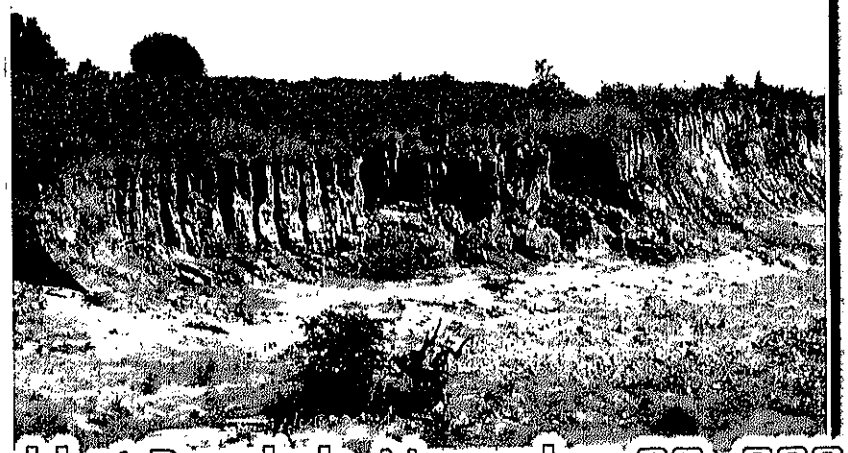
Proceedings of the Workshop on Watershed Degradation and Restoration of the Lam Phachi River Basin, Thailand

