

Evolution of Fisheries and Aquaculture in India



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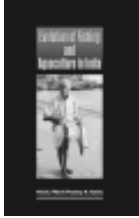
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References

- Abraham, M., Gopinathan and V. Sreekrishna, 1995. Induced breeding of the grey mullet *Liza macrolepis* (Smith) with special reference to larval rearing. *J. Aquaculture in the Tropics*, 3: 1-7.
- Abraham, M., P. Shiranee, P.K. Chandra, M. Kailasam and V. K. Charles, 1999. Embryonic and larval development of the striped mullet, *Mugil cephalus* (L.). *Indian J. Fish.*, 46: 123-131.
- Acharya, S., T. Dutta and M. K. Das, 2003. Effect of handling and crowding stress on some physiological parameters of juvenile *Rita rita* (Hamilton). *Env. and Ecol.*, 21 (3): 515-520.
- Alagarswami, K., 1974. Development of cultured pearls in India. *Curr. Sci.*, 43(7): 205-207.
- Algaraja, K., K. S. Scariah, J. Andrews, K. Vijayalakshmi and M. R. Beena, 1994. *Recent trends in marine fisheries production in Kerala with special reference to conservation and management of resources*, Kerala Fisheries Society, Trivandrum 43 p.
- Ali, A., S. C. Gopal and J. V. Ramana., 2000. Shrimp feed processing and production technology, *CIBA Bulletin*, 12: 1-20
- Alikunhi, K. H., K. K. Sukumaran and S. Parameswaran, 1963. Induced spawning of the Chinese carps *Ctenopharyngodon idella* (Cuv.) and *Hypophthalmichthys molitrix* (Cuv.) in ponds at Cuttack. *Curr. Sci.*, 52: 103-106.
- Alikunhi, K. H. and K. K. Sukumaran, 1964. Preliminary observations on Chinese carps in India. *Proc. Indian Acad. Sci.*, 60: 171-188.
- Alikunhi, K. H., A. Datta, V. D. Singh and G. P. Dubey, 1964. Observations on the breeding of carps in bundhs, near Nowgong, Madhya Pradesh, during July-August, 1964. *Bull. Cent. Inst. Fish. Educ.*, Bombay, 1: 22.
- Alikunhi, K.H., G. Mohan Kumar, S. Ravindran Nair, K.S. Joseph, K. Hammed Ali, M.K. Pavithran and P.K. Sukumaran, 1980. Observations on mass rearing of penaeid and *Macrobrachium* larvae at the Regional Shrimp Hatchery, Azhicoode during 1979 and 1980. *Bull. Dept. Fish. Kerala*, 2(1): 68 p.
- Alverson, D., M. Freberg, S. Murawski and J. G. Pope, 1994. A global assessment of fisheries by catch and discards. *FAO Fish. Tech. Pap.*, 233 p.
- Anil, M.K., V.S.Kakati, U. Ganga and Sherly Zachariah, 1999. Larval rearing of sea horse *Hippocampus kuda* under laboratory conditions. *Mar. Fish. Infor. Serv., T&E Ser.*, 162: 23-25.
- Anon., 1966. *Report of the fish seed committee*, Department of Agriculture, Ministry of Food and Agriculture, Government of India, 211 p.
- Anon., 1976. *National Commission on Agriculture, VIII- Fisheries*, Ministry of Agriculture, Government of India, New Delhi.

- Anon., 1977. *Proceedings of the Fifth Workshop of All India Coordinated Research Project on Ecology and Fisheries of Freshwater Reservoir*, Ukai, Gujrat, India. 7–8 Sept. 1977, 39 p.
- Anon., 1980. *Proceedings of the Sixth Workshop of All India Coordinated Research Project on Ecology and Fisheries of Freshwater Reservoir*, Simla, 25-26 November, 1980. Central Inland Fisheries Research Institute, Barrackpore, West Bengal, India, 121 p.
- Anon., 1983. *Proceeding of the Seventh Workshop of All India Coordinated Research Project on Ecology and Fisheries of Freshwater Reservoir*, Barrackpore, 9-10 March, 1983. Central Inland Fisheries Research Institute, Barrackpore, West Bengal, India, 148 p.
- Anon., 1984. *Proceeding of the Eighth Workshop of All India Coordinated Research Project on Ecology and Fisheries of Freshwater Reservoir*, Barrackpore, Patna, 11-12 July, 1984. Central Inland Fisheries Research Institute, Barrackpore, West Bengal, India, 117 p.
- Anon., 1990. Reports of the research stations 1988-90 and future research programmes proposed 1990-92. Department of Fisheries, Madras, 100 p.
- Anon., 1992. *The Census of Artisanal Fishing Fleet of Kerala*. South Indian Federation of Fishermen's Societies, Trivandrum, 122 p.
- Anon., 1996 a. *Ninth Five-Year Plan for Fisheries. Report of the Working Group*, New Delhi.
- Anon., 1996 b. *Handbook on Fisheries statistics*. Ministry of Agriculture (Department Of Agriculture and Co-operation, Fisheries Division), New Delhi: Government of India, 217p.
- Anon., 1996 c. On ice boxes and catamarans. *PHF Newsletter, BOBP* 7: 3 p.
- Anon., 1997. Ecology based fishery management in Aliyar reservoir. Bull. 72. *Central Inland Capture Fisheries Research Institute, Barrackpore*-743101, West Bengal. 36 p.
- Anon., 2000. *Handbook on Fisheries statistics*. Ministry of Agriculture (Department Of Agriculture and Co-operation, Fisheries Division), New Delhi, Government of India, 153 p.
- Anon., 2000a. *Technologies from ICAR*. Indian Council of Agricultural Research, New Delhi : 280-338.
- Anon., 2000b. Report of the Working Group for Revalidating the Potential of Fishery Resources in the Indian EEZ, 58p.
- Anon., 2001. Status of Indian Shrimp Aquaculture: Overview. *Fishing Chimes*, 21(6): 27-32.
- Anon., 2001a Shrimp aquaculture and the environment – An Environment impact assessment report submitted to the supreme court of India . Aquaculture Authority, Govt. of India. Chennai. 114 p.

- Anon., 2002. Indian Shrimp Culture Scenario: State-wise Status. Expert consultation: development of sustainable shrimp farming in India, held at Chennai during 28-29 August 2002. *Fishing Chimes*, 22 (7):10.
- Anon., 2002a. Rajiv Gandhi Centre for Aquaculture introduces commercial pond cage culture of seabass. *Fishing Chimes*, 22(7): 30-33.
- Anon., 2002b. Aquaculture Authority News, Aquaculture Authority, Chennai 1(1):16p.
- Antony, K. P., V. Muraleedharan and M. K. Mukundan, 2002. Convenience products from quality upgraded *m a s m i n*. In: N.G.K.Pillai, N.G.Menon, P.P.Pillai and U.Ganga (eds.) *Management of scombroid fisheries*, CMFRI: 218–225.
- APAARI, 2000. Bivalve Mariculture in India – a success story in coastal ecosystem development. *APAARI Publication*: 2000/1, 56 p.
- Ayyappan, S. and J. K. Jena, 1998. Carp culture in India - a sustainable farming practice. In: Natarajan, P., K. Dhevendaran, C. M. Aravindhan and S. D. Rita Kumari (eds.) *Advances in Aquatic Biology and Fisheries*, Vol. II. Department of Aquatic Biology and Fisheries, University of Kerala, Trivandrum, India: 125-153.
- Ayyappan, S. and J. K. Jena, 2001. Sustainable freshwater aquaculture in India. In: Pandian, T. J. (ed.) *Sustainable Indian Fisheries*, National Academy of Agricultural Sciences: 88-133.
- Ayyappan, S. and J.K. Jena, 2003. Indian Fisheries and Aquaculture : Present status and future prospects. In : *Fish for All : National Launch*, Kolkata: 12-24.
- Balan, K., K.K.P. Panikkar, T. Jacob, Joseph Andrews and V. Rajendran, 1989. Motorization of country craft in Kerala – an impact study. *CMFRI Spl. Publ.*, 45 : 74 p.
- Balasubramaniam, 2000. Modifications of craft and gear in diversified tuna fishery undertaking at Tharuvaikulam, Gulf of Mannar, India. *Mar. Fish. Infor. Serv., T & E Ser.*, 164 : 19-24.
- Balasubramanyam, 1970. On the characteristics of some of the Indian timbers for boat building- part I. *Indian Seafoods*, 7(4).
- Banerjee, R. K., 1988. Man induced environment deterioration in the Damodar river system. In: Arun G. Jhingran and V. V. Sugunan (eds.) *Conservation and Management of Inland Capture Fishery Resources of India*, Inland Fish. Soc. India, Barrackpore, India : 91-95.
- Banerjee, R. K., S. K. Saha, P. R. Sen and K. V. Sreenivasan, 1989. Ecological studies on town refuse in the context of environmental pollution abatement and fish production. *J. Inland Fish. Soc. India*, 21 (2): 25-30.
- Banerjee, S. M., 1967. Water quality and soil condition of fish ponds in some states of India in relation to fish production. *Indian J. Fish.*, 14: 115-144.

- Barman, R. P., 1988. The fishes of the river Gomti, Tripura, North Eastern India, ZSI Occasional Paper No. 11, ZSI, Calcutta.
- Basavaraja, N and S. Rao, 1988. Induction of sterility in common carp *Cyprinus carpio*. *Indian J. Anim. Sci.*, 50: 1248-1251.
- Basavaraju, Y. and T. J. Varghese, 1981. Embryonic and larval development of rohu-mrigal hybrid. *Proc. Indian Acad. Sci.*, 90: 417-426.
- Basavaraju, Y. and T. J. Varghese, 1983a. Life history of the hybrid, rohu-catla. *Indian J. Fish.*, 30: 87-95.
- Basavaraju, Y. and T. J. Varghese, 1983b. Life history of mrigal-rohu hybrid. *Mysore J. Agric. Sci.*, 17:57-65.
- Bhatta, R., 2000. Coastal aquaculture and Coastal ecosystem: An Institutional Perspective from Karnataka. Aquaculture Development in India : Problems and Prospects. National Centre for Agricultural Economics and Policy Research, Workshop Proceedings 7. Edited by M. Krishnan and Pratap S. Birthal: 78-86.
- Bhoopendranath, M. R., 2002. *Energy optimization in fishing*. Manual ICAR Winter School on Advances in Harvest Technology, CIFT: 230-237.
- Bhowmick, R. M., 1978. Glassjar hatchery for Indian major carps and Chinese carps. *Indian J. Fish.*, 25: 171-179.
- Bhowmick, R. M., G. V. Kowtal and R. K. Jana, 1986. Some observations on the use of various hormones and clomiphene citrate in hypophysation of Indian major carps. *Veterinarski Arhiv.*, 56: 285-292.
- Bhowmick, R. M., R. K. Jana, S. D. Gupta, G. V. Kowtal and M. Rout, 1981. Studies on some aspects of biology and morphometry of the intergeneric hybrid, *Catla catla* (Hamilton) x *Labeo rohita* (Hamilton) produced by hypophysation. *Aquaculture*, 23: 367-371..
- Biswas, K. P., 1996. A text book of fish, fisheries and technology. Narendra Publishing House, Delhi: 413-420.
- BOBP, 1993. Developing and introducing a beach landing craft along the east coast of India. *BOBP/RE/54*, 56 p.
- Bristow, R.C., 1938. History of Mud banks. Govt. Press, Cochin, 37 p.
- Chakrabarty, R. D., P. R. Sen, D. K. Chatterjee and G. V. Kowtal, 1973. Observation on the relative usefulness of different feed for carp spawn and fry. *J. Inland Fish. Soc. India*, 5: 182-188.
- Chakrabarty, R. D., N. G. S. Rao, and P. R. Sen, 1979. Culture of fish in ponds with fertilization. Abstract. Seminar on Inland Aquaculture, Barrackpore, India: 5-6.
- Chakrabarty, R. D., P. R. Sen, N. G. S. Rao, S. R. Ghosh, S. Jena and K. Janaki Ram, 1980. Observations on intensive composite fish culture. *Proc. Indo-Pacific Fish. Coun.*, 19: 515-520.

