



# IMPLEMENTATION OF IPM PROGRAM FOR CLEAN & SAFE RICE IN MEKONG DELTA (VIETNAM)

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## Vietnam's Agriculture

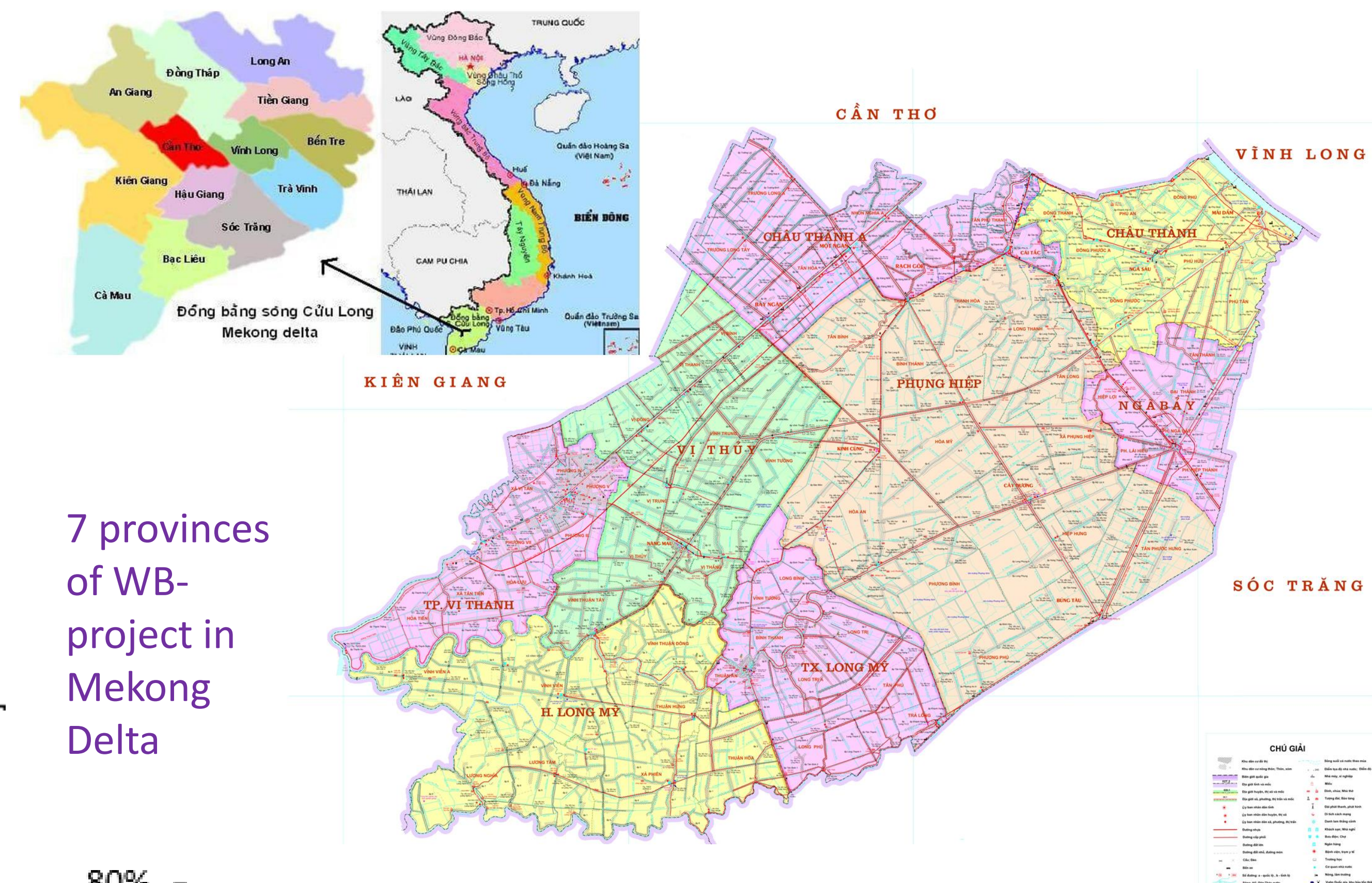
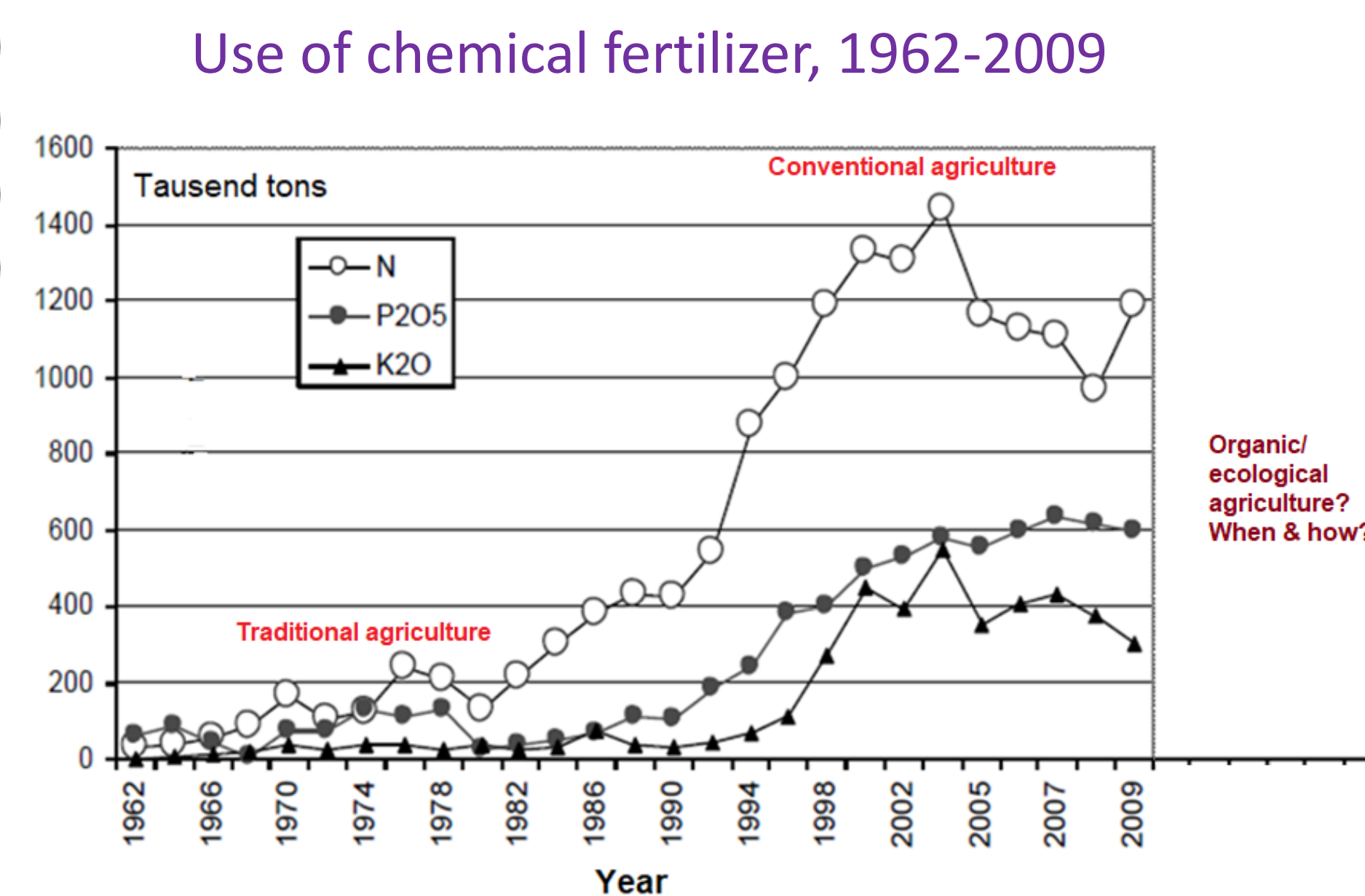
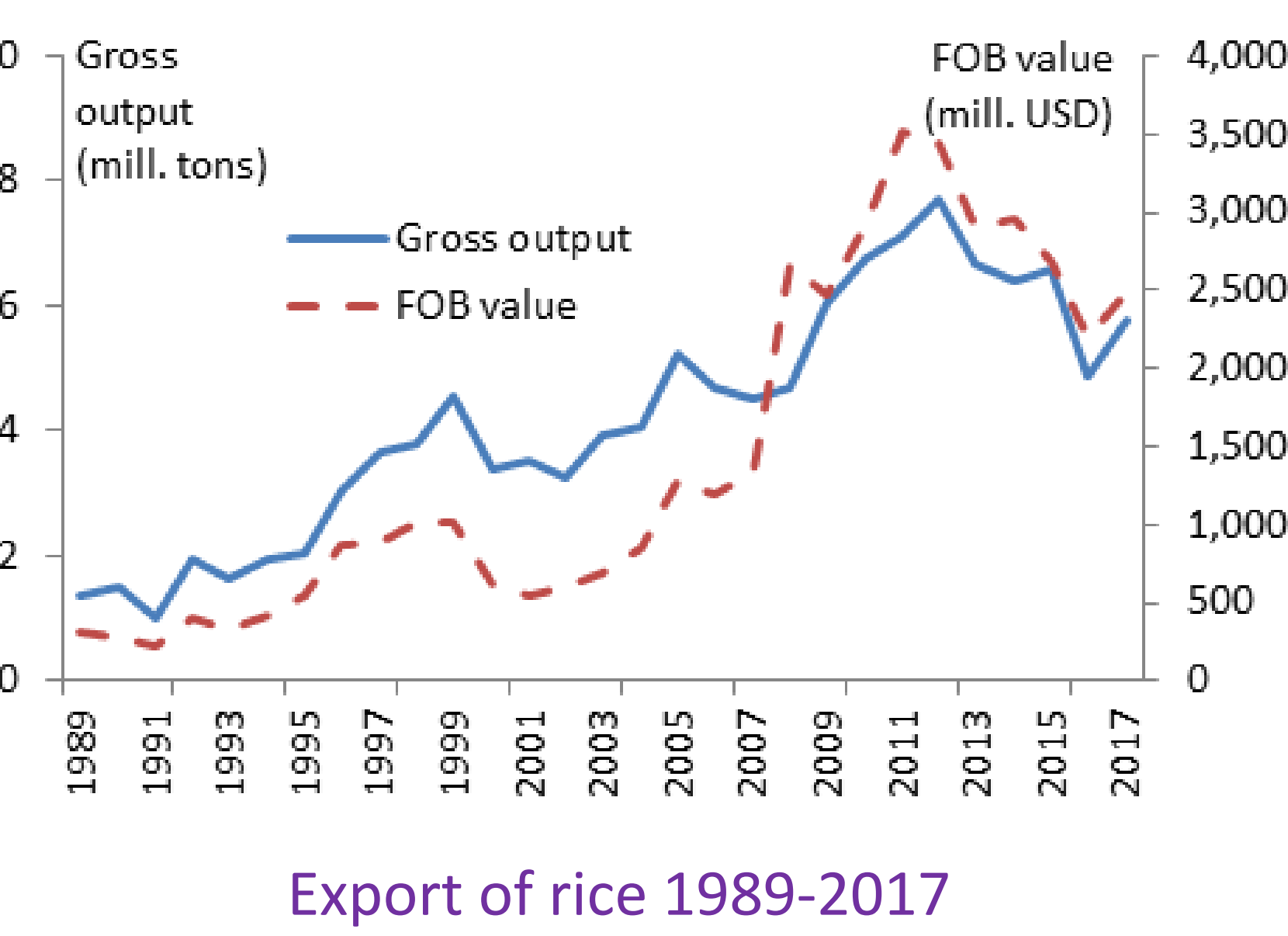
- 9.3 mill. ha of arable land (45% for rice), mainly in Mekong Delta
- Since 1986 change from food scarcity to rice exporter in the world
- 2013: Vietnam export 6.68 mill. tons/FOB value 2.893 bill. USD; Thailand 6.749/4,172; mostly to Africa, Asia and China ("easy", also low quality/standard market)
- The current status of rice production: high productivity/yield, low price, low quality, environmental pollution and stressing of land and water resources.
- Facts: USA, Japan, EU – Barrier for rice with high pesticide residues
- Challenges as the world turning to "Food safety & Healthy eating"

