



Promoting Sustainable Rice Production in Adverse Ecosystem of Bangladesh: *Challenges and Policy Direction*

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Background

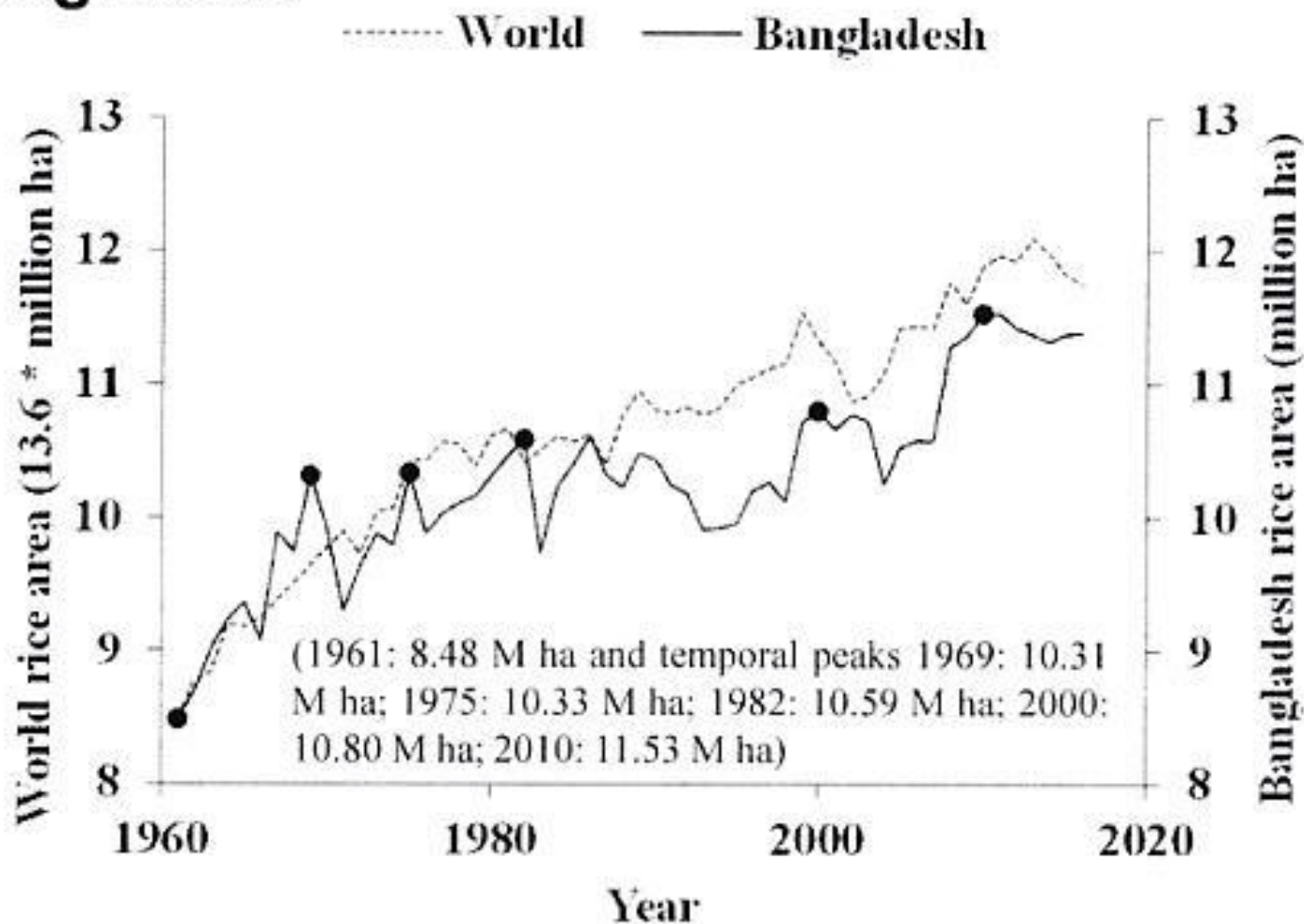


Figure 2. Historical change and trend in the rice area in Bangladesh compared with the world as a whole.

Table 1. Area and production of rice in Bangladesh under four ecotypes during 2016-'17.

Ecotype	Variety type	Area ('000 ha)	Production ('000 MT)
Aus	Indigenous	188.5	253.5
	Modern	753.2	1,880.1
	Total	941.7	2,133.6
T. Aman	Indigenous	1,082.8	1,820.2
	Modern	4,172.5	11,439.5
	Total	5,255.3	13,259.7
Deep Water Rice		-	396.3
Boro	Indigenous	34.0	66.0
	Modern	4,442.0	17,950.0
	Total	4,476.0	18,016.0
	2017-2018	4,800.0	19,000.0

Data source: DAE, Year Book of Agricultural Statistics 2016, BBS (2016); Daily star, 25 Mar. 2018

Context

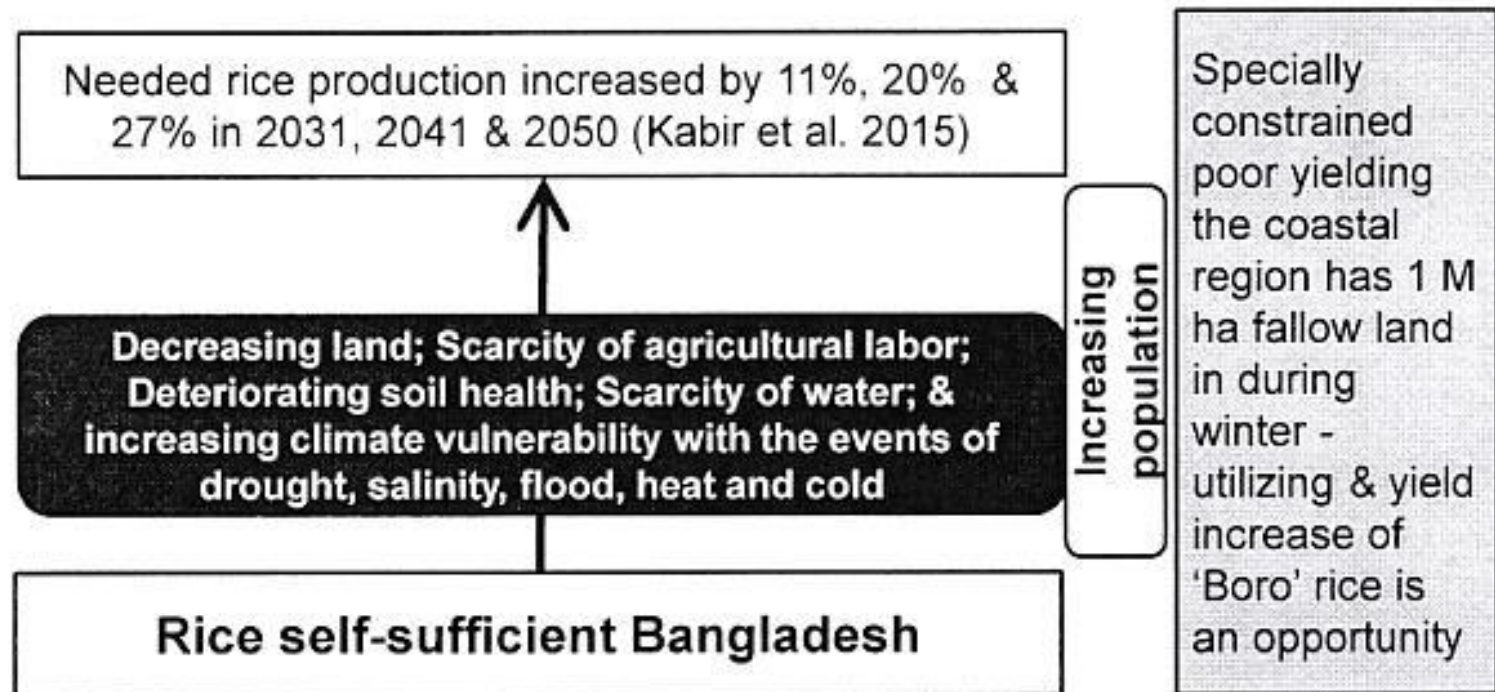


Figure 3. Major constraints and potentials in sustainable rice self sufficiency in Bangladesh

