



Asia Region Biennial IASC Meeting

Agricultural Production in the Face of Saline Intrusion in the Vietnamese Mekong Delta: Successes and Challenges

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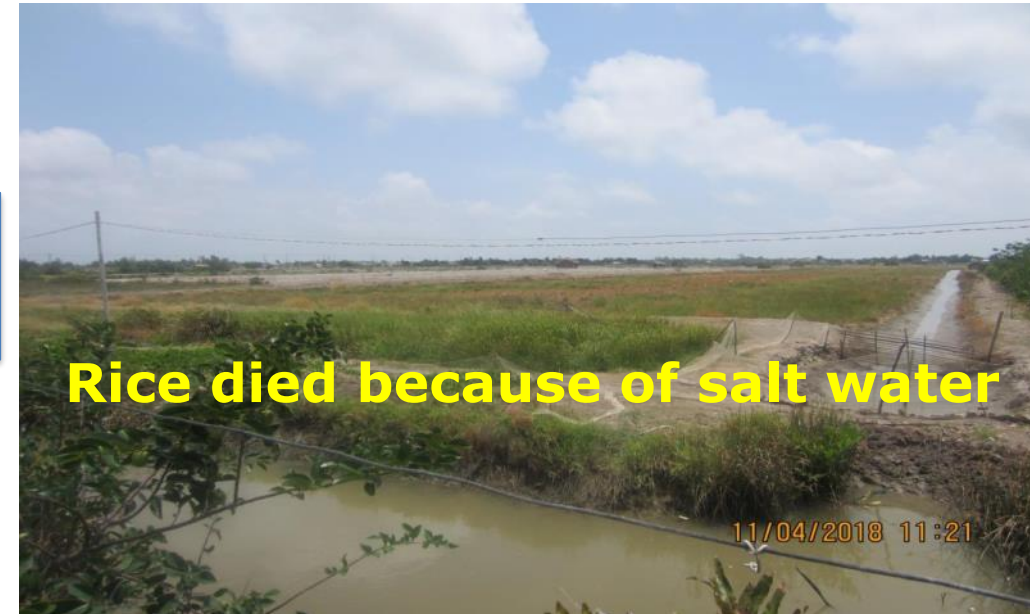
**AIT, Bangkok
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Introduction

SI is uncertain problem
challenging coastal
people in the dry season
in Vietnam



Adaptation to climate risk



The MD of Vietnam – the agricultural zone



**50% rice; 70 fish of total national
agricultural production**

Export:

Rice 90%;

