

# Field Guide



**Meghalaya Carbon and Agroforestry for  
Community Resilience and Ecosystems**



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## About

MBDA and Iora Ecological Solutions, in collaboration with Acorn-Rabobank have launched the Meghalaya Carbon Agroforestry for Community Resilience and Ecosystems (MegCare) programme.



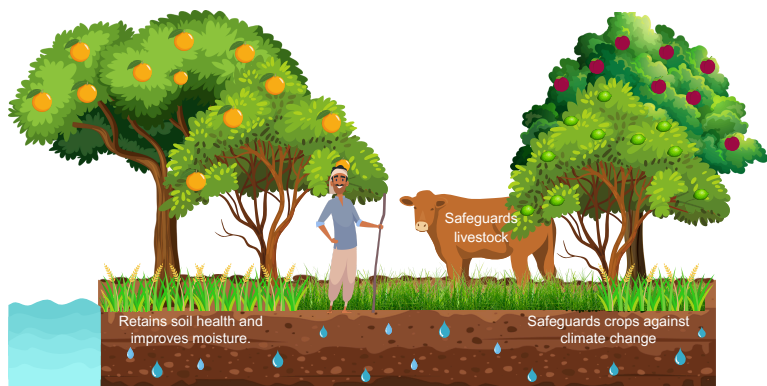
MegCare commits to distributing 80% of carbon income to farmers, providing support for plantation, maintenance, and gap-filling for three years. Farmers will receive training in agroforestry plantation management and access to improved value chains and market connections.



This programme promotes the improvement of nature and livelihoods through agroforestry practices among farmers. By joining the programme, farmers can benefit from yields from their trees – fruits, NTFPs, and timber – along with getting extra annual earnings from carbon credits.

# What is Agro-forestry

Agro-forestry is a land-use system that integrates tree planting, crop production and animal husbandry in a highly sustainable way for the Planet, People and Ecosystem.



## Benefits from Agroforestry



- Enhances crop production for economic benefits to farmers and facilitates timber and forest product production.
- Assists farmers in accessing carbon finance by sequestering carbon to boost their income.

- Retains soil health and enhances soil moisture.
- Slows run-off, reduces soil erosion, and improves water quality.



- Creates a beneficial microclimate for crops through shade, reduced evaporation, and increased humidity.
- Can help regulate water cycling, enhance water supply, increase water productivity and quality.

- Protects livestock and crops from climate change.
- Provides benefits to farmers in crops, wood, fruits, livestock fodder, soil promotion etc.





# Existing Plantation



**Meghalaya Carbon and Agroforestry for  
Community Resilience and Ecosystems**

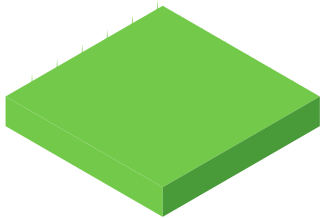


# Tasks to Complete Prior to Site Visit:

1. ✓ If the plantation <5 years.



2. ✓ If the **total land area** is **bigger than 0.1 hectares**.



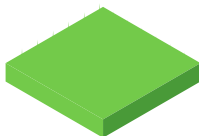
3. ✓ If the farmer can show **ownership documents or a No Objection Certificate (NOC)** from headman/ Nokma.



✗ If the plantation >5 years.



✗ If the **total land area** is **less than 0.1 hectares**.



✗ If the farmer cannot show **ownership documents or an NOC**.



4. ✓ If the farmer/ community members agree to keep the trees for **25 years** on their land. Only sustainable harvesting of **NTPF**, pruning of trees, and harvesting of fruits is allowed.

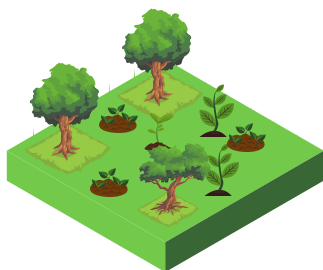


✗ If the farmer/ community members do not want to keep the trees for **25 years** and have plans for harvesting for wood/ timber.