- Chandra, K., D. N. Singh and R. S. Panwar, 1985. Possible pollution problems from wastes of thermal power plants in India – a case study of Rihand reservoir, Mirzapur (Uttar Pradesh). *Proc. Symp. Asses. Environ. Pollut.*, 1984 : 283-294.
- Chandra, R., V. R. Desai, and S. K. Das, 1984. Observations on bathymetric distribution of Hilsa larvae in middle stretch of river Ganga near Allahabad. *J. Bombay Nat. Hist. Soc.*, 80(2): 427-429
- Chandra, R., R. K. Saxena and R. K. Tyagi, 1990. *Hilsa ilisba* (Ham) of Ganga – its glory and downfall – A retrospect. *In*: V. P. Agrawala and P. Das (eds.) *Recent trends in Limnology*, Today & Tomorrow's Printers and Publishers, New Delhi: 365-378.
- Chaudhuri, H. and K. H. Alikunhi, 1957. Observations on the spawning in Indian carps by hormone injection. *Curr. Sci.*, 26: 381-382.
- Chaudhuri, H., 1959. Experiments on hybridization of Indian carps. *Proc. Indian Sci. Congr.*, 46: 20-21.
- Chaudhuri, H., 1960. Experiments on induced spawning of Indian carps with pituitary injections. *Indian J. Fish.*, 7: 20-49.
- Chaudhuri, H., 1963. Induced spawning of Indian carps. *Proc. Nat. Inst. Sci. India*, 29B: 478-487.
- Chaudhuri, H., 1973. Fertility of hybrids of Indian carps and preliminary studies on the generation of carp hybrids. *J. Inland Fish. Soc. India*, 5: 195-200.
- Chaudhuri, H., R. D. Chakrabarty, N. G. S. Rao, K. J. R. Rao, D. K. Chatterjee and S. Jena, 1974. Record fish production through intensive culture of Indian and exotic carps. *Curr. Sci.*, 43: 303-304.
- Chaudhuri, H., R. D. Chakrabarty and S. Jena, 1975. A new high in fish production in India with record yields by composite fish culture in freshwater ponds. *Aquaculture*, 6: 343-355.
- Chitranshi, V. R., 1988. Pen and cage culture of fish in oxbow lakes. *In*: Arun G. Jhingran and V. V. Sugunan (eds.) *Conservation and Management of Inland Capture Fishery Resources of India*, Inland Fish. Soc. India, Barrackpore, India : 148-150.
- Chitranshi, V. R., 1989. Pen and cage culture in beels. *In*: Training in management of beel (oxbow lake) fisheries, July 11-20, 1989. *Bull. Cent. Inland Capture Fish. Res. Inst.*, Barrackpore. No. 63 : 83-89.
- Chitranshi, V. R., 1992. Pencil culture in floodplain lakes of the Gondok basin – a case study. *In*: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 2: 170-175.
- Chondar, S. L., 1977. Systematic account of carp hybrid *L. gonius* and *L. calbasu*. *J. Inland Fish. Soc. India*, 9: 172-174.

- Choudhury, M, R. Chandra and V. Kolekar, 1990. Observations on some biological aspects and fishery of *Hilsa ilisa* (Ham) of river Brahmaputra. *J. Inland Fish. Soc. India*, 22 (1-2) : 66-74.
- Choudhury, M., 1992a. Fishing methods in floodplains lakes. In Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management* (1.9.92-31.12.92), Compendium, Vol. 2 : 163-166.
- Choudhury, M., 1992b. Fish landings and catch composition from floodplains lakes. In Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management* (1.9.92-31.12.92), Compendium, Vol. 2:160-162.
- Choudhuri, S., 1992. Role of Gomti reseservoir of Tripura. *Fishing Chimes*, 12 (5): 25-26.
- Choudhuri, S., 1995. Ichthyofauna in Tripura. *Fishing chimes*, (2): 34-35.
- CIBA, 1997. Final Report: *Comprehensive Survey of Impacts of Shrimp Farming in Nellore District*, Andhra Pradesh. Mimeo.
- CIFRI, 1978. *III Workshop Report of AICRP on Brackishwater Fish Farming*, Cochin.
- CIFRI, 1981. *IV Workshop Report of AICRP on Brackishwater Fish Farming*, Kakinada.
- CIFRI, 1981a, Progress and Achievements in Aquaculture, Central Inland Fisheries Research Institute, Barrackpore. 43 p.
- CIFRI, 1983. Final Workshop Report of AICRP on Brackishwater Fish Farming, Barrackpore, West Bengal, CIFRI, Mimeo.
- CMFRI, 1978. Larval Development of Indian Penaeid Prawns. *CMFRI bulletin* 28 : 90 p.
- CMFRI, 1995. Mahima, the CMFRI shrimp feed. *Technology Transfer Series* : 6.
- CMFRI, 1997. *Vision 2020-CMFRI Perspective Plan*. (ed. Murty, V.S) Central Marine Fisheries Research Institute (ICAR) Cochin, 70 p.
- CMFRI, 1997a. Status of Research in Marine Fisheries and Mariculture. *CMFRI Spl. Publn.*, No. 67 : 35 p.
- CMFRI, 2000. *Annual Report 1999-2000*. Central Marine Fisheries Research Institute, Cochin, 148 p.
- CMFRI, 2001. *Annual Report 2000-2001*. Central Marine Fisheries Research Institute, Cochin, 163 p.
- CMFRI, 2002. *Annual Report 2001-2002*. Central Marine Fisheries Research Institute, Cochin, 160 p.
- CMFRI, 2003. *Annual Report 2002-2003*. Central Marine Fisheries Research Institute, Cochin, 135 p.
- Das, M. K. and R. N. Pal, 1987. Histopathology of gill-infestation by monogenea and urceolariid ciliates in carps cultured in India. *Indian J. Parasitol.*, II: 127-130.

- Das, M. K., D. P. Haldar and S. K. Mondal, 1989. Macro ecological studies on protozoan disease of carps in tropical intensive fish culture ponds in India. *Environ. Ecol*, 7: 1-9.
- Das M. K., P. K. Meher, J. N. Saha, B. Gjerde, P. V. G.K. Reddy, R. K. Jana, M. Sahoo and M. Rye, 2000. Selection response of rohu, *Labeo rohita*, for two generations of selective breeding. The Fifth Indian Fisheries Forum, Bhubaneswar, India: 68.
- Das, M. K., 2002. Social and economic impact of disease in inland open water and culture based fisheries in India. *FAO Fish. Tech. Paper*, 406 : 333– 344.
- Das, M. K., R. K. Das and S. K. Mondal, 2002. Some stress sensitive parameters of young major carp, *Labeo rohita* (Hamilton-Buchanan). *Indian J. Fish.*, 49 (1) : 73-78.
- Das, M. K. and R. K. Das, 1997. Fish and prawn diseases in India – Diagnosis and control. Inland Fisheries Society of India Publication, Barrackpore. 139 p.
- Das, M. K., Tanushree Dutta, Subhendu Acharya and S. Bhaumik., 2002a. Sublethal temperature stress in juvenile *Labeo rohita* (Ham-Buch) and *Rita rita* (Ham.) : Some physiological changes. *Indian J. Exp. Biol.*, Vol. 40: 589-593.
- Das, P., D. Kumar, A. K. Ghosh and U. Bhowmick, 1980. A preliminary observation on the performance of catla-rohu hybrid in carp culture. *Food Farming and Agric.* 12: 294-296.
- Das, P., D. Kapoor and P. C. Mahanta, 1986. Genetic improvement of fish stock and resource conservation. Bull. No. I, NBFGR, Lucknow, India, 29 p.
- Das, P., M. K. Mukhopadhyay, K. M. Das and P. K. Pandit, 1987. Gonadal sex manipulation of *Oreochromis mossambicus* (Peters). In: Tiews, K. (ed.) *Selection, Hybridization and Genetic Engineering in Aquaculture*, Vol. II, Berlin : 73-78.
- Das, P. and A. G. Ponniah, 1991. Research needs on fish breeding and genetics in aquaculture for the year 2000. In: Sinha, V. R. P. and H. C. Srivastava (eds.) *Aquaculture Productivity*, Hindustan Lever Research Foundation, Oxford and IBH Pub. Co. Pvt. Ltd., New Delhi: 181-195.
- Datt, A.V., 1977. On a collection of fishes from Tripura state News letter, *Zool. Surv. India*, 3 (1) :24-26.
- David, 1959. Observations on some spawning ground of the Gangetic major carps with a note on carp seed resources in India. *Indian J. Fish.*, 6 (2) : 327 – 341.
- De, D. K., D. Nath and P. R. Sen, 1986. Preliminary trials on transport of fry of *Hilsa ilisha* (Ham). *Indian J. Fish.*, 33 (4) : 481-484.
- De, D. K. and P. R. Sen, 1988. Observations on the embryonic and early larval development of Indian shad *Tenulosa ilisha* (Ham). *J. Inland Fish. Soc. India*, 18 (2) : 1-12.

- De, D.K., Amitabha Ghosh and V.K. Unnithan, 1988. Biology and migration of Hooghly Hilsa in the context of Farakka Barrage. In: Arun G. Jhingran and V. V. Sugunan (eds) *Conservation and Management of Inland Capture Fisheries Resources of India*, Inland Fish. Soc. India, Barrackpore, India : 197-202.
- De, D. K. and B. N. Saigal, 1989. Spawning of Hilsa, *Tenulosa ilisha* (Ham.) in the Hooghly estuary. *J. Inland Fish. Soc. India.*, 21 (2): 46-48.
- De, D. K. and N. C. Datta, 1990. Age-growth, length-weight relationship and relating condition in Hilsa, *Tenulosa ilisha* (Ham) from the Hooghly estuarine system. *Indian J. Fish.*, 37 (3) : 199-209.
- De, D. K. and N. C. Datta, 1990a. Studies on certain aspects of the morpho-histology of Indian shad Hilsa, *Tenulosa ilisha* (Ham) in relation to feed and feeding habits. *Indian J. Fish.*, 37 (3) : 189-198.
- De, D.K., 1992. Live fish transport. In. *Training on Carp hatchery Management*, June 22-30, 1992, CICFRI, Barrackpore. (eds.) Utpal Bhaumik and P. K. Pandit : 26-32.
- De, D.K. and A. Mukherjee, 1992. Fish breeding and recruitment in floodplains lakes. In: Y. S. Yadava and V. V. Sugunan (eds) *FAO Sponsored Training Programme on Flood Plain Fisheries Management* (1.9.92-31.12.92), Compendium, Vol. 2: 167-169.
- De, D. K., M. Sinha and A. Ghosh, 1994. Impact of Farakka barrage on the spawning of Hilsa, *Tenulosa ilisha* (Hamilton) in the Hooghly estuary. *J. Inland Fish. Soc. India*, 26 (1) : 121-124.
- Dehadrai, P. V., R. N. Pal, M. Choudhury and D. N. Singh, 1974. Observations on cage culture of air-breathing fishes in swamps of Assam. *J. Inland Fish. Soc. India* 89-92.
- Dehadrai, P. V., 1980. Swamp ecology and scope for its utilisation for aquaculture in India. *Tropical Ecology and Development*: 823-831.
- Dehadrai, P. V., M. Y. Kamal and R. K. Das, 1985. Air-breathing fish culture: Package of practices for increasing production. Aquacultural Extension Manual, New Series 8, Central Inland Fisheries Research Institute, Barrackpore. 14 p.
- Dehadrai, P.V., 2003. Indian Fisheries in 21st Century. In: *Fish for all* National Launch. Organised by World Fish Centre, Penang; Government of India, New Delhi, Government of West Bengal, Kolkata and M.S. Swaminathan Research Foundation, Chennai on Dec. 18-19, 2003 : 1-11.
- Devadasan, K., 2002. Commercially viable fishery based technologies recently developed by CIFT. Agricultural Technology Information Centre, CIFT, Cochin *CIFT Technology Advisory Series* 10: 15 p.
- Devaraj, M., 1987. State of art of Marine Fisheries in India. *Proc. Nat. Symp. Utilisation of Living Resources of the Indian Seas*. National Academy of Sciences of India: 101-114.

