

Vol 4 Issue 6 July 2014

ISSN No : 2230-7850

International Multidisciplinary
Research Journal

*Indian Streams
Research Journal*

Executive Editor
Ashok Yakkaldevi

Editor-in-Chief
H.N.Jagtap

Welcome to ISRJ

RNI MAHMUL/2011/38595

ISSN No.2230-7850

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board. Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

International Advisory Board

Flávio de São Pedro Filho
Federal University of Rondonia, Brazil

Kamani Perera
Regional Center For Strategic Studies, Sri Lanka

Janaki Sinnasamy
Librarian, University of Malaya

Romona Mihaila
Spiru Haret University, Romania

Delia Serbescu
Spiru Haret University, Bucharest, Romania

Anurag Misra
DBS College, Kanpur

Titus Pop PhD, Partium Christian
University, Oradea, Romania

Mohammad Hailat
Dept. of Mathematical Sciences,
University of South Carolina Aiken

Abdullah Sabbagh
Engineering Studies, Sydney

Ecaterina Patrascu
Spiru Haret University, Bucharest

Loredana Bosca
Spiru Haret University, Romania

Fabricio Moraes de Almeida
Federal University of Rondonia, Brazil

George - Calin SERITAN
Faculty of Philosophy and Socio-Political
Sciences AL. I. Cuza University, Iasi

Hasan Baktir
English Language and Literature
Department, Kayseri

Ghayoor Abbas Chotana
Dept of Chemistry, Lahore University of
Management Sciences[PK]

Anna Maria Constantinovici
AL. I. Cuza University, Romania

Horia Patrascu
Spiru Haret University,
Bucharest, Romania

Ilie Pinte, a
Spiru Haret University, Romania

Xiaohua Yang
PhD, USA

.....More

Editorial Board

Pratap Vyamktrao Naikwade
ASP College Devrukh, Ratnagiri, MS India Ex - VC. Solapur University, Solapur

R. R. Patil
Head Geology Department Solapur
University, Solapur

Rama Bhosale
Prin. and Jt. Director Higher Education,
Panvel

Salve R. N.
Department of Sociology, Shivaji
University, Kolhapur

Govind P. Shinde
Bharati Vidyapeeth School of Distance
Education Center, Navi Mumbai

Chakane Sanjay Dnyaneshwar
Arts, Science & Commerce College,
Indapur, Pune

Awadhesh Kumar Shirotriya
Secretary, Play India Play, Meerut (U.P.)

Iresh Swami
Ex - VC. Solapur University, Solapur

N.S. Dhaygude
Ex. Prin. Dayanand College, Solapur

Narendra Kadu
Jt. Director Higher Education, Pune

K. M. Bhandarkar
Praful Patel College of Education, Gondia

Sonal Singh
Vikram University, Ujjain

G. P. Patankar
S. D. M. Degree College, Honavar, Karnataka

Maj. S. Bakhtiar Choudhary
Director, Hyderabad AP India.

S. Parvathi Devi
Ph.D.-University of Allahabad

Sonal Singh,
Vikram University, Ujjain

Rajendra Shendge
Director, B.C.U.D. Solapur University,
Solapur

R. R. Yalikal
Director Managment Institute, Solapur

Umesh Rajderkar
Head Humanities & Social Science
YCMOU, Nashik

S. R. Pandya
Head Education Dept. Mumbai University,
Mumbai

Alka Darshan Shrivastava
Shaskiya Snatkottar Mahavidyalaya, Dhar

Rahul Shriram Sudke
Devi Ahilya Vishwavidyalaya, Indore

S. KANNAN
Annamalai University, TN

Satish Kumar Kalhotra
Maulana Azad National Urdu University

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.net



A STUDY ON GOVERNMENT INITIATIVES TOWARDS FOSTERING FISH FARMING PRACTICES IN ASSAM

Gaurav Dutta

Assistant Professor, Department of Commerce, B.H. College, Howly, Dist: Barpeta, Assam.

Abstract:- Fish Farming as an occupation has gained tremendous popularity in the state of Assam, over the past few years. The emergence and recent upsurge of fish farming as a promising occupation, besides other factors, has been significantly induced by the positive interventions and developmental initiatives of the State, as well as, the Central Government. This paper, therefore, attempts to give an overview of the governments' recent and on-going initiatives, programmes and activities – all directed towards achieving sustainable development for the fishery sector of the state.

Keywords: fish farming, government initiatives, sustainable development.