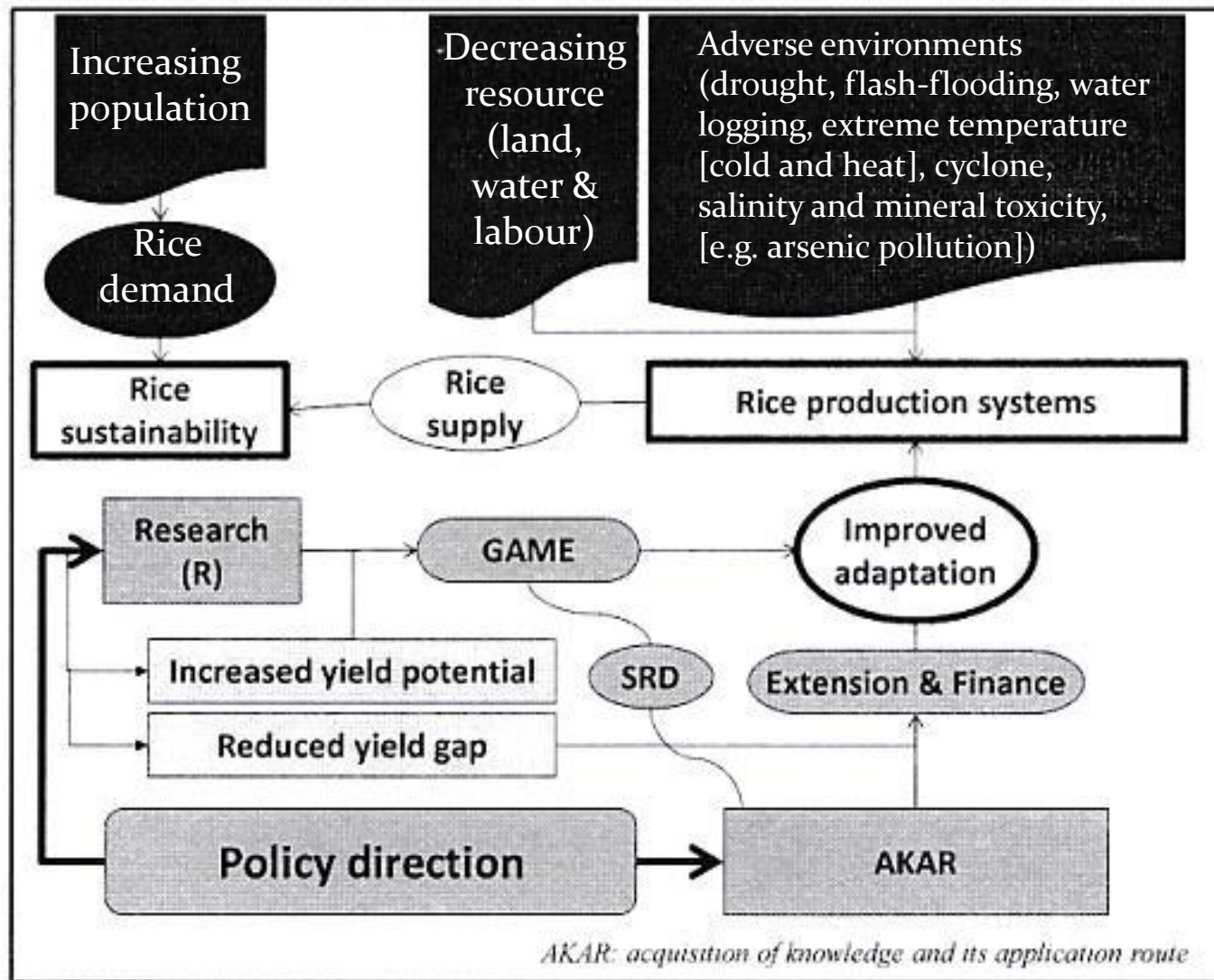
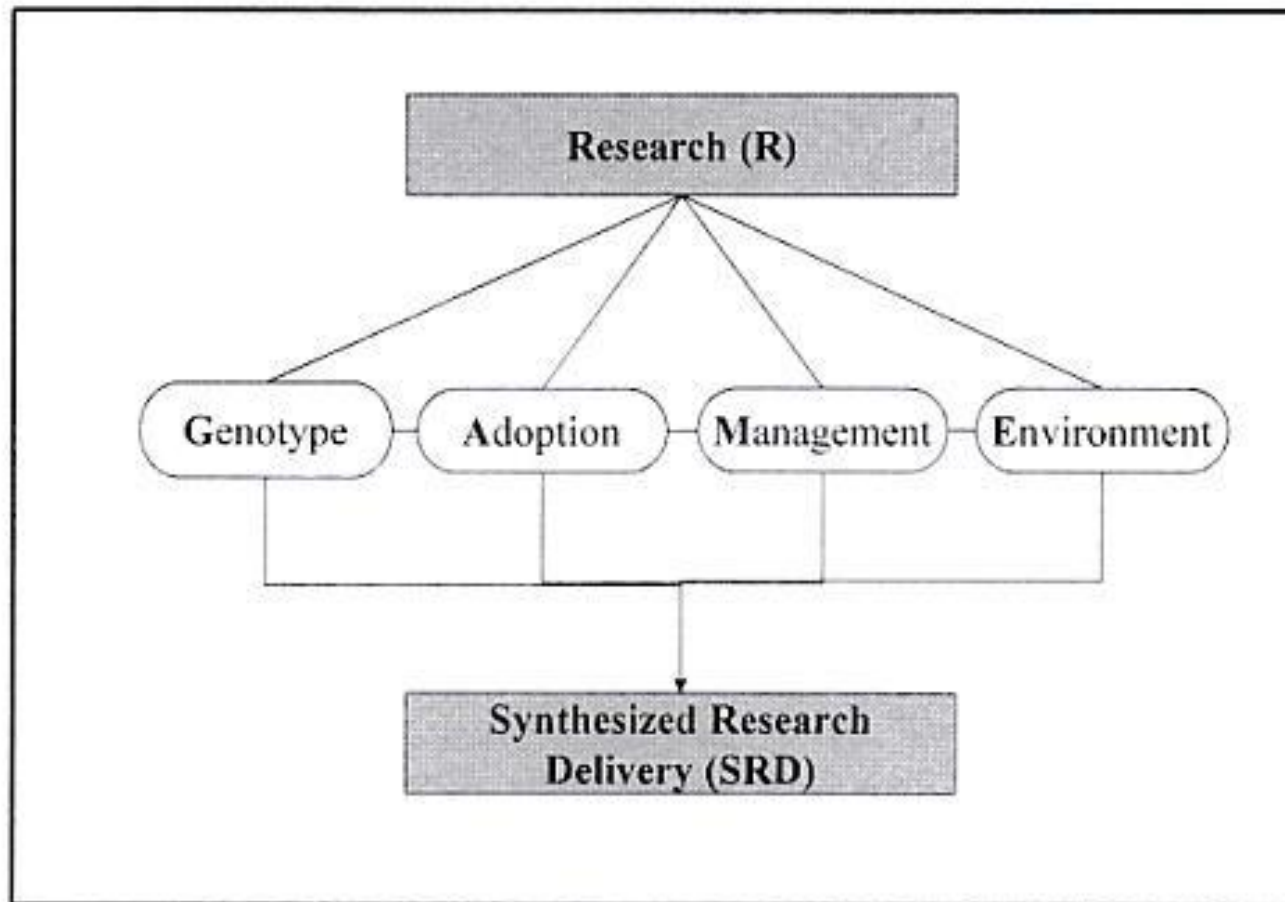


