



# TANGKOKO CONSERVATION EDUCATION

Education programme of the Macaca Nigra Project



## July 2021 - June 2022 ACTIVITIES AND BUDGET REPORT



### Contact:

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Photo: Oklisia, former TCE pupil in 2011 and participant of the 2020 Science Camp, is now an active volunteer of Tangkoko Conservation Education and helps us with our school activities and events.

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# Introduction



The island of Sulawesi is part of the Wallacea region, one of the 25 biodiversity hotspots of the world for conservation priorities. Due to its geographical situation, Sulawesi is of particular interest with respect to species' endemism, especially regarding primates, as it hosts seven macaque species found nowhere else in the world. **Crested macaques (*Macaca nigra*)** are one of these species.

Crested macaques' population has declined by more than 80% since the 1970s. Their primary threat is hunting and habitat destruction. They are now **critically endangered** and listed in the **IUCN 25 Most Endangered Species** List. Tangkoko hosts the biggest, most viable population. But the forest has seen a reduction in size over the last decades, mostly due to logging for timber, agriculture and illegal mining. If nothing is done, crested macaques may completely disappear from their natal range by 2030.

The Tangkoko Reserve, situated in North Sulawesi, Indonesia, spans about 8,867ha and is a mix of lowland tropical rainforest, secondary regrowing forest and submontaneous forest. It is likely to be the last stronghold for crested macaques. In 2007, the forests of Minahasa, the entire region where Tangkoko belongs, were classified as being in poor conditions, i.e. highly fragmented, largely dominated by human activity but with scattered forest remnants present.

**Tangkoko Conservation Education (TCE; [tce-programme.org](http://tce-programme.org))** is the education programme of the **Macaca Nigra Project ([macaca-nigra.org](http://macaca-nigra.org))**, a research-education-conservation project focused on crested macaques, founded in 2006 and based in the Tangkoko reserve. TCE was created in 2011, with the main goal of increasing positive behaviour of local people towards their local environment, using the emblematic crested macaque as a flagship species.

TCE aims at addressing the lack of local environmental awareness and capacity-building in order to improve the protection of the local flora and fauna and to enhance the sustainability of regional economic development. TCE aims at helping local communities of North Sulawesi (especially young people and school staff) to acknowledge the highly endangered status of the local wildlife as well as its ecological and economic importance, and to take action to protect it. On a long-term perspective, we believe that increasing awareness and appreciation for the environment in the local population can substantially decrease illegal activities, such as hunting, land conversion, and illegal logging.





TCE's activities are implemented by Nona Diko (local manager), Eunike Parera (education coordinator), Maria Taramen (education assistant), Stephan Lentey (public relation officer), as well as casual staff (Deity Mekel, Putri Tatodi, Cassa Abdullah Kaunang, Fikram Makawimbang, Pingkan Tinungki), volunteers and young ambassadors. TCE implements activities around the Tangkoko reserve and other protected forests of North Sulawesi, in the administrative regions of Bitung, North Minahasa and Manado.

Our main work is to design and deliver school interventions for local pupils. These activities are complemented with field trips, conservation education trainings for school staff and awareness campaigns for local communities.

Implemented in one village initially, TCE has now successfully expanded and established its activities on a larger scale, including 22 schools in 13 villages from 3 different districts, for a total of 4203 students (aged 9 to 15 years old), 100 school staff and 4500 members of the local communities.

In February 2021, we have established the Tangkoko Conservation Indonesia Foundation (Yayasan Tangkoko Konservasi Indonesia), which will enable the project to be recognised even more on a local and national level, and which will help us to apply for grants to develop other local activities (economic, social events and projects).