Edited by Hideji Maita and Banshaw Bahalayodhin







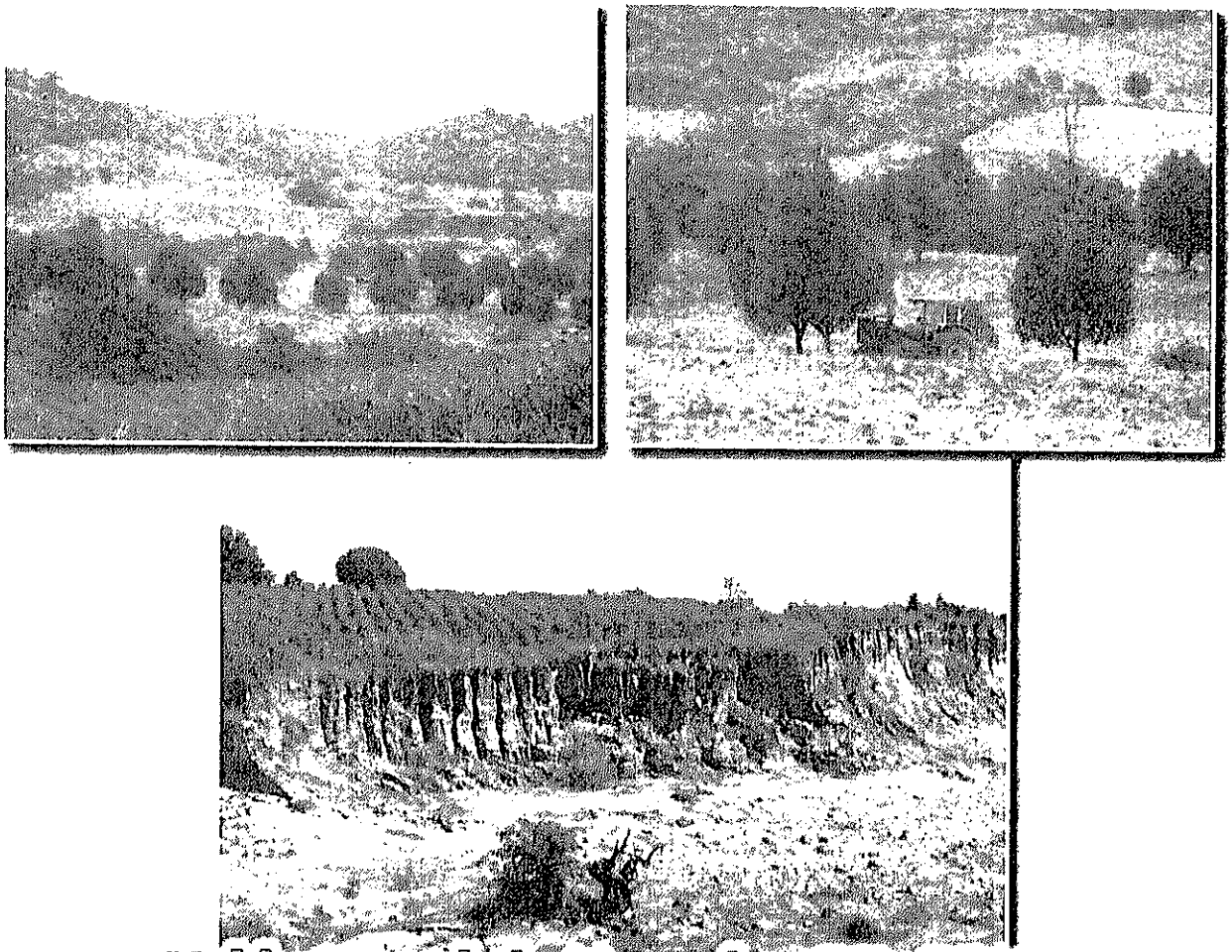
Held at Bangkok, November 29, 2002

Organized and sponsored by
Faculty of Engineering, Kasetsart University, Thailand
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March 2003

Preface

This workshop on "Watershed Degradation and Restoration of the Lam Phachi River Basin" is based on the research results of a Grant-in-Aid for Scientific Research granted by the Japan Society for the Promotion of Science (JSPS). Kasetsart University (KU), Thailand, and University of Tsukuba (UT), Japan, initiated this three-year program in 2000. Twenty researchers in the field of Engineering and Forestry participate in this program, including eight from Thailand (five from Kasetsart University and three from Royal Irrigation Department) and 12 from Japan (six from University of Tsukuba; two from Gifu University; and one each from Niigata University, Shinshu University, Miyazaki University and National Institute for Rural Engineering).

This is the third Kasetsart University-University of Tsukuba joint research program. The first joint research, "Sustainable Development of Agricultural Infrastructure and Organizational Management of Chao Phraya and Mae Klong Basins," was conducted from 1996 to 1998. The second joint research, "Sustainable Management of Mae Klong River Basin", was conducted from 1997 to 1999. Through these joint programs, we learned that widespread conversion of forest lands to cultivated lands in the past few decades was the main cause that triggered serious watershed degradation in Thailand. This trend accelerated drastically with the advancement of socio-economic activities. In ongoing search for remedies against inappropriate farming practices, particularly on the upper stream sloping areas, several artificially induced phenomena, including on-site erosion, aggravation of soil fertility, and continuing sedimentation on both rivers and reservoirs, and further needs for interdisciplinary approaches were identified. To address the causal interactions among watershed features, farmer's behaviors and degradation, a case study focusing on the Lam Phachi River Basin has been conducted.

The objective of this workshop is to clarify the current status of watershed degradation of the Lam Phachi River Basin, its effects on farming practices, and their interactions in order to develop a framework for sustainable management. This research, however, does not cover all the necessary aspects, nor is the analysis sufficient for the goal. We hope the participants here can discuss how to improve our findings on watershed degradation and resolve related issues of the Lam Phachi River Basin. We think that this attempt, with its integrated approach, is an effective way to solve the watershed degradation issues. For the next step, we hope to prepare a follow-up program in the near future.

Hideji Maita
Banshaw Bahalayodhin

January 2003

Report on KU-Tsukuba Joint Research Program
For The Opening of the Workshop on Watershed Degradation and Restoration of the Lam Phachi River Basin, Thailand.
November 29, 2002
By Dean of Faculty of Engineering(Mr.Nontawat Junjaroen)

Vice President for Planning and International Affairs(Associate Professor Dr.Sornprach Thanisawanyangkurn), Delegates from Japan, KU-Tsukuba research team, distinguishes participants, ladies and gentlemen.

The today workshop on "Watershed Degradation and Restoration of the Lam Phachi River Basin, Thailand" is the third workshop come under the joint effort of Kasetsart-Tsukuba University Research collaboration Program. Seven years ago in 1996, the agreement on academic and research cooperation was signed between Faculty of Engineering, Kasetsart University and the Institute of Agricultural and Forest Engineering, University of Tsukuba. This agreement gave the opportunity for the faculty members of the 2 universities for conducting this cooperative research.

At the beginning, 5 professors from Institute of Agricultural and Forest Engineering, University of Tsukuba leading by Professor Dr.Masayoshi Satoh and 7 professors from Faculty of Engineering and one from Faculty of Forestry, Kasetsart University leading by Associate Professor Banshaw Bahalayodhin worked almost simultaneously on 2 research projects. The first project was on Sustainable Development of Agricultural Infrastructure and Organizational Management of Chao Phraya and Mae Klong Basins. It was completed in 1998. The second project on Sustainable Management of Mae Klong River Basin was completed in 1999. At the end of each project, the workshops similar to the today workshop were held.

