

INDIA

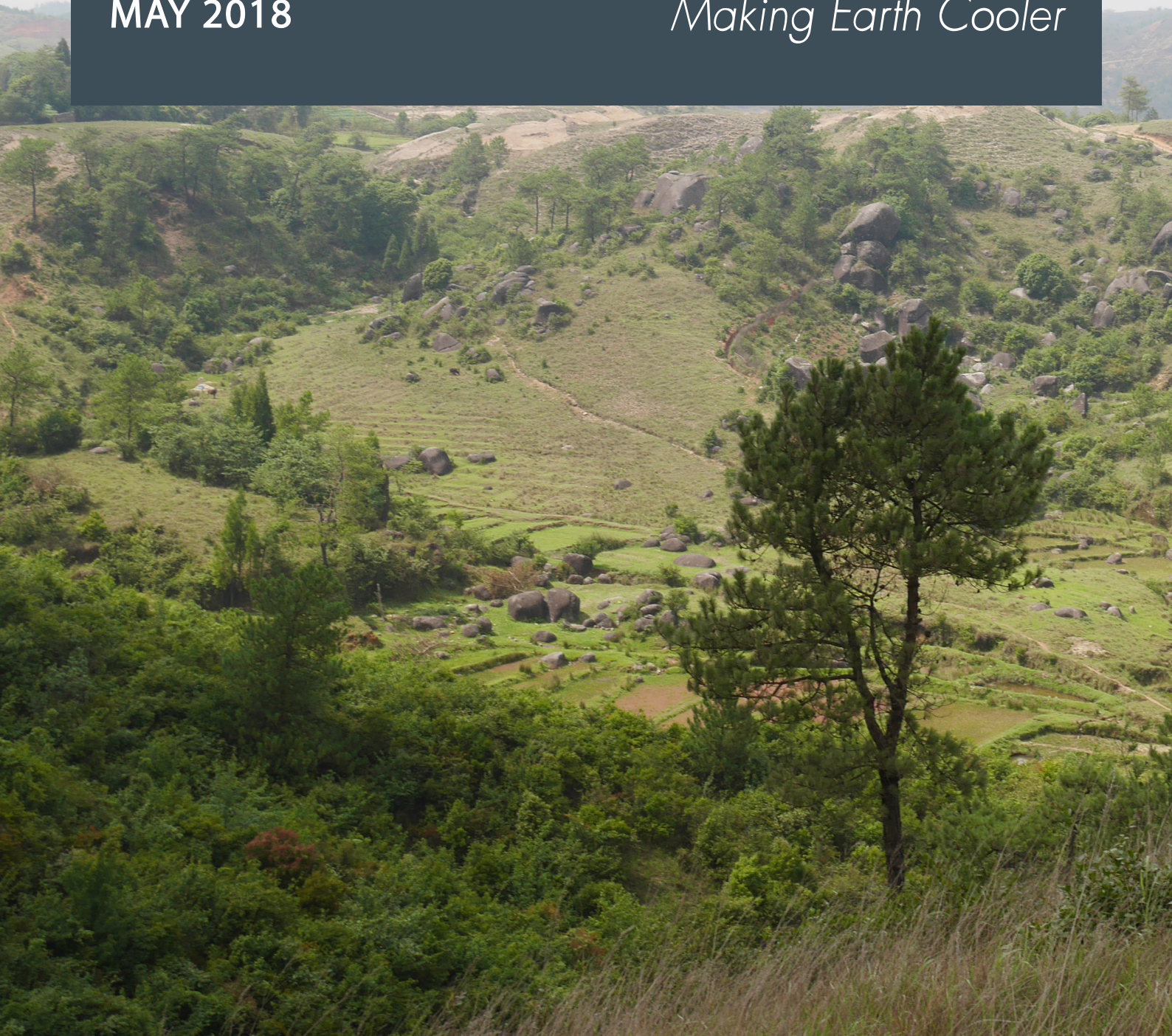
KHASI HILLS

MAY 2018



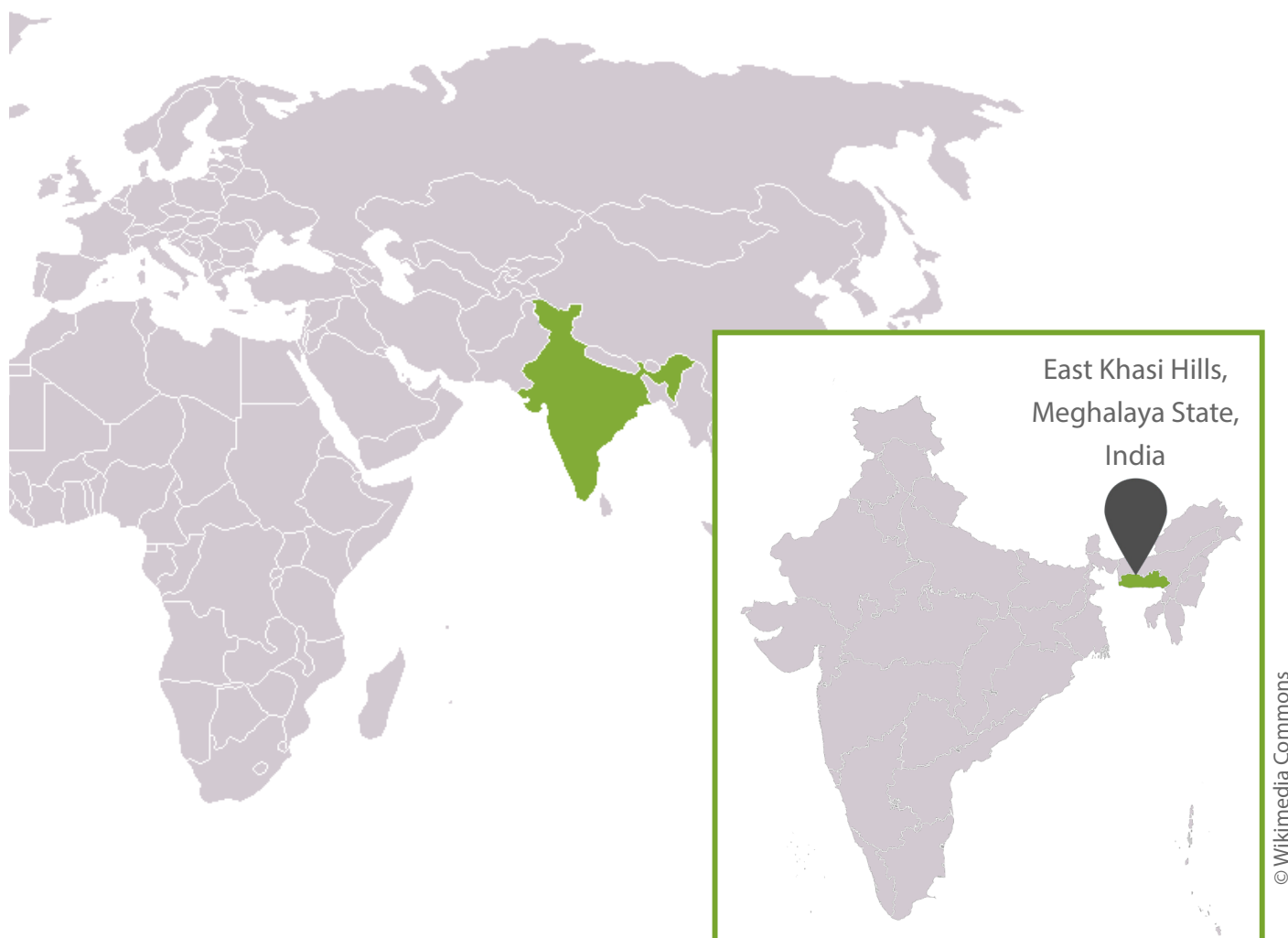
WeForest

Making Earth Cooler



THE PROJECT

Planting trees and restoring forests only make sense if you can ensure the trees will thrive in the long term: for that you need the local communities to see more value in standing trees than in felled forests. In the Khasi Hills, WeForest partnered with a federation of 10 indigenous governments and 62 Khasi villages to restore areas of forest through assisted natural regeneration (ANR) with enrichment planting. Communities are empowered and run the nurseries that provide the seedlings. The project also tackles the drivers of deforestation (charcoal production, grazing and forest fires): fuel efficient cooking sets for households are being provided to help reduce the pressure on forests.