Figure 4. Framework for improving adaptation of rice production systems

Policy direction towards research – the GAME



'G' – the first component of the GAME

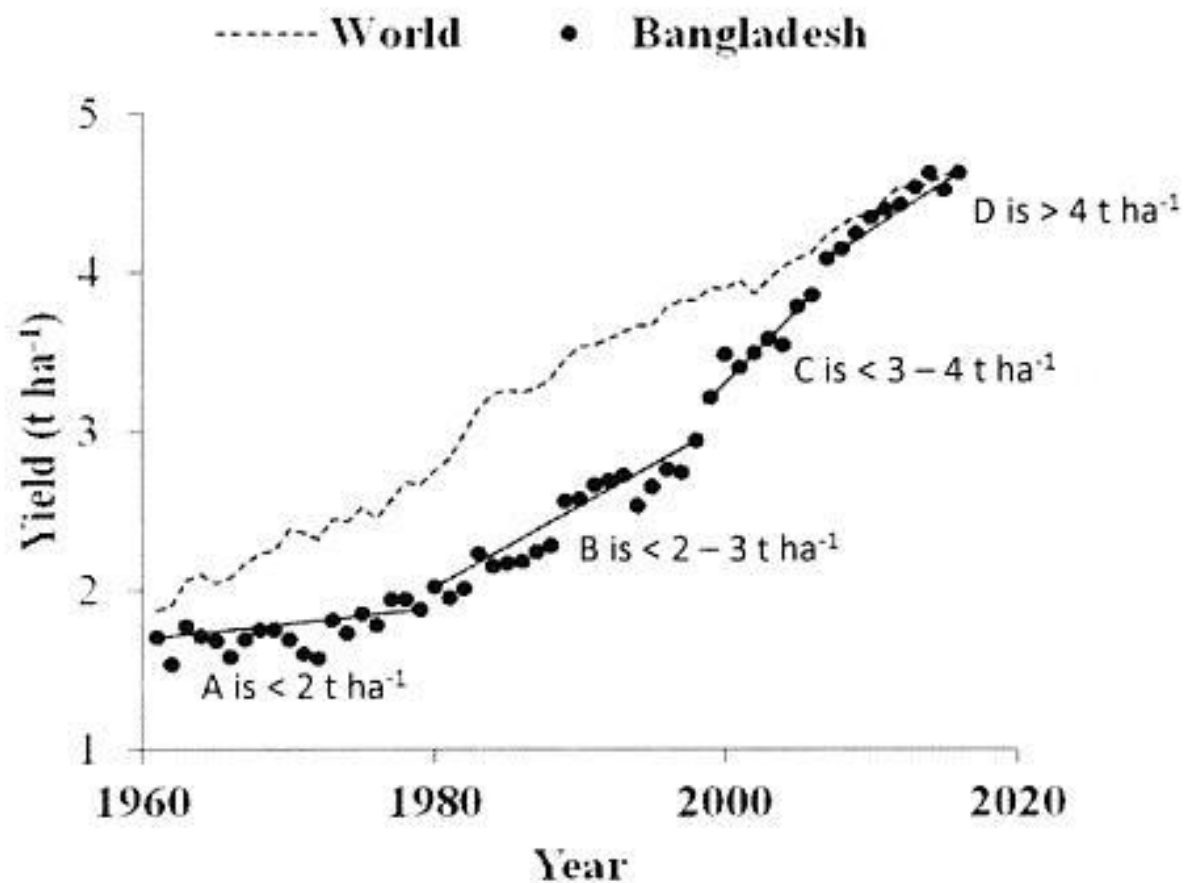


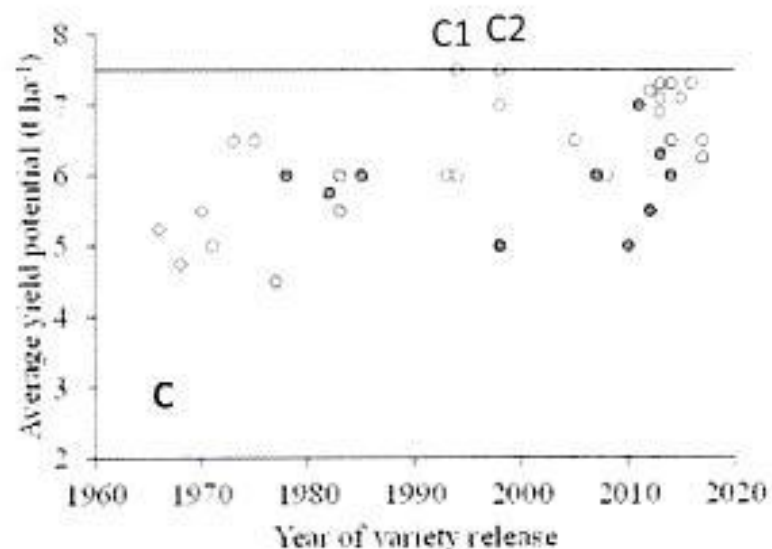
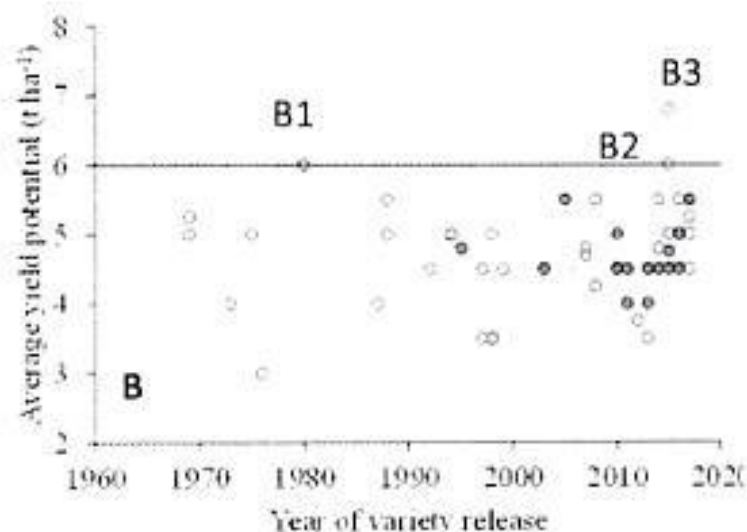
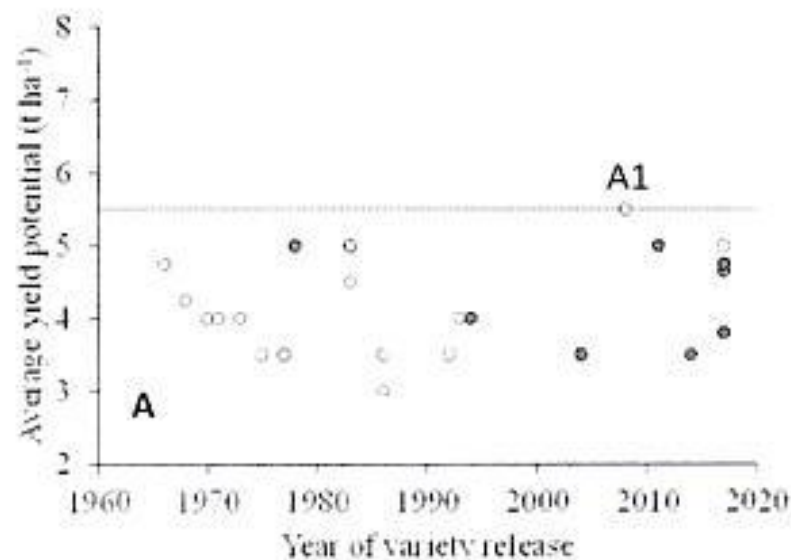
Figure 1. Historical change and trend in the rice yield in Bangladesh compared with the world as a whole.

