The 10th Kumamoto University Forum Surabaya, Indonesia

第10回 熊本大学フォーラム（スラバヤ）

Academic Collaboration and Cooperation for the Promising Future in Asia

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Poster Session B

The 10th Kumamoto University Forum in Surabaya

ITS 07

P ORGANIC MODELLING OF LESTI RIVER USING Q2K APPLICATION

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INTRODUCTION

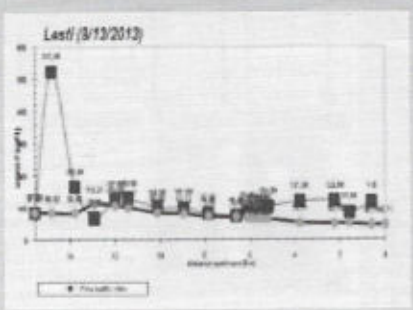
One of the instrument that can predict or simulate water quality changes are called water quality models. (Schnoor, 1996). Brantas river is second biggest river area in Java Island. The area covers 15 (fifteen) regencies and municipalities in East Java Provinsi (Figure 1.) and Lesti river is upstream section of Brantas river.

Figure 1. Map of Brantas River Area (Source : Bureau of Brantas Rivers District, 2002)

Figure 2. Research Activity Flowchart

Model Calibration

Result of Porganik model calibration can be seen below.



RESULT

River Reach System

Model Verification

Model verification was done using chi square test method (X^2). If the differences between model and field fulfill the test criteria then the model can be used. Based on computation, X^2 value are 2,648. The value of X_0^2 is 10.085 with n= 18 and α = 0,90 . So, the model is not accepted because $X^2 > X_0^2$ (2,648> 10.085).

The reach rates that used for calibration result above can be seen at the right side

Reach number	Reach Label	Organic P	
		Hydrolysis Rate /d	Settling Velocity m/d
S1	TC II	0.1	0.4
S2	TC III	0.1	0.2
S3	Dam Clumprit	2.1	0.3
S4	TC V	1.5	0.3
S5	TC VI	1.5	0.3
S6	Jemb.Clumprit	1.5	0.3
S7	Desa Ledokan	1.5	0.3
S8	Desa Suwaru	1.5	0.3
S9	CW IV	1.5	0.3
S10	CW V	1.5	0.3
S12	CW VII	1.5	0.3
S14	CW VII	1.5	0.3
S15	CW IX	1.5	0.3
S16	Jembatan Wonokerto	1.5	0.3
S17	Desa Rejoso	1.5	0.3
S18	WS III	1.5	0.3
S19	WS IV	1.5	0.3
S20	Sengguruh	1.5	0.3

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Certificate

We hereby certify that

Evi Hendriarianti

has made an excellent poster presentation title

"P Organic Modelling of Lesti River Using Q2K Aplication"

at The 10th Kumamoto University Forum held in Surabaya, Indonesia 25-26 November 2013.

On behalf of the Organizing Committee

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