



TANGKOKO CONSERVATION EDUCATION

2023-2024
Newsletter



Conservation education programme for local communities in North Sulawesi, Indonesia



Pupils from SMP 7 Bitung school
learning about global warming

WELCOME, SELAMAT DATANG!

We are pleased to share this newsletter detailing the activities of the Tangkoko Conservation Education (TCE) programme for 2023-2024, filled with exciting events!

Thank you very much for your support!

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***"Learn from Nature,
Act for Nature!"***





OUR FIRST SCIENTIFIC PUBLICATION!

This eventful year was highlighted by the publication of our **first scientific article** [1], featuring highly encouraging results! With the help of the Macaca Nigra Project (MNP) directors and conservation student François Lamarque, the TCE team evaluated the impact of our education programme on the knowledge, behaviour and habits of our pupils. The results indicate significant improvements in the pupils' knowledge of and behaviour toward local ecosystems and wildlife following their participation in our programme. While our study has some limitations, it underscores the positive influence of our efforts on young people in areas where primates are under threat. We are now seeking additional research funding so that we can improve upon our methods and continue to evaluate the impacts of our work.

The MNP team has published a total of 9 scientific articles in 2023, including a special issue in the International Journal of Primatology, edited by MNP directors Julie Duboscq and Jerome Micheletta. Curious about what our researchers discovered about the macaques? [Click here](#) [2] to access the list of publications!



Pupils receiving one of our lessons at school (left) and during a trip to the Tangkoko forest (right)



Junior school pupils completing a questionnaire for our evaluation study

SCHOOL ACTIVITIES

Between September 2023 and July 2024, we implemented our **13th school year** of educational interventions at local schools and field trips to the Tangkoko Nature Reserve. We visited **11 schools** and taught **159 pupils across the Bitung region in North Sulawesi**. Our curriculum now includes **7 interactive lessons** about human impacts on the environment, tropical rainforests, marine wildlife, national and local flora and fauna, crested macaques (and other primates), and nature reserves and conservation work.

We are incredibly grateful to our TCE staff and volunteers, MNP staff, guides, partners who helped to provide the lessons, and to the students, teachers and schools for their active participation and enthusiasm!



[1] First TCE article: <https://link.springer.com/article/10.1007/s10764-023-00356-9>
[2] MNP publication list: <https://macaca-nigra.org/publications/>



SCIENCE CAMP 2023

In October 2023, we held our **fourth annual Science Camp** for secondary school students. During the two-week programme, 10 students - five boys and five girls from various schools from the village of Batu Putih and the city of Bitung - received immersive training in research and conservation at the MNP research station in the Tangkoko Nature Reserve. The activities included conducting experiments to assess air and water quality, performing a vegetation survey, and practicing behavioral observations of the crested macaques. The students also had the opportunity to meet people from other conservation organisations, such as Selamatkan Yaki, Sulut Semangat, and Tasikoki Wildlife Rescue and Education Centre.



Camp participants conducting a water quality experiment (top) and observing the crested macaques (right)



With our Science camps, we aim to help local young people gain knowledge and hands-on experience in research, wildlife conservation, and nature education. This foundation will enable them to pursue potential careers in these fields. Many participants from our first Science Camp in 2020 are still involved with TCE as volunteers, and one former participant, Oklisia, helped as manager assistant of TCE in 2024! Two former participants have started university, studying management and environmental studies.

Moreover, a group of former participants has launched their own campaign, "Friends of Tangkoko", which raises awareness about the need to protect local ecosystems through community activities such as beach clean-ups and tree planting.



Camp participants performing a vegetation survey with the help of Eppen Jr, Tangkoko guide.

SYMPOSIUM 2024

On the 18th of January 2024, we held a Symposium in the headquarters of the Municipality of Bitung, where all Science Camp participants shared their knowledge about biology, ecology, and macaque behaviour with the community, NGOs, school directors, and members of the government.