'G' – the first component of the GAME

A= Aus; A1 = BRRI dhan48

B= T.Aman; B1 = BR 10 & BR 11;
B2 = BRRI dhan 72;
B3 = BRRI dhan 17

C= Boro; C1 = BRRI dhan 29
C2 = Bina dhan 6

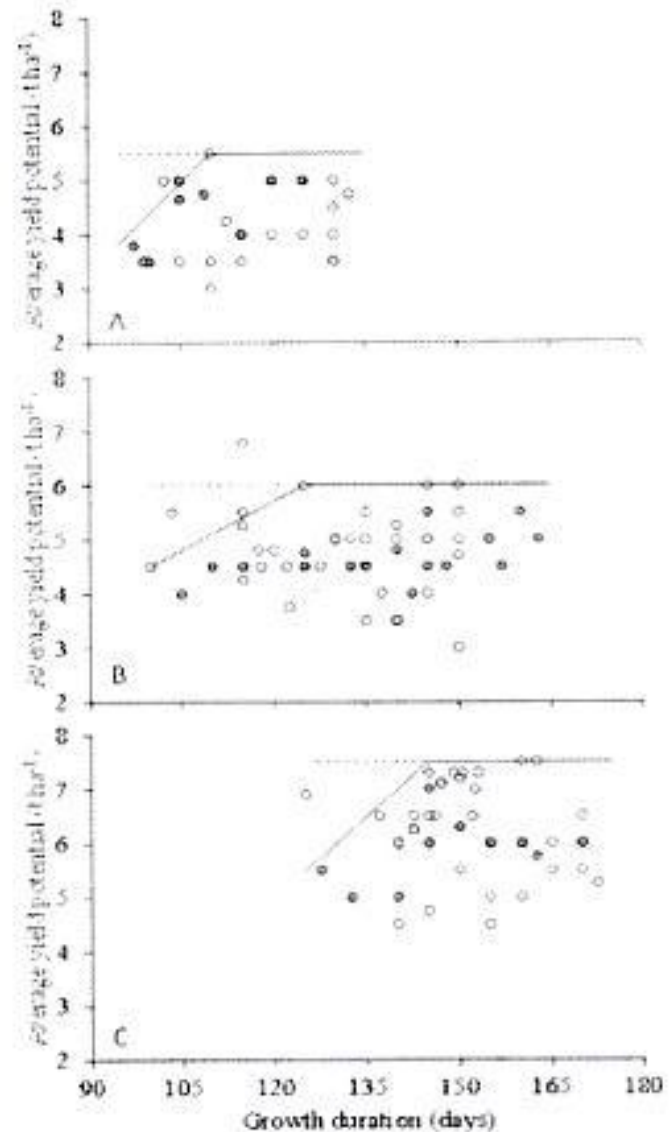


'G' – the first component of the GAME

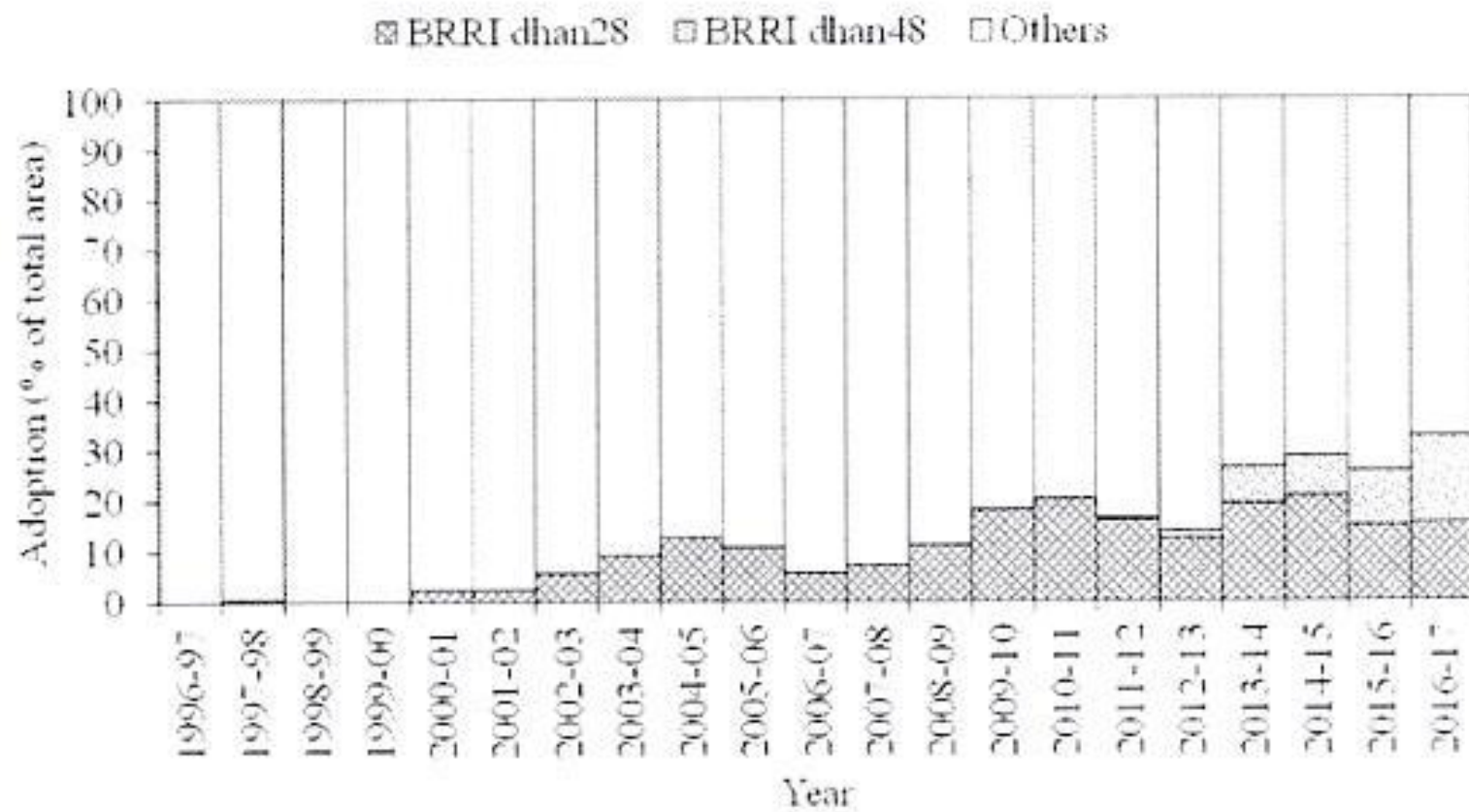
A= Aus; A1 = BRRI dhan48 (110 d; 5.5 t h⁻¹)

B= T.Aman; B1 = BR 10 & BR 11 (125 d; 6 t h⁻¹);
B2 = BRRI dhan 72; (145 d; 6 t h⁻¹);
B3 = BRRI dhan 17 (150 d; 6 t h⁻¹);

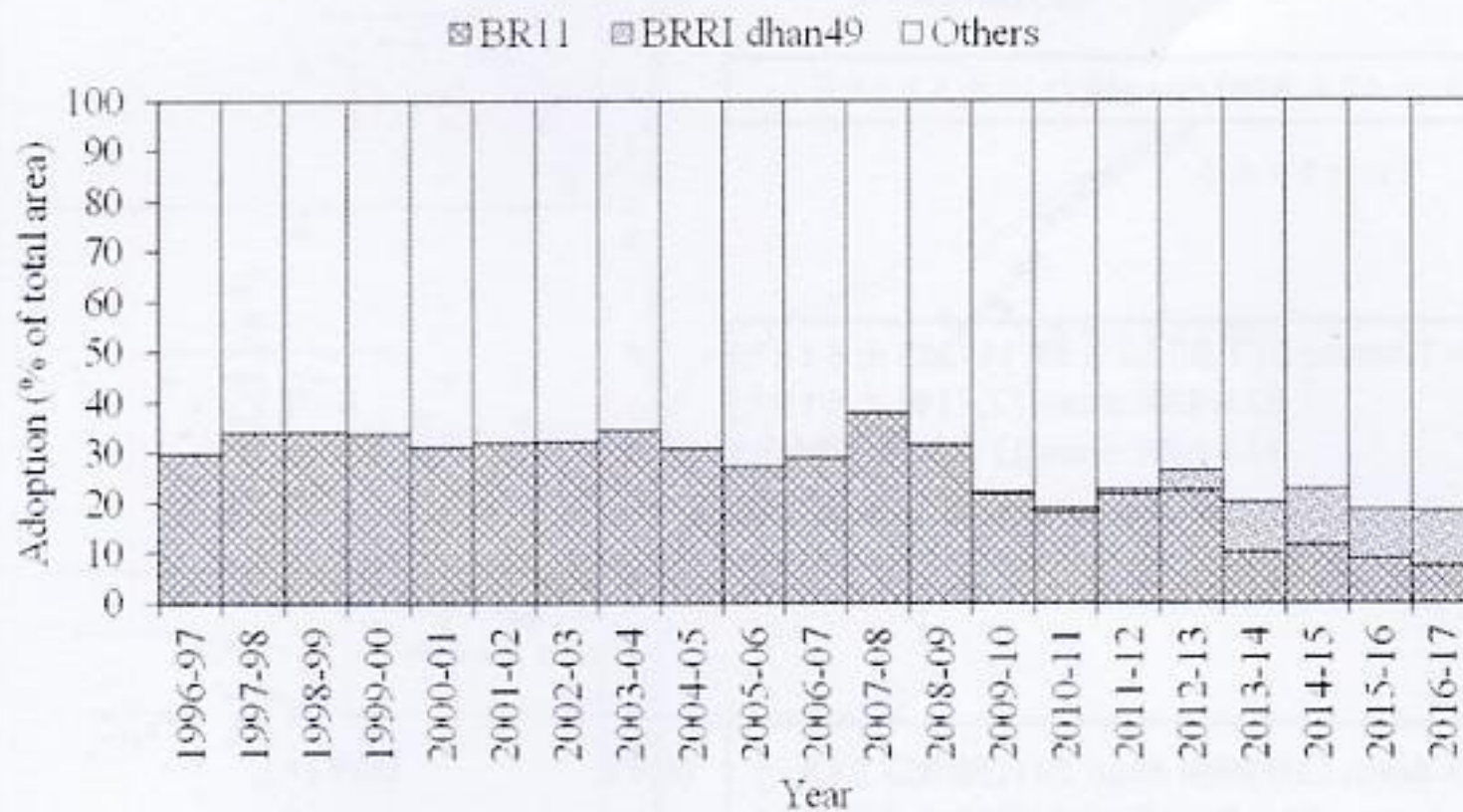
C= Boro; C1 = BRRI dhan 29 (160 d; 7.5 t h⁻¹);
C2 = Bina dhan 6 (163 d; 7.5 t h⁻¹);