- Devaraj, M., K.N.Kurup, N.G.K. Pillai, K.Balan, E.Vivekanandan and R.Sathiadas, 1997. Status, prospects and management of small pelagic fisheries in India. *In*: M.Devaraj and P.Martosubroto (eds.) *Small Pelagic Resources and their Fisheries in the Asia – Pacific region*. Proc. Of the APFIC Working Party on marine Fisheries, First Seassion, 13-16 May 1997, Bangkok, Thailand, *RAP Publ. 1997/31*: 91-197.
- Devaraj, M., V.S.R. Murty, R. Sathiadhas and K.K. Joshi, 1998. The New Economic Policy and Perspectives for Marine Fisheries Research and Development in India. *Fishing Chimes*, 18(5) : 18-29.
- Devaraj, M., V.K. Pillai, K.K. Appukuttan, C. Suseelan, V.S.R. Murty, P. Kaladharan, G. Sudhakara Rao, N.G.K. Pillai, N.N. Pillai, K. Balan, V. Chandrika, K.C. George and K.S. Sobhana, 1999. Packages of Practices for Sustainable, Ecofriendly Mariculture (Land-based Saline Aquaculture and Seafarming). *In*: M. Mohan Joseph (ed.) *Aquaculture and the Environment*, Asian Fisheries Society, Indian Branch: 33-69.
- Dubey, G. P., 1994 (in press). Current status and scope of fisheries management of major reservoirs in Narmada basin in Madhya Pradesh.
- Dwivedi, R. K., K. P. Srivastava, N. K. Srivastava, R. K. Tyagi, and R. Chandra., 1988. Influence of certain hydrological and meteorological factors on abundance of carp spawn in a stretch of river Yamuna near Allahabad. *In*: Jhingran, A. G. and V. V. Sugunan (eds.) Conservation and management of inland capture fisheries resources of India, *Inland Fisheries Society of India*, Barrackpore, India: 189-196.
- Dwivedi, R. K. and R. K. Tyagi, 1999. Spawn prospecting and fisheries from river Yamuna – A case study. *In*: Sinha, M. D. Kumar and P. K. Katiha (eds.) Eco-friendly management of resources for Doubling fish production – strategies for 21st Century, *Inland Fisheries Society of India*, Barrackpore, India: 149-152.
- Dwivedi, R. K., 1999. Trend of spawn availability in Ganga river system. *In*: Sinha, M., M. A. Khan and B. C. Jha (eds.) Ecology, fisheries and fish stock assessment in Indian Rivers, Bulletin 90, *Central Inland Fisheries Research Institute*, Barrackpore: 255-259.
- Dwivedi, S. N. and Ravindranathan, 1982. *Carp hatchery model CIFED-81: A new system to fish even when rain fails*. Bull. CIFE, Bombay, India, 19 p.
- Dwivedi, S. N. and G. S. Zaidi, 1983. Development of carp hatcheries in India. *Fishing Chimes*, 29-47.
- FAO, 1963. Third Report to the Government of India on Fishing Boats. Based on the work of Peter Gurtner, Report No. 1535, 8 p.
- Ganapathi, R. and M. Viswakumar, 2001. Present status and future prospects of coastal aquaculture in India. *In*: N.R. Menon, B.M. Kurup and R. Philip (eds.). *Proc. International workshop on Aquaculture and Environment*, 13-14 July 2001, Cochin, India, Centre for Integrated Management of coastal zones and Cochin University of Science and Technology : 1-15.

- George, K.V. 1974. Some aspects of prawn culture in the seasonal and perennial fields of Vypeen Island. *Indian J. Fish.*, 21(1): 1-19.
- George, K.V. 1980. Economics of traditional prawn culture in Kerala with a note on the advantages of intensive prawn culture. *Nat. Symp. Shrimp Farming, Bombay*, 16-18 August, 1978: 131-137.
- George, V. C., 1998. Technological advances in fishing gear for coastal and deep sea fishing in India. In: M. Shahul Hameed and B. Madhusoodana Kurup (eds.) *Technological Advancements in Fisheries, CUSAT*: 174-178.
- Ghosh, Apurba, 1988. Recycling of sewage effluents through fish production means to combat riverine pollution. In: Arun G. Jhingran and V. V. Sugunan (eds.) *Conservation and Management of Inland Capture Fishery Resources of India, Inland Fish. Soc. India, Barrackpore, India* : 69-74.
- Ghosh, B. B., M. M. Bagchi and D. K. De, 1983. Some observations on the status of pollution in the Hooghly estuary (West Bengal) with reference to heavy metal disposed through industrial wastes. *J. Inland Fish. Soc. India*, 15 (1-2): 44-53.
- Ghosh, B. B., H. C. Joshi and M. M. Bagchi, 1988. Impact of pollution in Hooghly-Matlah estuarine system. In: Arun G. Jhingran and V. V. Sugunan (eds.) *Conservation and Management of Inland Capture Fishery Resources of India, Inland Fish. Soc. India, Barrackpore, India*: 203-209.
- Ghosh, S.K. and A.P. Lipton, 1982. *Ichthyofauna of the N. E. H. Region with special reference to their economic importance*. Special bulletin No. 1, ICAR Research complex for NEH region, Shilong Meghalaya.
- Gopakumar, K., S. Ayyappan, J. K. Jena, S. K.Sahoo, S. K.Sarkar, B. B. Satpathy and P.K.Nayak, 1999. *National Freshwater Aquaculture Plan*. Central Institute of Freshwater Aquaculture, Bhubaneswar, 75 p.
- Gopal Rao, K., O. R. Reddy, P. V. A. N. Rama Rao and R. Ramakrishna, 1986. Monoculture of Indian freshwater prawn *M. malcolmsonii* (H..Milne Edwards). *Aquaculture*, 53: 67-73.
- Gopal, B., 1995. Management of aquatic weed. In: *Handbook of wetland management*, W. W. F., India, New Delhi: 212-225.
- Gopal, C. K., T. J. Verghese and P. Kcshavanath, 1989. Morphological features of catla-mrigal and mrigal-catla hybrids and their comparison with the parental species. In: Das, P. and A. G. Jhingran (eds.), *Fish Genetics in India*, Today and Tomorrow's Printers and Publishers, New Delhi: 183-191.
- Gopalakrishnan, P and V. B. Shenoy, 1998. *Artemia* cyst production integrated with salt works. In: K.K. Balachandran, T.S.G.Iyer, P. Madhavan, J. Joseph, P.A. Perigreen, M.R.Raghunath and M.D.Varghese (eds.) *Advances and priorities in Fisheries Technology*, Society of Fisheries Technologists (India), Cochin: 75-78.
- Gulbrandson, O., 1984. Fishing crafts development in Kerala: Evaluation Report, BOBP/WP/25, Development of small-scale fisheries in the Bay of Bengal, BOBP, Madras, 14 p.

- Gulbrandson, O., 1986. Reducing fuel cost of small fishing boats, BOBP/WP/27, BOBP, Madras, 15 p.
- Gupta, O. P., 1979. Aquatic weeds : their menace and control. Today's and Tomorrow's Printer Publishers. 272 p.
- Gupta, R. A. and S. K. Mondal, 1997. Methods of collection of inland fisheries statistics in India. *CIFRI Bulletin* No. 77. 71 p.
- Gupta, S. D., P. V. G. K. Reddy, E. Natarajan, U. K. Sar, S. K. Sahoo, S. C. Rath and S. Das Gupta, 1992a. On the second breeding and some aspects of culture of *Wallago attu*. (Schneider). *J. Aqua.*, 2: 1-6.
- Gupta, S. D., P. V. G. K. Reddy, U. K. Sar, S. K. Sahoo, S. C. Rath and S. Das Gupta, 1992b. Seed production of major Indian catfishes (*Wallago attu*, *Mystus aor*, and *Pangasius pangasius*). *Fourth National Fish Seed Congress*, 30 Sep. -1 Oct. 1992. Lucknow, India.
- Gupta, S. D., P. V. G. K. Reddy, S. C. Rath, S. Das Gupta, S. K. Sahoo and U. K. Sar, 1993. Induced breeding and larval rearing of the Indian catfish *Mystus aor* (lamillon). *J. Inland Fish. Soc. India*, 52: 51-53.
- Gupta, S. D., S. C. Rath and S. Das Gupta, 1994. Modifications in indoors carp hatchery for increasing seed production. In: Ayyappan, S., B. S. Giri, M. Ranadhr and S. D. Tripathi (eds.) *Proc. Nat. Sem. Freshwat. Aqua.*, Bhubaneswar, India: 16-17.
- Gupta, S. D., P. V. G. K. Reddy, S. C. Rath, S. Das Gupta, S. K. Sahoo and U. K. Sar, 1998. A note on artificial propagation of a teleost, *Pangasius pangasius* (Hamilton). *J. Aqua.*, 6: 23-26.
- Henderson, H. F & R. L. Welcomme, 1974. Relationship of yield to morpho-edaphic index and Numbers of fishermen in African inland waters. *CIFA Occas.*: 1-9.
- Hora, S. L. and T. V. R. Pillay, 1962. Handbook on fish culture in Indo-Pacific Fisheries region. *FAO Fish Biol. Tech. Pap.*, 14, 203 p.
- ICAR, 2000. Technologies from ICAR (For Industrial liaison). Indian Council of Agricultural Research, New Delhi, 350 p.
- Jacob, T., V. Rajendran, Mahadevan Pillai, P.K. Joseph Andrews and U.K. Sathyavan, 1987. An appraisal of marine fisheries of Kerala. *CMFRI Spl. Publ.*, 35.
- Jafri, A. K., D. K. Khan, M. A. Anwar, M. F. Hassan and Erfanullah, 1991. Growth and survival of Indian major carp spawn fed artificial diets. In: Sinha, V. R. P. and H. C. Srivastava (eds.) *Aquaculture productivity*, Oxford and IBH Publishing Company Private Limited, New Delhi, India: 485-490.
- James, P. S. B. R., A. G. Jhingran and K. Madhusudana Rao, 1986. Present status and future scope for fish production in cages and enclosures in India. *Indian J. Anim. Sci.*, 56 (3): 453-458.

- Janaki Ram, K., 1989. Studies on culture pearl production from freshwater mussels. *Curr. Sci.*, 58(8): 474-476.
- Janaki Ram, K. and S. D. Tripathi, 1992. A manual on freshwater pearl culture. Central Institute of Freshwater Aquaculture, Bhubaneswar, India, 44 p.
- Jayaraman, R., P. Selvaraj, J. Vasantkumar and R. K. Ramkuamar, 1993. Marketing of Shrimps in Pudukottai and Tirunelveli Districts, Tamil Nadu. *Indian Journal of Agricultural Marketing*, 7(2): 213-222.
- Jayaraman, R. and P. Selvaraj, 2000. Constraints to Development of aquaculture. Aquaculture Development in India: Problems and Prospects. National Centre for Agricultural Economics and Policy Research, Workshop Proceedings 7. (eds.) M. Krishnan and Pratap S. Birthal: 65-73.
- Jena, J. K., P. K. Mukhopadhyay, S. Sarkar, P. K. Aravindakshan and H. K. Muduli, 1996. Evaluation of a formulated diet for nursery rearing of Indian major carp under field condition. *J. Aqua. Trop.*, II: 299-305.
- Jena, J. K., P. K. Aravindakshan, Suresh Chandra, H. K. Muduli and S. Ayyappan, 1998a. Comparative evaluation of growth and survival of Indian major carps and exotic carps in raising fingerlings. *J. Aqua. Trop.* 13: 143-150.
- Jena, J. K., P. K. Aravindakshan and W. J. Singh, 1998b. Nursery rearing of Indian major carp fry under different stocking densities. *Indian J. Fish.*, 45: 163-168.
- Jena, J. K., P. K. Mukhopadhyay and P. K. Aravindakshan, 1998c. Dietary incorporation of meat meal as a substitute for fish meal in carp fry rearing. *Indian J. Fish.*, 45: 43-49.
- Jena, J. K., P. K. Mukhopadhyay and P. K. Aravindakshan, 1999. Evaluation of formulated diet for raising carp fingerlings in field condition. *J. Appl. Ichthyol.*, 15: 188-192.
- Jena, J. K., S. Ayyappan and P. K. Aravindakshan, 2002a. Comparative evaluation of production performance in varied cropping patterns of carp polyculture systems. *Aquaculture*, 207: 49-64.
- Jena, J. K., S. Ayyappan, P. K. Aravindakshan, B. Dash, S. K. Singh, and H. K. Muduli, 2002b. Evaluation of production performance in carp polyculture with different stocking densities and species combinations. *J. Appl. Ichthyol.*, 16: 165-171.
- Jha, B. C., 1989. Beel fisheries resources in Bihar and eastern Uttar Pradesh. In: Training in management of beel (oxbow lake) fisheries, July 11-20, 1989. *Bull. Cent. Inland Capture Fish. Res. Inst., Barrackpore*. No. 63: 15-28.
- Jha, B. C., 1995. The floodplain fishery of Gondok basin, Bihar. In. Conservation and sustainable use of floodplain wetlands. Asian Wetland Bureau, Kuala Lumpur, Malaysia.
- Jhingran, A. G. and K. K. Ghosh, 1978. The fisheries of the Ganga river system in context of Indian aquaculture. *Aquaculture*, 14: 141-162.