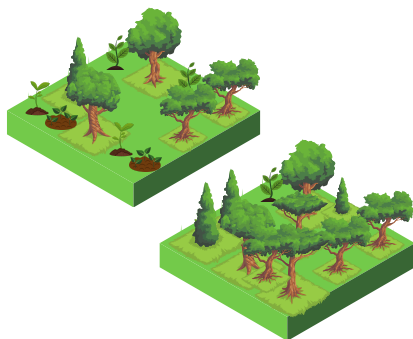


## When you reach the site

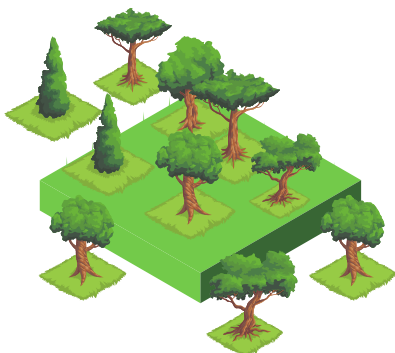
5. If the old trees (**older than 5 years**) are **less than 60%**, ✓ continue with the onboarding.




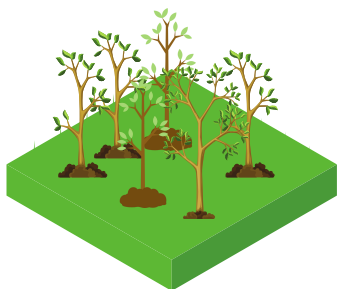
If the old trees (**older than 5 years**) are **more than 60%**, the plot is ✗ eligible for the program.



6. Is the plantation done inside a forest area? If no, proceed with the **onboarding**.




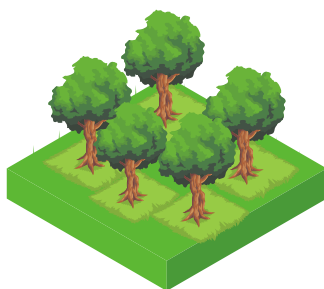
7.  If the existing plantation (**not older than 5 years**) has a mix of different species.



Is the plantation done inside a forest area? If yes, go the **next question**.



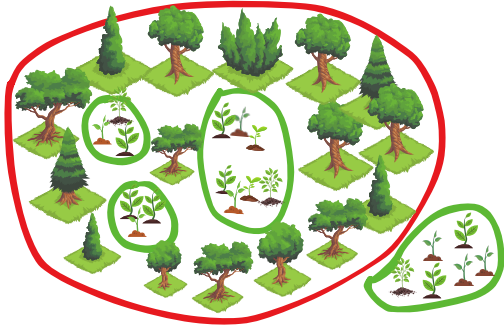
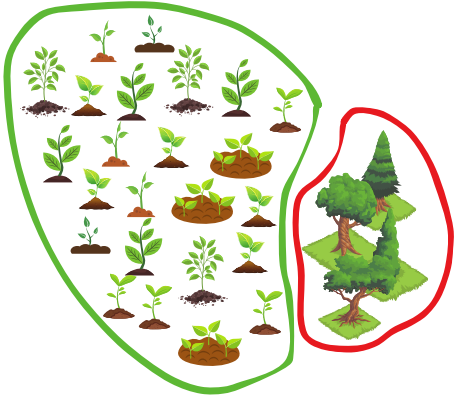
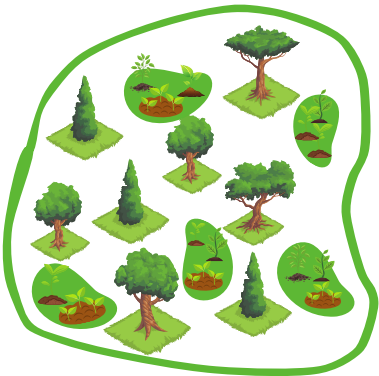
 If the existing plantation (**older than 5 years**) is a monoculture (only one tree species is growing).