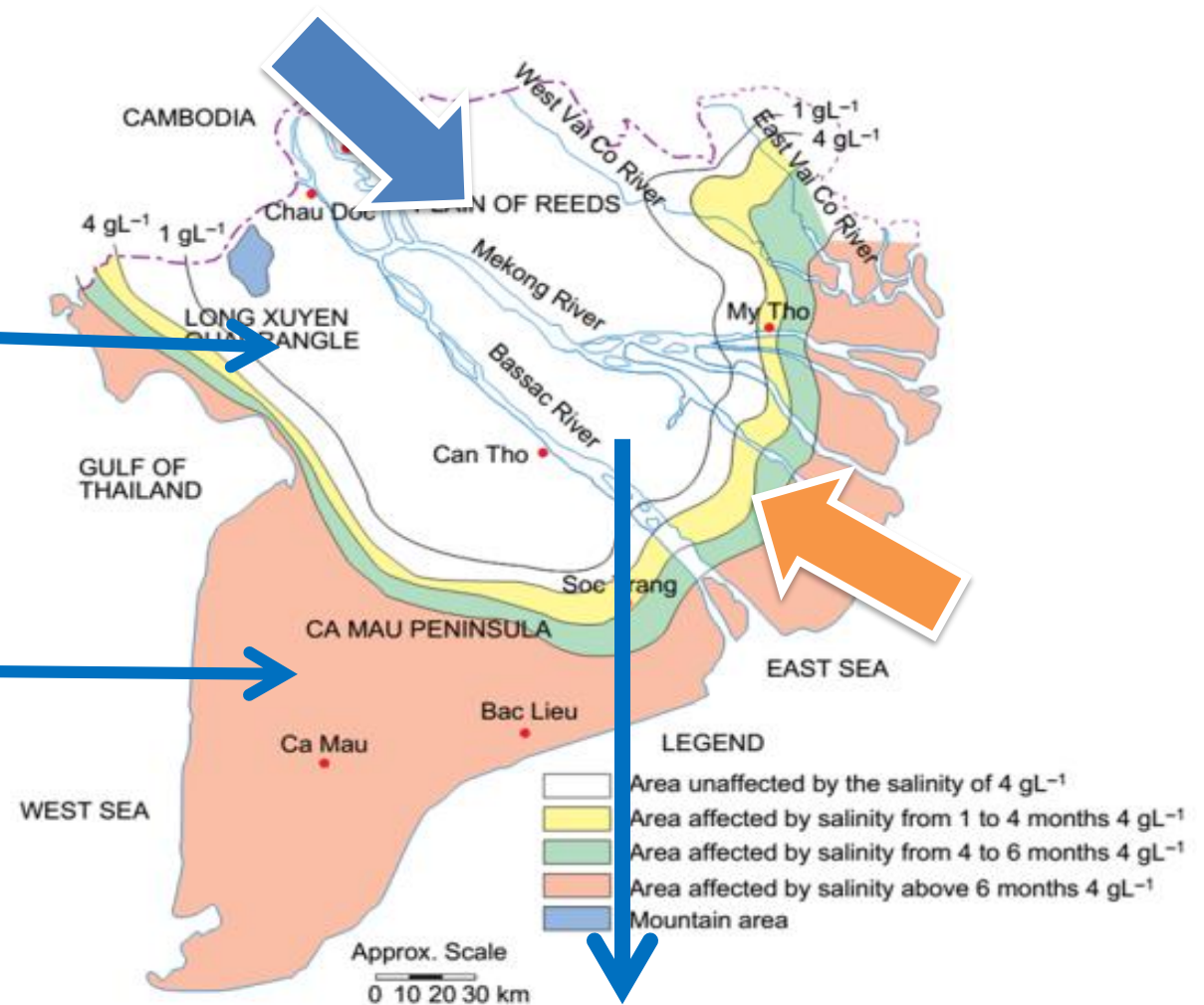
Fruit trees 70%;

