



Universität Stuttgart



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Universität Stuttgart · WAREM · Pfaffenwaldring 7a · 70569 Stuttgart

WAREM Seminar September 16, 2014

Master's Thesis Presentation

of Rebecca Audrey Valentine

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An Evaluation of Remediation Scenarios using Sediment and Habitat models in a River Channel

Due to the large amount of land used for monoculture rubber plantations, a sensitive ecologically rich region in Xishuangbanna, China has seen a decrease in biodiversity and an increase in sediment erosion. These factors have contributed to a horrifying impact on local streams and rivers. This issue is blamed on over fishing, a decrease in water quality, and an increase in fine sediment load. Fine sediments have been found clogging the sediment bed, harming and changing the delicate river ecosystem. Although sediment clogging is a natural process when it is upset by anthropologic actions it can become detrimental to the ecosystem.

This project uses data from the region and previous project work including results from erosion models to study the current situation along with what would happen if plantations were expanded and two probable passive non-instream remediative techniques.

This study interprets erosion model results for a morphodynamic model. The morphodynamic model is then used to study the change in substrate before and after flood season. Morphodynamic model results are then interpreted for use in a habitat model. The habitat model, with fuzzy logic sets for a locally found fish, results are finally analyzed to suggest a form of habitat protection and remediation for this special region.

Date: Tuesday, September 16, 2014

Time: 17:30

Location: Pfaffenwaldring 7, Room 7.11

WAREM Students and other interested parties are cordially invited.

Auslandsorientierter Studiengang „Water Resources Engineering and Management - WAREM“

Program Coordinator
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