Science Camp participants (top) and TCE manager Nona Diko (left) at the Symposium

INDEPENDENCE CURRICULUM 2023

In 2022, the Indonesian Ministry of Education, Culture, Research, and Technology launched the "Merdeka Curriculum" (Independence Curriculum), that emphasises interactive projects and field trips rather than lessons in the classroom. The Education Department of Bitung has encouraged the TCE team to implement this new project-based curriculum, which nicely fits our hands-on learning approach. Therefore, we aim to enrich our lessons with interactive projects that are adapted to the students' biology curricula.



Independence Curriculum students creating artwork from plastic waste together with local artist Cindy (lin) Samiadji (left) and observing the crested macaques (right)



We piloted our Independence Curriculum as part of our conservation education programme. In October 2023, we expanded upon this curriculum by organizing a mini-Science Camp for students from the SMP 7 Junior High School of Winenet (a village near Bitung). The students followed the macaques together with the MNP team, made coastal and forest transects, learned about waste decomposition and the effect of global warming, and made art from plastic waste together with a local artist. We received positive feedback from the schools that were involved in the curriculum, which further highlights the importance of combining formal learning with practical experiences in nature education.

In February 2024, we organized a training to provide teachers and volunteers with the skills and knowledge needed to teach our Independence Curriculum. The training included various workshops and a trip to the Tangkoko forest!



Vegetation lesson of our teacher training



MACAQUE NEWS

Here are some updates about the crested macaques that are studied by our MNP colleagues in the Tangkoko Nature Reserve:

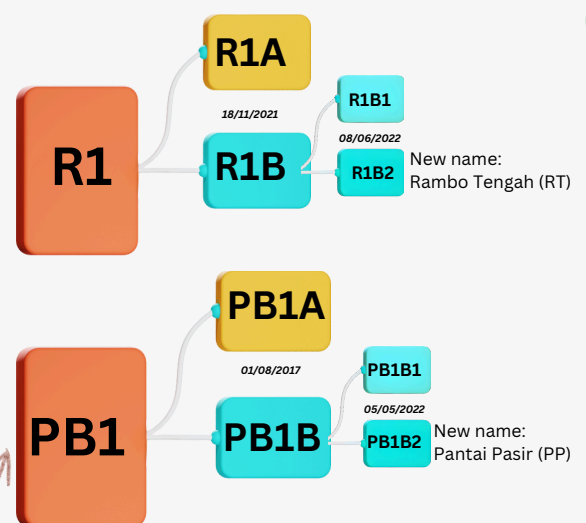
Across the two main groups that were followed this past year ('Rambo Tengah (RT)' and 'Pantai Pasir PP'), 19 macaques were born and only 3 died. The makeup of both groups remains dynamic, as male crested macaques often leave to join another group when they reach maturity. This prevents inbreeding and diversifies the gene pools of all groups in the area.

Take a look at the complex evolution of macaque group dynamics over the past three years in this diagram!

Mango season

Around September, the mango season starts in Tangkoko. During this period, the macaques like to feed from mango trees outside the forest. While this is a smart and resourceful way for the macaques to get a meal, it can also lead to conflict with the people growing the mangos in their gardens.

Group names and split dates



A group of macaques feeding on mangos outside the forest

EVENTS AND COLLABORATIONS

This past year has been full of awareness campaigns, collaborations, national and international meetings, and training opportunities! Here are some of the highlights:

Summer 2023

MNP directors Jerome Micheletta and Julie Dubosq, and TCE international coordinator, Mathilde Chanvin, visited Tangkoko to meet with the team, partner organisations and local authorities. Together with the on site team, they evaluated the TCE programme and discussed its long-term perspectives. They were accompanied by Caroline Richaud, Pierre Bouthors and Christine Morrier, long term supporters of the programme based in France.



School visit in Pinangunian with TCE team and international supporters

November 2023

Nona and Risma visited RIMBA – an Ecolodge & Non-Profit Organisation in Sungai Pinang, West Sumatra. They learned about their recycling station with a pyropolis machine, which transforms plastic into fuel and other raw materials.



Nona and Risma with their poster

August 2024

The TCE and MNP teams took part in the Festival of Conservation in Manado, the capital of North Sulawesi. TCE pupils also took part in the event, presenting their poems, drawings and theatrical performances about macaque conservation. Well done to them!



