

BUKTI KORESPONDENSI
PRESENTASI POSTER PADA SEMINAR INTERNASIONAL

Judul artikel : Rice-Based Water Service Fee Assessment in Tidal Lowland
Agriculture

Seminar : 28th Internasional Rice Research Conference

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No.	Perihal
1	Abstract Submission
2	Abstract Notification
3	IRC Poster
4	IRC Sertificate

Abstract Submission
(5 Maret 2010)

**IRC 2010 Abstract Submission Acknowledgment**

Friday, March 5, 2010 5:59 PM

From: "IRC Conference Secretariat" <info@ricecongress.com>
To: yazid_ppmal@yahoo.com

Dear Yazid, Muhammad,

Thank you once again for submitting your abstract to the 3rd International Rice Congress, to be held from 8-12 November 2010 at the Vietnam National Convention Centre, Hanoi.

We send you this letter to acknowledge your submission of an abstract to the congress. Your abstract with the title "RICE_BASED WATER SERVICE FEE ASSESSMENT IN TIDAL LOWLAND AGRICULTURE" and assigned the number "3818" was received as a candidate for Oral Presentation Preferred under this theme: Water, availability, and access.

You may review your submitted abstract by logging in to our system. Just visit our website, www.ricecongress.com, click on IRRC28 Call for Papers and Posters, and enter the system by using your registered email address and password. If you forgot your password, then just click "Send password to my email."

The scientific programme committee has already began evaluating the abstracts and authors will be notified of the results no later than 30th April 2010. Should there be a delay, we will notify you via your registered email address before the aforementioned date.

Kindly note that in order for you to be eligible to present your paper, you must register as a delegate to the conference. Register at a special rate as an author of paper by visiting our website, www.ricecongress.com. Authors of papers have until 31st July 2010 to register for the congress. Failure to register will result in the exclusion of your paper in the conference programme.

For more information or clarification, please contact me at sharon@asiacongress.com or tel. +66 2 748 7881.

Cordially,

Ms. Sharon Mascarinas
Conference Manager, IRC 2010

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Abstract Notification

(30 April 2010)



IRRC28 - Abstract Notification

Friday, April 30, 2010 4:03 PM

From: "IRRC28 Secretariat" <sharon@asiacongress.org>

To: yazid_ppmal@yahoo.com

Dear Yazid, Muhammad,

Thank you for your abstract **RICE BASED WATER SERVICE FEE ASSESSMENT IN TIDAL LOWLAND AGRICULTURE** (Sequence no. 3818) that you submitted as a preferred poster presentation for the International Rice Research Conference (IRRC28) during the International Rice Congress (IRC2010) to be held in Hanoi, Vietnam in November this year.

I am pleased to inform you that your abstract has been accepted for poster presentation under the theme **Policy, market, and supply chain**.

These are the next steps that you need to take:

1. Confirm that you will attend IRRC28.
2. Register online by 31 July 2010 and pay the registration fee, taking advantage of the author discount just for the lead author/presenter (in cases where there are multiple authors).
3. Prepare a poster following the guidelines and format that will be published very soon by AsiaCongress Events Co., Ltd. on the congress website.
4. Your abstract will be published, as received – subject to some formatting changes – online before the conference and made available to registered participants. All abstracts will be published on CD after the conference.
5. It is important to quote the Sequence no. in the subject line in any communications, and to clearly print the number on your poster. In this way we will be able, more easily and efficiently, to track your poster and ensure it is placed in the correct portion of the program.

I look forward to your participation in this important rice research conference, and welcoming you to Hanoi in November.

Yours sincerely,

Dr Michael Jackson
Chair – Scientific Committee, IRRC28

IRC POSTER



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INTRODUCTION

- WSF is considered a key factor for successful agricultural water management.
- Supposedly collected from water users on volumetric base, crop base, area base, or tradable water right (Cornish et al., 2004), current WSF was collected based on neither one of these due to the absent of objective measure of WSF and poorly defined role and function of water users association.
- Water service has been valued in various different ways including fixed and variable cost estimation (Gonzalez-Alvarez et al., 2006; Tarimo et al., 1998), marginal (social) cost of water delivery (Bar-Shira et al., 2006), environmental cost internalization (Esteban et al., 2008), water market instrumentation (Goetza et al., 2008), price elasticity prediction (Schoengold et al., 2006), and production function (Pagiola et al., 2004).
- This study was designed to assess the financial value of water service using rice production function in order to estimate WSF.

