Adaptation Mechanisms for Crop Production in Southeast Asia: Rainwater Harvesting, Conservation Agriculture with Trees and Drip Irrigation
In Southeast Asia about 181 million hectares are acidic uplands

Photo by Manny Reyes Chiang Mai, Thailand, June 2005

http://ontheworldmap.com/asia/map-of-southeast-asia.jpg
TOO MUCH WATER IN THE WET SEASON

Cagayan de Oro watershed
Photos courtesy of Jun Mercado and John Muir

230 mm of rain in 10 hrs

https://www.youtube.com/watch?v=Zo75O-Elb0
TWO LITTLE WATER DURING THE DRY SEASON

PROBLEM

As Walter relayed, let us just Nike it
CONSERVATION AGRICULTURE WITH TREES

Proposed Solution

Conservation agriculture with trees (CAT) system as sloping lands management strategy

Diagram from Dr. Agustin Mercado
TRANSFORMATION AFTER FIVE YEARS
SANREM- IL: Philippines site

2009

2014
TRANSFORMATION AFTER FIVE YEARS

Encouraging

Success

Depressing
ANIMAL-BUILT RAINWATER HARVESTERS

Plow, Scoop and Dump
CONSERVATION AGRICULTURE WITH DRIP IRRIGATION FOR VEGETABLES

Water from the pond was used to water vegetables below using drip irrigation
TAKE HOME MESSAGE

• Alarming land degradation is occurring in the steep mountainous food producing regions of the Southeast that severely threatens food security—urgent solutions are needed to arrest this.

• Through 20 years of research in the Philippines, SANREM CRSP has developed Conservation Agriculture with Trees plus Rainwater Harvesting Technology as a very possible solution. Conservation agriculture with Trees + Rainwater Harvesting is a CMA that can be scaled up.

• Conservation agriculture plus drip irrigation sequesters carbon, provides drought resilience and increases yield. It is a CMA that can be scaled up.
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