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Reservoir Fishery Management and Development in Asia

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

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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'etat 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 recommendations 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 ichtyologistes de participer trés tôt aux études de planification, notament 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 lomnológicos, 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 ls 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

ABSTRACT

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

H. Wickstrom and O. Enderlain, Institute of Freshwater Research, S-17011 Drottningholm, Sweden

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 esimate 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.