SCIENCE-BASED MEASUREMENTS AND VERIFICATION

Forestry survey: once a year monitoring of 10 Shannon Index plots

Socio-economic survey: once a year grading of all Self-Help Groups and Farmers' Clubs

Financial audit: once a year by Joshi via Rilum Foundation



LANDSCAPE TRANSFORMATION

Trees funded¹: 1 666 955

Hectares directly restored: 2 250 ha

Methodologies used:

Assisted natural regeneration: ANR is a method that enhances the natural processes of forest restoration, encouraging the natural establishment and subsequent growth of indigenous forest trees, while preventing any factors that might harm them.

Enrichment planting: Adding trees to a degraded forest to increase the density of existing tree species or to increase the richness of a specific tree species; often used as part of ANR.



BIODIVERSITY CONSERVATION

Restoring the original tree biodiversity with over 40 tree species planted across the intervention site.

Contributing to the **conservation of endangered tree species**, such as *Ilex khasiana*, *Quercus gluaca* and *Cinnamomum camphora*.

Adapting our methodology to enhance biodiversity: WeForest plots vary between Shannon biodiversity index of 0.93 and 3.34, which indicates that some plots have been less disturbed than in the past and therefore had more time for regeneration. In the sites with lowest biodiversity scores, we remove the dominant species to leave space for endangered species to regenerate.



CARBON SINK

In the East Khasi Hills, the forest is estimated to capture an average of 169.9 tons of CO₂ per hectare (above ground carbon) over a period of 20 years tree growth.

The trees planted to date will eventually after 20 years have stored **382 275 tons CO₂** or an equivalent of **annual carbon footprint of 38 200 Europeans**.²



COMMUNITY ENGAGEMENT

Direct project beneficiaries: 5 000

62 Self-Help Groups, with an average of 12 members each, run socio-economic activities, in order to reduce the need for firewood and limit deforestation.

5 farmers' clubs, with an average of 30 members each, focus on agricultural activities and serve as a common economic unit for the community in the future.

159 employees and volunteers from the local community are engaged in restoration and livelihood activities.

6 trainings held in 2017 with a total of 211 participants.

ACTIVITIES AND RESULTS

OVERCOMING HARSH WINTERS AND HAIL

WeForest planting sites are regularly monitored by our forestry team. A monitoring visit to the 2017 planting sites showed that 70% of the 25 069 trees planted in Khasi Hills last year survived. This rather low survival rate was caused by exceptionally heavy frost during the winter and hail storms during the spring months.

Extreme weather events are rare but WeForest always takes their probability into consideration in project design. The cost of each tree includes a contribution towards the tree guarantee fund that allows us take quick action and replant lost trees. In Khasi Hills, we have already prepared replacement tree seedlings for the areas hit by frost and hail.

The federation of indigenous governments, one of WeForest's project partners, has decided to protect seedlings of frost sensitive species by teepees to ensure a better survival next winter. With the help of villagers, youth volunteers and community facilitators, approximately 1 000 hand-made teepees were installed in Hima Myllem and Hima Mawbeh.



Hand-made teepees shelter young trees from frost and hail.



Villagers, youth volunteers and community facilitators came together to cover tree saplings with teepees to protect them.

PARTNERSHIP WITH UNITED NATIONS FAO: BUILDING CAPACITY ON FOREST-WATER INTERACTIONS

In response to community concerns about water availability and quality, WeForest collaborated with FAO's Forest and Water Programme to organise a workshop for our Indian project partners on forest-water interactions. The workshop took place in February over 8 days and provided a more in-depth technical follow-up to the forest-water capacity building workshop from April 2017.