Aquaculture 60%

Tropical climate

**The rainy season
(flood)**

**The dry season
(salinity)**

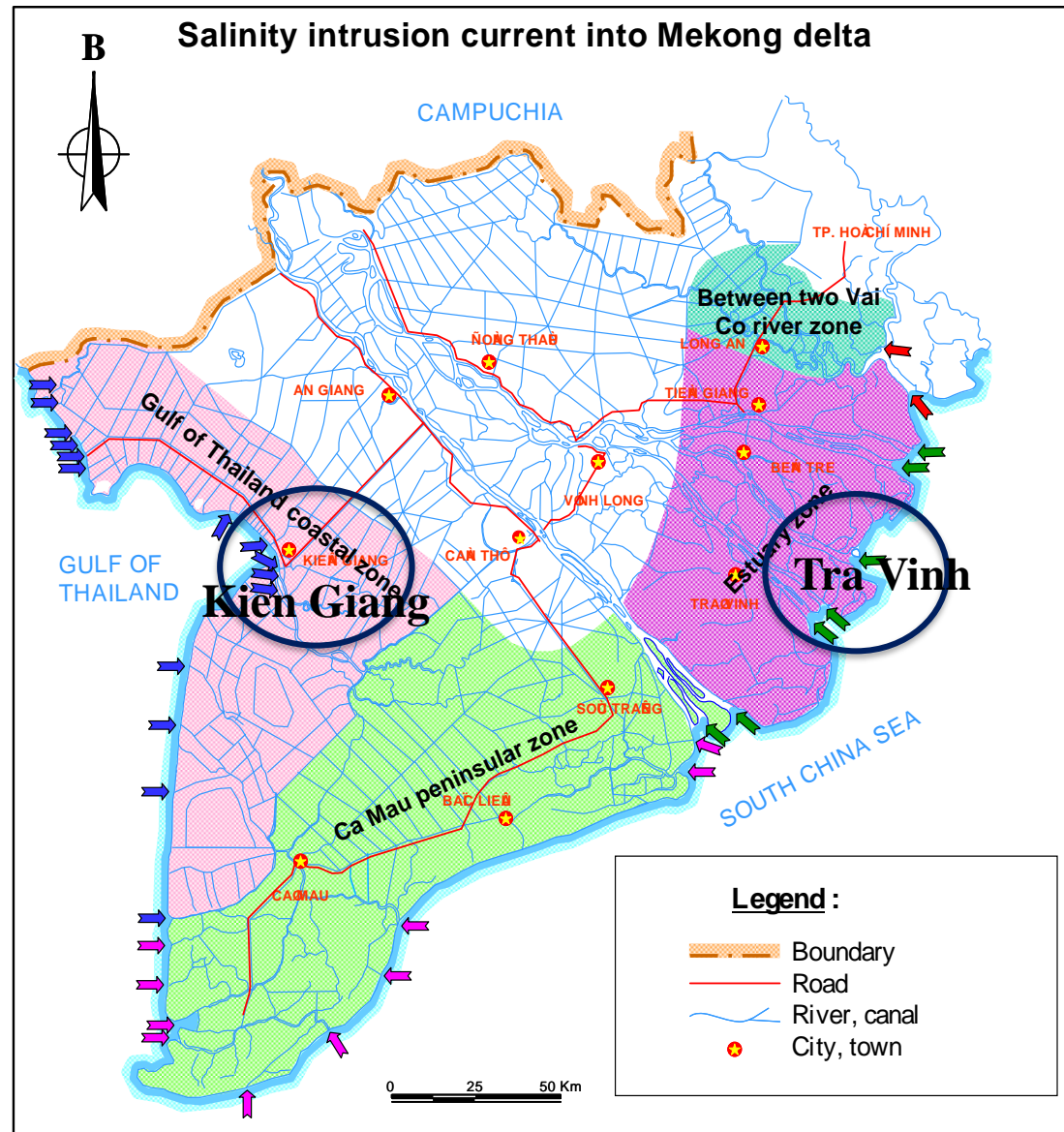


