



# **SUSTAINABLE WATER MANAGEMENT FOR FOOD SECURITY**

**BOGOR (near Jakarta), INDONESIA**

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**A Presentation by:**

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**Region IX**

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# Average I.A. Area Coverage (Rice Area Only)

## (Actual Irrigated Area of Davao del Norte IMO)

<b>NAME OF SYSTEM</b>	<b>AREA(Ha.)</b>	<b>IAs Then</b>	<b>IAs Now (water based splitting of IA)</b>
1. Lasang RIS	4,900.00	1	11
2. Libuganon RIS	7,500.00	9	45
3. Kipaliku RIS	2,600.00	3	8
4. Salle RIS	5,000.00	18	20
5. Communal(CIS)	1,605.00	12	12
<b>Total</b>	<b>21,605.00</b>	<b>43</b>	<b>96</b>
Ave. IA area(NIS)	(Banana 6,756.37 ha.)	427.21 ha/ IA	157.66 ha./ IA

# **Irrigation by Rotation Method for Five (5) National Irrigation Systems in Davao del Norte, Region XI, Philippines**

- Irrigation by Rotation Method based on the Approved Cropping Pattern per System.
- 1. Lasang RIS 4,900.00 ha.– Water is available every 7 days.
- 2. Libuganon RIS 7,442.82 ha. – Water is available every 11 days.
- 3. Kipaliku RIS 2,600 ha.– Water is available every 5 days.
- 4. Saug RIS 4,300.00 ha. – Water is available every 5 days.
- 5. Libuganon Left RIS 700.00 ha.- water is available every 5 days

# **Advantages of Irrigation by Rotation Method**

- 1. Expand the NIA's Service Area by 20 to 30 %.
- 2. Reduced Irrigation Canal Siltation.
- 3. Reduced Drainage Canal Erosion and Siltation.
- 4. Improved Rice Production.
- 5. Maintained Ecology in the Water Source.

# Principles of Alternate Wetting and Drying (AWD)

Irrigation method wherein water is reapplied after ponded water in the paddy has disappeared for about 3 days or more.

During periods without ponded water:

- No continuous percolation
- No continuous seepage
  - Less evaporation

## Field water tube and rules to be observed for safe AWD

- *Drive the tube to 20 cm depth and remove the soil inside.*
- *Initially, keep 1-3 cm standing water from 1-2 wk after transplanting for seedling recovery and weed control.*
- *After recovery to first heading, apply AWD by irrigating the field with a ponded water depth of around 5 cm when the water level is 15 cm from the soil surface as observed from the field water tube.*
- *In the period from first heading to 1 wk after flowering, keep the field flooded with 2-5 cm depth.*
- *After that, during grain filling and ripening, apply AWD again.*

# To Strengthen NIA as a Government Office

## RA # 3815 – Revised Penal Code

- **Article 217: Malversation of public funds or property.**
- Presumption of malversation. Any public officer who, by reason of the duties of his office, is accountable for public funds or property shall appropriate the same or shall take or mis-appropriate or shall consent, or through abandonment or negligence, shall permit any other person to take such public funds or property, wholly or partially, shall suffer; Penalty:
  - Prision correctional – 6 years if the amount does not exceed P 200.00
  - Prision mayor - 12 years if the amount P 201.00 - P 6,000.00
  - Reclusion temporal - 20 years if the amount exceeds P 20,000.00

## **Policy # 1.**

**All Irrigation water users shall be a member of Irrigators' Association.**

- **RA # 7607 (06-04-92)**

**AN ACT PROVIDING A MAGNA CARTA OF SMALL FARMERS**

- **CHAPTER VI**

- **WATER MANAGEMENT AND IRRIGATION FACILITIES**

- **Sec. 20. (Among others) – The Government shall encourage small farmers to join or form irrigators' associations. In addition, it shall promote participation of farmers to develop their capabilities to eventually assume the operation and maintenance of irrigation systems and the responsibility of collecting fees from the individual members and remitting an amount to the NIA.**

## **Policy # 2.**

**Only members of the Irrigators' Association are legally allowed to withdraw Irrigation water.**

Presidential Decree # 1067

**WATER CODE OF THE PHILLIPINES**

Article # 3 - Principles

- a. All waters belong to the state.
- b. Cannot be the subject of acquisitive prescription.
- c. Water resources shall be subject to the control and regulation of the government through NWRC.
- d. Development of waters shall consider current usage.

