

# Turnitin Dr. Retno 12

*by Aldi Dwi Saputra*

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**Submission date:** 04-Mar-2025 06:57PM (UTC+0700)

**Submission ID:** 2604951610

**File name:** 12. Paper Taiwan.pdf (641.01K)

**Word count:** 416

**Character count:** 2482

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## Abstract

Floods in big cities start from the failure of handling at the rural scale. The involvement of The Deka-helic is needed, especially Disaster Resilient Villages (DESTANA). The most important thing is to develop The Dynamic System model for flood resilience and environmental quality in real time. System Dynamics is very appropriate for creating policy direction solutions. The validation process of previous research results from primary data, surveys and interviews. Results of the Dynamic System Model; controlled community assistance, reduction of built-up land by 0.15. Drainage regulations 0.40, drainage infrastructure 0.28, drainage performance increased by 0.42 resulting in a decrease in built-up land, the performance of Disaster Resilient Villages (DESTANA) increased by 0.45, and community participation increased by 0.3. Reducing flooding by 0.58, and improving environmental quality by 0.35. Flood resilience and environmental quality can be said to have been realized in the 4th year.

**Keywords:** System Dynamics, Flood, Environmental Quality, Disaster Resilient Village

## Results and Discussion

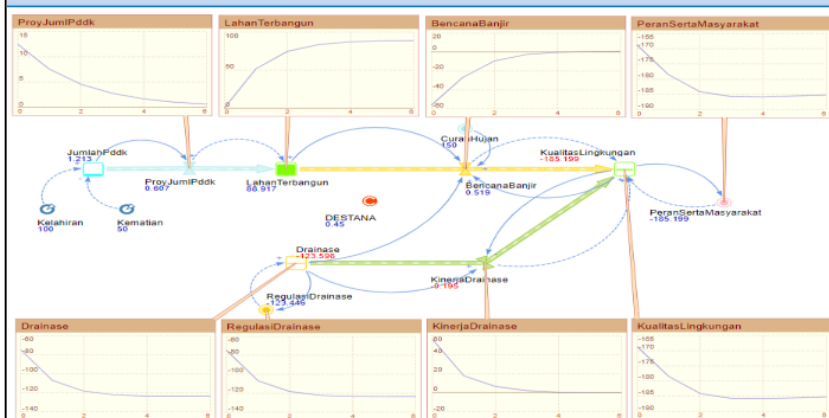


Image of Model Results before DESTANA as intervention

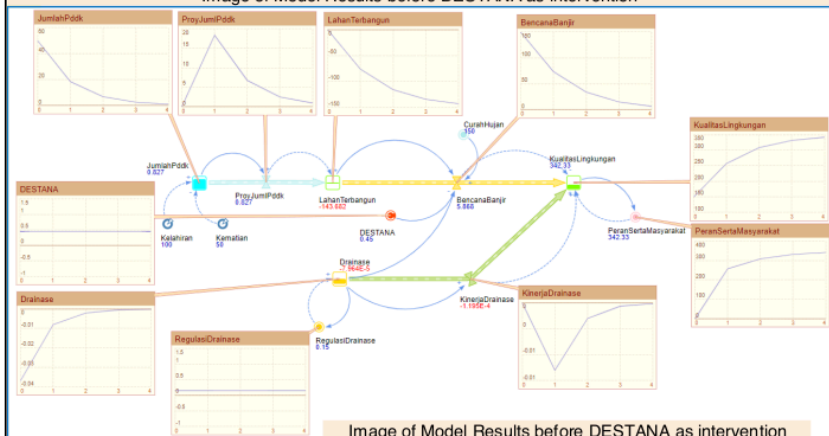


Image of Model Results before DESTANA as intervention

## Introduction

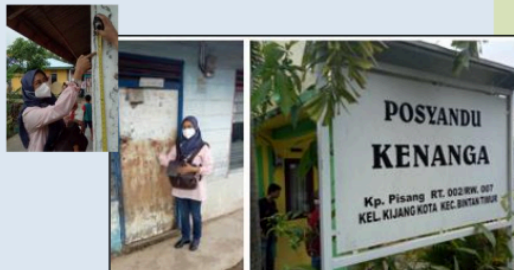


Image of East Binta Flood Height Location, 2023

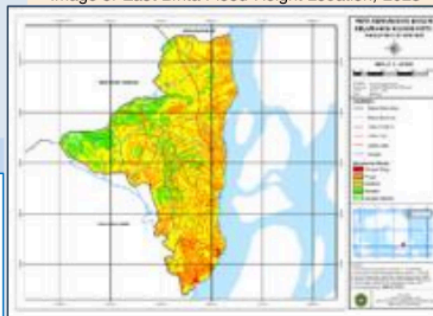


Image of Flood Hazard Map Results for East Bintan, 2023

## Methods and Materials



## Conclusions

Population stabilization, built-up land management for water catchment areas. Disaster Resilient Village (DESTANA) is the main intervention in flood reduction. Drainage regulation and community participation through direct intervention to improve environmental quality have just entered their 4th year, mandatory regulation refinement in the 5th year to ensure sustainability. This model aims to realize service policies for environmental quality resilience such as Noveltis.

## Referensi

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