8. Is the plantation done in patches or by filling gaps between older trees? If in patches, digitally mark / plot only the areas with new plantations.

1 Plot = 1ha ~ 400 trees



Key



Do not onboard

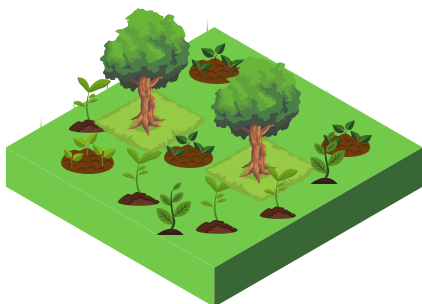


Can be onboarded

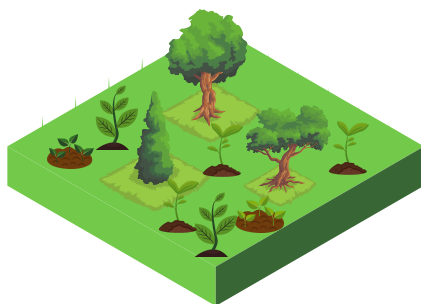
If the patches are smaller than 0.1 hectares, the ACA will not consider it, so we can merge two or more neighboring patches and treat them as a singular plot.

9. Estimate the percentage of existing trees (older than 5 years) on the land visually: **0-20%, 20-40%, 40-60%, or more than 60%.**

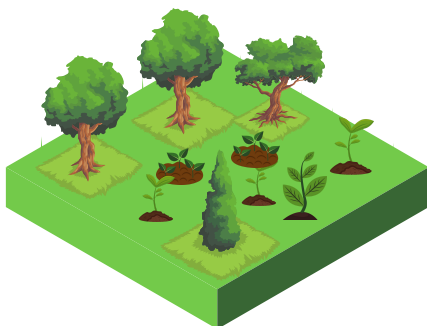
**1 Plot = 1ha**



**10-20%  
<50 Trees**



**20-40%  
50-100 Trees**

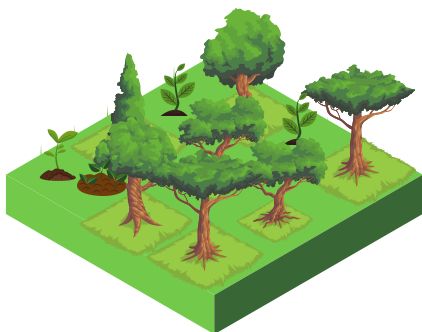


**40-60%  
100-240 Trees**



**60-80%  
240-320 Trees**

In this case, we can provide saplings for the **gap-filling**, as per the farmers need.



**80-100%  
320-400 Trees**

# Annexure

## Bucket 1- All Regions Major Species - Orange and Lemon

English Names	Garo/ Khasi	Scientific Names
<b>Forestry Species</b>		
Red cedar	Bolbret/ Poma	<i>Toona ciliata</i>
Teak	Bolsegun/ Dieng tik	<i>Tectona grandis</i>
Indian bay leaf	Tej pat, teji bol, tespata, Tegi-bol/ Dieng Latyrdop/ Dieng latyrdop	<i>Cinnamomum tamala</i>
Sal	Bolsal/ Bolsar/ Dieng blei	<i>Shorea robusta</i>
Needlewood	Boldak/ Dieng ngan/ Diengshyrngan	<i>Schima wallichii</i>
<b>Horticulture Species</b>		
Lemon	Gakji/kakji/ Soh-jew	<i>Citrus limon (C. jambhiri)</i>
Orange	Komilla/ Soh-niamtra	A few commercial varieties, one is <i>Citrus sinensis</i>
Plum	Plum/ Soh-plum	<i>Prunus domestica</i>