- Jhingran, Arun G. and H. C. Joshi, 1987. Heavy metals in water sediments and fish in the river Yamuna. *J. Inland Fish. Soc. India*, 19 (1) : 13-23.
- Jhingran, A. G., 1988. Reservoir fisheries management in India. Bulletin 45. *Central Inland Capture Fisheries Research Institute*, Barrackpore, India. 68 p.
- Jhingran, Arun G., 1989. Fishery transformation in response to environmental stresses in river Ganga. *Him. J. Env. Zool.*, 3 : 211-223.
- Jhingran, A. G., 1990. Recent advances in the reservoir fisheries management in India. In: Sena De Silva (ed.), *Reservoir Fisheries of Asia, Proceedings of the 2nd Asian reservoir fisheries workshop*, Hangzhou, Peoples Republic of China, 15 – 19 Oct., 1990.
- Jhingran, Arun G., 1990a. Aquatic pollution with special reference to the Ganga River System. In: G. K. Manna and B. B. Jana (eds.) *Impacts of environment on animals and aquaculture*, University of Kalyani, Kalyani. 1990 : 35-43.
- Jhingran, Arun G., 1990b. Impact of environmental stress on freshwater fisheries resources. Keynote address delivered at the National Symposium on Environmental Pollutants and Resources of Land and Water. *Marathwada Univ., Aurangabad* on 21st Dec., 1990.
- Jhingran, Arun G., 1991. Water resources development in India in the context of environmental perturbations. Presented at the meeting on Preserved Planet Earth. *Rotary International* on 27.04.91, 17 p.
- Jhingran, V. G., 1969. Potential of inland fisheries. *Indian Fmg.*, 19: 22-25.
- Jhingran, V. G., K. L. Sehgal, Kuldip Kumar and B. B. Ghosh, 1979. Rearing of advanced fry of major Indian carp species in recirculatory filtering ponds at Barrackpore, West Bengal. *Aquaculture*, 18: 45-49.
- Jhingran, V. G. and B. K. Sharma, 1980. Integrated livestock-fish farming. In: Pullin, R.S.V. and Z. H. Shehadeh (eds.) *Proceedings of the ICLARM - SEARCA Conference on Integrated Agri-aquaculture Farming System*, Manila, Philippines: 135-142.
- Jhingran, V. G. and R. S. V. Pullin, 1985. A-hatchery manual for the common Chinese and Indian major carps. Asian Development Bank and International Center for Living Aquatic Resources Management, Manila, 191 p.
- Jhingran, V. G. 1991. Fish and Fisheries of India. Hindustan Publishing Corporation, New Delhi, 727 p.
- John, G., P. V. G. K. Reddy and S. D. Gupta, 1984. Artificial gynogenesis in two Indian major carps, *Labeo rohita* (Ham.) and *Catla catla* (Ham.). *Aquaculture*, 42: 161-168.
- Jose Cyriac, K., 2003. Status and scope of fisheries export. In: Fish for all : National launch, Organized by World Fish Centre, Penang; Government of India, New Delhi, Government of West Bengal, Kolkata and M.S. Swaminathan Research Foundation, Chennai on Dec 18-19, 2003, Kolkata : 90-98.

- Joshi, H. C., 1985. Pesticide residue monitoring in the Bhagirathi-Hooghly stretch of the Ganga river system. *Proc. National Seminar on Pollution Control and Environmental Management*, 17-19 March, 1985, NEERI, Nagpur, Vol. 3, Water Quality WQ (a) : 123-134.
- Joshi, H. C., 1986. DDT residues in fish in the river Hooghly. *Proc. Symp. Pest. Resid. and Env. Pollut.*, 93-96.
- Joshi, H. C. and P. K. Sukumaran, 1987. The impact of effluents from Harhar polyfibre and Gwalior rayon factories on the aquatic life in the river Tungabhadra near Harihar in Karnataka – A report. *Bull. Cent. Inland Fish. Res. Inst.*, Barrackpore. No. 50: 21 p.
- Joshi, H. C., 1988. Impact of man-made environmental modifications on the riverine ecology and productivity – a case study of the river Ganga. *In: Arun G. Jhingran and V. V. Sugunan (eds.) Conservation and Management of Inland Capture Fishery Resources of India*, Inland Fish. Soc. India, Barrackpore, India : 80-90.
- Joshi, H. C., 1989. Problems of heavy metal and pesticide contamination in beel ecosystems. *In: Training in management of beel (oxbow lake) fisheries*, July 11-20, 1989. *Bull. Cent. Inland Capture Fish. Res. Inst.*, Barrackpore. No. 63 : 95-101.
- Joshi, H. C., 1990. Pollution and its effect on inland fisheries in India. *In: V. V. Sugunan and Utpal Bhaumik (eds.) Technologies for Inland Fisheries Development*, CICFRI, Barrackpore : 189-196.
- Joshi, H. C., 1990a. Water pollution problems in Indian reservoirs. *In: Reservoir fisheries in India : Proc. Of the National Workshop on Reservoir Fisheries*, 3-4 January, 1990. Special Publication No. 3, Asian Fisheries Society, Indian Branch, Mangalore, 1990 : 21-28.
- Joshi, H. C., 1992. Environmental mediated stress factors in floodplain lakes. II. Pesticides and agricultural run off. *In: Y. S. Yadava and V. V. Sugunan (eds.) FAO Sponsored Training Programme on Flood Plain Fisheries Management*, (1.9.92-31.12.92), Compendium, Vol. 2, : 134-140.
- Joshi, H. C., 1994. Environmental constraints in management of fisheries in inland open water systems in India. *In: Das, M. K. and P. K. Chakraborty (eds.), Contributions to the fisheries of open water systems in India*. Inland Fisheries Society of India.
- Joshi, H. C., 1994a. Environmental constraints in management of Fisheries in inland open water systems in India. *In: Das, M. K. and P. K. Chakraborty (eds.) Contributions to the fisheries of open water systems in India*, Barrackpore : 8-19.
- Kaladharan, P. and N. Kaliaperumal, 1999. Seaweed industry in India. *NAGA, the ICLARM quarterly*, 22 (1) : 11-14.
- Kanaujia, D. R. and A. N. Mohanty, 1992. Breeding and large scale seed production of the Indian river prawn *M. malcolmsonii* (H. M. Edwards). *J. Aqua.*, 2: 6-14.

- Kanaujia, D. R. and A. N. Mohanty, 1993. Air-lift biofilter recirculatory system in large scale seed production of *M. malcolmsonii*. National Meet on Aqua-farming Systems- Practices and Potentials. 10-11 Feb. 1993, Bhubaneswar, India (Abstract).
- Kanaujia, D. R., V. Yadav and A. N. Mohanty, 1993. Use of salt stock solution for seed production of *M. malcolmsonii* (H. M. Edwards). Nat. Meet. Aqua-farming Systems-Practices and Potentials, 10-11 Feb 1993, *Central Institute of Freshwater Aquaculture*, Bhubaneswar, India (Abstract).
- Kanaujia, D. R., 1998. Emerging Technologies in the seed production of *Macrobrachium malcolmsonii* (H.M. Edwards). In: Thomas, P. C. (ed.), *Current and Emerging Trends in Aquaculture*, Daya Publishing House, New Delhi: 148-59.
- Kathirvel, M., S. Srinivasagam, P.K. Ghosh and C.P. Balasubramanian, 1997. Mud crab culture. *CIBA Bulletin* No. 10 : 1-14.
- Katiha, Pradeep K., 2000. Freshwater aquaculture in India: Status, potential and constraints. National Centre for Agricultural Economics and Policy Research, *Workshop Proceedings 7*. (eds.) M. Krishnan and Pratap S. Birthal : 98-108.
- Katiha, Pradeep K. and R. C. Bhatta, 2002. Production and consumption of aquacultural products in India: past trend, present status and future prospects. Presented at special session on 'Strategies and options for sustainable aquacultural Development' at *World aquaculture 2002*, Beijing, China during April 23-27, 2002.
- Katiha, Pradeep K., J. K. Jena and N. K. Barik, 2002. Profile of key inland freshwater aquacultural technologies in India. In: Anjani Kumar, Pradeep K. Katiha and P.K. Joshi (eds.) *Profile of people, technologies and policies in Fisheries sector in India*, National Centre for Agricultural Economics and Policy Research, New Delhi: 59-82.
- Katiha, Pradeep K., J. K. Jena and N. K. Barik, 2003. Profile of key aquacultural technologies in India. In: *A Profile of people, technologies and policies in Fisheries sector of India*. (eds.) Kumar, A. Pradeep K. Katiha, and P. K. Joshi, National Centre for Agricultural Economics and Policy Research, New Delhi: 59-82.
- Khan, H.A., 1972. Induced breeding of air-breathing fishes. *Indian Fmg*, 22: 44-45.
- Khan, H. A. and S. K. Mukhopadhyay, 1975. Production of stocking material of some air-breathing fishes by hypophysation. *J. Inland Fish. Soc. India*, 7:156-161.
- Khan, H. A., S. D. Gupta, P. V. G. K. Reddy, M. Tanta and G. V. Kowtal, 1988. Production of sterile intergeneric hybrids and their utility in aquaculture and reservoir stocking. In: Keshavanath and Radhakrishnan (eds.) *Carp Seed Production Technology. Proc. Workshop Carp Seed Production*, Asian Fisheries Society, Indian Branch, Managalore, India: 41-48.
- Khan, M. A. and A. K. Jafri, 1993. Quantitative dietary requirement for some indispensable amino acids in the Indian major carp *Labeo rohita* fingerling. *J. Aqua. Trop.*, 8: 67-80.

- Khasim, I. D. and M. M. Prasad, 1998. Ready to fry dried products from low cost fish. *In: K.K.Balachandran, T.S.G.Iyer, P.Madhavan, J.Joseph, P.A.Perigree, M.R.Raghunath and M.D.Varghese. (eds.) Advances and priorities in Fisheries Technology*, Society of Fisheries Technologists (India), Cochin: 261-263.
- Konda Reddy, P. and T. J. Varghese, 1980a. On the taxonomic characters of two major carps hybrids, catla-rohu and rohu- catla hybrids. *Proc. Indian Acad. Sci. (Animal Sci.)*, 89:419-429.
- Konda Reddy, P. and T. J. Varghese, 1980b. Studies on the comparative growth rates of two Indian major carp hybrids, catla-rohu and rohu-catla. *J. Inland Fish. Soc. India*, 12:18-24.
- Korakandy, Ramakrishnan, 1994. *Technological change and the development of marine fishing industry in India*. Daya Publishing House, New Delhi, 338 p.
- Krishnan, M. T., P. S. P. Ravishankar, D. D. Gupta, Vimala and K. Gopinathan, 1995. The economics of production of brackishwater aquaculture in Krishna District of Andhra Pradesh. *Seafood Export Journal*, 26(8): 19-26.
- Kurup, B. M., 2004. Innovative approaches for development of Giant Prawn (*Macrobrachium rosenbergii*) farming in India. *Fishing Chimes*, 24(1): 34-37.
- Kutty M. N., 2001. Diversification of Aquaculture. *In: Pandian T.J.(ed.) Sustainable Indian Fisheries*, National Academy of Agricultural Sciences: 169-212.
- Laal, A. K., S. K. Sarkar and A. Sarkar, 1988. The trophicity and saprocity of the river Ganga and its oxbow lake in relation to community sewage waste impact. *Bull. Bot. Soc.*, 35: 21-38.
- Lakshmanan, M. A. V., D. S. Murty, K. K. Pillai and S. C. Banerjee, 1967. On a new artificial feed for carp fry. *FAO Fish. Rep.* (44) 3:373-387.
- Lakshmanan, M. A. V., P. R. Sen, D. S. Murty, and D. P. Chakraborty, 1968. Preliminary study on the rearing of carp fingerlings. *Indian J. Fish.*, 15: 40-52.
- Lakshmanan, M. A. V., 1969. Nurseries and their management. FAO/ UNDP Regional Seminar on Induced Breeding of Cultivated Fishes. FRI/ 113CF/ 17-25p.
- Lakshmanan, M. A. V., K. K. Sukumaran, D. S. Murty, D. K. Chakraborty and M. T. Philipose, 1971. Preliminary observations on intensive fish farming in freshwater ponds by the composite culture of Indian and exotic species. *J. Inland Fish. Soc. India*, 3: 1-21.
- Laxminarayana, A., S. M. Pillai, K. K. Surendran and C. S. Sashidharan, 1995. Backyard hatchery technology for the white prawn, *Penaeus indicus*. *CIBA Bulletin* No. 8: 1-7.
- Leela Edwin and C. Hridayanathan, 1998. Catch per unit effort of ring seines of south-Kerala coast. *In: K.K.Balachandran, T.S.G.Iyer, P.Madhavan, J.Joseph, P.A.Perigree, M.R.Raghunath and M.D.Varghese. (eds.) Advances and priorities in Fisheries Technology*, Society of Fisheries Technologists (India), Cochin: 181-184.