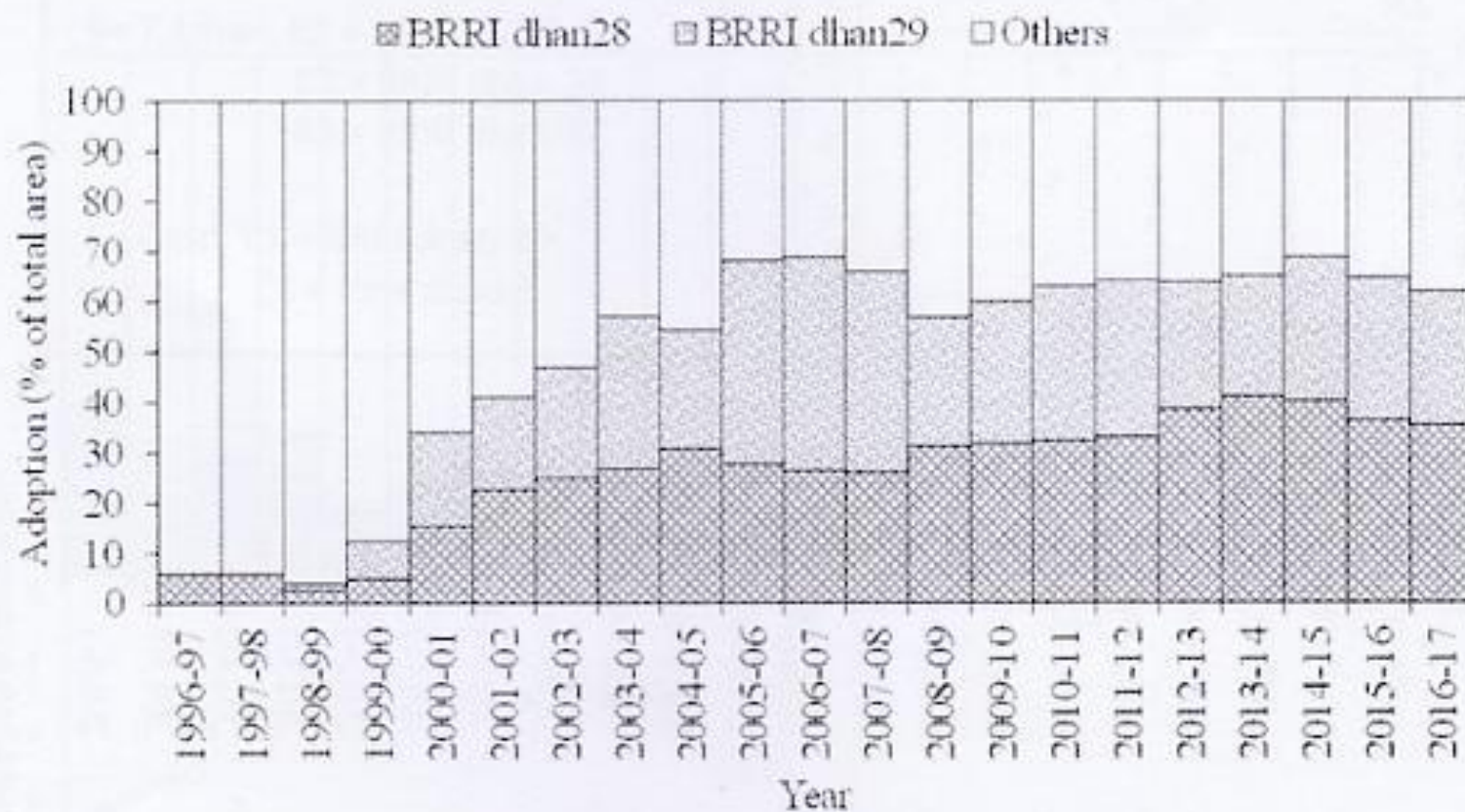
'A' – the second component of the GAME (Aus Adoption)



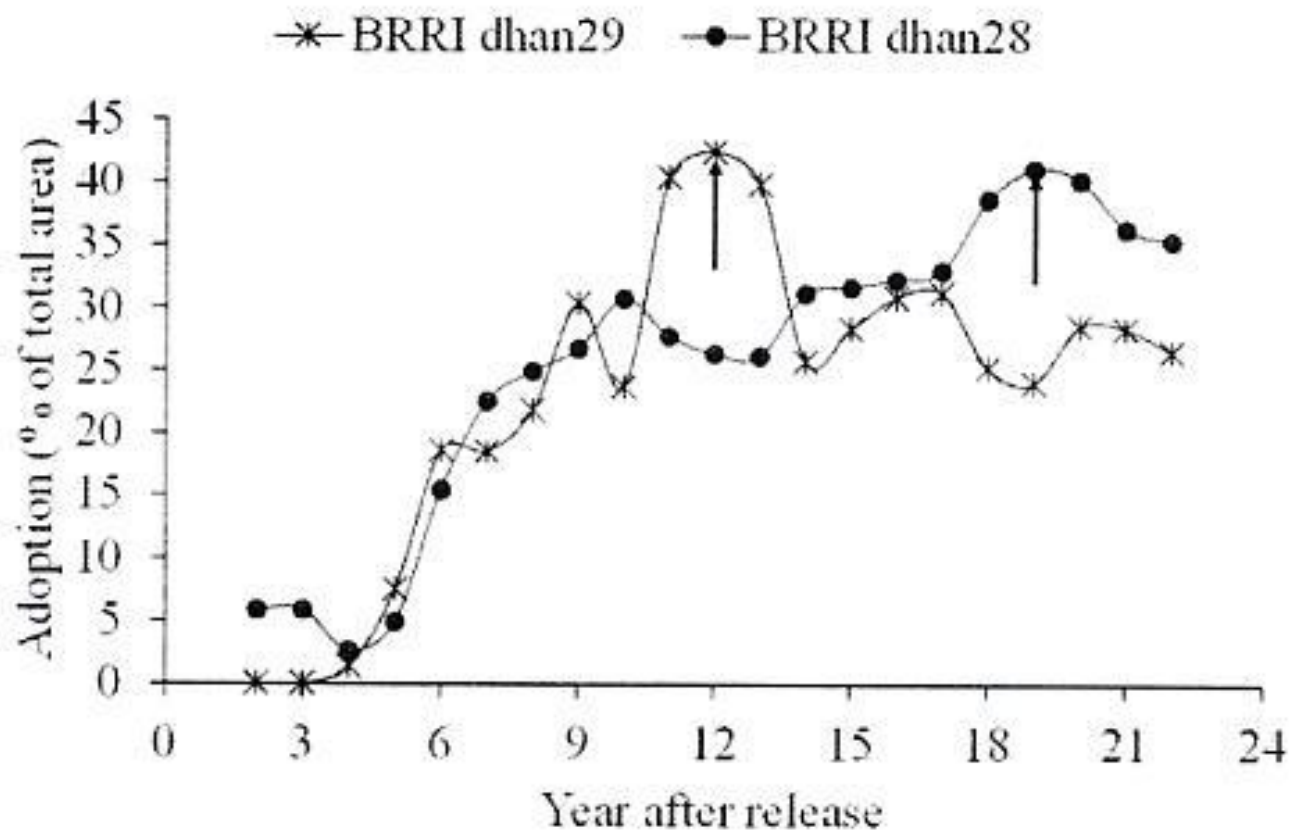
'A'– the second component of the GAME (T. Aman Adoption)



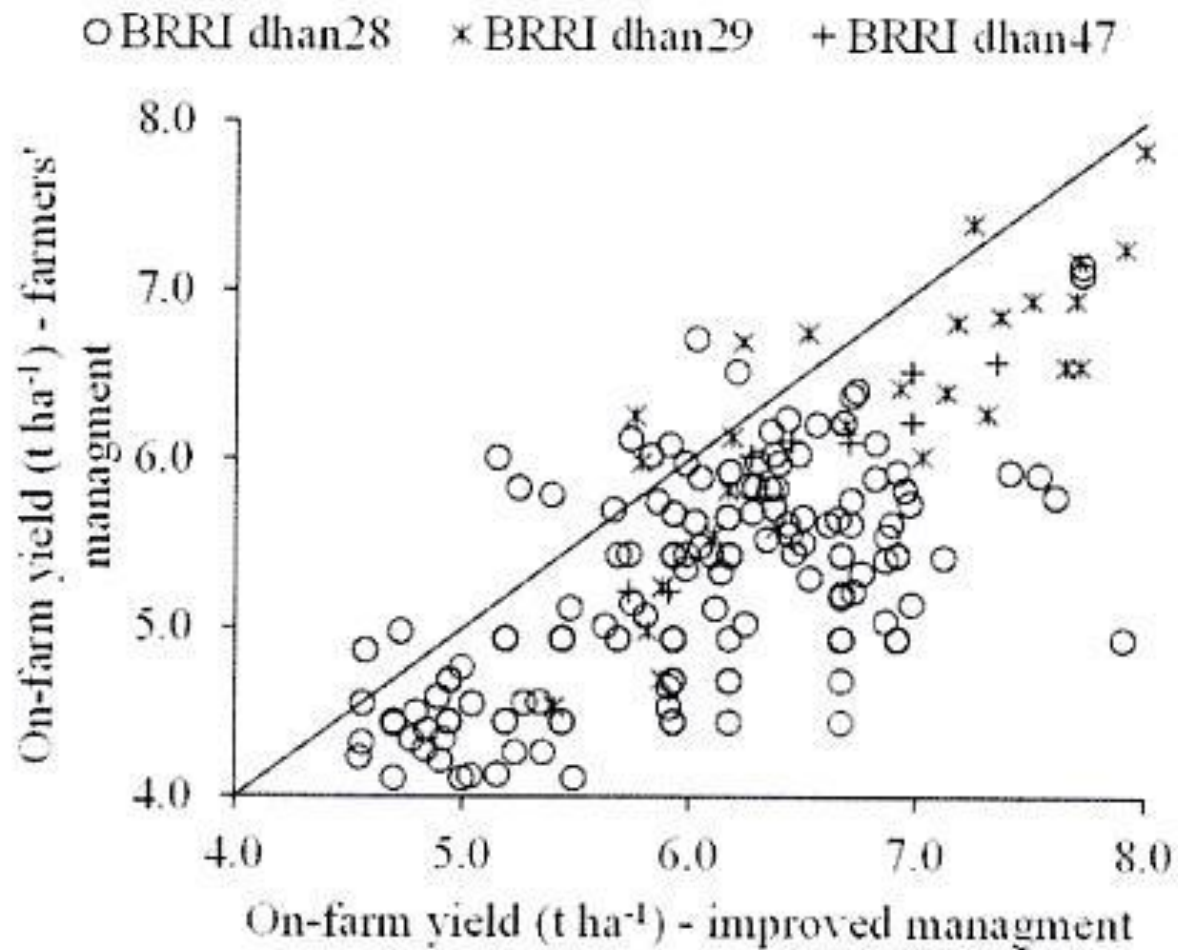
'A' – the second component of the GAME (Boro Adoption)



