



# Expedition: Reducing the Overexploitation of the Bengal Tiger Habitat

## Field Study: Conservation and Livelihood Development

### Summary:

Silvia Schrötter, a master's student at the Norwegian University of Life Sciences, spent five months in India researching methods to help reduce the overexploitation of the Bengal tiger in Manas National Park. The tiger population is dwindling due to poaching; overgrazing by cattle; and the collection of thatch, food and fuel wood by the local people. Schrötter collected data about homestead gardens and will create a pamphlet in the Bodo and Assamese languages to share information about how these gardens can improve the homestead fuel wood production and income to local communities.

### THE EXPEDITION

Mainly caused by human induced impacts, the population of tigers that are left in the wild have declined to an estimate of approximately 3,900 individuals.

The Manas National Park (MNP) in Assam, India is an important habitat for Bengal tigers. However, poaching as well as habitat fragmentation and destruction still threaten the endangered big cat.



Silvia during the socio-economic interview with a family

To conserve these apex predators and therefore the whole ecosystem, the Manas Tiger Conservation Programme (MTCP) was established.

Under the lead of Aaranyak, a society for biodiversity conservation in northeast India and the international NGOs Awely Wildlife & People, Panthera and the WCT India, the MTCP strives for the protection of the Bengal tiger.

Creating protected areas like the MNP is a common conservation practice.



## WHO

Silvia Theresa Schrötter

## WHAT

Researching methods to help reduce the overexploitation of the Bengal tiger

## WHEN

June 16 – December 16, 2017

## WHERE

Fringe villages of Manas National Park, Assam, India

## WHY

The tiger population is dwindling due to human impact

## Manas National Park

However, conflicts with local people who are suddenly prohibited to access essential natural resources can be negative results.

To diminish these conflicts one objective of the MTCP is to increase the livelihood of local people and therefore reduce the dependency on resources from the MNP. Silvia's Expedition was part of the MTCP. By analyzing home gardens, she tries to connect traditional methods and structures in order to increase the local fuel wood production.

### EXPEDITION GOALS

- Find out if home gardens have the potential to function as exclusive sources for fuel wood.
- Compile maintenance strategies, that if applied could increase the fuel wood production in home gardens.
- Elaborate species that could be planted, function as fuel wood and likely bring income.



Silvia Schrötter, master's student at the Norwegian University of Life Sciences

- Create a pamphlet in the local languages Bodo and Assamese to share the outcome of the study and raise awareness.

### CHALLENGES FACED

Silvia's methods included the identification of local tree species, entering homes and roaming through private properties, as well as asking very personal questions to people who have sometimes never seen a foreigner before. She had to learn a lot about the people, the different cultures and their environment before the field work could be started.



Silvia has a group discussion with villagers.

By living with a local Bodo family, Silvia learned to understand their problems, their thinking, and following actions. Through including the villagers in group discussions, explaining the reason for the field work and personally answering and asking questions, Silvia got a good insight in the situation and gained the trust of local people. This should raise the chance of an authentic study and that the suggestions of the pamphlet will be accepted and actually applied in the future.

Besides the advantages for her research, Silvia experienced what life in rural northeast India with a native tribe feels like, which was an adventure itself. Yet, some hindrances occurred during the research. Heavy monsoon rain sometimes made it impossible to conduct the work. Even with rain gear it was challenging to identify leaves of a 30-foot high tree, when it feels like staring straight into a shower head. Being assisted by a local woman, who translated from Bodo and Assamese to English, the language barrier was kept quite low, however sometimes miscommunication led to misunderstandings. Although the reason for the study was explained very detailed, understandably some people found it hard to comprehend why a foreign woman is wading through flooded garden patches to count trees.

Others directly asked if they get a financial benefit out of letting Silvia access their property. It was hard to make it comprehensible that their benefit will follow in form of a pamphlet. The plant Betel nut (*Areca catechu*) is of high social and economic value to the residents. To explain that planting fuel wood trees instead of Betel nut palms might be of use not only privately, but also for the ecosystem of the Manas National Park, is a challenge itself. This challenge will be addressed in the pamphlet to create awareness about how the MNP is impacted by the extraction of fuel wood and how this threatens the ecosystem and its functions.



Silvia with village women from the Bodo tribe in the traditional dress, the Dokhona

### EXPEDITION RESULTS

In 27% of the households the home garden is used as the only fuel wood source. This indicates, that home gardens have the potential to function as an alternative source to the Manas National Park. What maintenance strategies could be applied and which species should be planted to improve the fuel wood production in home gardens will be determined after further analysis.

### EXPEDITION FUNDING

The expedition was partially funded by a field study grant by the Norwegian University of Life Sciences. Local expenses were covered by Awely, Wildlife & People and WINGS WorldQuest.

### ABOUT THE FLAG CARRIER

Silvia Schrötter is currently pursuing her Master's Degree in Tropical Ecology and Natural Resource Management at the Norwegian University of Life Sciences, and completed her Bachelor's Degree in Biology at the Ludwig-Maximilians-University in her home country Germany. Silvia wants to stay on the path of Conservation Biology and link it with the livelihood development of residents. By including local people and their traditional knowledge in the conservation of unique ecosystems, the chance of success seems more realistic. Silvia's ambition is to conduct a PhD Degree subsequently to her current studies and therefore contribute to the research of applied conservation and development.



Silvia Schrötter  
and field assistant  
Kapati Basumatari.

### EXPEDITION TEAM

Team Leader: Silvia Theresa Schrötter  
Field Assistant: Kapati Basumatari

### CONTACT INFORMATION

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