## Bucket 2- Garo Hills and Ri Bhoi Region Major Species - Arecanut and Tamarind

<b>Forestry Species</b>		
Neem	Aja-neemu, Nim/ Dieng-neem/ Dieng sohlong	<i>Azadirachta indica</i>
Teak	Bolsegun/ Dieng tik	<i>Tectona grandis</i>
Jamun	Sambu/ Chambi/ Kimkol/ Khimkol/ Dieng Sohrimai	<i>Syzygium cumini</i>
<b>Horticulture Species</b>		
Arecanut	Gue/ Kwai	<i>Areca catechu</i>
Mango	Tegatchu/ Soh-pieng	<i>Mangifera indica</i>
Jackfruit	Tebrong/ Soh-phan	<i>Artocarpus heterophyllus</i>
Cashew	Cashew	<i>Anacardium occidentale</i>
Orange	Komilla/ Soh-niamtra	<i>Citrus sinensis</i>
Tamarind	Ken tiri/ Cheng/ khenthiri/ Soh-kyntoi	<i>Tamarindus indica</i>
Star Fruit	Amilengga, Galde, Amrenga/ Soh- pyrshong/ Soh- khlur	<i>Averrhoa carambola</i>

# Annexure

## Bucket 3- Khasi- Jaintia Region Major Species - Khasi Pine

English Names	Garo/ Khasi	Scientific Names
<b>Forestry Species</b>		
Khasi pine	Dieng kseh	<i>Pinus kesia</i>
Diengdoh	Dieng doh	<i>Exbucklandia populnea</i>
Alder	Dieng lieng iong	<i>Alnus nepalensis**</i>
Needlewood Tree	Boldak/ Dieng ngan/ Shyr ngan	<i>Schima wallichii</i>

## Bucket 4 - Garo Hills and Ri Bhoi Region Major Species - Tea

Shade Species	Interpolated in the plantation	
Red cedar	Bolbret/ Poma	<i>Toona ciliata</i>
Needlewood Tree	Boldak/ Dieng ngan/ Shyr ngan	<i>Schima wallichii</i>
Neem	Aja-neemu, Nim	<i>Azadirachta indica</i>

## Bucket 5- Khasi Jaintia Region Major Species - Mixed Spices

<b>Forestry Species</b>		
Diengdoh	Dieng doh	<i>Exbucklandia populnea</i>
Khasi pine	Dieng kseh	<i>Pinus kesia</i>
Alder	Dieng lieng iong	<i>Alnus nepalensi</i>
Needlewood Tree	Boldak/ Dieng ngan/ Shyr ngan	<i>Schima wallichii</i>
Diengsning	Diengsning	<i>Castanopsis tribuloides</i>
<b>Horticulture Species</b>		
Bay berry	Bol-solia/ Sohphie	<i>Myrica esculenta</i>





# FAQS

## 1. What is the objective of the MegCare programme?

"MegCARE", which stands for Meghalaya Carbon and Agroforestry for Community Resilience and Ecosystems, aims to implement initiatives that help protect nature and enhance livelihoods of people through agroforestry practices.

## 2. Is the programme for existing or new plantations?

The project is for both existing agroforestry (up to 5 years old, planted since 2019) and new plantations on eligible land.

## 3. How can farmers apply to the MegCare programme?

Farmers who are interested can contact the MegCare team who will then visit their farm for onboarding. The programme team uses a mobile app to map land, list trees, and take farmer information.

## 4. What land size/ area is eligible for enrollment in the programme?

Farmers owning between 0.1 to 10 Ha (0.4 bigha to 40 bigha) of land are eligible to join the programme. Communities can collectively apply for any size of land that belongs to them.

## 5. Who owns the land after you have joined the programme?

Farmers /communities will always retain all the rights and ownership to land. Joining means committing to growing and maintaining trees on your land for minimum of 25 years.

