

UNITED STATES GOVERNMENT

Memorandum

RDA #6 - Small Activities
Proj. 1-1156
Obj. # ~~3178757~~ 3178757

PD-110-866
152

TO : TA/PPU, Robert Simpson

DATE: January 18, 1977

FROM : TA/AGR, Leon Hesser *LH*

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931-1156

SUBJECT: Approval Request for a Utilization Activity

Title: Short Course on the Control of Aquatic Weeds and an Assessment of Their Economic Significance in Thailand to be Held Cooperatively with the National Research Council (NRC) of Thailand and Oregon State University at Bangkhen, Bangkok, March 28 to May 10, 1977.

A. Background.

Water is a vital and essential natural resource in Thailand where it is used for irrigation, transportation, energy production, drinking, and other purposes. Master development plans of the country not only require maximum use of existing water resources but the potential of expanding supplies for hydroelectric power and efficient irrigation systems. A major deterrent to maximum utilization of fresh water systems in Thailand is the explosive growth of exotic aquatic weeds. Excessive growth of these weeds has significant implications in many fields: agriculture, irrigation, fisheries, hydroelectric power, wildlife conservation, public health, recreation, flood control, drainage, and inland navigation. Aquatic weeds overrun rice paddies and decrease food production. Significant weed growth in natural water systems is characteristically the result of pollution whereas their presence in large man-made schemes is the result of disturbances of the natural hydrological regime.

A serious need exists in Thailand for information, expertise, and facilities to cope with their aquatic weed problems. Positive action programs are hindered not because of a lack of interest but due to leadership and coordination difficulties.

The International Plant Protection Center (IPPC) has been requested, through USAID channels, to supply technical assistance to Thailand for the development of an action program of aquatic weed control. The purpose of this proposal is to recommend a positive response to this request.

The awareness of the aquatic weed problem and its potential impact in the country by Thailand officials is justified. To delay the development of a water weed management system for the country is dangerous. In all cases in other areas of the tropics and subtropics, failure to recognize and plan for water weed infestations has created acute problems.



Long-range, permanent programs can be developed and implemented if they are initiated soon. Further delays will result in unrealistic control programs which are well beyond the cost that can be absorbed in Thailand. Future planning is essential because of the dependence of Thailand's people on water for a wide range of purposes. Any loss of access to this resource would result in serious socioeconomic problems.

The present water weed situation is highly favorable for the development of a management system. No weed pests will be eradicated, therefore a system should be developed to manage specific weeds or groups of weeds to permit maximum utilization of water and agricultural resources in the future.

Thailand is one of the few countries in the tropics where a concentrated aquatic weed research and management program can be recommended since (1) the water weed situation is amenable to long-range planning; (2) research facilities and some degree of expertise are available; and (3) there is an awareness of the water weed problem by local scientists and government officials.

The support and scope of the technical assistance in the request from USAID is considered to be far above the level considered necessary for the development of an effective water weed program in Thailand. Dr. George Allen, Coordinator of the Aquatic Weed Program, IPPC, visited Thailand in December 1976 to prepare a response proposal agreeable to all parties. Mr. Chobvit Lubpairee, NRC and Dr. Allen believe this proposal sound.

B. General Purpose and Specific Objectives.

The purpose of this proposal is to stimulate action programs for the control of aquatic weeds in Thailand. It is recommended that the first step involve a short course to accomplish the following: to train capable Thai scientists in the methodologies of aquatic weed control; to identify personnel and organizations interested in and capable of developing and conducting a long range control program; to design short and long range control programs for the country to be coordinated by a control organization such as the National Research Council; to evaluate and assess the water weed situation in conjunction with Thai scientists; and to determine the interest and commitment of the Thai government to the solution of the country's water weed problem. Following the short course, recommendations will be drafted, by U. S. consultants and the Thai participants, outlining both research and pilot project programs. Emphasis will be placed on maximum Thai involvement at all levels with minimum support from the IPPC.

The proposed short course will be organized by the Thailand National Research Council Coordinating Subcommittee on Aquatic Weeds (Appendix 1). The proposed course will be tentatively held in Bangkok during March 28 - May 10, 1977. Twenty to twenty-five participants will be selected by CSAW. The course will be conducted in 3 phases:

Phase I - 3 weeks duration.

For lectures and discussion sessions including field observations, demonstrations, and experimentation.

Course Outline:

- Types of aquatic weed problems
- The aquatic ecosystem
- Taxonomy and morphology of aquatic weeds
- Ecology and physiology of aquatic weeds
- Assessment of aquatic weed problems
- Socioeconomic impact of water weeds
- Management of aquatic weeds and preventive measures
- Control of aquatic weeds
 - Mechanical control
 - Chemical control
 - Biological control
 - Integrated control
- Utilization of aquatic plants
- Long-range management programs

Phase II - 2 weeks duration.

Review the major aquatic ecosystems to assess the current and potential water problems in the country. This phase will involve the U. S. consultants and 4-5 principle Thai scientists who will

play key roles in the action program. Areas to be reviewed will include the following lakes plus selected rivers and canal systems:

Bhumiphol Dam, Tak	Man-made Lake
Bung Borapet, Nakorn Sawan	Natural Lake
Kwan Payao, Chiang Rai	Natural Lake
Nam Pong Reservoir, Khon Kaen	Man-made Lake
Lam Pao Reservoir, Kalasin	Man-made Lake
Songkhla Lake, Songkhla	Natural Lake

Phase III - 1 week duration.

Develop short and long-range programs for Thailand. This important phase will involve the U. S. consultants, the Coordinating Subcommittee on Aquatic Weeds of the National Research Council and key government personnel.