**The TCE team gathered for the establishment of the Tangkoko Conservation Indonesia Foundation in February 2021.**



**Some of our local TCE staff, volunteers, and helpers:  
From left to right: Maryam Hasan, Deity Mekel (Science Camp coordinator), Aryati Rahman, Pingkan Tinungki, Rio Dulughu, Tirsa Katili, Stephan Lentey (TCE staff - Public relation officer), Frisna Tamaha, Oklisia Angel Triputri Tatodi, Eunike Parera (TCE staff - Education coordinator), Nona Diko (TCE staff - Local manager) and Liska Kuas. Missing: Maria Taramen (TCE staff-Education assistant.)**

# 2021 - 2022 Activities report

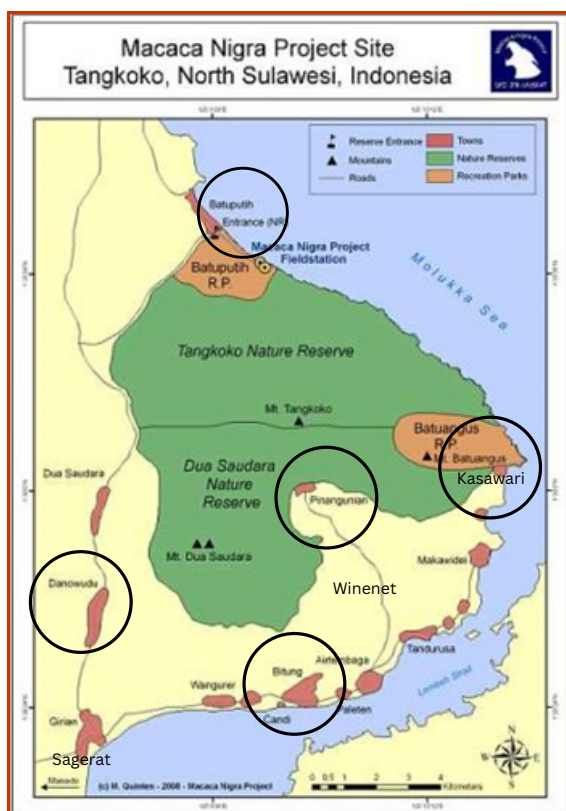
## School activities

Over the period between August 2021 and May 2022, TCE delivered 6 school interventions combined with a visit to Tangkoko for 9 primary and secondary schools in Bitung region (Figure 1), for a total of 180 students aged 9 to 15 years old. After the COVID-19 pandemic, the local TCE team was able to resume their interventions as normally as possible, making sure that safety precautions were in place when delivering interventions. However, less schools have opened their doors to TCE interventions this year due to the difficulties linked to COVID 19. Interventions from external organisations were still not considered a priority for most schools. Where TCE staff is welcome, the interventions are being delivered in small groups and outside the classroom whenever possible.

These interventions were:

- Lesson 1: Basics and human changes over the environment.
- Lesson 2: Biodiversity of tropical rainforest.
- Lesson 3: Indonesian, Sulawesi and North Sulawesi flora and fauna.
- Lesson 4: Primates, the crested macaques (*Macaca nigra*) and the Macaca Nigra Project.
- Lesson 5: Observation of the crested macaques (part of a field trip to the Tangkoko Nature Reserve),
- Lesson 6: Characteristics of a nature reserve, status of and threats on protected and endangered Indonesian wildlife, and conservation actions.

Our environmental lessons were presented in a booklet, combined with illustrations by a professional scientific illustrator. We delivered our interventions together with the help of several volunteers, as well the Macaca Nigra Project (MNP) for lesson about the macaques. The trips to Tangkoko Nature Reserve were implemented together with the Macaca Nigra Project .



**Schools involved in our 2021-2022 period:**

### Batu Putih:

- SD GMIM primary school
- SMK Negeri 4 senior high school

### Pinanguan:

- SD GMIM primary school
- SD INPRES 5/81 primary school
- SMP Negeri 14 SATAP Bitung junior high school

### Kasawari:

- SD Nasional Kasawari primary school
- SD GMIM Kasawari primary school

### Danowudu:

- SD GMIM 6 Danowudu primary school

### Bitung:

- SMP 2 Bitung junior high school

## School activities: Pictures

Here are some pictures of our school activities implemented in 2021-2022:



At the start and end of each school year, the pupils complete a questionnaire, assessing their knowledge, behaviour and habits towards their local environment. This activity is a very useful tool to monitor their progress and assess whether TCE has a positive impact on the pupils after they take part. Here pupils from SD GMIM Pinangunian, SD lipres 5/81 Pinangunian and SD Gmim Kasawari primary schools are completing the questionnaires.