- Leela Edwin and N. Saly Thomas, 2000. Copper-Chrome–Arsenic (CCA) treatment for catamarans. *Fishing Chimes*, 20 (4): 56-57.
- Leela Edwin, 2002. Fishing craft materials. *Manual ICAR Winter School on Advances in Harvest Technology*, CIFT: 55-68.
- Ling, S. W. and A. B. O. Merican, 1961. Notes on the life habits of the adults and larval stages of *M. rosenbergii*. *Proc. Indo- Pacific. Fish. Coun.*, 9: 55-60.
- Ling, S. W., 1969a. The general biology and development of *M. rosenbergii* (de Man). *FAO Fish Rep.*, 3: 589-606.
- Ling, S. W., 1969b. Methods of rearing and culturing *M. rosenbergii* (de Man). *FAO Fish. Rep.*, 3: 607-619.
- Lipton, A. P., 1983. Fish fauna of Tripura. *Matsya*, 9: 110-118.
- Maheswarudu, G., E.V. Radhakrishnan, N.N. Pillai, M.R. Arputharaj, A. Ramakrishnan, S. Mohan and A. Vairamani, 1997. Observation on the growth of *Penaeus semisulcatus* in the nursery ponds. *J. mar. biol. Ass. India*, 38 (1&2): 63-67.
- Mairh, O.P., S.T. Zodape, A. Tewari and M.R. Rajyaguru, 1995. Culture of marine red alga *Kappaphycus striatum* (Schmitz) in the Saurashtra region, west coast of India. *Indian J. Mar. Sci.*, 24: 24-31.
- Marichamy and Motha, 1986. Prospects of prawn culture in salt pan areas. *Mar. Fish. Infor. Serv., T&E Ser.*, 70:1-7.
- Marichamy, R. and S. Rajapackiam, 2000. Mud crab hatchery technology. In: V.N. Pillai and N.G. Menon (eds.) *Marine Fisheries Research and Management*: 747-752.
- Mathew, P. M. and M. V. Mohan, 1990. Reservoir fisheries in Kerala – Status and scope for development. In: Jhingran Arun G. and V. K. Unnithan (eds.) *Reservoir Fisheries in India. Proceedings of the National Workshop on Reservoir Fisheries*, 3-4 January, 1990. spl. publication 3, Asian Fisheries Society, Indian Branch, Mangalore, India: 11-117.
- Menon, A.G.K., 1974. A checklist of fishes of the Himalayan and Indo Gangetic Plains. Special publication No. 1 Inland fisheries society of India. 136p.
- Menon, V. R., 1983. On the result of rearing carp fry in floating nurseries in Tamil Nadu. In: *Proceedings of the National Seminar on Cage and Pen Culture*. Fisheries College, Tamil Nadu Agricultural University, Tuticorin, India: 95-98.
- Mishra, D. N. and B. C. Tyagi, 1981. Progress report of Jaunpur sub-centre, Uttar Pradesh for the period October, 1978 to August, 1980. Fifth Workshop on All India Co-oriented Research Project on Composite Fish Culture and Fish Seed Production, Freshwater Aquaculture Research and Training Centre, Dhauli, Bhubaneswar, India.
- Mitra Gopal, 1999. Earth worm as potential feed for aquarium fishes. *Fishing chime*, 19 (9): 24 p.

- Mitra, K., 1993. Common macrophytes of floodplain lakes and their control. *In*:FAO Sponsored Training Programme on Flood Plain Fisheries Management. (1.9.92-31.12.92), Compendium, Vol. 1, (eds.) Y. S. Yadava and V. V. Sugunan. *Cent. Inland Capture Fish. Res. Inst., Barrackpore*:55-58.
- Mitra, K., 2003. Macrophyte management in floodplain wetlands. *In*: Vinci, G. K., B. C. Jha, U. Bhaumik and K. Mitra (eds.) *Fisheries Management of Floodplain Wetlands in India*, Central Inland Fisheries Research Institute, Barrackpore, Bulletin No. 125 : 55-61.
- Mitra, P. M. and D. K. De, 1981. A regression model for estimating fecundity of *Hilsa ilisha* (Hamilton) of the Hooghly estuary. *J. Inland Soc. India*, 13 (2): 1-5.
- Mitra, P. M. and H. C. Karmakar, 1985. Multiple regression model for estimating body weight of mature *Hilsa ilisha* (Ham). *J. Inland Fish. Soc. India*, 17 (1-2): 62-65.
- Mitra, P. M., B. N. Saigal and H. C. Karmakar, 1988. Indiscriminate exploitation of young *Hilsa ilisha* (Ham) from the upper freshwater stretches of the Hooghly estuary. *Proc. Nat. Acad. Sci. India*, 58 B (3) : 349-358.
- Mohamed, K.S., V. Kripa, T.S. Velayudhan and K.K. Appukuttan, 2003. Enhancing profitability through improved seeding techniques : green mussel (*Perna viridis*) farming. *J. mar. biol. Ass. India*, 45(2) : 214-223.
- Mohanty, S. N. and D. N. Swamy, 1986. Enriched conventional feed for Indian major carps. *In*: Maclean, J. L., L. B. Dizon and L. V. Hosilos (eds.), *Proc. First Asian Fisheries Forum, Asian Fisheries Society, Manila*: 597-598.
- Mohanty, S. N., D. N. Swamy and S. D. Tripathi, 1990. Protein utilisation in Indian major carp fry *Catla catla* (Ham.), *Labeo rohita* (Ham.) and *Cirrhinus mrigala* (Ham.) fed four protein diets. *J. Aqua. Trop.*, 5: 173-179.
- Mohanty, S. N. and S. J. Kaushik, 1991. Whole body amino acid composition to Indian major carps and its significance. *Aquat. Living Resour.*, 4: 61-64.
- Mohanty, S. N. and S. P. Das, 1995. Evaluation of *Azolla caroliniana* for inclusion in carp diet. *J. Aqua. Trop.*, 10: 343-353.
- Mohanty, U. K., 1995. Comparative evaluation of growth and survival of Indian major carp fry in aerated vis-a-vis non-aerated ponds under different stocking densities. M. F. Sc. Thesis, Orissa University of Agriculture and Technology, Bhubaneswar, India, 123 p.
- Moitra, S. K. and S. K. Sarkar, 1975. A new method of induced breeding by hypophysation of some major carps in dry bunds of Bankura, West Bengal. *Proc. Zool. Soc., Calcutta* 2.8:41-50.
- Motwani, M. P., 1964. Location of natural fish seed collection center and importance of exploratory surveys. *In*. *Seminar on Inland Fisheries Development in Uttar Pradesh*, Lucknow, Government of Uttar Pradesh: 117 – 126.

- Mukherjee, A. B., 1988. Engineering aspects of cage and pen designs. *In: Arun G. Jhingran and V. V. Sugunan (eds.) Conservation and Management of Inland Capture Fishery Resources of India*, Inland Fish. Soc. India, Barrackpore, India : 151-155.
- Mukherjee, A. B., 1989. Design and construction of pens and cages. *In: Training in management of beel (oxbow lake) fisheries, July 11-20, 1989. Bull. Cent. Inland Capture Fish. Res. Inst., Barrackpore. No. 63 : 76-82.*
- Mukherjee, A. B. and P. Roy, 1989. Calcutta metropolitan waste, its characteristic, pollution load and disposal problem. *Environ. And Ecol.*, 7 (4): 1019-1089.
- Mukhopadhyay, M. K., B. B. Ghosh and M. M. Bagchi, 1987. Preliminary observations on the impact of some industrial wastes on prawn fisheries of Hooghly estuary. *J. Indian Soc. Coastal Agric. Res.*, 5 (1) : 293-296.
- Mukhopadhyay, M. K., B. B. Ghosh, H. C. Joshi, M. M. Bagchi and H. C. Karmakar, 1987a. Biomonitoring of pollution in the Hooghly estuary by using *Rita rita* as test fish. *J. Environ. Biology*, 8 (4): 297-306.
- Mukhopadhyay, M. K., B. B. Ghosh and M. M. Bagchi, 1994. Toxicity of heavy metals on fish, prawn and fish food organism of Hooghly Estuarine System. *Geobios*, 21 (1) : 13-17.
- Mukhopadhyay, M. K., K. K. Vaas, Krishna Mitra, M. M. Bagchi and D. K. Biswas, 1994a. Environmental impact assessment on the test fish *Rita rita* in the river Ganga in West Bengal. *J. Inland Fish. Soc. India*, 26 (1): 116-120.
- Mukhopadhyay, P. K. and S. Rout, 1996. Effect of the different dietary lipids on growth and tissue fatty acid changes in fry of the carp *Catla catla* (Hamilton). *Aquaculture Research*, 27.
- Mukhopadhyay, P. K., 1998. Recent advances in carp nutrition and diet development studies in India: an overview. *In: Thomas, P. C. (ed.), Current and emerging trends in aquaculture*, Daya Publishing House, New Delhi, India: 272-277.
- Mukhopadhyay, P. K. and J. K. Jena, 1999. Use of non-conventional dietary ingredients in fish feed formulations. *In: Saxena, D. N. (ed.), Ichthyology: Recent Research Advances*. Oxford IBH Pub. Company Pvt. Ltd., New Delhi: 225-248.
- Murty, V.S., 1969. Catalogue of fishes (excluding from the Laccadives) in the reference collection of the Central Marine Fisheries Research Institute. *Bull. Cent. Mar. Fish. Res. Inst.*, 10: 36 pp.
- Murty, V.S., M. Kumaran and R.S. Lal Mohan, 1989. Resource of ornamental fishes. *Bull. Cent. Mar. Fish. Res. Inst.*, 43: 46-64.
- Murty, V.S. and P. Vedavyasa Rao, 1996. Marine fishery resources of India – Present status and management concerns. *In: N.G. Menon and C.S.G. Pillai (eds.) Marine Biodiversity Conservation and Management*, CMFRI, Cochin: 103-125.
- Murty, V.S., 2002. Marine ornamental fish resources of Lakshadweep. *CMFRI Spl. Publ.*, 72, 134 p.

- Muthu, M.S. 1980. Development and culture of penaeid larvae – A review. In: T. Subramaniam and Sudha Varadarajan (eds.), *Progress in invertebrate reproduction and aquaculture* :203-226.
- Muthu, M.S. and N.N. Pillai, 1991. Prawn hatchery at Mopla Bay with CMFRI Technology. *Mar. Fish. Infor. Serv. T&E Ser.*, 107 : 1-11.
- Nagy, A., M. Bercsenyi and V. Csanyi, 1981. Sex reversal in carp (*Cyprinus carpio*) by oral administration of methyl testosterone. *Can. J. Fish. Aquat. Sci.*, 38: 725-728.
- Nagy, A., V. Csanyi, J. Bakos and M. Bercsenyi, 1984. Utilization of gynogenesis and sex reversal in commercial carp breeding: growth of the first gynogenetic hybrids. *Aquaculture Hungarica (Szarvas)*, 4: 7-16.
- Nair, P. R., T. S. Unnikrishnan Nair, K. George Joseph and Cyriac Mathen, 1994. Amenability of *Euthynnus affinis* to preparation of *masmin*-like products by a modified process. *Fish. Technol.*, 31: 69.
- Nandeesh, M. C., 1993. Aquafeeds and feeding strategies in India. In: New, M. B., A. G. J. Tacon and I. Csavas (eds.) *Farm-made aquafeeds*, Bangkok, Thailand: 213-254.
- Naseem, A. and K. H. Alikunhi, 1971. Preliminary studies on upgrading *Cirrhina reba* by hybridization. *J. Indian Fish. Assoc.*, 1: 68-73.
- Nasar, M., 1998. Fuel saving in fishing by improving the propeller design. In: Balachandran, K.K., Iyer, T.S.G., Mahadeva, P., Joseph, J., Perigreen, P.A., Raghunath, M.R. and Varghese, M.D. (eds.) *Advances and Priorities in Fisheries Technology*, Society of Fisheries Technologists (India), Cochin: 419-425.
- Natarajan, A. V., 1976. Ecology and state of fishery development in some of the man made reservoirs in India. *Proc. Indo-Pacif. Fish. Counc. Colombo.*, 7th session, 27-29 Oct. 1976 : 258 – 267.
- Natarajan, A. V., R. K. Saxena and N. K. Srivastava, 1979. Raising quality fish seed in floating nurseries in India. *Asian Aquaculture*, 2(8): 4-8.
- Natarajan, A. V., 1979. Ecosystem oriented approach for reservoir fisheries development in India. In: Golden Jubilee Souvenir, in commemoration of ICAR Golden Jubilee Year, 1979, Central Inland Fisheries Research Institute, Barrackpore, Part 1: 107-111.
- Natarajan, A. V., 1979a. Planning strategies for development of reservoir fisheries in India. *Madras J. Fish.*, 8 : 69-77.
- Natarajan, V., 1971. Report on spawn prospecting investigations in the Cauvery river. Breeding of fish upstream of Bhavanisagar in Mettur reservoir. *Madras J. Fish.*, 6 : 57 – 76.
- Palaniappan, C., 2001. Fish drying through solar heating - a case study. *Fishing Chimes*, 20(10,11) : 49-51.