The third project on Watershed Degradation and Restoration of Lam Phachi River Basin, Thailand was started in 2000. The Lam Phachi River is a tributary of Khwae Noi in Mae Klong River Basin. The project leader is Associate Professor Dr.Hideji Maita. This project expanded the research collaboration to other universities and institute in Japan including Niigata University, Shinshu University, Gifu University, Miyazaki University and National Institute for Rural Engineering and to Royal Irrigation Department of Thailand.

The workshop today is an outcome of the third research project on Watershed Degradation and Restoration of the Lam Phachi River Basin granted by JSPS Grant-in-Aid for Scientific Research. The objectives of the workshop are to address the casual interactions among watershed features, farmers' behavior and degradation. The detail of this workshop will be given by Associate Professor Dr.Hideji Maita, the project leader, right after the opening of this workshop.

There are more than 70 participants coming from 17 institutes including the government and private sectors. At the end of the workshop, the friendship party will be arranged and all the participants are invited.

I believe that this collaboration program is very fruitful to both universities and there will be a lot more cooperative research projects created by KU-Tsukuba team in the future.

On this special occasion, may I request Associate Professor Dr.Sornprach Thanisawanyangkurn, the vice president for planning and international affairs of Kasetsart University, deliver the speech and declare the opening of the workshop on "Watershed Degradation and Restoration of the Lam Phachi River Basin, Thailand"

Thank you.

Openning Speech for
Workshop on Watershed Degradation and Restoration
of the Lam Phachi River Basin, Thailand
on November 29, 2002
by Associate Professor Dr.Sornprach Thanisawanyangkurn
Vice President for Planning and International Affairs, Kasetsart University

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Dean of Faculty of Engineering, Delegates from the University of Tsukuba, Niigata University, Shinshu University, Gifu University, Miyazaki University, National Institute for Rural Engineering, Japan, KU-Tsukuba research team, distinguishes participants, ladies and gentlemen.

On behalf of Kasetsart University, I am very please to hear that the research collaboration between Faculty of Engineering, Kasetsart University and Institute of Agricultural and Forest Engineering, University of Tsukuba, Japan which was well established 7 years ago has produced such progress in the research works. And the collaboration is now expanding to other universities and institutes in Japan. The outcome of the first research project was presented in the workshop at Faculty of Engineering in 1998. The outcome of the second research project was presented at this hotel in 1999. The first two research projects focused on the Sustainable Management of Mae Klong River Basin in general. Many of you might take part in those workshops. Today the third workshop under the theme of Watershed Degradation and Restoration of the Lam Phachi River Basin, Thailand is held for presentation of the outcomes of the third project. This project is financially supported by JSPS Grant-in-Aid for Scientific Research, Japan. During 3 years of the continuous effort, the research team has visited Lam Phachi river basin many times from its most upstream part in Ratchaburi province to the mouth of the river in Kanchanaburi. The problems on the casual interactions among watershed features, farmers' behavior and degradation were identified. The approach methodology was developed in such a way that the restoration of Lam Phachi can be achieved.

There are 2 keynote speeches and 4 sessions with 9 papers to be presented today. I believe that this workshop will be fruitful to all participants who are coming from different operating agencies and academic institutions.

Thank you for an industrious work of the Kasetsart-Tsukuba research team, Faculty of Engineering, Faculty of Forestry, Kasetsart University, Royal Irrigation Department and Institute of Agricultural and Forest Engineering, University of Tsukuba, JSPS Grant-in-Aid for Scientific Research who sponsors this workshop.

Now it is the appropriate time to declare the workshop on "Watershed Degradation and Restoration of the Lam Phachi River Basin, Thailand" open with best wishes for success.

Thank You.



Group Photo of The Workshop Particpants (taken on 29 November 2002)

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Abbreviation

KU (Kasetsart University), UT (University of Tsukuba), RID (Royal Irrigation Department, Ministry of Agriculture and Cooperatives), AD (Department of Agriculture; Ministry of Agriculture and Cooperatives), NU (Niigata University), GU (Gifu University), SU (Shinshu University), MU (Miyazaki University), NIRE (National Institute for Rural Engineering)