Each pupil has its own book which compiles facts, illustrations, games, quizzes and practical exercises for each lesson taught by TCE staff. Here the pupils of SD Inpres 5/81 Pinangunian are enjoying their books.



Trip to the Tangkoko Forest with the pupils from SD Nasional Kasawari primary school: Looking for local flora and identifying trees, observing crested macaques with the Macaca Nigra Project staff, and doing litter picking in the forest.

Pupils from SMK 4 Batu Putih senior high school are posing in front of a statue of the British naturalist Alfred Russell Wallace, who visited the Batu Putih area.

# Science Camp 2021

Since 2020, we expanded our education activities for a new target audience: students who are about to finish secondary school and enter further studies/professional life.

In October 2020, we have successfully implemented a pilot project called **Science Camp programme**, aiming at supporting local young people to gain more theoretical and practical experience in research and wildlife conservation, and pursue possible studies/career in research, conservation, and education. Since then, Science Camp has become a regular programme enjoyed by young people every year.

In 2021, we have welcomed 10 students from the 11th Grade of 4 Negeri Senior High School in Batu Putih (village next to the Tangkoko Nature Reserve) for a week of immersive research and conservation training at the MNP research station in the Reserve. Between the 24th of October and the 7th November 2021, the students (5 boys and 5 girls) have learnt different field and scientific methods and research tools. For example, they ran experiments about the effect of detergent on the environment, and learned about stingless bee farming. In addition, they took time to observe the macaques in the forest and collect data about their behaviour. In the camp, they followed our environmental lessons and met several local conservation partners (for example, Tasikoki Wildlife Rescue and Education Centre, Selamatkan Yaki). On the 21st January 2022, a symposium has been organised in the Batu Putih village and all participants have shared their knowledge about biology, ecology, and macaque behaviour with the local community.

Thanks to this Science Camp and Symposium, we hope that these young people will pursue their studies or a professional path in conservation. Participants from our first Science Camp in 2020 are still involved with TCE through various activities, such as volunteering in awareness campaigns or in our school activities. They have also created their own informal group called “Friends of Tangkoko”, to raise awareness about protecting their local forest through activities of local communities (beach clean, tree planting etc.) and they also participated in the environmental patrols organised within the Tangkoko Nature Reserve by the local office for nature conservation (BKSDA).



Here are some messages shared by our 2021 Science Camp participants after their week spent at the MNP research station:

**“Let’s protect the crested macaque, so important for our forest regeneration!” (Marsya)**

**“Earth is able to meet all human needs, but not able to meet all human greed.” (Manda)**

**“Forests are the source of life.  
Let’s take care of them together!” (Sheyla)**

**“Science camp gave me the opportunity to learn more about how to protect the forest and the macaques. I have learnt a new skill, which is wildlife photography.” (Deo)**

## Science Camp: Pictures

Here are some pictures of 2021 Science Camp and Symposium:



**Biology experiment led by Risma from MNP; Presentation From Billy, director of the Tasikoki Wildlife Rescue and Education Centre.**



**Observation of the crested macaques and learning how to collect behaviour data together with the help of the Macaca Nigra Project staff.**



**Symposium in the High School of Batu Putih; The Science Camp participants have presented their work to the teachers, students and members of the local community.**

## Awareness campaigns and events (Indonesia)



### Empower villagers about human-wildlife conflict mitigation:

In 2022, TCE and MNP staff, together with Selamatkan Yaki, BKSDA Sulawesi Utara and many more organisations, have started focus group discussions and community-led outreach events in 5 villages around the Greater Tangkoko area (Batu Putih, Dua Saudara, Kasawari, Winenet and Pinangunian) to discuss all things related to human-wildlife encounters and how best to tackle problems and find solutions together with the local community.



At the same time, we organised small events with children's theater, songs and photo exhibition. We took the time to ask visitors a few open questions about their perception of and behavior towards nature. These events were very well attended and it was a great opportunity to openly discuss how people and macaques can live together.



Exhibition, discussions, concert and activities for children in the villages participating in the workshops.



## Awareness campaigns and events (Indonesia)

### Earth Day 2022:

On the 22nd April 2022, TCE team together with the participants of the 2021 Science Camp have organised an Earth Day event, when they did litter picking in the forest and sorted the waste found by the beach in order to recycle it. Afterwards, they monitored the growth of various trees that were planted in one specific area of the Tangkoko forest by the same team during Earth Day 2021.