Participants learned how to better monitor forest-water processes and studied the effect of forest restoration on soil hydrological function. Under the guidance of two forest hydrologists, they conducted experiments to compare infiltration of the rainwater through different soil types.



Measuring rainwater infiltration.

CELEBRATING WOMEN SELF-HELP GROUPS

Self-Help Groups (SHGs) are the key to sustainable development in the Khasi Hills restoration project. They integrate forest restoration and sustainable livelihood activities, and they help involve families and women as heads of families in the matrilineal Khasi society.

SHGs have proven to be popular as they offer women an opportunity to increase family income. In December 2017, the Khasi Hills federation of 10 indigenous governments recognised the SHGs with the best performance and most creative work. WeForest's Socio-Economic team organised two friendly celebrations, one in Hima Myllem on 12 December and one in Hima Laitkroh on 13 December. Each celebration was attended by nearly 200 SHG members as well as newcomers looking to join a group. The interest from the potential new members was so high that the federation is now considering launching another 8 SHGs in 2018.



Members of the Self-Help Groups attend the celebration in Hima Myllem.

STRENGTHENING LOCAL CAPACITIES

Keeping the planted trees alive and growing requires the engagement of the whole community. Our dynamic project team in India consists of forestry, socio-economic and finance professionals from the Khasi communities. By engaging local experts, WeForest ensures that our project and its impacts are sustainable in the long-run.

In order to further strengthen the team's capacities in project finance management, environmental and socio-economic monitoring, members of the team will receive additional training in the second half of 2018. A particular emphasis will be given to further integrating the forestry and socio-economic activities, and to preparing a strategy for transitioning tree nurseries into financially self-sufficient businesses and for better coping with the harsh winters.



WeForest team in the Khasi Hills.

PROJECT CHRONOLOGY

- 2014 Partnered with Ka Synjuk Ki Hima Arliang Wah Umiam Mawphlang Welfare Society
- 2015 Weforest and the federation start distributing efficient cooking stoves to the communities to encourage a transition to forest-friendly cooking culture
- 2016 Expansion strategy started for North (Rhi Bhoi) and West Khasi regions
- 2017 United Nations Food and Agriculture Organization (FAO) & WeForest partnership: Water Capacity Building Workshop seeking to support the community to build their understanding of forest-water relationships in East Khasi Hills
Meeting of all Self-Help Groups
- 2018 Field workshop on forest water interactions

MEET MEDALIN, CLEAN COOKING CHAMPION



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Medalin is a 32 year-old labourer and mother of four living in the Mawlum Thyrсад Village. In the past, her family used up more than 1800 kg of firewood for cooking every year. In addition to being inefficient and contributing to tree felling, their dependence on firewood added more than 200 euros equivalent to the family's annual expenses. In the winter, the family also had to operate a costly electric heater.

Thanks to a 40% subsidy from WeForest, Medalin was able to afford an LPG connection. Now she uses gas for both cooking and heating for a fraction of the cost, protecting her family from the health-damaging smoke and protecting the forests of the Khasi Hills.



Celebration of Self-Help Groups in Hima Myllem in December 2017.



Tree saplings in the Shailang nursery are ready for planting.

FOOTNOTES

- 1 Includes 400 067 trees financed in 2016, 504 437 trees financed in 2017 and 299 996 trees financed in 2018 (ongoing).
- 2 Assuming the average annual carbon footprint of one European is an equivalent of 10 tons of CO₂.

WeForest is an international non-profit that specializes in mobilizing companies to restore the World's forests and embark their stakeholders into a long-term journey towards environmental sustainability.

In order to achieve the objectives of the Paris Climate Agreement, we need to start decreasing our global emissions by 2020 and achieve carbon neutrality by the second half of this century. While reducing carbon emissions is critical, research suggests that even if carbon dioxide emissions came to a sudden halt, the carbon dioxide already in the Earth's atmosphere could continue to warm our planet for hundreds of years. The challenge is to reduce future carbon emissions and actively remove the excess carbon from our atmosphere.

Forests are known as the best technology for that: they are an amazing carbon sink.

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THANK YOU