# PUBLIC AWARENESS FOR AGRICULTURAL EXTENSIONS THROUGH TRAINING OF TRAINERS (TOT) ON CLIMATE CHANGE

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# Introduction

- Agricultural sector in Indonesia (Amien, 2012):
  → one of the largest employers (45%)
  → 17% contribute to the national economy
- Based on geography, topography and climate, Indonesia is vulnerable to the impacts of climate change (Tumiwa, 2010)
- Farmer is one of the actors affected → Increased awareness through the role of agricultural extension agents → Training of Trainers (TOT)

# Training of Trainers (TOT)

- Purpose: to increase the capacity of extension agents, gradually from the central to the local.
  - ✓ Level I → national (TOMT)
  - ✓ Level II → provincial
  - ✓ Level III → local site (field level)
- ICATAD collaborating with ICCTF and BMKG organized TOT on climate change for agricultural extensions

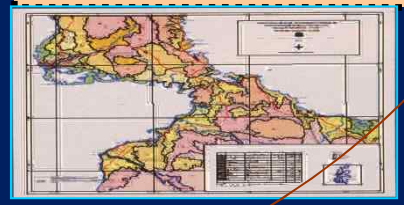
# ICATAD ROLE

**1. Functional (Dissemination)**

- Assistance
- Exhibition/Demo plot
- Consultancy/guidance/training

**2. Structural (Policies/ Coordination)**

- Program & policy formulations
- Ministry of Agriculture program Intermediation
- Road map, agro ecological zone, etc.



**3.Technique/ Operational**

- Multi Location Tests
- Seed Development (FS/SS)
- Soil/plant Analyses, etc.


**4. Specific Duty/ Strategic Programs**

- PUAP, FEATI, P4MI SL-PTT (ICM-FFS), PSDS, Horticulture Areas, Cocoa National Movement


During class in TOT

Refreshment by facilitator

# Visiting Climatological Station

# Discussion

- TOT was conducted in September, 2011
- involved 39 extensions from 18 AIATs and also the extensions from the pilot project location of ICCTF
- The average age was 45 years, with the youngest aged 26 and the oldest 59 years.
- Experience as an extension has lived for an average of 13 years, with a range of diversity between 2 years to 34 years.
- The participants are dominated by male extensions (77%).

# Discussion

**Table 1.** Participant's perceptions on climate change

| Understanding climate change | Percentage (%) | | | |
|---|---|---|---|---|
| | Very idea | Know | Do not Know | Do not know at all |
| It has been climate change | 7.7 | 92.3 | 0.0 | 0.0 |
| Climate change affects agriculture significantly | 15.4 | 10.3 | 66.7 | 7.7 |
| Climate change requires adjustments to farming | 35.9 | 64.1 | 0.0 | 0.0 |
| Climate change can be identified based on natural signs | 5.1 | 43.6 | 51.3 | 0.0 |

# Local Wisdom

- shown by signs on nature or “pranata mangsa”- Indonesian lang.-
- the determination of the behavior associated with animal, plant development, and the landscape around is associated with an agrarian culture (Pramudia, 2011).

# Examples of local wisdom based on user experiences:

- *Cottonwood leaves-If we see a lot of cottonwood leaves were fluttering wind, the incident shows that being a change from wet to dry season*

- *Laron - if we see a lot of moths that emerged in the early morning or evening, that was a change from the dry to the wet season.*

## Using “Pranata Mangsa”

1. The end of the dry season
- Feature: vines up the trellis, bamboo shoots emerging
- Guidance: starting to plant crops

2. Early dry season
- Feature: soil dries and cracks, cottonwood and mango trees start flowering.
- Guidance: unutilized land

## Using “Pranata Mangsa”

3. Early rainy season

- Feature: cottonwood trees begin to bear fruit, small birds begin to nest and lay eggs.
- Guidance: harvest crops, time to working the land for upland rice.

4. Early planting in the rainy season

- Feature: the rain started, tamarind trees start growing young leaves, caterpillars began to appear, moths out of the hole.
- Guidance: repairing field ditch, began to spread seed of upland rice.

- In order to disseminate and provide insight into the impact of climate change and strategies to anticipate approximately 70% of extensions said they have been actively providing information on the extent of knowledge.
- But there are still extension agents whose states are less active (3%) due to the limited access to information resources.

The overall average value of :

→the pre-test was 51.49

→the post-test was 66.97

**Table 2.** Results of pre-test and post-test of the participants of TOT in understanding climate change

| Range of values | Criteria | The number of people (pre-test) | The number of people (post-test) |
|---|---|---|---|
| 0-25 | Less | 2 | 0 |
| 26-50 | Enough | 13 | 2 |
| 51-75 | Good | 23 | **28** |
| 76-100 | Excellent | 1 | **9** |
| Total participants | | 39 | 39 |

# Action Plans

(by extensions, based on questionnaire)

- Socialization to other extensions in provincial level
- In field level, using FFS-ICM and FEATI program to disseminate about climate change issues
- Providing printed media to support their activities in dissemination of climate change impact
- Collaborating with local radio station to socialization of climate change

# Conclusion

- TOT on climate change is a means for extensions to gain knowledge about strategies for coping with the impact of climate change on farming activities based on site-specific local knowledge.
- Increased knowledge and understanding of the extension on climate change and adaptation/mitigation strategies contribute to assist farmers in managing their farming system.
- Awareness of the extensions and farmers play an important role in anticipating the impact of climate change on farm productivity, which further can be attributed to efforts to maintain the stability of national food security.

# Acknowledgement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