- Palanisamy, K. and S. K. Ghosh, 1998. Fisheries developmental planning- role of financial institutions. *In*: K. K. Balachandran, T. S. G. Iyer, P. Madhavan, J. Joseph, P. A. Perigree, M. R. Raghunath and M. D. Varghese. (eds.) *Advances and priorities in Fisheries Technology*. Society of Fisheries Technologists (India), Cochin: 495-502.
- Pandian, T. J. and K. Varadaraj, 1987. Techniques to regulate sex ratio and breeding in tilapia. *Curr Sci.*, 56: 337-343.
- Pandian, T. J., 1991. Biotechnology and aquaculture in India. *In*: Sinha, V. R. P. and H. C. Srivastava (eds.), *Aquaculture Productivity, Proc. Symp. Aquaculture Productivity*, Oxford and IBH Pub., New Delhi: 582-597.
- Pandian, T. J., 2001. A prelude for Indian Fisheries Policy. *In*: Pandian, T. J. (ed.) *Sustainable Indian Fisheries*, National Academy of Agricultural Sciences: 321-327.
- Panicker, P. A., 1985. *Harvest and Post-harvest Technology of Fish*. Society of Fisheries Technologies (India), Cochin, 713 pp.
- Panicker, P. A., T. M. Sivan, and N. A. George, 1998. *Harvest and Post-harvest Technology of Fish*. Society of Fisheries Technologists (India), Cochin 223 p.
- Parameswaran, S. and V. K. Murugesan, 1975. Supplementary feeding and nursery rearing of murrel fry. *Proc. Nat. Acad. Sci. India*, 45(B): 133-42.
- Parameswaran, S., P. Kumariah and K. K. Sukumaran, 1988. Breeding of the riverine catfish *Wallago attu* (Schneider) by hormone stimulation. *Proc. Nat. Acad. Sci. India*, 58: 621-623.
- Parameswaran, S., 1995. Toxic wastes: a potential danger to freshwater fisheries and aquaculture resources. *Fishing Chimes*, 14 (10): 63-68.
- Parthasarathi G, and K. A. Nirmala, 2000. Economics and environmental issues of brackish water aquaculture. *Aquaculture Development in India: Problems and Prospects*. National Centre for Agricultural Economics and Policy Research, Workshop Proceedings 7. (eds.) M. Krishnan and Pratap S. Birthal: 32-51.
- Paul, B. N., S. Nandi, S. Sarkar and P. K. Mukhopadhyay, 1997. Effects of feeding unconventional animal protein sources on the nitrogen metabolism in rohu *Labeo rohita* (Hamilton). *Israeli J. Aquaculture-Bamidgeh*, 49: 183-192.
- Paul, S. and V. V. Sugunan, 1990. Development of reservoir fisheries, areas of hopes and despair. *In*: Jhingran Arun G. and V. K. Unnithan (eds.). *Reservoir Fisheries in India. Proceedings of the National Workshop on Reservoir Fisheries*, 3-4 January, 1990. Special Publication 3, Asian Fisheries Society, Indian Branch, Mangalore, India: 29-32.
- Paul, S., 1992. Socio-economic appraisal of floodplain fishermen community – A synoptic view. *In*: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management* (1.9.92-31.12.92), Compendium, Vol. 2, : 144-147.

- Pillai, N.G.K., Mohan Joseph Modayil and U. Ganga, 2003. Marine fishing practices and coastal aquaculture technologies in India. *In: Anjani Kumar, Pradeep K. Katiha and P.K. Joshi (eds.) Profile of people, technologies and policies in Fisheries sector in India*, National Centre for Agricultural Economics and Policy Research, New Delhi: 83-121.
- Pillai, N.G.K., P.P. Pillai, T.M. Yohannan and C. Muthiah, 2002. Management of scombroid resources of India. *In: N.G.K. Pillai, N.G. Menon, P.P. Pillai and U. Ganga (eds.) Management of Scombroid Fisheries*, Central Marine Fisheries Research Institute, Kochi: 240-249.
- Pillai N. N. and G. Maheswarudu, 2000. Broodstock development of Penaeid shrimp. *Symposium on Ecofriendly Mariculture Technology packages – an update*(Abstracts)25-26th April, 2000, MBAI, CMFRI, Mandapam Camp.
- Pillai, R., A. P. Tripathi and K. J. Rao, 1999. Observations on the growth of post-larvae of *M. rosenbergii* in polythene sheet covered earthen nursery ponds during winter. *Indian J. Fish.*, 46: 57-59.
- Pillai, V. N., M. Devaraj and E. Vivekanandan, 1997. Fisheries environment in the APFIC region with particular emphasis on the northern Indian Ocean. *In: Devaraj, M and P. Martosubroto (eds.) Small pelagic resources and their fisheries in the Asia-Pacific region. RAP Publn.* 1997/31: 381-424.
- Pillai, V. N., 2002. Application of satellite data for marine fishery forecasting. *In: N.G.K. Pillai, N.G. Menon, P.P. Pillai and U. Ganga (eds.) Management of scombroid fisheries*, CMFRI: 90-95.
- Planning Commission Report, 2002. Tenth Five Year Plan (2002 – 2007), Planning Commission, Government of India, New Delhi. 576 p.
- Rai, S. P. and R. C. Singh, 1990. Potential of pen culture in oxbow lakes. *In: Arun G. Jhingran, V. K. Unnithan and Amitabha Ghosh (eds.) Contributions to the Fisheries of Inland Open Water Systems in India*. Part I. Inland Fisheries Society of India, Barrackpore : 97-100.
- Rajan, K.N., G. Nandakumar and K. Chellappan, 2001. Innovative exploitation of deepsea crustaceans along the Kerala coast. *Mar. Fish. Infor. Sem., T&E Ser.*, 168:1-11.
- Raje, P. C. and V. P. Joshi, 1992. Evaluation of different diet \ diet combinations for the larvae of *M. rosenbergii*. *In: Silas, E. G. (ed.) Freshwater Prawns*, Kerala Agricultural University, Thrissur, India: 218-222.
- Rajyalakshmi, T., 1983. Applications of pen and cage culture technology in certain brackishwater lagoons and lakes of India. *Proc. Natl. Sem. Cage & Pen Culture*: 83-85.
- Rama Rao, P. V. A. N., K. V. Prasada Rao, R. Rama Krishna and P. Haribabu, 1992. Studies on the growth of two *Macrobrachium spp.* in monoculture. *In: Silas, E. G. (ed.) Freshwater Prawns*, Kerala Agricultural University, Thrissur, India: 183-186.

- Ramachandran, V., 1963. The method and technique using unhydrous ammonia for aquatic weed control. *Proc. Indo-Pacif. Fish. Coun.*, 10 (2) : 146 – 153.
- Ramachandran, V. and T. Ramaprabhu, 1968. Investigations on the aquatic weed control with special reference to the use of chemicals. *FAO Fish. Rep.*, 5 (44) : 92 – 108.
- Ramachandran, V., T. Ramaprabhu and P. V. G. K. Reddy, 1975. Observations on the use of ammonia for the control of *Pistia strptiotes* Linn. *J. Inland Fish Soc. Ind.*, 7 : 124 – 130.
- Ramaswamy, L. S. and B. I. Sundararaj, 1957. Induced spawning in the catfish *Clarias*. *Naturwissenschaften*, 44:384.
- Rao, K. L., 1979. India's Water Wealth: Its assessment, uses and projections. New Delhi: Orient Longman Limited: 55-102.
- Rao A. Srinivasa and M. Krishnan, 2000. Coastal aquaculture : issues of economics, equity and sustainability. *Fishing Chimes*, Vol.20(5): 13-15.
- Rao, G. R. M. and K. Janaki Ram, 1991. An effective dose of pituitary for breeding *Clarias*. *J. Aqua. Trop.*, 6: 207-210.
- Rao, G.R.M., A. K. Sahu and S. K. Singh, 1991. Advancement of ovarian maturation and multiple spawning in *C. batrachus* (L.). *In*: Ayyappan, S., B. S. Giri, M. Ranadhir and S. D. Tripathi (eds.) *Proc. Nat. Symp. Freshwat. Aqua.*, Bhubaneswar, India : 1-3.
- Rao, G. R. M., K. Janaki Ram and H. K. Muduli, 1994. Seed production and larval rearing of *Clarias batrachus* (Linnaeus) under controlled conditions. *In*: Ayyappan, S., B. S. Giri, M. Ranadhir and S. D. Tripathi (eds.) *Proc. Nat. Sem. Freshwat. Aqua.*, Bhubaneswar, India: 123-125.
- Rao, G. R. M and P. Ravichandran, 2001. Sustainable brackishwater aquaculture. *In*: Pandian, T.J., (ed.) *Sustainable Indian Fisheries*, National Academy of Agricultural Sciences : 134-151.
- Rao, K. J. and T. S. R. Raju, 1989. Observation on polyculture of carps in large freshwater ponds in Kolleru lake. *J. Aqua. Tro.*, 4: 157-164.
- Rao, L.H., M. Kathirvel, P. Ravichandran and S. Sivagnanam, 1995. Development of broodstock and maturation of tiger prawn *Penaeus monodon* in captivity. *CIBA Bulletin* No. 6 : 10 p.
- Rao, R. M., 1965. Breeding behaviour in *M. rosenbergii* (de Man). *Fish Technol.*, 2: 19-25.
- Rao, Virabhadra, K., 1973. Distribution pattern of the major exploited marine fishery resources of India. *Proc. Symposium on Living Resources of the Seas around India. CMFRI Spl. Pbnln.*, 11: 18-101.
- Rath, S. C. and S. D. Gupta, 1997. Improvement and management of eco-hatchery system for carp production. *Fishing Chimes*, 17:42-44.

- Ravi, J. and K. V. Devaraj, 1991a. Quantitative essential amino acid requirement of growth of *Catla catla*. *Aquaculture*, 96. 281-291.
- Ravi, J. and K. V. Devaraj, 1991b. Essential branched chain amino acid requirement of *Catla catla* fry. *J. Appl. Aquaculture*, 1: 89-97.
- Ravindran, K. and M. V. Baiju, 1998. Technological advancements in craft designs and construction for coastal and deep sea fishing in India. In: K.K. Balachandran, T.S.G. Iyer, P. Madhavan, J. Joseph, P.A. Perigreen, M.R. Raghunath and M.D. Varghese. (eds.) *Advances and priorities in Fisheries Technology*. Society of Fisheries Technologists (India), Cochin: 166-173.
- Reddy, O. R., K. Gopal Rao, P. V. A. N. Rama Rao and R. Ramakrishna, 1985. Polyculture of freshwater prawn, *M. malcolmsonii* (Milne Edwards), major Indian and Chinese carps. *J. Aqua. Biol.*, 2: 20-26.
- Reddy, P. V. G. K., H. A. Khan, S. D. Gupta, M. S. Tantia and G. V. Kowtal, 1990. On the ploidy of three intergeneric hybrids between common carp (*Cyprinus carpio communis* L.) and Indian major carps. *Aquaculture*, Hungarica (Szarvas) VI: 5-11.
- Reddy, P. V. G. K., Kanta Das Mahapatra, J. N. Saha and R. K. Jana, 1998a. Effect of induced triploidy on the growth of common carp (*Cyprinus carpio* var. *communis* L.). *J. Aqua. Trop.*, 13: 65-72.
- Reddy, P. V. G. K., B. Gjerde, K. D. Mahapatra, J. N. Saha, R. K. Jana, S. D. Gupta and M. Rye, 1998b. Selective breeding and mating designs for selection in fishes with reference to rohu *Labeo rohita* (Hamilton). *Fish Gen. Biodiversity Conserv. Natcon. Pub.*, 5: 449-456.
- Reddy, P. V. G. K., B. Gjerde, K. D. Mahapatra, R. K. Jana, J. N. Saha, M. Rye and P. K. Meher, 1999. Selective breeding procedures for Asian carps. Central Institute of Freshwater Aquaculture, Bhubaneswar, India, 46 p.
- Saha, G. N., D. K. Chatterjee, C. Selvaraj and N. N. Majumdar, 1979. Evaluation of chemical fertilisers in enhancing fish production in composite fish culture in tropical freshwater fish ponds. Abstract. Seminar on Inland Aquaculture, Barrackpore, India, 48 p.
- Saju, K. A., N. Sukumaran, and R. Suresh, 1999. On stocking density, production and economics of tiger and white shrimp extensive culture. *Fishing Chimes*, 19(9): 25-27.
- Santosh B. and B. K. Mondal, 2001. Prospects of Ornamental fish Culture in Tripura state. *Fishing Chimes*, 21(2): 54-55.
- Sathiadhas, R., R. Narayanakumar and D.B.S. Sehara, 1994. Exploitation of marine fisheries and their utilisation. *Proc. 4th Swadeshi Science Congress*, Swadeshi Science Movement, Kerala, Kochi: 20-25.
- Sathiadhas, R., 1996. Economic evaluation of marine fisheries of India for sustainable production and coastal zone development. *Naga the ICLARM Quarterly*, 19(3): 54-56.