IPPC Consultants:

The instruction and assessment team will consist of the following scientists:

Dr. George E. Allen - University of Florida - Coordinator and Aquatic Biological Control Specialist

Dr. William Haller - University of Florida - Herbicide Specialist

Dr. Lloyd Chesnut - Georgia College - Water Quality Ecologist

Don Henley - Private Consultant - Aquatic Weed Ecologist

Dr. Larry Bagnall - University of Florida - Mechanization Control

To Be Identified - Fisheries Biologist

To Be Identified - Oregon State University - Agricultural Economist

C. Budget.

1. Requested.

Per Diem

a. Consultants

1 x 60 days x \$35/day	\$2,100
6 x 30 days x \$35/day	6,300

b. Thai

4 x 15 days x \$25/day (during field trip)	1,500
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Intertravel Consultants

7 x \$1800	<u>12,600</u>
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Materials and Supplies	1,000
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Literature and Reference Materials for Participants	<u>1,500</u>
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Subtotal	25,000
Less IPPC Share	<u>8,000</u>
Net Total Requested	<u>17,000</u>

2. IPPC Contribution

IPPC will defray expenses of:

U. S. Coordinator
IPPC Economist and Weed Control Expert

3. Thailand Contribution

- a. Meeting facilities
- b. Typing services
- c. In-country transportation
- d. 25 participants

D. Publication and Utilization.

Dr. George Allen will be responsible for publishing the recommendation of this study group. The report, in large part, will be drafted during the final week of the activity. The target date is for finalizing the report in one month after the meeting or approximately June 10, 1977. One-hundred copies of the report will be published and A.I.D. will receive thirty-five copies, the remainder being distributed to Thai officials and other interested parties.

E. Initial Environmental Examination.

This training and program development activity, per se, will not have any impact on the environment and therefore is awarded a negative determination. In formulating recommendations for aquatic weed research and control programs, environmental implication will be considered. Preceding any further support to implement the recommendations, an environmental assessment would be undertaken.

F. General Assessment and Recommendation.

Aquatic weeds have been recognized as a serious problem in Thailand for years. Excessive growth of water weeds has significant implications in many fields: agriculture, irrigation, fisheries, flood control, drainage, and inland transportation. The increasing role of these weeds in semiaquatic agricultural crops such as rice, hydroelectric projects, and health in developing countries should not be ignored. A serious need exists in the developing countries for information, expertise, and facilities to cope with their aquatic weed problems.

AA/TA received a memorandum from AA/AA in the Fall of 1975, requesting TAB to review the worldwide aquatic weed problem in general and the East Asian regional problem in particular. EA Bureau recommended a team visit to Southeast Asia. After a visit to Thailand in March 1976, it was agreed by RED (Dr. Irving), USAID, Oregon State University Weed Project Staff, and GOT officials that the subject of aquatic weed control would not benefit from seminar workshop talk sessions but rather from a training and program development activity.

Dr. George Allen has since developed this proposal which has the blessing of the ARC and USOM/Thailand. TA/AGR considers this approach to have the greatest immediate impact on the aquatic problem of Thailand.

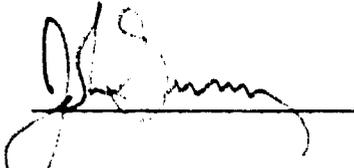
Ref:1.Farrar/AA/TA to Gardiner AA/ASIA
memo dated 9/17/75

Approved:

2.Riggs, ASIA/TR to Hesser, TA/AGR memos dated 1/28/77 and
2/10/77

Disapproved:

Date:



2/16/77

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Appendix I : Organizations Represented on the Coordinating Subcommittee on
Aquatic Weeds - Thailand National Research Council

Applied Scientific Research Corporation of Thailand

The Electricity Generating Authority of Thailand

National Biological Control Research Center

Royal Irrigation Department

Department of Fisheries

Department of Communicable Disease Control

Department of Science

Department of Technical Agriculture

Chiangmai University

Khon Kaen University

Kasetsart University

Prince of Songkla University

Chulalongkorn University

SER/CM/COD, Mr. Morton Darwin

February 24, 1977

TA/AGR/ Leon F. Hesser

Justification for Non-Competitive Procurement, Oregon State University, International Plant Protection Center (IPPC)

I recommend that we negotiate only with Oregon State University and the IPPC for technical services required in connection with a short course on the control of aquatic weeds and an assessment of their economic significance in Thailand. In the opinion of TA/AGR, the following statement of justification complies with AIDPR Notice 73-1, Paragraph 2(c), -- "predominant capability".

AID/W has funded two contracts with OSU for research, technical services, and training in weed control since 1966 (AID/ta-C-1295) and 1976 (AID/ta-C-1303). A competence in aquatic weed management was provided for by a subcontract with the University of Florida in the second contract. OSU has developed unique skills, contacts, and experience during the period since 1966. Since 1976, innovative general technical service techniques have been demonstrated by OSU along with expertise in dealing with developing countries. OSU has established a viable International Plant Protection Center on campus. Here are trained the professional and nonprofessional staff within the OSU projects. It is this staff which will be available and called upon to conduct the short course for which negotiation is being authorized.

Dr. George E. Allen, Coordinator and Aquatic Biological Control Specialist of the University of Florida subcontract, has had numerous meetings with Thai officials in preparation for the short course. It was actually firmed up at a meeting in December 1976 between OSU and the Coordinating Sub-Committee on Aquatic Weeds of the National Research Council of Thailand. A change of contractor at this stage would require an additional investment of time and resources in order that the same level of capability might be reached. Furthermore, the IPPC fund allotment would not be available as part of the OSU contribution to this short course.

Clearances:
TA/AGR/CP:LRLeng *JWH* Date: 2/28/77
TA/AGR/CP:FWhittemore *JW* Date: _____
OCLARK RC 2-28-77

TA/AGR/CP:JANwhite:bw 2/24/77