### **Policy # 3**

**Negotiations for Right of Way shall be done by I.A. with the assistance of NIA ( for Public Use).**

Section 112 of CA # 141 ( Public Land Law) as amended by P.D. # 635

Sec. 112 of CA 141 as amended under PD 635, Jan.7, 1975.  
(among others).

“Said land shall further be subject to a right-of-way not exceeding sixty (60) meters in width for public highways, railroads, irrigation ditches, aqueducts, telegraph and telephone lines, and similar works, with damages for the improvements only”

# **Seven (7) Crop Management Procedures for Maximum Rice Production**

- 1. Proper Seed Quality Selection;**
- 2. Best Land Preparation;**
- 3. Crop Establishment;**
- 4. Nutrient Management;**
- 5. Water Management;**
- 6. Pest Management; and**
- 7 Harvest Management**

# TO BE VIABLE AND MOST OUTSTANDING IRRIGATORS' ASSOCIATION

1. Updated registration with Securities and Exchange Commission (SEC);
2. Full implementation of Irrigators' Association (I.A) Policies;
3. 100% irrigation water users membership with I.A.;
4. 100% attendance to;
  - a. General assembly meetings.
  - b. TSAG and or Sector group meetings.
5. Properly documented on resolution of cases and submitted to I.A.  
secretary from the following; to wit:
  - a. Cases resolved at general assembly;
  - b. Cases resolved at Board of Trustees meeting;
  - c. Cases resolved at TSAG or Sector group.

# **TO BE VIABLE AND MOST OUTSTANDING IRRIGATORS' ASSOCIATION**

6. 100% attendance to monthly Canal Clearing;
7. Monthly Coordination meeting after canal clearing with 2 or 3 agendum;
8. Establishment of Cooperative as Marketing arm of the I.A.;
9. Organization of Housewives to produce Homemade products or production of Organic Fertilizer;
10. Must have I.A. office and Post Harvest Facilities;
11. Documented linkages with LGU, PO, NGO and other Institutions;
12. 100% ISF / Amortization Collection Efficiency;
13. No Back Accounts for its I.A. Officers;
14. Documented activities of I.A. working committees; and
15. Application of Water Savings Technology.

Note: All of the above must be in color coded folders.

# I.A's CONTROL FOR WATER DISTRIBUTION REQUEST FOR WATER DELIVERY

**RA # 3601, PD#552, RA # 6657, CA # 141, & PD 1067**

I.A. Form No. \_\_\_\_\_

## REQUEST FOR WATER DELIVERY

Date \_\_\_\_\_

**The President**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Sir / Madame:**

May I request for irrigation water to be delivered to my farm described as follows; to wit:

Lot. No. \_\_\_\_\_ Area to be served (ha.) \_\_\_\_\_  
Name of landowner \_\_\_\_\_ Variety to be plated \_\_\_\_\_  
Estimated date of sowing \_\_\_\_\_ Estimated date of planting \_\_\_\_\_

I hereby comply with the policies of the Association with regards to the effective and efficient distribution and use of irrigation water. Likewise, I hereby promise to pay immediately upon harvest the corresponding amount of Irrigation Service Fee due from me.

\_\_\_\_\_  
**Applicant**

Recommending Approval:

Approved / Disapprove

Noted:

\_\_\_\_\_  
**FIG Leader**

\_\_\_\_\_  
**IA President**

\_\_\_\_\_  
**NIA - WRFT**

Priority of payments before availing the request for water delivery:

- Presentation of Official Receipts of the following; ISF, Membership/annual dues, Penalties, OBA, and Others.

## **Conclusions from actual implementation of sustainable irrigation water management:**

**Amount of water input depends on soil type and hydrology;**

**Amount of water reduced with AWD depends on soil type and hydrology;**

**Strategies for sustainable water management could be properly implemented with a strong Irrigators' Association; and**

**Finally, all of these procedures were based on location specific technology development.**