- Sathiadhas, R., R. Reghu and Sheela Immanuel, 1999. Human resources, utilization, productivity and earnings in Indian marine fisheries. *Seafood Export Journal*, XXX (4): 51-55.
- Sathiadhas, R. and R.S. Biradar, 2000. Fisheries in the development of Indian Economy. *Proceedings, National Conference on Fisheries Economics, Extension and Management*, January 5 & 6 2000: 1-19.
- Saxena, R. K., 1965. The fishing nets and traps in a section of the middle reaches of Ganga river system of India. *Proc. Indo. Pacifi. Fish. Coun.*, II: 250-271.
- Saxena, R. K., 1988. Fishing methods in river systems. In: Arun G. Jhingran and V. V. Sugunan (eds.) *Conservation and Management of Inland Capture Fishery Resources of India*, Inland Fish. Soc. India, Barrackpore, India: 61-68.
- Sen, P. R., N. G. S. Rao and A. N. Mohanty, 1980. Relationship between rate of feeding, growth and conversion in major Indian carps. *Indian J. Fish.*, 27: 201-208.
- Sen, P. R., D. K. De and D. Nath, 1990. Experiments on artificial propagation of Hilsa, *Tenulosa ilisha* (Ham). *Indian J. Fish.*, 37 (2): 159-162.
- Seth, R. N., 1997. Fisheries ecology and breeding behaviour of a catfish *Aorichthys seenghala* (Sykes) with special reference to its management strategies. D. Phil. Thesis. Department of Zoology, University of Allahabad. 73 p.
- Seth, R. N. and Predeep K. Katiha, 2002. Observations on duration of brood care and breeding activities of a large size catfish *Aorichthys seenghala* (Sykes) in nature. In: S. Ayyapan, J. K. Jena and M. Mohan Joseph (eds.). *The Fifth Indian Fisheries Forum Proceedings*. Published by Asian Fisheries Society, Indian Branch, Mangalore and AoA, Bhubaneswar, India: 1-4.
- Seth, R. N. and Predeep K. Katiha., 2002a. Observations on duration of brood care and breeding activities of a large size catfish *Aorichthys seenghala* (Sykes) in nature. In: S. Ayyapan, J. K. Jena and M. Mohan Joseph (eds.) *The Fifth Indian Fisheries Forum Proceedings* Published by Asian Fisheries Society, Indian Branch, Mangalore and AoA, Bhubaneswar, India: 1-4.
- Seth R. N. and Pradeep K. Katiha, 2003. Present scenario of riverine fishing methods with special reference to large sized catfishes *Aorichthys seenghala* (Sykes) and *Aorichthys aor* (Ham.). *Indian J. Fish.*, 50 (1):125-130
- Shaleesha A. and V. Amalan Stanley, 2001. Breeding of ornamental fish- An underdeveloped Enterprise. *Fishing Chimes*, 21 (2): 39-41.
- Shamsundar, B. A., 2001. Fish Processing. In: Pandian, T.J. (ed.) *Sustainable Indian Fisheries*. National Academy of Agricultural Sciences: 250-271.
- Sharma, B. K. and M. K. Das, 1988. Studies on integrated fish-livestock crop farming system. In: Joseph, M. Mohan (ed.), *Proceeding of the First Indian Fisheries Forum*, Asian Fisheries Society, Indian Branch, Mangalore, India: 27-30.

- Sharma, B.K., Dilip Kumar, M. K. Das, S. R. Das and D. P. Chakraborty, 1979. Observations on swine dung recycling in composite fish culture. *Symposium on Inland Aquaculture, Barrackpore, India* (Abstract): 99.
- Sharma, B. K., M. K. Das, S. R. Das and S., K. Neogi, 1979a. Observations on fish-duck rearing. *Symposium on Inland Aquaculture, Barrackpore, India* (Abstract): 95.
- Silas, E. G., K. H. Mohamed, M. S. Muthu, N. N. Pillai, A. Laxminarayana, S.K. Pandian, A.R. Thirunavukkarasu and Syed Ahmed Ali, 1985. Hatchery production of penaeid prawn seed : *Penaeus indicus*. *CMFRI Spl. Publication*, 21: 1-41.
- Singh, H. P., Ravish Chandra and Balbir Singh, 1993. Study of heavy metals in water sediments and fish flesh in the middle stretch of river Ganga. *J. Inland Fish. Soc. India*. 25 (1): 62-65.
- Singh, S. B., K. K. Sukumaran, P. C. Chakrabarti, and M. M Bagchi, 1972. Observations of composite culture of exotic carps. *J. Inland Fish. Soc. India*, 4: 38-50.
- Singh, S. B., S. R Ghosh, P. V. G. K. Reddy, R. K. Dey and B. K. Mishra, 1980. Effect of aeration on feed utilization by common carp fingerlings. *J. Inland Fish. Soc. India*, 12: 64-69.
- Singh, S.K., 2000. Role of fisheries co-operatives in reducing the high cost of Marketing involved in fisheries sector. In: Pillai, P.P (ed.) *Symposium of Ecofriendly Mariculture Technology packages – an update* (Abstracts) 25-26th April, 2000. MBAI, CMFRI, Mandapam Camp.
- Sinha, M. and P. K. Saha, 1980. Efficacy of commercial fish feed for composite fish culture. *J. Inland Fish. Soc. India*, 5: 201-208.
- Sinha, M., 1990. Reservoir fisheries – its present status and future potentials in North Eastern region. In: Jhingran Arun G. and V. K. Unnithan (eds.) *Reservoir Fisheries in India. Proceedings of the National Workshop on Reservoir Fisheries*, 3-4 January, 1990. Special Publication 3, Asian Fisheries Society, Indian Branch, Mangalore, India: 57-64.
- Sinha, M., 1993. Floodplain fishery resources and their distribution in India. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management* (1.9.92-31.12.92), Compendium, Vol. 2: 1-8.
- Sinha M., 1997. Inland Fisheries resources of India and their utilisation. In: V.V. Sugunan and M. Sinha (eds.) *Fisheries enhancement of small reservoirs and Floodplain lakes in India*, Bulletin 75, Barrackpore: Central Inland Capture Fisheries Research Institute : 167-174.
- Sinha, M., 1997a. Floodplain wetlands – An important inland fishery resource of India. *Aquaculture Asia*. Oct-Dec., 1997 : 8-10.
- Sinha, M. and B. C. Jha, 1997. Ecology and Fisheries of Oxbow lakes (Maun) of North Bihar – A threatened ecosystem. *CIFRI Bulletin* No. 74.

- Sinha, M. and Pradeep K. Katiha, 2002. Management of inland fisheries resources under different property regimes. *In*: Dinesh K. Marothia (ed.) *Institutionalizing Common Pool Resources*, Concept Publishing Company, New Delhi : 437-460.
- Sinha, V. R. P., M. V. Gupta, M. K. Banerjee and D. Kumar, 1973. Composite fish culture in Kalyani. *J. Inland Fish. Soc. India*, 5: 201-208.
- Somvanshi, V.S., 2001. Issues concerning marine fisheries and fisheries management in India. *In*: V.S. Somvanshi (ed.) *Fisheries Monitoring, Control and Surveillance*, Fishery Survey of India : 1-15.
- Somvanshi, V.S., 2001a. Problems and prospects of deep sea and far sea fishing. *In*: Pandian T.J. (ed.) *Sustainable Indian Fisheries*, National Academy of Agricultural Sciences : 71-87.
- Soundarapandian, P., M. J. Samuel and T. Kannupandi, 1997. A simple method for the seed production of freshwater prawn *M. malcolmsonii* (H. Milne Edwards). *J. Aqua. Trop.*, 12: 261-266.
- Sreenivasan, A., 1971. Liming of an upland lake. *Madras J. Fish.*, 6:9-13.
- Sreenivasan, A., 1976. Fish production and fish population changes in some South Indian reservoirs. *Indian J. Fish.*, 23 (1 & 2) : 133 – 152.
- Sreenivasan, A., 1984. Influence of stocking on fish production in reservoirs in India. *Fishing Chimes*, 4 (1): 54 – 70.
- Sreenivasan, A., 1993. Reservoir fisheries of India – Present status. *Fishing Chimes*, 13 (1): 18 – 21.
- Srinath K., 2000. Experiences in Aquaculture: Some lessons for extension. Aquaculture Development in India: Problems and Prospects. *In* : M. Krishnan and Pratap S. BIRTHAL (eds.) *Workshop Proceedings 7*, National Centre for Agricultural Economics and Policy Research : 87-97.
- Srinath, M. and K. Balan, 2003. Potential yield from Indian EEZ. *In*: Mohan Joseph, M. and Jayaprakash, A.A. (eds.) *Status of Exploited Marine Fishery Resources of India*, Central Marine Fisheries Research Institute, Kochi : 287-290.
- Srinivasagam, S., M. Kathirvel and S. Kulasekarapandian, 1998. Mud crab culture production in the North Tamil Nadu coast. *Fishing Chimes*, 18: 37-38.
- Srinivasagam, S., M. Kathirvel and S. Kulasekarapandian, 2000. Captive broodstock development, induced breeding and larval stages of mud crabs (*Scylla* spp.). *CIBA Bulletin* No. 12: 1-26.
- Srivastava, K. P., 1992. Ichthyofauna of floodplain lakes of the Ganga and Brahmaputra basin. *In*: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management* (1.9.92-31.12.92), Compendium, Vol. 2: 151-159.
- Srivastava, L.S., 1994. Ornamental Fish, New export opportunities. *Yojana*, Nov. 15: 22.

- Srivastava, U.K., M. Dharma Reddy, B. Subrahmanyam and V.K. Gupta, 1986. Impact of mechanization on small scale fishermen, Centre for Management in Agriculture Mogograph series No. 114, IIM, Ahmedabad, 499 p.
- Sudarsan, D., 2000. Looking at fish production of India in new light. *Fishing Chimes*, 20(6): 7-9.
- Sugunan, V. V., 1990. Reservoir fisheries management. In: V. V. Sugunan and Utpal Bhaumik (eds.) *Technologies for Inland Fisheries Development*. CICFRI, Barrackpore : 155-165.
- Sugunan, V. V. and Y. S. Yadava, 1991a. Feasibility studies for fisheries development of Kyrdemkulai reservoir. Central Inland Capture Fisheries Research Institute, Barrackpore, 743101 West Bengal, 30 p.
- Sugunan, V. V. and Y. S. Yadava, 1991b. Feasibility studies for fisheries development of Nongmahir reservoir. Central Inland Capture Fisheries Research Institute, Barrackpore, 743101 West Bengal, 30 p.
- Sugunan V. V., 1995. Reservoir Fisheries in India. *FAO Fisheries Technical Paper* No. 345, Rome: Food and agriculture Organisation, 423 p.
- Sugunan, V. V. 1995a. Reservoir fisheries of India. *FAO Fisheries Technical Paper* No. 345, 423 p.
- Sugunan, V. V. and M. Sinha, 1997. Possible impact of species enhancement in Indian reservoirs through introduction of genetically modified tilapia. *Bulletin* No. 61, Central Inland Capture Fisheries Research Institute, Barrackpore, 38 p.
- Sugunan, V. V., 1997. Fishery management of small water bodies in Africa, Asia and Latin America. *FAO Fisheries Circular* No. 933, 149 p.
- Sugunan, V. V., 1997a. Fisheries of small reservoirs in India-general guidelines for their management. In: Sugunan, V. V. and M. Sinha (eds.) *Fisheries enhancement in small reservoirs and floodplain lakes in India*. *Bulletin* No. 75, Central Inland Capture Fisheries Research Institute, Barrackpore, 252 p.
- Sugunan, V. V., 1997b. Guidelines for management of small reservoirs in India. *Fishing Chimes*, 17(4): 23-27.
- Sugunan, V. V., 1999. Scientific management of reservoir fisheries in India. *Hydrobiologia*, 430: 121 – 147.
- Sugunan, V. V., 2000. Culture-based fisheries in India In: Utilizing Different Aquatic environments for small-scale aquaculture *International Institute of Rural Reconstruction*, Cavite Philippines.
- Sugunan, V. V., 2000a. Status of culture-based fisheries in small reservoirs of India. In: Proceedings of the Workshop on Reservoir fisheries –Biology and Management 15 – 18 February 2000 Bangkok.