### Talk about waste to orphan children:

On the 23rd April 2022, TCE team together with the students part of the nature lover club of Manado State Islamic Institute implemented a talk aimed at local orphan children about the issue of waste and how we can recycle more. Children have designed posters to raise awareness about how we can protect our Planet Earth.



## Awareness campaigns and events (Europe)



**Caroline Richaud presenting TCE activities  
at the AFdPZ general assembly.**

Tangkoko Conservation Education has been represented in Europe through different activities:

- September 2021: Conservation Weekend at Amiens Zoo, France: two days to raise public awareness about the protection of wildlife with stands and activities led by conservation stakeholders supported by the Zoo.
- In October 2021, Caroline Richaud (long term volunteer of TCE) presented the TCE programme during the General Assembly of the AFdPZ held at the Réserve Africaine de Sigean in France. This presentation helped to strengthen our ties with the Zoos supporting us, and to create contacts with others who may support us in the near future.
- For two years, Nona Diko and the local team follow an online training from Chester Zoo (UK) community engagement staff which enable the team to develop better tools for our education programme.

## TCE's first publication

TCE's team (with the help of the MNP directors and Francois Lamarque, student in conservation) have written an article (submitted for publication for a special issue in International Journal of Primatology), about the impact of TCE programme on the children participating in our school activities.

In this paper, we have assessed whether TCE's programme had a positive impact on children's knowledge, habits and behaviours towards their local environment.

Ten years of data from our evaluation questionnaires provided to the pupils have been analysed and showed that pupils' knowledge and behaviour scores significantly increased after their participation in the programme. Their habits score also improved but this increase was not statistically significant.

These positive results encourage us to keep implementing our activities in order to engage more children every year. We will share the full article once it is published, we hope, in early 2023.



## TCE's 2022-2023 activities and perspectives

In August 2022, the TCE team has started its 13th school year programme with motivation and enthusiasm, supported by various volunteers, casual staff and help from its Science Camp participants:

- The school activities have started again with more schools involved since the regulations related to COVID-19 have been made easier. 269 pupils are participating in our programme this year.
- Our third Science Camp has been implemented in October 2022 and was a great success again. Ten new students have enjoyed their immersive week of research, conservation and education in the Macaca Nigra Project research station. Their symposium (public presentation for local communities) will take place in January 2023.



Pupils from SD GMIM Duasudara with Deity (TCE team)



Science Camp 2022 students observing crested macaques in the Tangkoko Forest

### The Independence Curriculum:

In 2022, the Indonesian Ministry of Education, Culture, Research, and Technology launched a new curriculum, namely the Merdeka Curriculum (Independence Curriculum), focusing on projects, field trips and interactive/hands on activities rather than classic lessons in the classroom.

The Education Department of Bitung has encouraged TCE team to implement this new project based curriculum, which is a great opportunity to enhance local young people interest, knowledge and care for their local environment.

This is why, in August 2022, TCE has launched a pilot project to conduct this Independence Curriculum as part of its conservation education programme with the aim to replicate it to other classes in the future. The aim is to base the interventions on the existing material delivered by TCE with the addition or several activities adapted to the student's biology curriculum.

From implementing a **vegetation survey**, creating a **mini volcano** or **identifying animals' footprints**, our activities implemented since August have received a warm and enthusiastic welcome from the students and teachers!



## 2021-2022 Budget report

Here is the financial report in Euros for the TCE activities regarding the August 2021 – July 2022 period. The total expenses are 20,060 €.

The rate used is: 1 € = 17096 Indonesian Rupiahs.