Saline intrusion (SI) increasing

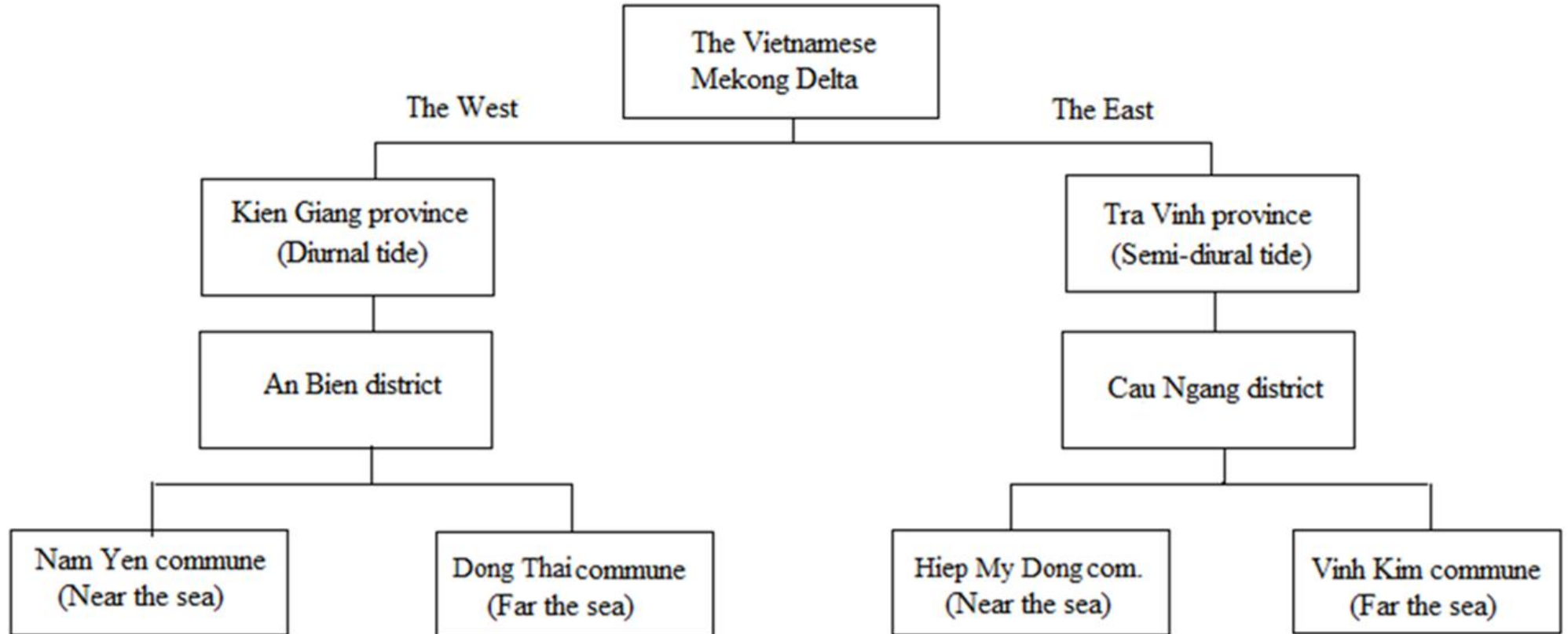
**SI trend, successes and challenges of
agricultural development**

