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IDRC-264e

Reservoir Fishery Management and Development in Asia

Proceedings of a workshop
held in Kathmandu, Nepal,
23–28 November 1987

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8447**

Proceedings



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Editor: Sena S. De Silva



PR2417
639.21 : 627.81(5)
R 4
1987

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Postal Address: P.O. Box 8500, Ottawa, Ont., Canada K1G 3H9

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IDRC-264e

Reservoir fishery management and development in Asia :
proceedings of a workshop held in Kathmandu, Nepal, 23-28 November
1987. IDRC, Ottawa, Ont., 1988. xii + 246 pp. : ill. (Proceedings
series / IDRC)

/Fishery development/, /reservoirs/, /inland fishery/, /fishery
management/, /Asia/ -- /fish production/, /freshwater fish/, /fishery
resources/, /conference reports/, /lists of participants/.

UDC: 631.21:627.81(5)

ISBN: 0-88936-515-6

Technical editor: W.M. Carman

A microfiche edition is available.

The views expressed are those of the authors and do not necessarily
reflect the views of the Centre. Mention of proprietary names does
not constitute endorsement of the product and is given only for
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ABSTRACT

This publication presents the results of an IDRC-funded workshop held in Kathmandu, Nepal, 23-28 November 1987. Representatives from 15 countries reviewed the status of reservoir fishery research in Asia under the following topics: existing fisheries, limnological aspects, biological and resource aspects, management aspects, and culture. Papers were presented on these topics, but the discussion sessions were the main element of the workshop. Summaries of these discussions as well as a series of general recommendations that were generated during the final discussion are presented in this book. The potential for increased fish production in reservoirs and the need for early involvement of fisheries scientists in the planning and preimpoundment studies before dam construction are emphasized.

RÉSUMÉ

Cet ouvrage présente les résultats d'un atelier financé par le CRDI à Katmandou, au Nepal, du 23 au 28 novembre 1987. Des représentants de 15 pays ont examiné l'état de la recherche sur l'élevage du poisson en étangs en Asie, en particulier les aspects suivants : les systèmes actuels, les aspects limnologiques et biologiques, les ressources, la gestion et l'élevage. Des exposés ont été présentés sur ces sujets, mais les discussions ont été l'élément le plus important de l'atelier. L'ouvrage présente également un résumé des discussions ainsi que les recommandations générales issues de ces discussions. On met l'accent sur la possibilité d'augmenter la production de poissons en étangs et la nécessité pour les ichthyologistes de participer très tôt aux études de planification, notamment de la mise en étangs du poisson, qui précèdent la construction d'un barrage.

RESUMEN

Esta publicación presenta los resultados de un taller auspiciado por el CIID en Kathmandu, Nepal, del 23 al 28 noviembre de 1987. Representantes de 15 países analizaron el estado de la investigación sobre pesquería asiática en embalses desde los siguientes ángulos: pesquería existente, aspectos limnológicos, aspectos biológicos y de recurso, aspectos de manejo y cultivo. Las ponencias versaron sobre estos temas, pero las sesiones de discusión fueron el principal elemento del taller. Este libro ofrece los resúmenes de estas discusiones, así como una serie de recomendaciones generales emanadas de la discusión final. Se subraya el potencial para incrementar la producción pesquera en embalses y la necesidad de una participación temprana de los científicos del área en la planificación y los estudios de apropiación que anteceden a la construcción de represas.

CONTENTS

Acknowledgments	ix
Foreword	xi
Introduction	1
Inaugural Address	3
Summary and Recommendations	5
Session I: Existing Fisheries	
The present status of the reservoir fishery in Indonesia Atmadja Hardjamulia and P. Suwignyo	8
The status of reservoir fisheries in the Philippines R.D. Guerrero III	14
The reservoir fishery of Asia S.S. De Silva	19
Abstracts	
Present status of the reservoir fisheries in Thailand T. Chookajorn and T. Bhukaswan	29
Potential of reservoir fishery development in Nepal B.R. Pradhan	29
Discussion	30
Session II: Limnological Aspects	
Nutrient cycling in tropical Asian reservoirs: some important aspects with special reference to Parakrama Samudra, Sri Lanka A. Gunatilaka	34
Efficiency of two types of nets for sampling microcrustacean zooplankton in three Sri Lankan reservoirs and a discussion of sampling methods J. Vijverberg	47
Seasonal dynamics of copepods and cladocerans in five Sri Lankan reservoirs J. Vijverberg, M. Arunachalam, and P.B. Amarasinghe	58
Energy flow and present status of small irrigation reservoirs in southern Tamil Nadu, India T.J. Pandian	69