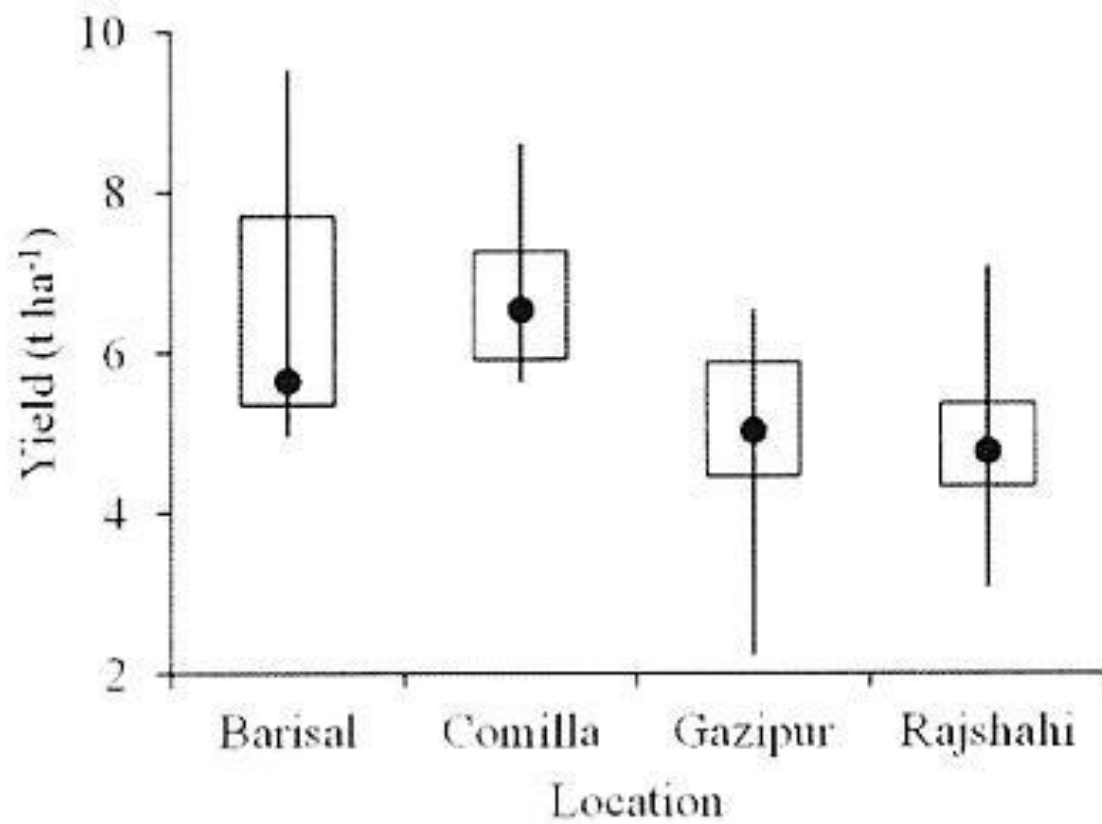
'A' – the second component of the GAME (Adoption Lag)