Method - Research location

Stratified sampling: Ecological zone – province – district – commune

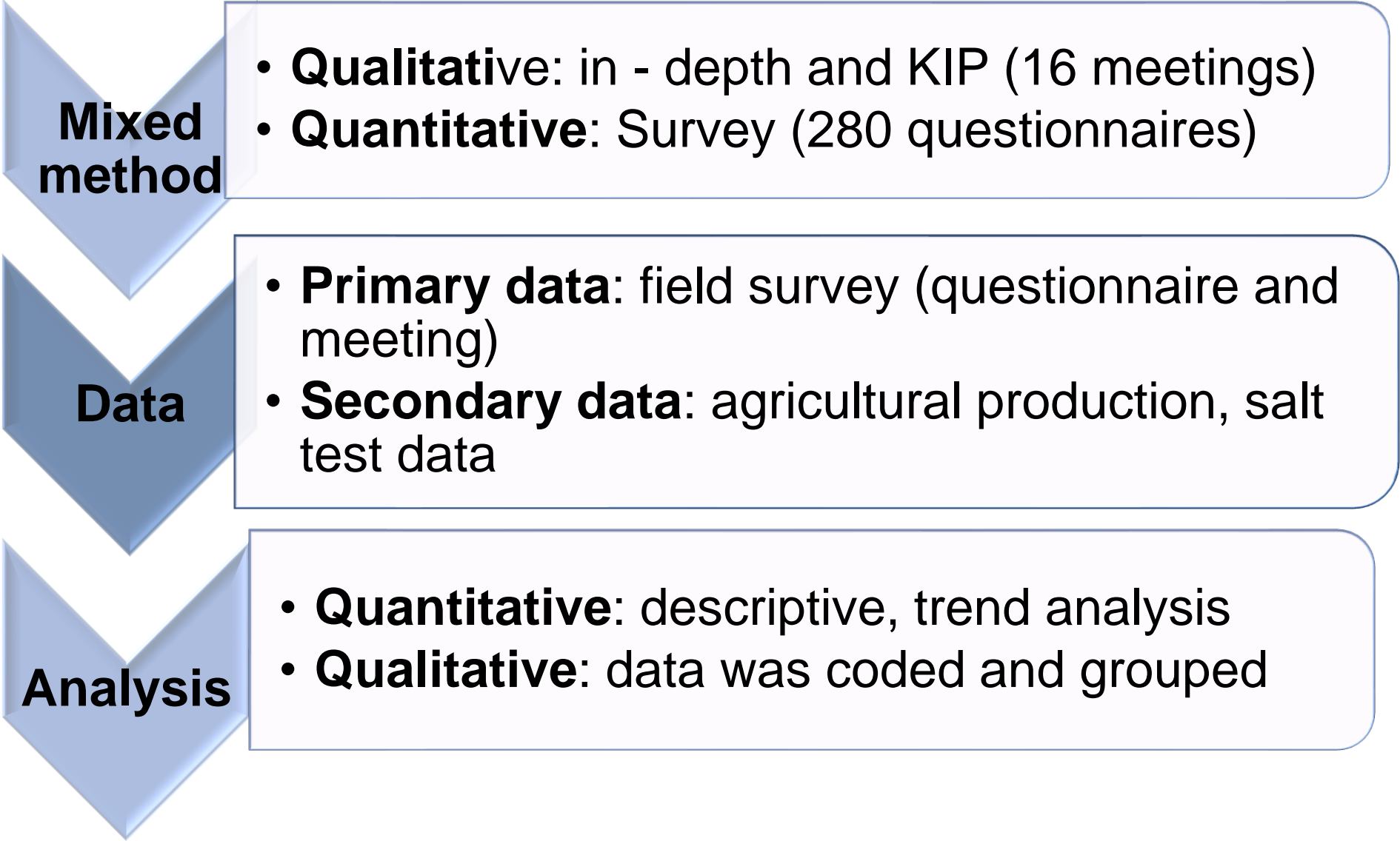


Research sizes



2 provinces, 2 districts and 4 communes

Methods and analysis



Mixed method

- **Qualitative:** in - depth and KIP (16 meetings)
- **Quantitative:** Survey (280 questionnaires)