## Agro-technical measures (ATMs) in application

- "3 reductions 3 increases" (reduce seeds, pesticide, nitrogen)
- "1 must 5 reductions" (use certified seed, "5 reductions" is to reduce seeds, nitrogen, pesticide, irrigation water & post harvest losses)
- SRI (System of Rice Intensification)
- Since 2000: IPM (Integrated Pest Management)

## IPM – Principles & compared to other ATMs

- IPM/FAO: Attention to nature, environmental, technical and social factors; Four basic principles: Healthy plantings, Conservation of natural enemies, Frequent field visits, Farmers becoming experts
- Focus on: Combining different measures for crops, farmers, extension workers of DARD, traders of chemical fertilizer & pesticide, waste tanks & treatment, ...



## WB-project

"Mekong Delta Water Management for Rural Development", 2014-2017.

**Goals:** Reduction of 50% pesticides & 10% fertilizer in the project area

**Project area:** 7 provinces, 18,600 ha, 9,300 HHs in FFS, training for 2,070 technical staffs, 1,890 fertilizer & pesticide traders, 620 disposal tanks for dumping the pesticide packaging after use

### Requirements

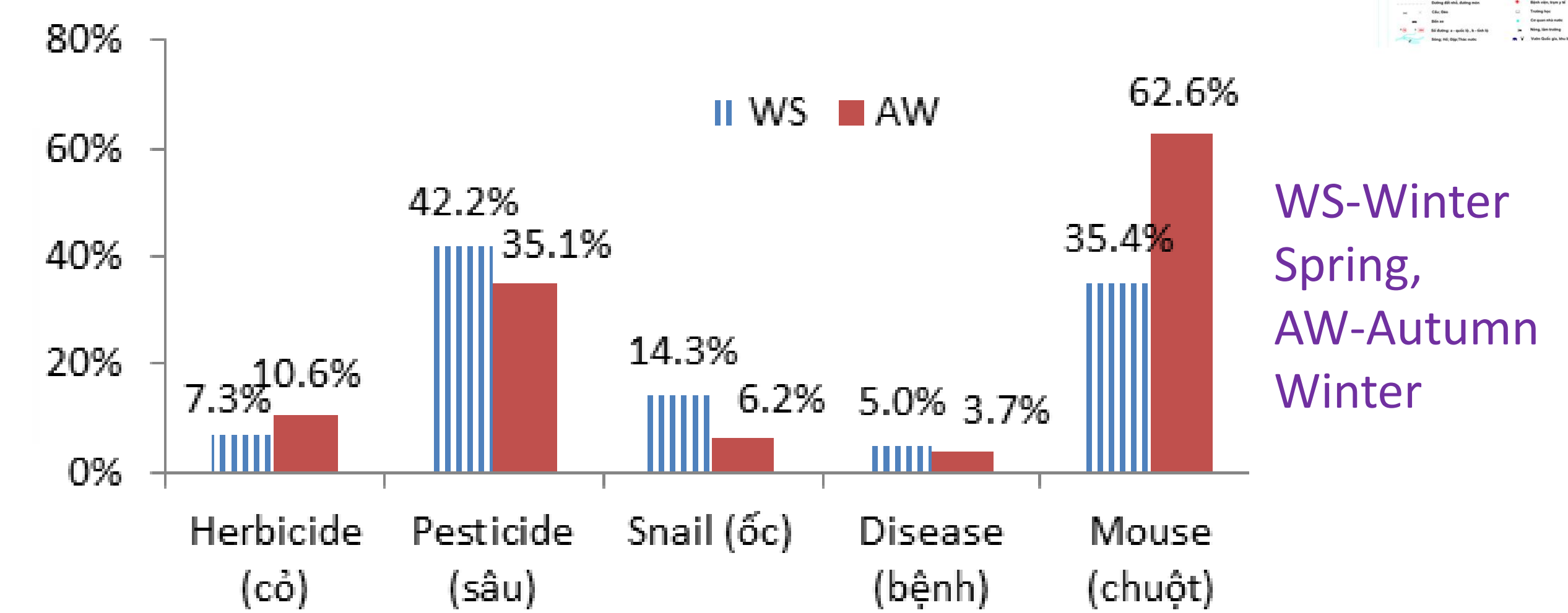
- Seeding density and method: Thin and in row;
- Rice variety & use certificated seeds;
- Training courses for Farmer in form of FFS and visiting in other fields; training for pesticide & fertilizer traders;
- Application: During pesticide use: wearing the clothes and mouth mask, glass; After use: cleaning the sprayer in right place, throw the packaging in a disposal tank, ... not into fields, canals.

### Economic benefits (An Giang province)

- Reducing costs of production inputs (fertilizer, herbicide and pesticide, FHP)
- In comparison with Begin IPM, at the End IPM in WS season, the cost of FHP decreased by 1,969,000 VND/ha, in AW season decreased by 1,351,000 VND/ha.

### Environmental effects (An Giang province)

- A pesticide reduction of 35-42% or 0.39-0.49 kg or liter/ha per crop season,
- It is estimated that up to 1,000 kg or litter in 2,610 ha pilot field could not be released into the environment



Clear reduction of chemical fertilizer N and K<sub>2</sub>O in both seasons at End IPM. However, the amount of K<sub>2</sub>O is nearly unchanged!!!



Behavioral change in the use of pesticide & herbicide

## EU green regulations on agricultural and fishery products - Motivation for transformation in agriculture

- Mandatory regulations:** Packaging waste, IUU regulation: deter and eliminate illegal, unreported and unregulated, Maximum pesticide residue levels, Veterinary and zoo technical checks on live animals and products, authorized food additives
- Standards:** Organic food labeling, GAPs: GAP is also one kind of organic farming but its benefits are more than that. VIETGAP, ... Eco-management and audit scheme (EMAS), ISO 14000



"Vietnam Turns Back A Tsunami Of Pesticides"