Water-quality criteria for the protection of aquatic life and its users in tropical Asian reservoirs Yap Siaw-Yang	74
Limnology and fishery potential of the Indrasarobar Reservoir at Kulekhani, Nepal B.R. Pradhan and D. Swar	87
Discussion	94
Session III: Biological and Resource Aspects	
Some biological aspects of the predominant fish species in the Jatiluhur Reservoir, West Java, Indonesia Atmadja Hardjamulia, K.E. Setiadi, and N.S. Rabegnatar	98
Growth overfishing: a potential danger in the Sri Lankan reservoir fishery U.S. Amarasinghe	105
Nonconventional fish resources in Sri Lankan reservoirs H.K.G. Sirisena and S.S. De Silva	113
Reservoir bed preparation in relation to fisheries development: an evaluation S.S. De Silva	121
Abstract Age and growth of <u>Anguilla bicolor</u> and <u>Anguilla nebulosa</u> : a case study H. Wickstrom and C. Enderlain	131
Discussion	132
Session IV: Management Aspects	
Postimpoundment changes and effects of conflicting uses on the fisheries of Tungabhadra Reservoir, India G.S. Singit, P. Ramamohan Reddy, and H.V. Krishnamaraju	136
Aims and strategies of fisheries management for the Tehri Dam Reservoir in the Garhwal Himalaya, India R.C. Sharma	145
Reservoir fisheries management in Thailand T. Bhukaswan and T. Chookajorn	154
The role of fishermen in implementing management strategies in the reservoirs of Sri Lanka U.S. Amarasinghe	158
The need for reservoir fishery management in Bangladesh M.A. Rahman	164
Fishing techniques in Chinese reservoirs Xu Senlin	169

Fish pressures on ecosystems: dynamic, holistic indices A. Duncan and F. Schiemer	176
The significance of the ecosystem approach for reservoir management F. Schiemer and A. Duncan	183
Reservoir fisheries management and environmental impacts: Western experiences J.F. Craig and R.A. Bodaly	195
Abstracts	
The concept of reservoir fisheries management P. Suwignyo	202
Fisheries management strategies in two reservoirs in the Philippines R.D. Guerrero III and E.V. Manalili	202
Discussion	203
Session V: Culture	
Cage-culture practices in Sri Lankan reservoirs G. Muthukumarana and D.E.M. Weerakoon	206
The principles and strategies of fish culture in Chinese reservoirs Li Sifa	214
Integrated aquaculture systems in the Saguling Reservoir, West Java, Indonesia B.A. Costa-Pierce, G.W. Atmadja, P. Effendi, and Sutandar Zainal	224
Aquaculture in reservoirs M.C.M. Beveridge and M.J. Phillips	234
Discussion	244
Participants	245

ABSTRACT

Age and Growth of Anguilla bicolor and Anguilla nebulosa: a Case Study

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As part of a study on unexploited resources in tropical reservoirs, the occurrence and abundance of eels were investigated in five lowland reservoirs in southeastern Sri Lanka. The fishing gear used was mainly double fyke nets, but some additional catches were made using longlines (both floating and sinking). Test fishing was performed during our five visits to Sri Lanka, covering all seasons. About 470 Anguilla bicolor and 410 Anguilla nebulosa were caught. The abundance, expressed as catch per unit effort (CPUE), was the highest in Badagiriya, where about 2 eels/double fyke net per day were caught. The abundance fluctuated significantly in Badagiriya from season to season from 1 to 8 eels as CPUE. Also, the proportions of A. bicolor to A. nebulosa varied greatly from 0.3:1 to 6.3:1. The by-catch of other species was small in the fyke nets; only Glossogobius giuvis was caught in any significant numbers. Otoliths and the length-frequency distribution were analyzed to find the growth rates of both eel species. The results were rather inconclusive but indicate an annual growth of about 6-12 cm in eels 40-60 cm total length. To get a better estimate of the growth rates, eels of both species in Badagiriya were tagged individually with jaw tags. The maximum CPUE values found were rather high in comparison with European catches. Because the dynamics behind the fluctuations (i.e., recruitment and migrations) are still unknown, however, it is impossible to assess the potential yield of eels in Badagiriya.