'M' – the third component of the GAME



‘E’– the fourth component of the GAME



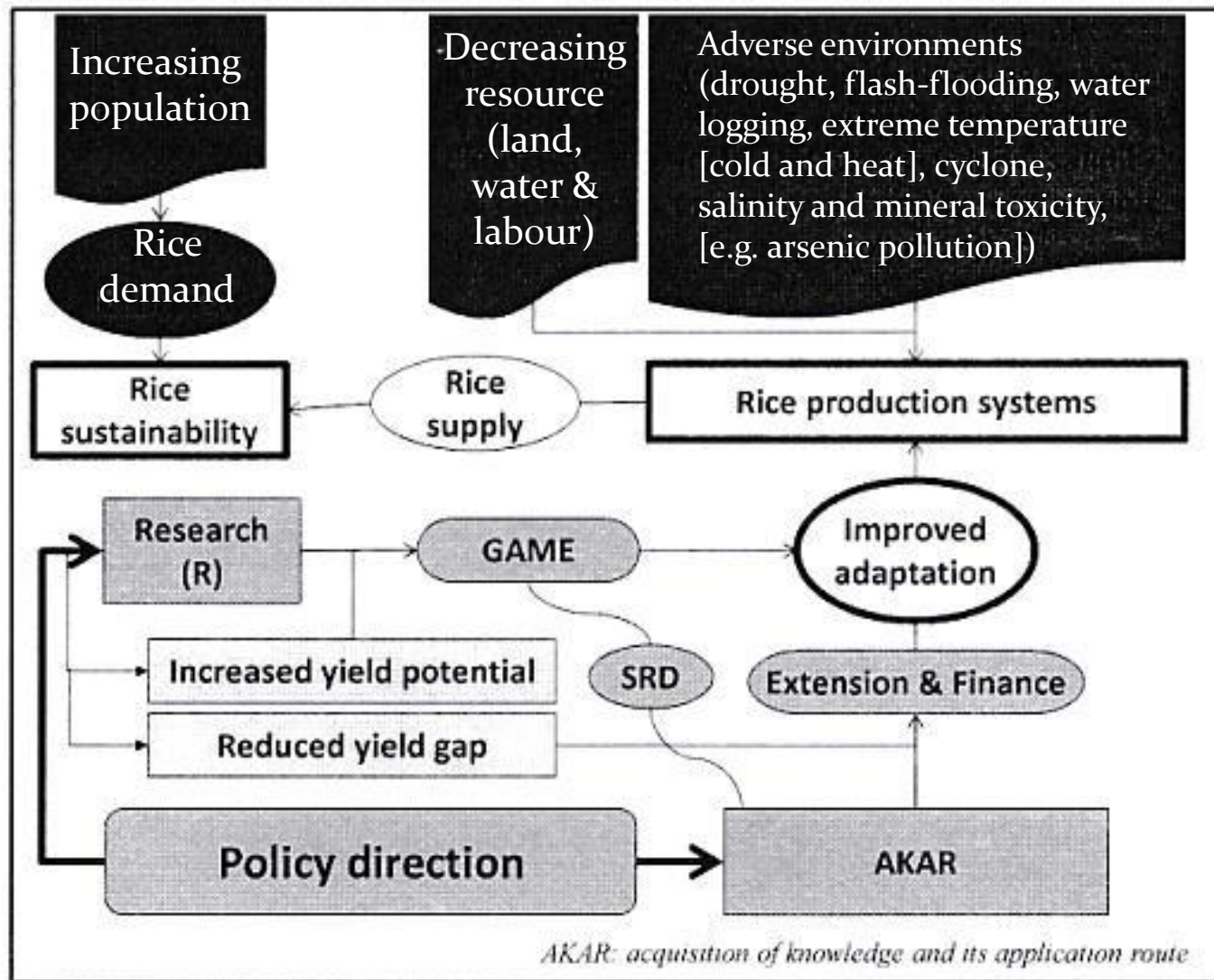
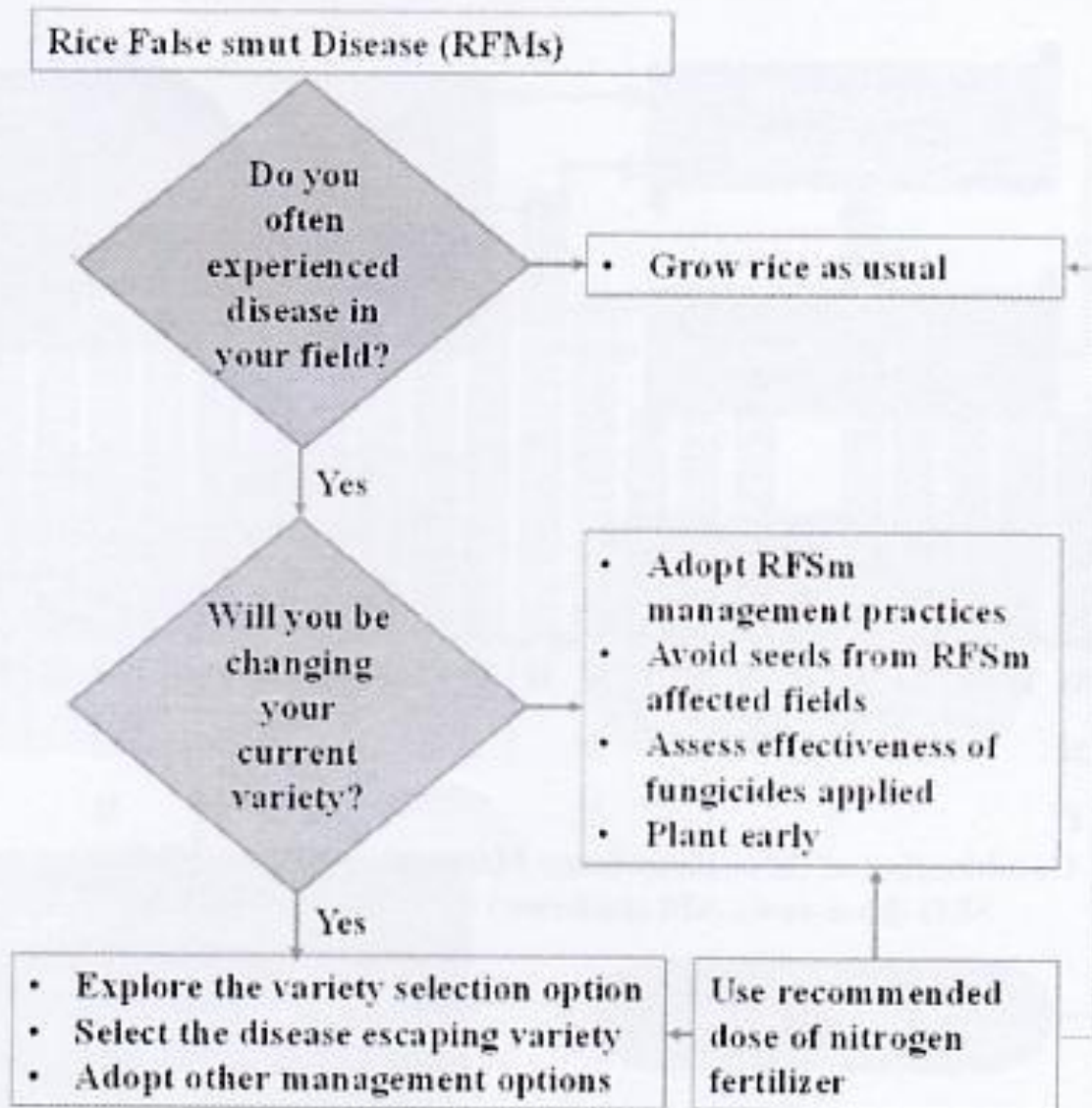
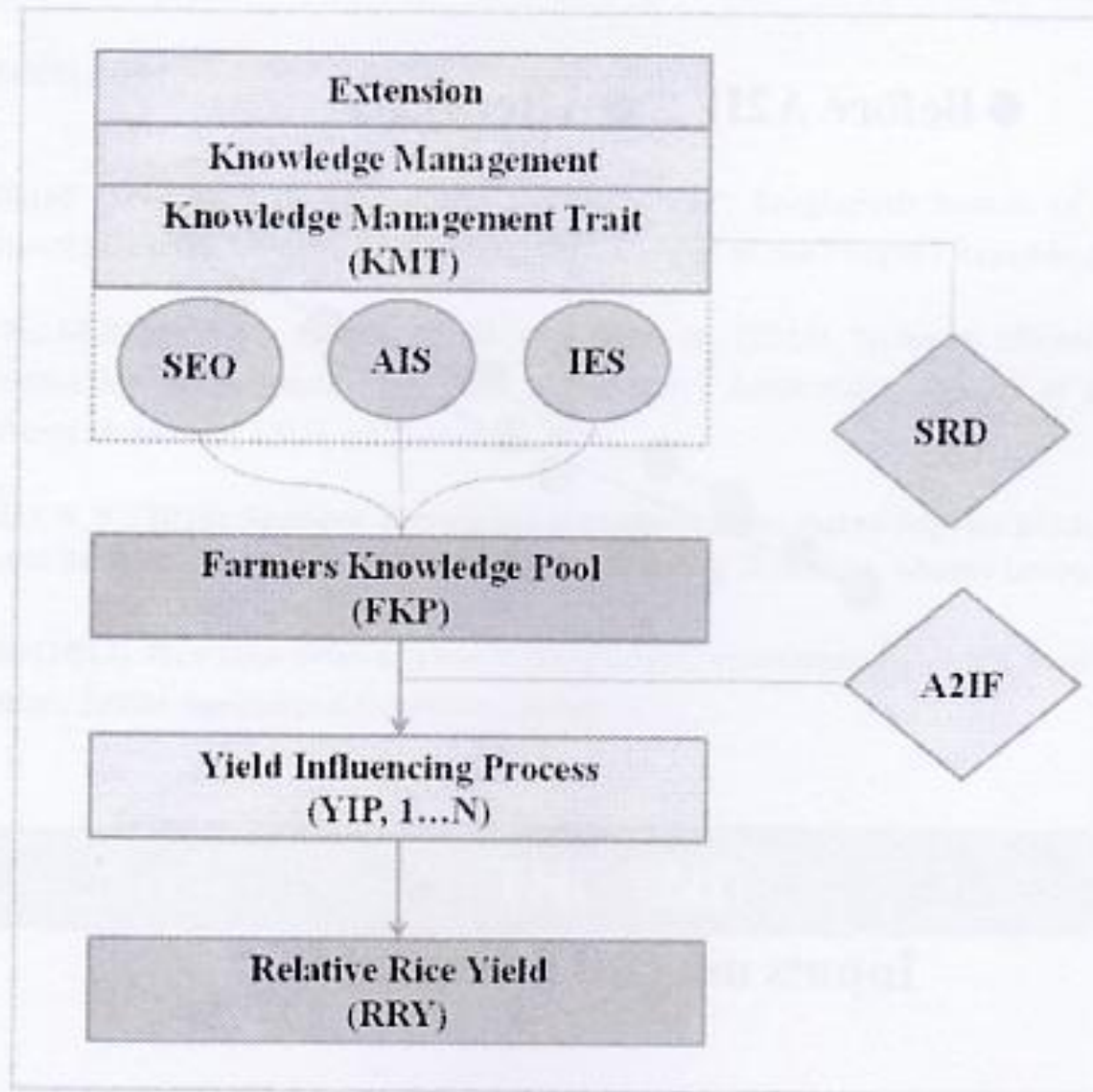


Figure 4. Framework for improving adaptation of rice production systems

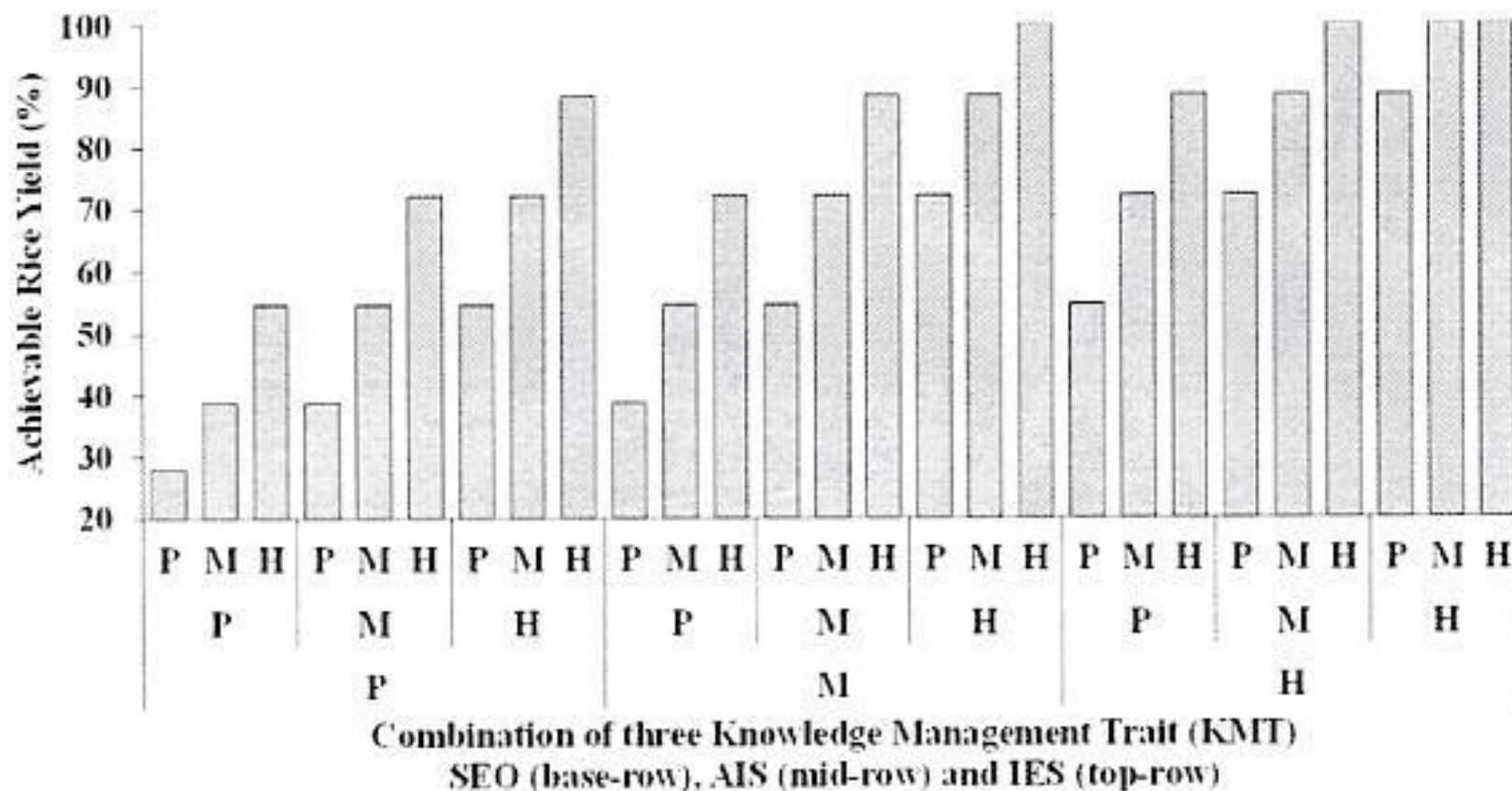
Synthesized Research Delivery (SRD) – an input to the AKAR