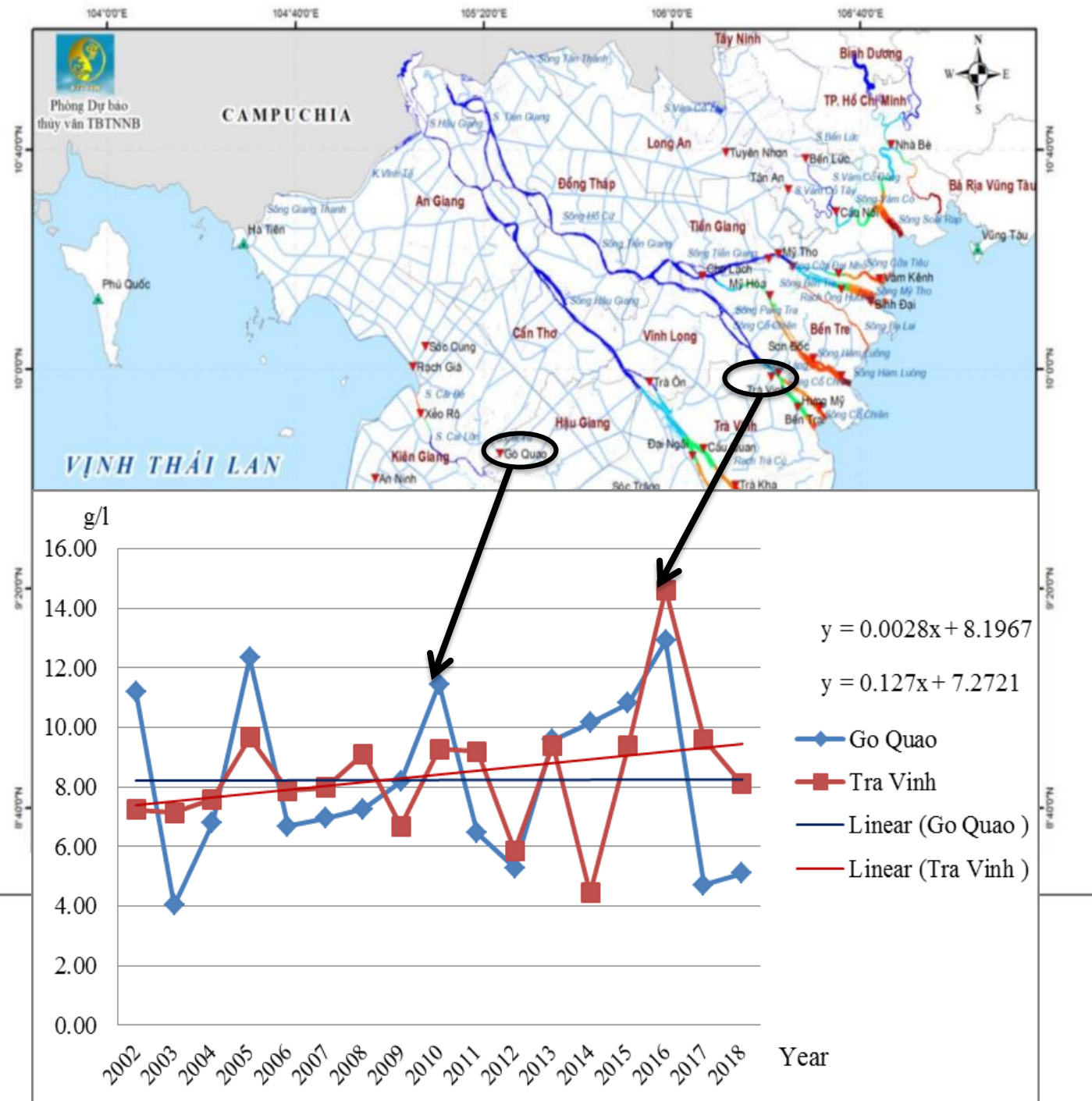
Data

- **Primary data:** field survey (questionnaire and meeting)
- **Secondary