EXPENSES		EXPENSES (IDR)	EXPENSES (€)	INCOME	INCOME (€)
Coordinators' salaries and insurance	Local coordinators' salaries: (1 local coordinator, 3 assistants) and casual staff	Rp 96,305,000	€ 5,800	Amiens Zoo	€ 1,000
	Coordinators' insurance and medicine fees	Rp 23,023,268	€ 1,387	French Association of Zoos (AFdPZ)	€ 3,000
Transportation	Car rental, motorbike rental and gasoline for coordinators' and volunteers' transportation (meetings, education interventions in the villages, events and	Rp 59,276,950	€ 3,570	UNIVET Nature	€ 3,000
	Service and maintenance (for the project's motorbikes)	Rp 2,890,900	€ 174	Vallee des Singes/Conservatoire des Primates	€ 2,000
	Bus rental for pupils' transportation to Tangkoko reserve	Rp 2,594,900	€ 156	Rettet den Regenwald e.V	€ 11,060
Food	Food for the local coordinators (when outside the headquarters)	Rp 18,140,622	€ 1,092		
Pedagogical material	Stationeries: books, games, pens, paper, notebooks, ink, photocopies, etc	Rp 2,527,500	€ 152		
	Creation, edition and printing of the education booklet	Rp 54,248,900	€ 3,267		
Communication	Post, Internet and phone expenses	Rp 4,958,000	€ 299		
Office	Office rental, electricity, furniture and small equipment	Rp 15,215,675	€ 916		
Equipment	Electronic: phone, laptop, speakers, tripod, etc)	Rp 5,995,500	€ 361		
Awareness campaigns	Promotion material: Panels, banners, Tshirt posters, stickers, keyholders	Rp 500,000	€ 30		
	ASAP events and Earth Day	Rp 4,800,000	€ 289		
Administration	Administration fees (Tangkoko Conservation Indonesia Foundation)	Rp 1,810,700	€ 109		
Science Camp and Symposium	Food, accomodation, transport, material, Symposium organisation and implementation	Rp 40,022,050	€ 2,410		
Other	"Solidarity" expenses (wedding, funerals, etc)	Rp 781,400	€ 47		
<b>TOTAL</b>		<b>Rp 292,287,915</b>	<b>20,060 €</b>		<b>20,060 €</b>

The funds used during this period (August 2021-July 2022) came from:

- Amiens Zoo: 1000 €
- AFdPZ (French Association of Zoos): 3000 €
- Vallée des Singes – Conservatoire pour la protection des primates: 2000 €
- UNIVET Nature: 3000 €
- Rettet den Regenwald e.V: 11060 €

# Aknowledgments

Tangkoko Conservation Education would like to thank all their members, volunteers, friends and partners who have supported its activities since 2011, and especially in 2021-2022: We thank the Education department of Bitung, the Ministry of Forestry's Conservation Agency of North Sulawesi (BKSDA), NGO Regards d'Ailleurs, Macaca Nigra Project directors and staff, Yayasan Konservasi Tangkoko Indonesia, Kaum Muda Pencinta Alam (KMPA) Tunas Hijau Airmadidi, Lamp of Bottle, Mahasiswa Pencinta Alam (Mapala) Bumi, Sahabat Tangkoko, Pusat Penyelamatan Satwa Tasikoki (PPST), Selamatkan Yaki, Alliansi Konservasi Tompotika (AlTo).

We also thank our donors as well as the students, volunteers, friends and acquaintances in other parts of the World for their precious help and support: Caroline Richaud, Claire D and G, Francois Lamarque, Christine Morrier, Christine Avril, Marine Joly, Joana Sedille (Bulle et Cie). Many thanks also to our online volunteer translators: Brian Oentoro, Brian Hincliffe, Sonia Maryan, Kristin Kelber and Eka Ramadhona Nasution.

In 2021-2022, MNP and TCE received the financial, logistic and moral support from Amiens Zoo, the French Association of Zoos (AFdPZ), Rettet den Regenwald e.V, UNIVET Nature, Vallée des Singes/Conservatoire des Primates, the Asian Species Action Partnership – Rapid Action Fund (ASAP-RAF) initiative, Tayto Park, The foundation Manfred-Hermsen-Stiftung for Nature Conservation and Environmental Protection, French National Centre for Scientific Research CNRS, the French National Museum for Natural History MNHN, the Darmstadt Zoo, the Zoo of Leipzig, Chester Zoo, Mulhouse Zoo, as well as private donations from individuals. We sincerely thank these organisations and donators for their invaluable support during this year.

Thank you for your support to help local children and young people to  
Learn from Nature, and Act for Nature!