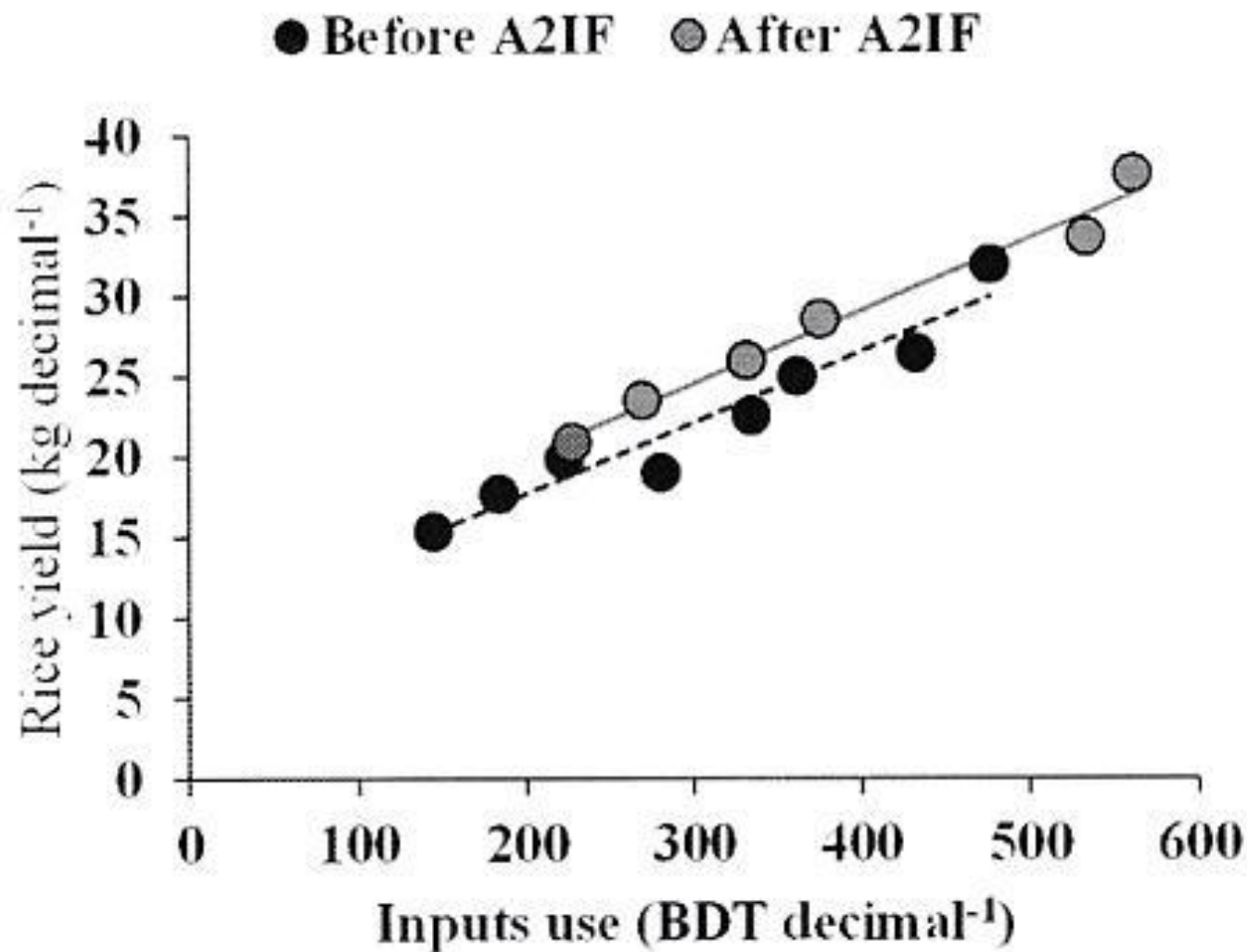
Policy direction towards extension and finance – the AKAR



Knowledge acquisition – the first component of the AKAR



Access to Inclusive Finance (A2IF) – the third component of the AKAR



Conclusion and Recommendation

Policy Direction

Organizational Capacity Building & Institutionalization of Extension Services & National Campaigning

MoA & DAE Management

Research & Extension

Private Sector led Extension Services & ICT based Information Systems (Judicious use of N fertilizer & reduces of GHG)

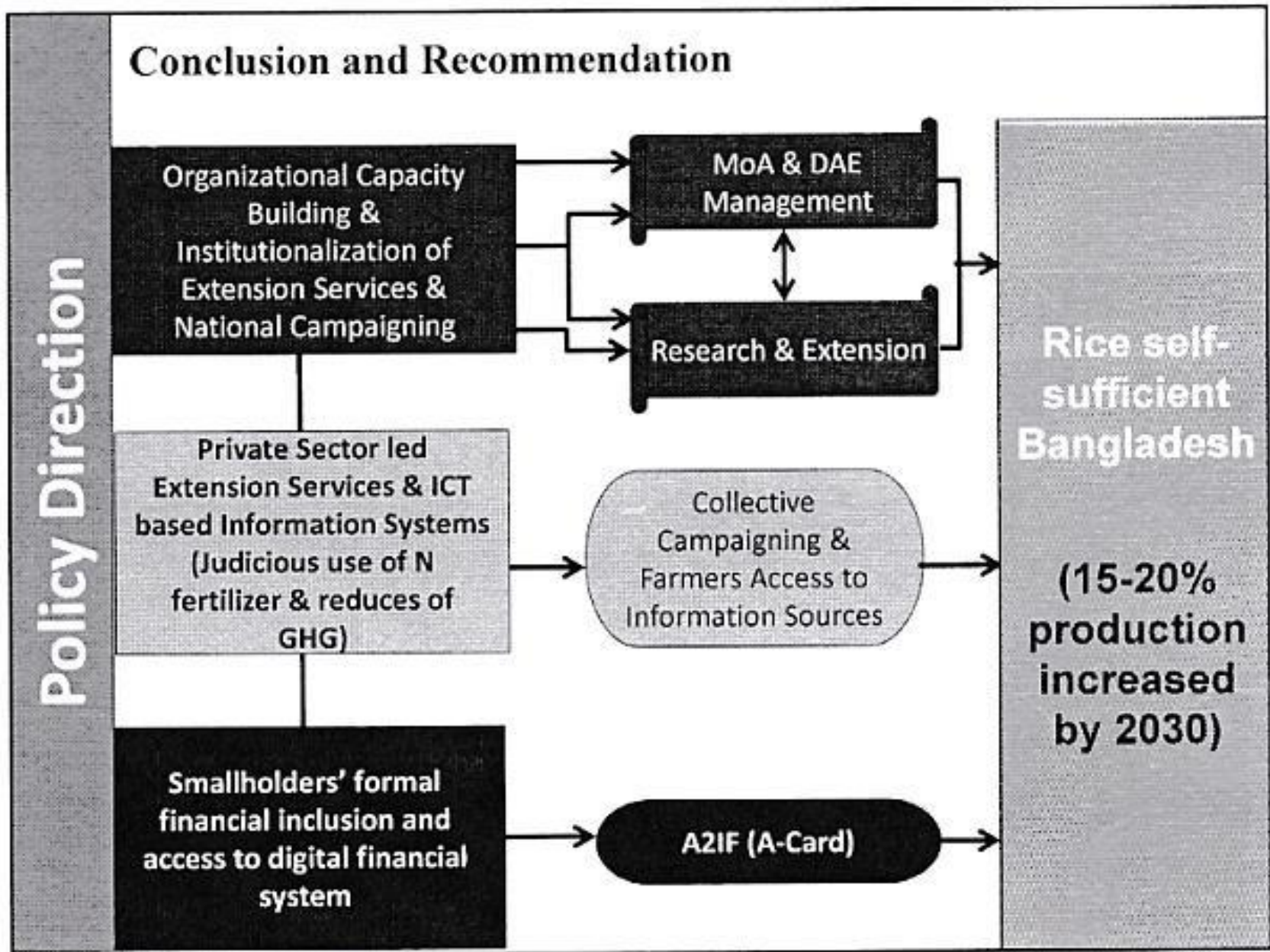
Collective Campaigning & Farmers Access to Information Sources

Smallholders' formal financial inclusion and access to digital financial system

A2IF (A-Card)

Rice self-sufficient Bangladesh

(15-20% production increased by 2030)



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