

# Building village economies through climate farming & forest gardening (BeChange)

Paddy rice terraces lay barren due to exodus of work forces



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# The lady farmers maintain kitchen gardens



# Main objectives

- biodiversity preservation
- erosion control, land slide protection
- water retention
- soil organic mater increase
  
- carbon sequestration
  
- increase of economic productivity
- development of new forest products
- creation of jobs in the village

# By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced

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Indicator 1: Trends in tree cover

Indicator 2: Forest area as a percentage of total land area (indicator for SDG target 15.1)

BEFORE ( 2015 )

There were no planning to promote community nurseries and tree cover project, and community people had to depend on District Forest Office, which is little far (at least 30-to 40 km) from the village.

Plantation arrangement was adhoc and usually based on willingness of local government and community leaders.

AFTER ( 2017 )

Now partnership with Municipality and Ithaka Institute for climate farming and technical support of KAFCOL, 10 tree sapling nurseries established for plantation on both public and private lands.



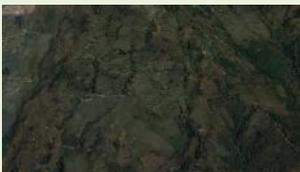
Plantation and management of planted trees rehabilitated both common and private lands of more than 176 ha and benefitted 1039 people.



# By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity

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Indicator 1: Area of land under conservation agriculture  
 Indicator 2: Proportion of agricultural area under productive and sustainable agriculture

BEFORE (2012)	AFTER (2017)
<p>Previously only village head and Community Forestry User Group leaders were worry about the loss of biodiversity and land abandonment.</p> 	<p>Now, Lower caste Iron smith (14 ), Shoe makers (8 women HHs), and indigenous family members (145) and women association (10 groups) are involved in the process of planning and Implementation process</p> 
<p>Community meeting immediately after devastating Earthquake in 2015 identified more than 100 ha of the agricultural lands of Ratanpur region were left abandoned and observed SEPLS as deteriorated and loss of biodiversity. Local youth migrated outside the village because the existing land could not sustain and Provide food.</p> 	<p>68 ha of abandoned agricultural land have been revitalized by planting locally threatened trees with the help of 1039 community people, KAFCOL and Ithaka Institute. It helps local people to promote cultural tourism and re-habilitation of barren land. Slowly migrated youth returning home and started cultivating these barren lands.</p> 

# By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated

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Indicator 1: Trends in eradication of priority invasive alien species

BEFORE (2012)	AFTER (2017)
<p>Before 2015, no people were involved in eradication of invasive species. <i>Eupatorium</i> spp encroached almost half of the forest and agriculture lands.</p>	<p>Invasive species (<i>Eupatorium odortum</i>) are used to make biochar, by means of which their population decreased by 50%.</p>

Because of heavily encroachment of invasive species, the whole area was changed to monocropping of *Eupatorium*.

Now the area replaced with other threatened species, such as *Michelia champaca*, *Cinnamomum*. More than half of the beneficiary households are involved in planting trees with biochar based organic fertilizer using *Eupatorium* feedstock.



# List of locally threatened species, now cultivated

English common name (Local name)	Scientific name	Description
1. Bay leaf	Cinnamomum tamala	Cinnamon leaf and bark is used for spices and perfume making. Its essential oil is good medicine for gastric.
2. Blue marble or bead tree	Elaeocarpus ganitrus	Has religious significance and its bead is use as garland by Hindu Priest.
3. Champak	Michelia champaca	Used as a source of food, medicines and a range of commodities. It is particularly valued for its essential oil and timber
3. Mulberry	Morus alba	Leaf of cinnamon is used for food of silk worm and also used for making organic tea
4. Butter tree	Bassia butyracea	Vegetable ghee production, candle manufacturing and soap making.



# Parcel wise mapping for carbon payment (Target 15: Carbon stocks within ecosystems)







## Suggestions to IPSI for post-2020

- Abandoned lands should be cultivated with high value and locally threatened species
- Local government should lead the reforestation activities and removal of invasive species
- Local NGO/ private agencies need to involve to promote biodiversity related activities for extension at local level.
- Need to develop a well coordinated biodiversity mechanism between Government and Non-Government agencies
- Scale-up from village to village: Farmers are the best ambassadors to multiply the actions

# Biodiversity action unites the global communities



A landscape photograph showing a grassy hill with several trees. The foreground is dominated by tall, dry, golden-brown grasses. In the middle ground, there is a cluster of trees, including a prominent, large, spreading tree with a light-colored trunk. The background shows a hazy, overcast sky and a distant hillside. A semi-transparent white rectangular box is overlaid on the lower half of the image, containing the text "Thank you and please share your comments!".

Thank you and please share your comments!