatically thereby increasing the average income level of the area. Local crime, which was once high, has disappeared. The number of hospital visits is steadily decreasing. Now, if only we could measure the quantity of smiles BOS is generating! But mention BOS and there is a very good chance you will get that smile. We also look at other things like the number and kind of vehicles people can now afford; the number of new houses appearing; the occasions of flooding; etc. etc. All of these are moving in a better direction now.

Forest Research

Some parts of Samboja Lestari are reserved as tree research areas. Research topics include: the growth and comparisons of different tree species, hydrology, meteorology, plant physiology, species site-matching, space-based monitoring, etc. There are also sampling points at every 100 x 100 metres in the area, where we look at the soil conditions, record the presence of certain indicator herbs that tell us what tree species could grow well there, the development of micro-organisms in the soil, the amount of organic matter and how it develops over time, what other seeds of plants are brought in by the evermore abundant wildlife, etc.