data:** agricultural production, salt test data

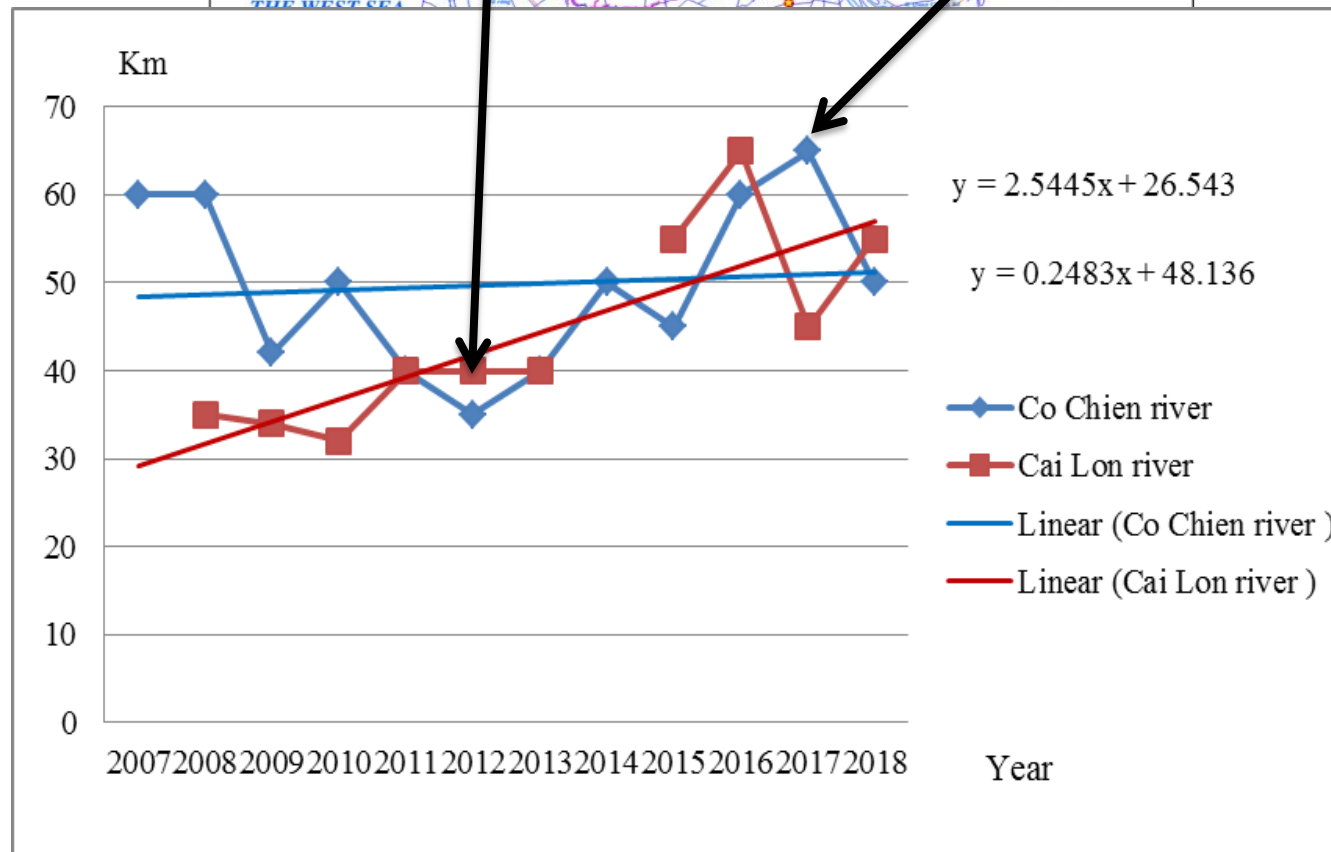
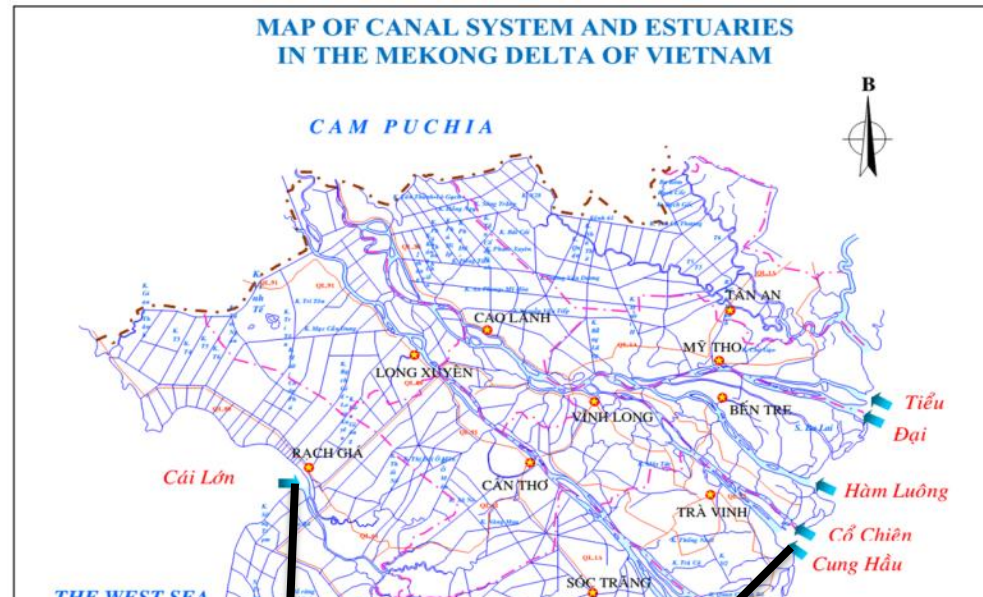
Analysis