- Sugunan, V. V. and M. Sinha, 2000. Guidelines for small reservoir fisheries management in India. Central Inland Fisheries Research Institute 743101, West Bengal. *Bull*No. 93. 31 p.
- Sugunan, V. V., G. K. Vinci, B. K. Bhattacharya and M. A. Hassan, 2000. Ecology and Fisheries of beels in West Bengal. *CIFRI Bulletin* No. 103.
- Sugunan, V. V., 2001. Guidelines for fishery management of small reservoirs in India. *In*: Utpal Bhaumik (ed.), *Management of fisheries in small reservoirs*, *CIFRI Bulletin* No. 106.
- Sugunan, V. V. and M. Sinha, 2001. Sustainable capture and culture-based fisheries in freshwaters of India. *In*: T. J. Pandian (ed.) *Sustainable Indian fisheries*, *National Academy of Agricultural Sciences*, New Delhi: 43–70.
- Sugunan, V. V., S. K. Mondal, and D. S. Krishna Rao, 2002. Fish yield prediction through morpho-edaphic index and estimation of stocking density for Indian reservoirs. *Indian J. Fish.* 49(4): 369-378.
- Sugunan, V. V., M. K. Das, G. K. Vinci and Utpal Bhaumik, 2003. Methods of assessment of aquatic ecosystem for fish health care. *CIFRI Bulletin* No. 115, 188 p.
- Sugunan, V. V., P. K. Saha and N. K. Barik, 2003. Handbook on pen culture of fish and prawn. Central Inland Fisheries Research Institute, National Agricultural Technology Project. CIFRI, Barrackpore, 65 p.
- Sugunan, V. V. and Katiha, P. K., 2004. Impact of stocking on yield in small reservoirs in Andhra Pradesh, India. *Fisheries Management and Ecology*, 11: 65-69.
- Sukumaran, K. K., D. V. Pahwa, and B. C. Tyagi, 1976. Progress report of the Kamal sub-centre of Haryana for the period of November 1977 to August 1975. *In*: *Third Workshop on All India Co-ordinated Research Project on Composite Fish Culture and Fish Seed Production*, Pune, India: 5.
- Surendran, V., K. Madhusudhan Reddy and V. Subba Rao, 1991. Semi-intensive shrimp farming – TASPAP's experience at Nellore. *Fishing chimes*: 23-29.
- Swamidas, C., T. Satyanarayana, 2000. Economics of Production and Marketing of Brackish water Shrimp. Aquaculture Development in India : Problems and Prospects. *In* : M. Krishnan and Pratap S. Birlhal (eds.), *Workshop Proceedings 7*, National Centre for Agricultural Economics and Policy Research : 59-64.
- Thakur, N. K. and P. Das, 1986. Synopsis of biological data on magur, *Clarias batrachus* (Linnaeus). *CIFRI Bulletin* No.: 41.
- Thangadurai, A. J., 1991. Experimental culture of freshwater prawn *M. rosenbergii* in ponds. *In*: *Proc. Nat. Symposium Freshwat. Aqua.*, Bhubaneswar, Orissa, India: 23.25.
- Thirunavukkarasu, A. R., Mathew Abraham, P. Kishore Chandra, M. Kailasam and S. Pereira, 1997. Breakthrough in the successful breeding and seed production of seabass (*Lates calcarifer*) at CIBA. *CIBANEWS* 2 : 1-2.

- Tripathi, S. D. and D. N. Mishra, 1986. Synergistic approach in carp polyculture with grass carp as a major component. *Aquaculture*, 54: 157-160.
- Tripathi, S. D. and H. A. Khan, 1988. Carp seed production technology. In: *Proc. National Workshop on Carp Seed Production Technology*, Eluru, 2-4 September, 1988.
- Tripathi, S. D., 1990a. Freshwater aquaculture in India. In: Joseph, M. Mohan (ed.), *Aquaculture in Asia*, Asian Fisheries Society, Indian Branch, Mangalore, India: 191-222.
- Tripathi, S. D., 1990b. Recent advances in freshwater aquaculture. In: Manna, G. K. and B. B. Jana (eds.), *Impacts of environment on animals and aquaculture*, India: 69-77.
- Tripathi, S. D., 1991. Recent trends in fish culture. In: Sinha, V. R. P. and H. C. Srivastava (eds.), *Aquaculture productivity*, Hindustan Lever Research Foundation. Oxford and IBH Pub. Co. Pvt. Ltd., New Delhi: 307-313.
- Tripathi, S. D., 1992. Status of freshwater prawn fishery and farming in India. In: Silas, E. G. (ed.), *Freshwater Prawns*, Kerala Agricultural University. Thrissur, India: 42-49.
- Tripathi, S. D., P. K. Aravindakshan, S. Ayyappan, J. K. Jena, H. K. Muduli, S. Chandra, and K. C. Pani, 2000. New high in carp production in India through intensive polyculture. *J. Aqua. Trop.*, 15: 119-128.
- Tripathi, S. D., 2003. Inland Fisheries in India. In: *Fish for all* National Launch, organised by World Fish Centre, Penang; Government of India, New Delhi, Government of West Bengal, Kolkata and M.S. Swaminathan Research Foundation, Chennai on Dec 18-19, 2003 at Park Hotel, Kolkata : 33-57.
- Tripathi, Y. R., 1976. Qualitative and quantitative estimates of spawn collection from different centres of Ganga river system, Group discussion for National Policy on major carp seed production, Pune, February 28, 1976: 6p.
- Usha Rani, G. T. Chandra Reddy and K. Ravindranath, 1993. Economics of Brackish water Prawn Farming in Nellore District of Andhra Pradesh State. *Indian Journal of aquaculture*, 8: 221-230.
- Vaas, K. K., 1989. Beel fisheries resources in West Bengal. In: *Training in management of beel (oxbow lake) fisheries*, July 11-20, 1989. *Bull. Cent. Inland Capture Fish. Res. Inst.*, Barrackpore. No. 63 : 29-35.
- Vaas, K. K., 1989a. Productivity status of beels in India. In: *Training in management of beel (oxbow lake) fisheries*, July 11-20, 1989. *Bull. Cent. Inland Capture Fish. Res. Inst.*, Barrackpore. No. 63 : 57-64.
- Vaas, K. K., 1990. Pen and cage culture in open waters. In: V. V. Sugunan and Utpal Bhaumik (eds.) *Technologies for Inland Fisheries Development*, CICFRI, Barrackpore : 93-101.
- Vaas, K. K., 1992. Whole basin development approach towards optimum utilization of floodplain fisheries. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored*

- Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 1: 216-221.
- Varadachari, V. V. R. and G. S. Sharma, 1967. Circulation of waters in the north Indian Ocean. *J. Indian Geophy.*, 4(2): 61-73.
- Varadaraj, K. and J. Pandian, 1989a. Monosex male broods of *Oreochromis mossambicus* produced through artificial sex reversal with 17 α -methyl-4 and Rosten 17/3-01-3 one. In: Das, P. and A. G. Jhingran (eds.) *Fish genetics in India*. Today and Tomorrow's Printers and Publishers, New Delhi: 1.69-173.
- Varadaraj, K. and T. J. Pandian, 1989b. First report on production of supermale tilapia by integrating endocrine sex reversal with gynogenetic technique. *Curr Sci.*, 58: 434-441.
- Varadaraj, K. and T. J. Pandian, 1989c. Introduction of allotriploids in the hybrids of *Oreochromis mossambicus* females x red tilapia male. *Proc. Indian Acad. Sci.*, 98: 351-358
- Varghese, C.P., 1989. Fishing regulations in India's territorial waters. *World Fishing*, August 1989: 2-7.
- Varghese, C.P., 1998. Capture fisheries technology in India. In: M. Shahul Hameed and B. Madhusoodana Kurup (eds.) *Technological Advancements in Fisheries*: 161-165.
- Varghese, P.U., 2001. Environmental impacts of coastal aquaculture with special reference to treatment protocol. In: N.R. Menon, B.M. Kurup and R. Philip (eds.) *Proc. International Workshop on Aquaculture and Environment*, 13-14 July 2001, Cochin, India. The Centre for Integrated Management of coastal zones and Cochin University of Science and Technology : 114-120.
- Varghese, T. J. and B. Santharam, 1971. Preliminary studies on the relative growth rates of three Indian major carp hybrids. *Proc. Indian Acad. Sci.* (B) 88:209-16.
- Varghese, T. J., G. P. Satyanarayan Rao, K.V. Devaraj and B. Chandrasekhar, 1975. Preliminary observation on the use of marine catfish pituitary glands for induced spawning of the Indian major carps. *Curr. Sci.*, 44: 75-77.
- Vijayakumar, K. and A. K. Bhargava, 2001. An overview of marine fisheries management in India. In: V.S. Somvanshi (ed.) *Fisheries Monitoring, Control and Surveillance*, Fishery Survey of India : 34 - 41.
- Vijayan, P.K., T.K. Srinivasa Gopal, K.K. Balachandran and P., Madhavan, 1998. Ready to consume fish curry in retort pouch In: K.K. Balachandran, T.S.G. Iyer, P. Madhavan, J. Joseph, P.A. Perigreen, M.R. Raghunath and M.D. Varghese. (eds.) *Advances and priorities in Fisheries Technology*, Society of Fisheries Technologists (India), Cochin : 232-235.
- Vinci, G. K., 1992. Biological traits of the common commercial fishes from floodplain lakes. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 1: 66-72.

- Vinci, G. K. and K. Mitra, 2002. Scope and prospects of penculture in estuarine wetlands of West Bengal. *CIFRI Bulletin* No. 111 : 32-35.
- Vinci, G. K., K. Mitra, M. K. Bandopadhyay, M. A. Hassan and D. K. Biswas, 2002. Penculture of *M. rosenbergii* in a beel of West Bengal. *Env. And Ecol*, 20 (1): 4-7.
- Viswakumar, M., 1992. Technical and economic considerations for Shrimp culture in Andhra Pradesh. *Fishing Chimes*, June : 30-40.
- Welcornme, R. L., 1976. Approaches to resource evaluation and management in tropical inland waters. In: *Proceedings of the Indo-Pacific Fisheries Council, Food and Agriculture Organization of the United Nations. Colombo* October 1976, 500p.
- Yadava, Y. S., 1985. Extent and source of aquatic pollution in the Brahmaputra drainage of Assam. In: *International Conference on Environmental Education*, Vigyan Bhawan, New Delhi from 5-9 March, 1985.
- Yadava, Y. S., 1989. Beel fisheries resources in North-East India. *CIFRI Bulletin* No. 63.
- Yadava, Y. S., 1992. Floodplain fisheries and waterfowl. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 2: 191-193.
- Yadava, Y. S., 1992a. International conventions vis-à-vis production of floodplain lake ecosystem. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 2: 213-215.
- Yadava, Y. S., 1992b. Origin and geomorphology of floodplain lakes in the Ganga and Brahmaputra basins in India. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 1 : 9-11.
- Yadava, Y. S., 1992c. Physiography and morphometry of floodplain lakes. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 1: 12-16.
- Yadava, Y. S. and S. Paul, 1992. Model project formulation for floodplain fisheries – a conceptual frame work. In: Y. S. Yadava and V. V. Sugunan (eds.) *FAO Sponsored Training Programme on Flood Plain Fisheries Management*. (1.9.92-31.12.92), Compendium, Vol. 2 : 207-212.

