Tree growing area planted with mangium (Engr. Djolly Ma. P. Dinamling, Bureau of Soils and Water Management)

Integrated Soil and Water Conservation Approach in Improving Biophysical Condition of Mt. Kitanglad Agri-Development Corporation (MKADC) Pineapple Production ( )

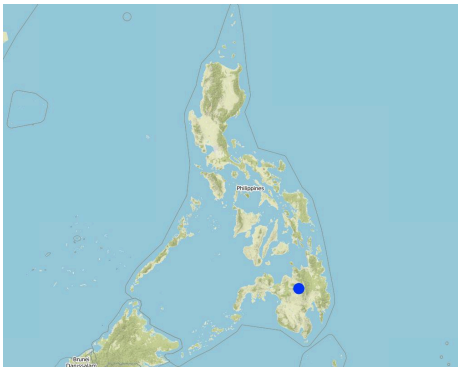
Integration of soil and water conservation technologies primarily aim to protect the area from loss of biodiversity and land degradation.

Aims: (1) To improve biodiversity in the area; (2) To prevent on-site erosion; and (3) To minimize off-site impacts like siltation of natural water bodies.

MKADC is internationally renowned producer of export quality fresh pineapples. They cater different countries in Asia as a proof of their excellent service in pineapple production. Along with this success in MKADC, environmental management system is incorporated in their production area which gives additional merit in the protection of our ecology. This system includes various soil and water conservation technologies namely: 1) buffer zones; 2) sediment traps, brush dams and catch basins; 3) contour straight block lay-out technology; 4) natural vegetative strip; 5) pineapple as erosion control commodity; and 6) relay cropping which aim to minimize soil erosion and improve biodiversity in the area.

Stages of implementation: (a) Site development for 4 to 6 months; (b) Land preparation for 3 months; (c) Planting and replanting; (d) Plant care and crop management which include fertilization and weed control when the pineapple is at 2 to 11 months; (e) Flower induction, fruit development, fruit care and fruit estimates when pineapple is at 12 to 17 months; (f) Degreening and harvesting at 18 months; (g) Ratooning; and (h) Maintenance i.e manual weeding (as needs arises).

The primary stakeholders are the land owners of the leased lands and MKADC.The approach of MKADC ensures that at the end of the contract between the company and the land owners, the land is still productive.



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Pineapple plant serves as silt traps along trenches (Baldwin M. Pine, Bureau of Soils and Water Management)

Pineapple plantation of MKADC (Engr. Djolly Ma. P. Dinamling (Bureau of Soils and Water Management))

The main objectives of the approach are to prevent soil erosion and improve biodiversity.

- ( ): Contract leasing minimum of ten years. After ten years and the owner wish to have its land back, the company is obliged to return the land to its original state/ or productivity. They conduct before and after fertility sampling to ensure the area is productive for cultivation.
- : Compliment labor needs from field operations thru internal environmental management services. Filling up the labor requirement thru reassignment of regular labor from other areas.
- : Fences were built along boundaries to prevent the entry of stray animals and assignment of watchmen in critical areas.

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/ ✓ Sustainability of pineapple production inspite of identical issues on soil erosion, slope protection, and soil fertility loss.

✓ Yearly review and modification of farm field layout to correct deficiencies and to enhance control measures.

✓ Integrated in the pineapple field production approaches.

✓ Internal audits / self-monitoring during high rainfall.

research ✓ Benchmarking on new approaches to address identified issues.

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Collection of sediment/ silt from sediment traps and catch basins. Attempt to conduct research by third party, however cost constraints are foremost. In-house are conducted thru practical approaches and benchmarking.

SLM

< 2,000
2,000-10,000
10,000-100,000
100,000-1,000,000
> 1,000,000

Precise annual budget:

MKADC (land owner,company)
100%

/

SLM?

Retention of soil fertility since eroded soils are trapped in the catchment canals, embankments and other structures to prevent the further movement of the soil downstream.

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It provided additional source of income for laborers to support their families.

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SLM?

The land used for the pineapple production are leased from private owners. If the owner decided not to renew the lease of contract then the company needs to revert back the state of the land before returning to the owner.For this, soil fertility analysis is being practiced.Water rights use is exclusive under National Irrigation Administration (NIA). Need for water are arrange thru fees.

Did other land users / projects adopt the Approach?

Some private companies are starting to adopt the approach. Small-scale farmers nearby the plantation are also encouraged in establishing SWC structures but most of them did not adopt the technology as it lessened the production area and would entail additional cost for them.

SLM

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The company has the financial capabilities to sustain the program since it is part of their workplan.

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- Pineapple produced are exported in Japan, Korea, Middle East and China.
- Physical environment is favorable for pineapple production.

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- Improves livelihood of farmers/ land-users without compromising the productivity of the land since it is ecologically viable.
- Financial capabilities of the company to implement and sustain the program.

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- Physical destruction of field planted with trees providing additional environmental depletion by outside parties (eg. charcoal making, firewood, others).

/ / :

- High input and labour requirements.

Editors

Philippine Overview of Conservation Approaches and Technologies — Eduardo Alberto, Rima Mekdaschi Studer

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- Department of Agriculture-Region VIII (DA-8) -
- Decision Support for Mainstreaming and Scaling out Sustainable Land Management (GEF-FAO / DS-SLM)