- **Quantitative:** descriptive, trend analysis
- **Qualitative:** data was coded and grouped

Salt concentration



Distance ...



Adaptations



Salinity control projects



Changing of farming system

Rice increasing in the Mekong region in Vietnam

		1995	2000	2005	2010	2015
1	Land for rice (million ha)	-	-	1.90	1.92	1.91
2	Rice areas * (million ha)	3.19	3.95	3.83	3.95	4.30
3	Yield (ton/ ha)	4.02	4.23	5.04	5.47	5.96
4	Rice Production (million ton)	12.83	16.70	19.29	21.59	25.59

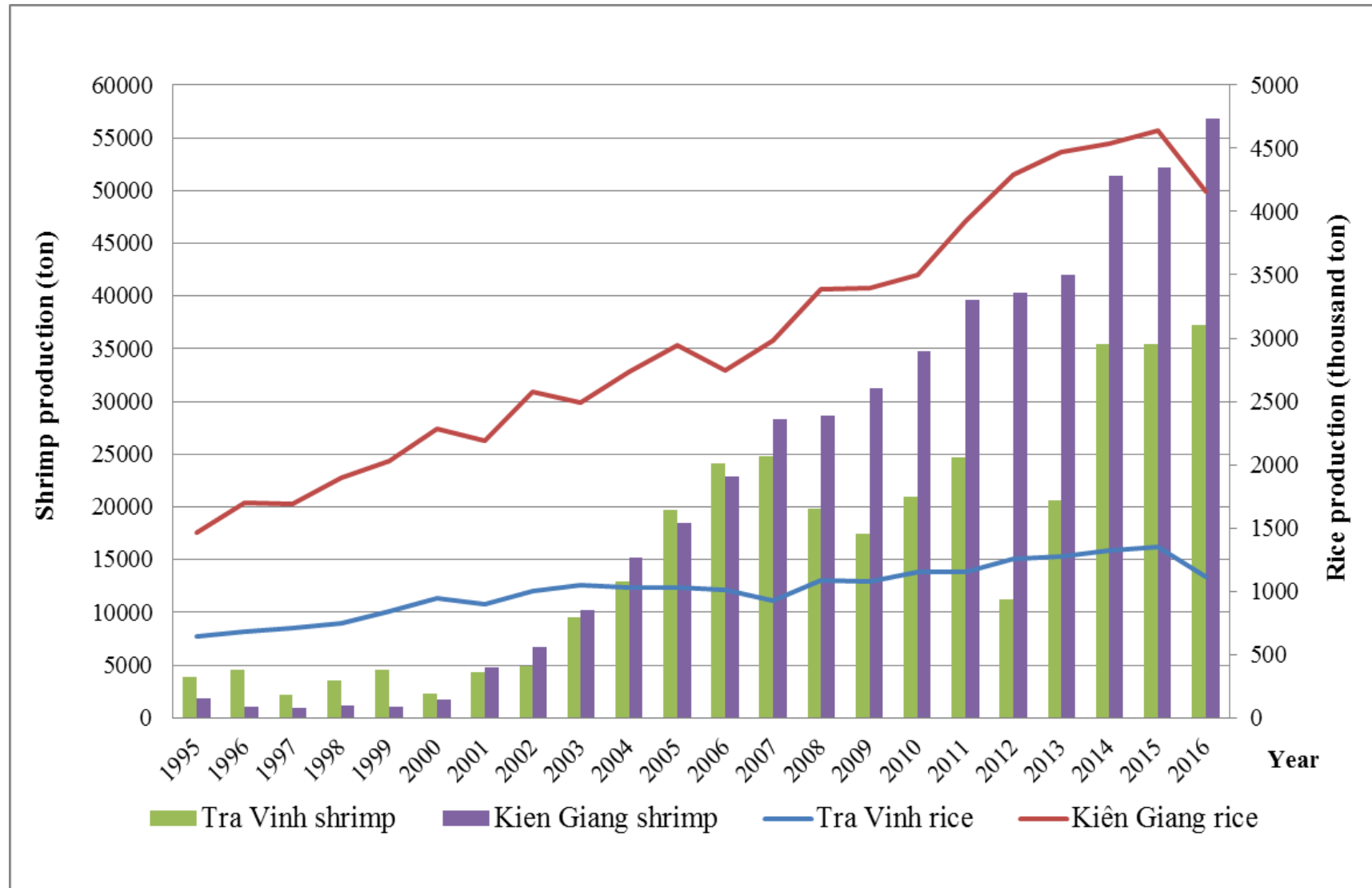
(*): Two or three crops of rice per year are calculated

Source: (MONRE (Ministry of Environment and natural resource), 2017), (National Statistic book, 2017)

Current farming systems

		An Bien		Cau Ngang	
		%	Area (ha)	%	Area (ha)
1	Shrimp rice	99.33	1.88 ± 1.17	24.03	1.05 ± 0.59
2	Intensive shrimp	0.67	0.67	68.18	0.79 ± 0.69
3	Two rice crops		-	1.95	0.7 ± 0.36
4	Others (one rice, upland, fruit...)		-	5.84	0.48 ± 0.28
	Average farm size per household (ha)		1.88 ± 1.17		0.93 ± 0.69

Increasing of diversified agricultural products



Shrimp and rice production increases in the West and the East

Source: National statistical office (2017).

Challenges: techniques

- One way of water flow
- Irrigation system is not good for shrimp



- Solutions to overcome
- Meet various demands brackish ecological zone



Effects of SI

86.67 % in AB

67.90% in CN

Knowledge of facing SI

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Necessary to attract attention

Social challenges

Loss of common resources

- Aquatic resources loss
- Pollution
-

Threats for the poor

- Money to invest
- Conflict of water use
- ...



Conclusion

- SI increases on both sides;
- Adaptation adopted variously from the Government and farmers;
- Success in increased and diversified agricultural products;
- Challenges exist in techniques and social issues.



Collective adaptation

A wide-angle photograph of a large, multi-arched bridge spanning a wide river. The bridge has a complex structure with multiple levels and arches, and it is supported by several piers. The sky is blue with scattered white clouds. The water in the foreground is calm and reflects the sky.

THANK YOU FOR YOUR ATTENTION

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