METHODOLOGY

- Method: Survey.
- Location: Telang, South Sumatra, Indonesia. Telang is among the most productive reclaimed tidal lowland areas.
- Sample Size: 500 farm households randomly drawn from approximately 10,000 farm households.
- Data Collection: Field Observation and Structured Interview.
- Valuation of water service in rice cultivation was carried out using a Cobb-Douglas production function (Coelli, 1995):

$$\ln Y_i = \beta_0 + \beta_1 \ln SEE + \beta_2 \ln CHE + \beta_3 \ln FER + \beta_4 \ln LAB + \beta_5 D_{ws} + \epsilon_i$$

where Y_i = total rice production in Tons; SEE = seed used in Kg; CHE = chemical used in Rupiah; FER = fertilizers used in Rupiah; LAB = labor used in man-days; D_{ws} = dummy variable water service for 0 = without and 1 = with water service.

RESULT AND DISCUSSION

Production and Productivity of Rice

- The production and productivity of rice cultivation in the study area were presented in Table 1. These figures were estimated based on on-farm dried paddy.

Table 1. Production and productivity of rice

	Mean	SD	Min	Max
Cultivation area (Ha)	1.84	0.99	0.25	12
Production (Tons)	9.75	5.70	1.5	79.2
Productivity (Tons/Ha)	5.35	0.88		

The Value of Water Service in Rice Cultivation

- Based on t-test, chemicals, fertilizers, labor and water service have significant effect on rice production (Table 2).
- Rice production of the farmland with water service is 4 percent higher than that without water service (exponentiated 0,040 is 1.0408, subtracting 1 from this gives 0.04, multiplying this by 100 gives 4 percent).

Table 2. Result of regression analysis

Variables	β	SE of β	t	Sig.
(Constant)	-3.712	.387	-9.592	.000
Seed	.017	.028	.595	.552
Chemicals	.032	.019	1.693	.091*
Fertilizer	.122	.027	4.473	.000***
Labor	.767	.037	20.532	.000***
Water Service	.040	.013	2.944	.003***

Note: All variables are in logarithmic, except water service

R Square = .936; F-test = 1209.697; Sig. of F-test = .000

*Significant at 10%; **Significant at 5%; ***Significant at 1%

- Taking the mean productivity of the farmland without water service (5.3180 Tons/Ha) as the basis, the change from without water service to with water service in rice production will increase the productivity by 0.217 Tons/Ha.
- In monetary term, this increase in productivity is equal to Rp 455,700 per hectare, assuming the price of on-farm dried paddy at local market is Rp 2,100 per kg. This is considered to be the value of water service in rice cultivation.
- In comparison, WSF estimated using the cost of water service varies from Rp 315,000 to Rp 391,500 per hectare per year (Table 3). Therefore, the value of water service (assuming only one crop per year) is higher than the cost of water service. This value is sufficient to cover the highest WSF (that covers the external cost of water service) by which current agricultural water management in tidal lowland can expectedly be sustained.

Table 3. Costs of water service and WSF estimates

Type of Cost	Cost Components	Total (Rp)	WSF (Rp/ha/year)
Supply Cost	OM cost	80,580,000	WSF ₁ = 315,000
	Depreciation and replacement cost		
	Management cost		
Economic Cost	Opportunity cost	88,644,000	WSF ₂ = 346,500
Full Cost	External cost	100,164,000	WSF ₃ = 391,500

CONCLUSION

- Water service is required to provide water properly according to crop water requirement. In tidal lowland agriculture where water management is a key factor, water service has been proved to be a statistically significant contributor in rice production.
- The present of water service in rice cultivation contributes to an increase in income. This increase is considered to be the financial value of water service upon which a fee may reliably be imposed.
- The value of water service is higher than any estimates of WSF such that it may cover the highest cost (the full cost) that can sustain current agricultural water management in tidal lowlands.

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IRC CERTIFICATE



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CERTIFICATE OF PARTICIPATION

This is to certify that

Muhammad Yazid

Presented a Poster

at the

28th International Rice Research Conference

9-11 November 2010 in Hanoi, Vietnam

To Phuc Tuong
Chair, Organizing Committee

Michael T. Jackson
Chair, Scientific Committee