A pupil reading poetry at the Festival of Conservation

August 2023

MNP and TCE managers Risma Rismayanti and Nona Diko attended the congress of the International Primatological Society in Kuching, Malaysia, with a poster and a presentation. An ideal opportunity to share the important work they do in Tangkoko and to exchange ideas with other researchers from around the world!

February 2024

The wonderful teachers who took part in our teacher training programme presented what they created and learned during the training at SMP 7 Bitung school.



Participants of our teacher training programme in the Tangkoko forest

INTERNATIONAL OUTREACH

This year also saw growing international outreach and collaborations!

Awareness campaign for students in France

In 2023, Caroline Richaud, our long-term volunteer and biology teacher, taught 150 students of the secondary school "Ensemble scolaire Marie Rivier" (France) about biodiversity and conservation. The students successfully incorporated crested macaques and related topics in their A-level presentations, and we are very proud of them!



A-Level students presenting their work on crested macaques

"In the far away jungle" exhibition

Between July and September of 2023, our exhibition "In the far away jungle" was presented at three zoos across France: CERZA Parc des Safaris, Mulhouse Zoo and Zoo d'Amiens Métropole. The exhibition informs zoo visitors about the importance of protecting crested macaques and the rich ecosystems they inhabit, while also highlighting the conservation and education work carried out by MNP and TCE.



The exhibition "In the far away jungle" at Zoo d'Amiens Métropole, hosted by Julie Dubosq and Adam Provin from MNP

FUTURE PERSPECTIVES

We have a lot more in store for 2024 and beyond!

- We have started our 14th TCE school year in 2024-2025 with even more students and schools involved, as well as our 5th Science Camp and Symposium!
- Our 8th lesson, "plastic waste" is now complete and ready to be piloted, thanks to the help of our volunteers and illustrator Elodie Philippe. We will also be creating our 9th lesson about the problem of land conversion for palm and coconut oil plantations, and how to mitigate it.
- We are looking for funds to establish our own plastic recycling project, like the one run by RIMBA. This would help to reduce plastic pollution and improve the sanitation in the area of Batu Putih.
- We plan to collaborate with Valérie Provin, a preschool teacher based in the North of France, to foster connections between pupils in France and Batu Putih, with a focus on environmental stewardship. Valerie visited Tangkoko in the summer of 2024 with the TCE and MNP teams, and met with many enthusiastic students and teachers!
- And much more to come :)



Valérie Provin, Adam Provin, MNP and TCE staff with pupils from a preschool in Batu Putih



AKNOWLEDGMENTS

Tangkoko Conservation Education would like to thank all members, volunteers, friends and partners who have supported our activities since 2011, and especially in 2024: 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, IPB Bogor, Yayasan Konservasi Tangkoko Indonesia, Kaum Muda Pencinta Alam (KMPA) Tunas Hijau Airmadidi, Lamp of Bottle, Forum Komunikasi Kader Konservasi Indonesia (FK3I) Manado, Mahasiswa Pencinta Alam (Mapala) Bumi, Mahasiswa SMA MAN Model Manado, Sahabat Tangkoko, Tasikoki Wildlife Rescue and Education Centre (PPST), Selamatkan Yaki, Sulut Semangat, Alliansi Konservasi Tompotika (AITo), and Rimba NGO.

We also thank our donors as well as the students, volunteers, friends and acquaintances in other parts of the World for their outstanding help and support: Caroline Richaud, Claire D and G, Francois Lamarque, Christine Morrier, Pierre Bouthors, Julie Dubosq, Adam and Valérie Provin, Christine Avril, Marine Joly, Nadege and Reno from Rimba NGO. Many thanks also to our online volunteer translators: Brian Oentoro, Brian Hincliffe, Sonia Maryan, Kristin Kelber, and Eka Ramadhona Nasution. A special thanks to Adam Zeeman for designing this newsletter!

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

Help us continue our work with
local communities to protect
wildlife in North Sulawesi.

Your donation can make a difference:

<http://pina-ev.interjam.de/en/donate>

Thank you for your support!



Our supporters in 2023-2024

