PROPOSAL

TAMANU/NYAMPLUNG CULTIVATION IN 10 HECTARES OF JAKARTA FOREST

Planting 1000 Tamanu/Nyamplung Trees with the Jakarta Provincial Parks and Urban Forestry Service

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Tamanu/Nyamplung Tree (*Calophyllum inophyllum*)-Based Greening Program for Post-Mining Lands & Sustainable Economy

A. BACKGROUND

Post-mining land generally suffers severe ecological damage: nutrient-poor, barren soil, low pH (acidic), dry, hot, low in organic matter, structurally damaged, prone to erosion, and loss of biodiversity. Solutions are needed that not only restore the environment but also provide long-term economic benefits for surrounding communities.

The Tamanu/Nyamplung tree (*Calophyllum inophyllum*) is an ideal species for reclamation due to its resilience to extreme soil conditions while producing valuable products: Tamanu/Nyamplung oil, Tamanu/Nyamplung flower honey, wood, and even traditional medicinal ingredients.

Tamanu-based reclamation programs create a sustainable model: Ecological rehabilitation → ecosystem restoration → green economy → community empowerment.

B. PROGRAM OBJECTIVES

Ecological Goals

1. Restores soil structure and increases vegetation cover.
2. Reduces erosion and increases soil stability.
3. Establishes new ecosystems (bird and insect habitats).
4. Improves soil quality through natural biomass production.

Economic & Social Goals

1. Producing high-value commodities (Tamanu oil).
2. Developing beekeeping for Nyamplung honey.
3. Increasing community income through agroforestry and MSMEs.
4. Becoming a long-term CSR program with tangible economic impact.

C. REASONS FOR CHOOSING THE TAMANU TREE

The Tamanu/Nyamplung tree is more than just a greening agent—it's a commercial tree. Nearly every part of the plant is valuable.

Ecological Reasons

1. Resistant to Extreme Environments

- Can thrive in nutrient-poor, sandy, rocky, and acidic soils.
- Tolerant of extreme heat and drought.
- High survival rate in damaged areas.
- Does not require intensive fertilizer.

2. Strong Root System Penetrates Hard Soil

- Deep, spreading roots stabilize the soil surface.
- Binder the soil, preventing landslides and erosion.
- Improve soil porosity.

3. Wide Canopy → New Ecosystem

With a big, lush header:

- Creates shade.
- Reduces ground surface temperatures.
- Creates habitat for birds and insects.
- Accelerates the formation of secondary forests.

4. Biomass Increases Fertility

- Fallen leaves become humus
- Adding organic matter
- Improves soil structure and fertility

Economic Reasons

1. Seeds → Tamanu Oil (Golden Asset)

Tamanu seeds produce Tamanu oil, which is highly valued. Tamanu oil benefits:

- Treats wounds and acne
- Anti-inflammatory
- Anti-aging
- Repairs skin cells
- Premium cosmetic ingredients

Economic value:

- Each Tamanu tree produces approximately 20–40 kg of fruit per year.
- Every 100 grams of kernels yields 5–8 ml of pure oil.
- Pure Tamanu oil costs between IDR 300.000 and IDR 1.200.000 per 100 ml (premium market).

→ Extraordinary potential for communities around the mine.

2. Flowers → High Quality Honey Source

Tamanu/Nyamplung flowers contain nectar that bees really like. Benefits of flowers:

- An abundant source of nectar for honey bee cultivation.
- Produces Monofloral Tamanu Honey (a unique, premium-quality honey).

Profit:

- Suitable for apiculture (beekeeping) development.
- Local honey business opportunities.
- Enhancing biodiversity.

3. Leaves → Animal Feed & Organic Pesticides

Tamanu/Nyamplung Leaves:

- Can be used as a livestock feed supplement after fermentation.
- Has antimicrobial properties.
- Can be used as a botanical pesticide.



4. Wood → Valuable Material

Characteristics of Tamanu/Nyamplung wood:

- Long lasting
- Strong & not easily weathered

Suitable for:

- Craft materials
- Non-structural furniture
- Wood-based MSME program



5. Bark and Sap → Traditional Medicine

- Tamanu/Nyamplung bark has antibacterial and anti-inflammatory properties.
- Tamanu/Nyamplung sap is used as a traditional wound remedy.
- This opens up opportunities for the local herbal industry.



6. Agroforestry Potential

- Tamanu/Nyamplung can be combined with: Moringa, Leucaena, Gamal, Elephant Grass, and medicinal plants.
- This creates the potential for a productive agroforestry system on ex-mining land.

Reasons for Sustainable Economics

Long-Term Empowerment and CSR

Community empowerment in the Tamanu/Nyamplung area can become a community-based commodity.

Nyamplung → Oil → MSMEs
Flowers → Honey → Beekeepers
Agroforestry → Food and animal feed

Corporate CSR can be directed to:

- Tamanu oil production
- Bee farming
- Woodcraft MSMEs
- Mass planting program

D. SUSTAINABLE ECONOMIC DEVELOPMENT

Tamanu Oil

- One tree produces 20–40 kg of fruit per year.
- Oil price: IDR 300.000 – 1.200.000 / 100 ml.
- Market: skincare, pharmaceuticals, export.

Bee Cultivation (Nyamplung Honey)

- Nectar-rich flowers → suitable for apiculture.
- Monoflora honey has a premium value.

Derivative Products

- Wood: crafts.
- Leaves: organic feed and pesticides.
- Sap: herbal ointment.
- Green areas can become eco-tourism destinations.

E. OUTPUT & IMPACT OF THE PROGRAM

Output

- Real rehabilitation of ex-mining land.
- Productive forests based on Nyamplung.
- Development of community-based MSMEs.
- Sustainable production of Tamanu oil and honey.

Impact

- Ecosystem recovery
- Community income increases
- Carbon emission reduction
- High-value and sustainable CSR

F. PROGRAM DESIGN

Planting Scheme

Planting Distance: 10 x 10 m → Fruit Production

Planting Hole:
30x30x30 cm or 40×40×40 cm (Large Seedlings)

Fertilization:

- At planting: 5–10 kg of compost or manure per hole plus topsoil.
- Two months after planting: 50–75 grams of NPK fertilizer per tree.

Crop Combination (Agroforestry)

- Nyamplung (main crop)
- Moringa
- Leucaena / Gamal
- Elephant grass (livestock)
- Herbal plants (galangal, ginger, lemongrass)

G. CALCULATION OF SEED NEEDS

Number of Seeds per Hectare

Planting distance 10 × 10 m → 100 seedlings/ha

Number of Seeds for 10 Hectares

100 seedlings/ha x 10 → 1000 seedlings

THANK YOU!

For further information or collaboration opportunities, please contact us through the contact information provided. We are ready to partner with you in harnessing the potential of Tamanu and nature for a better future!

“Bring The World Back To Nature”

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