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## A GLOBAL PARTNERSHIP FOR LOCAL SUCCESS

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Bali Province  
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Batur UNESCO Global Geopark  
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SU-re.co  
Sustainability & Resilience



# RESTORING NORTHEAST BALI & BATUR UNESCO GLOBAL GEOPARK

Agroforestry and Reforestation for Improved Livelihoods and Ecosystem Services through Commodities, Carbon Sequestration, Ecotourism, Bioenergy

## The challenge

Northeast Bali, Indonesia — which includes the Batur UNESCO Global Geopark — features approximately 135,000 ha of degraded land in the Government's Forest Estate ('Kawasan Hutan'), which is managed by the provincial government's Forestry and Environment Agency (Dinas Kehutanan Dan Lingkungan Hidup Provinsi Bali/DKLH).

The vegetation, soils and water resources are designated as 'potentially' to 'very severely' degraded on 43,000 hectares. This is steadily increasing owing to unsustainable forestry and farming practices. Local communities within and surrounding the Kawasan Hutan

— among the poorest in Bali — are affected by droughts, flash floods, landslides and poor water quality.

The Geopark in Northeast Bali was established in 2012 on the active volcanic landscape of Mt Batur, which features not only unique and dramatic geological formations, protected forests and endemic flora and fauna but also 15 villages. Approximately 90% of the Geopark is classified as severely degraded owing to a lack of post-eruption rehabilitation and unsustainable farming practices. The Geopark received almost 1 million visitors in 2019.

## Proposed solution

Under an MoU already established between Sustainability and Resilience Co. (a local NGO/ su-re.co) and DKLH, a partnership of local communities and governments will, in collaboration with international and national development organizations, donors and investors, rehabilitate approximately 20,000 hectares of degraded and 'production' forest land and agricultural land using assisted natural regeneration, enrichment planting and agroforestry.

The resultant secondary forests and agroforests will have high values for ecotourism, sequester substantial amounts of carbon, produce a range of in-demand commodities (e.g., coffee, spices), generate bioenergy and offer improved ecosystem services to Bali as a whole, the latter being of extremely high value for the tourism industry, representing an opportunity for investment and payment for ecosystem services.

## How will it happen?

The ten-year project will be implemented by a consortium consisting of su-re.co, Indonesian government (DKLH and National Research and Innovation Agency/BRIN), local university (Udayana), international research-in-development organization (CIFOR-ICRAF), National Institute of Forest Science (NIFoS, Republic of Korea), larger private sector, donors and investment partners, each bringing a specific set of resources, skills and expertise.

The work will be carried out through four major components.

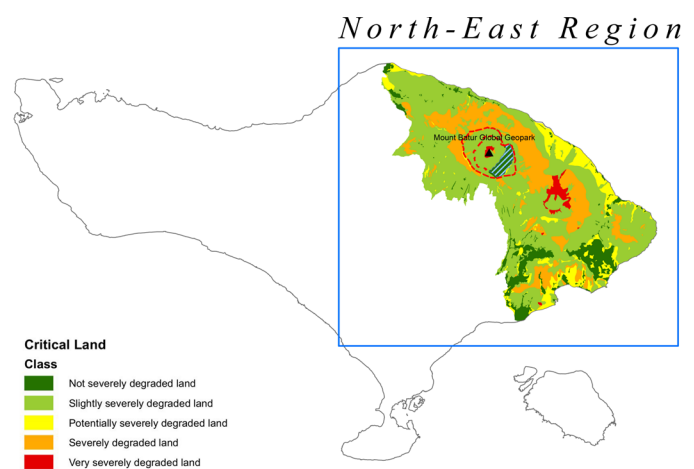
1. Establishment of a coordinated enabling environment through a multistakeholder forum of local governments, national and provincial government agencies, communities, larger private sector and project consortium members.
2. Co-designing and co-implementing models of integrated ecosystem and livelihoods restoration that suit local socio-economic and environmental conditions with staged expansion over the ten years.
3. Training communities, local small businesses and Government staff in co-design, establishment and management of restored, productive ecosystems and value chains.
4. Strengthening and further introducing partnerships between the community, public and private sectors in all aspects of the landscape, including co-developing and co-implementing an enabling investment environment for continuing financial flows.

## Expected outputs

1. Quality germplasm from commercially viable nurseries
2. A landscape of integrated restoration, bioenergy and payment for ecosystem services
3. At least 10,000 male and female farmers trained in assisted natural regeneration, enrichment planting, climate-smart agroforestry, bioenergy and other productive practices
4. At least 100 forestry officials and Geopark staff trained in long-term management of assisted natural regeneration, enrichment planting and climate-smart agroforestry
5. Enabling environment for investment in tree-product supply chains
6. Readily investable business plans and economically viable restoration models targeting profitable species, such as Pongamia, Bamboo, Coffee
7. Small-to-medium-sized enterprises enhanced or established
8. Carbon credits
9. Payment for ecosystem services' schemes
10. Spatially explicit maps of degraded land and recommended species for restoration (including productivity and market potential) with accompanying geospatial database of landscapes and predictive models for economic and ecological benefits linked to a smartphone app for design, establishment, sales, monitoring and continuing assistance

## International and national benefits

The project is aligned with the UN Decade on Ecosystem Restoration, UN Framework Convention on Climate Change and Indonesia's commitment to its Nationally Determined Contribution and the Sustainable Development Goals, and the UN conventions on Biological Diversity and Combating Desertification. The project will be a national model of 'bundled' support for restoration in a most challenging environment. A joint stakeholders forum will provide a collaborative space for local, provincial and national stakeholders, including the private sector, to identify, learn and share effective ways to contribute to restoring the land, livelihoods and future of the Geopark.



### su-re.co

su-re.co is an environmental think-do-be tank based in Bali, Indonesia founded in 2014. su-re.co has worked with international and local organisations in various sectors to build expertise in climate change adaptation and mitigation, renewable energy, agriculture, waste management, and other sustainability issues.

### CIFOR-ICRAF

CIFOR-ICRAF harnesses the power of trees, forests, and agroforestry landscapes to address the most pressing global challenges of our time – biodiversity loss, climate change, food security, livelihoods and inequity.