## 6. What happens if I sell my land?

You must try to convince new owner to enter a new contract with the programme so that they can continue to receive benefits for the same area. If they decide to cut the trees, they will no longer receive any benefits from the programme. You also need to inform MegCare team so that necessary onboarding can be initiated.

## 7. Do I have to include all my land in the programme?

No, you can decide how much of your land will be part of the programme, as long as it is between 0.1 to 10 Ha (0.4 bigha to 40 bigha) as individual land or larger for community lands.

## 8. Can land already under plantations become part of the project?

Yes. Land with plantations up to 5 years old is eligible; anything planted over 5 years ago cannot be part of the project. For those joining in 2024, plantations must be from 2019 or later.

## 9. Is land under PES scheme eligible to be part of the programme?

Yes, land under the PES (Payment for Ecosystem Services) scheme is eligible to apply to the programme.

## 10. What type of land is not eligible for joining the programme?

If you have cut more than 60% of the trees on your land in the last 5 years, then you cannot apply for the programme. Unless, these trees had become unproductive and were replaced by native trees.

## 11. What happens if I do not have land ownership documents?

It is very important to have land ownership documents, which will be checked before you can join the programme. If you do not have this, you must get an NOC from Nokma or village Headman.

## 12. How many trees should be/ need to be planted per hectare?

You need to have at least 300 trees per ha on your land and maintain them by replanting/ replacing those that do not survive. More trees means more benefits, but they need to be in balance with other crops to be considered Agroforestry.



# FAQS

## 13. In an existing plantation, how can cash crops be incorporated?

The programme will provide advise of which crops should be planted with the tree species that are on the farm. It will be ensured that the right combination of crops are grown, so that there is no loss in productivity.

## 14. For how many years do I need to keep trees on my land?

You need to keep the trees on your land without cutting them for a minimum of 30 years. Pruning and harvesting is allowed in this time, but if you cut any trees, you will no longer be a part of the programme and will not receive any income.

## 15. When will I receive the first income?

Expect initial income in 4-5 years, and then on an annual basis until the trees reach 25 years. Trees would need to be maintained for another 5 years to maximize environmental benefits.

## 16. How will I receive payments?

You will receive payments directly into your bank account. For this, the programme team will collect your bank details when you sign the contract and you land is mapped.

## 17. Will I be informed of the carbon absorbed by the trees on my farm?

Yes, every year you will be informed of the carbon absorbed by the trees on your farm as well as the payment that you will receive for this.

## 18. What happens if a fire, flood or drought occurs?

Natural events (so-called Acts of God) are unavoidable, and you will not be liable for any loss in tree growth, if there is no deliberate negligence involved. You will be able to rejoin the programme with new trees on the same land.

## 19. Who gets the income generated from trees on community land?

All community members will hold a share in all income generated from trees on community land. How this money will be utilised will be the decision of the community.

## 20. Can fruit trees be planted in the programme?

Yes, fruit trees can be planted. The programme recommends upto 30% of fruit trees on the total land. This will help ensure that farmers get optimal benefits of produce and carbon credits.

## 21. Can I remove or include another area into the project?

No, you cannot remove or include area after you join the programme and your land has been mapped.

## 22. What happens if I divide the land among my children?

Your children can become part of the programme if they keep the trees on the farm. They must come to an agreement among them that they will share the income and other benefits from the land.

## 23. Will training on Agroforestry be provided to those who join the programme?

Yes, the programme will provide regular trainings on agroforestry practices and maintenance, along with sustainable harvesting of NTFPs, value addition, etc.

## 24. Can I plant species of my choice under the project?

Yes, you can select the species, but they should be native or naturally adapted to the state. The programme will also recommend agroforestry models suited on the region. These are scientifically developed to ensure maximum benefit to the farmers and environment.



*A Joint Initiative by*



**For more information or to arrange a visit from the  
MegCare team, contact:**

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