INTRODUCTION

There are about 3.91 lakh hectare of water area in the State in the form of rivers, beel, derelict water bodies and ponds and tanks. Recently emphasis has been given for scientific fish farming in beels and community tanks through awareness, training, government support and subsequent bank linkage. There is a positive trend in fish productivity during recent past. The State is yet to reach self-sufficiency in fish production in respect of economic as well as minimum nutritional requirement of 11kg/ person considering 90% of the state's population is fish eating. The gap is partially maintained by import of fish from other states. Fishery sector has a higher growth rate than other agriculture and allied sectors and could play a pivotal role in the socio-economic development and employment generation in the State. Department of Fishery has been implementing a number of schemes in the State with a view to achieve self-sufficiency in fish production and socio-economic development of poor section of the society. Fish farming is gradually gaining popularity in the State, as farmers have taken up fish seed farming and fish farming on commercial scales as a result of extensive awareness campaign by the Department. Fish production in the State during 2009-10 is 218 thousand tones which is 5.82 percent higher than 2008-09. In view of the importance of the sector in providing nutrition to the people, employment generation and livelihood to the rural sector, and in view of the bright prospects for the sector to grow further, State Government has been giving due emphasis to the sector. The present study, thus, attempts to give an overview of the various developmental initiatives taken by the State as well as Central Government in this regard.

LITERATURE REVIEW

A highlight of some research works that were being reviewed before undertaking the present study are as follows:

Goswami & Sathiadhas (2000) undertook a study on “Fish Farming through Community Participation in Assam”. The paper highlights the involvement of a rural community in Assam in fish farming in a community tank and how the revenue is used for the common welfare and development of the whole community.

National Centre for Agricultural Economics and Policy Research, New Delhi, India published their workshop proceedings (2003) on the topic “A Profile of People, Technologies and Policies in Fisheries Sector in India”. The book presents an overview of the performance, policies and programmes relating to the fisheries sector in India and several other issues relating to the sector, distributed over seven contributions by different authors.

Hapke (2001) examined the impact of mechanization and commercialization on small scale fish traders in Kerala with special emphasis on gender and the impact of economic transformation on women fish traders. According to the study, mechanization in fishery sector has led to an ecological crisis of over fishing and declining incomes from fishing in the artisanal sector, which has placed an increased burden on women to support their families through work in fish marketing. However, in course of the review no research work has been found emphasizing specifically on analyzing the schemes and

activities of the government in the concerned sector. This paper, thus, attempts to fill this gap in the existing literature and make an addition to the existing knowledge base relating to the impact of government intervention on the fishery sector of the state of Assam.

OBJECTIVES OF THE STUDY

- 1.To study the various measures taken by the State Department of Fisheries towards enhancement of fish production and productivity in the state;
- 2.To outline the various schemes introduced for the development of the fishery sector of Assam;
- 3.To give an account of the financial allocation and expenditure in the fishery sector by the State Government in recent years.

RESEARCH METHODOLOGY

The present study attempts to carry out an analysis of the government's role in the development of the immensely potential fishery sector of the state of Assam. The facts presented in the paper have been collected from reliable secondary sources, which include office of the State Department of Fisheries and survey reports prepared by various departments of the Central and the State Government. Moreover, a few reputed books, journals etc. have also been referred.

Fish Resource and Fish Production in Assam

Assam is the largest state among all the North-eastern states in India in terms of population which stands at 3,11,69,272 (Census of India, 2011) and 85.92 per cent of this figure constitutes the rural population of the state. Agriculture is the main source of livelihood for majority of people residing in the rural areas of the state. Fish farming is one of the prime and fastest growing occupations that a huge portion of this rural population is engaged in. An important feature of the fish produces of the state is that 76 species of fish produced in the state are considered as ornamental fish and most of them are items of demand in the international market (Das & Biswas, 2008).

Table No. 1
Statistics of Fisheries on Inland Water Bodies, 2011

Resource	Number	Water Spread Area (Hectare)
River Fisheries		2,05,000
i) Main River	2	
ii) Tributaries	53	
Beels / Ox-bow Lakes Fisheries		1,00,815
i) Registered Beels	430	
ii) Un- Registered Beels	766	
Forest Fisheries	N.A.	5,017
Derelict Water Bodies/ Swamp	9,852	39,240
Reservoir Fisheries	1	1,713
Ponds and Tanks	2,08,124	39,583
Total	2,19,318	3,91,481

Source: Economic Survey of Assam, 2011-12

Table No. 2
Production of Fish Seed and Fish in Assam

Production of Fish Seed and Fish in Assam (Year)	Production of Fish Seed (in millions)	Production of Fish (in tonnes)
2001-02	1801	161450
2002-03	1902	165521
2003-04	2228	180945
2004-05	2741	186314
2005-06	3207	187378
2006-07	2062	181479
2007-08	3206	190320
2008-09	3429	206700
2009-10	3326	218823
2010-11	4624	232339

Source: State Fishery Department, Guwahati, Assam

The table above indicates that production of fish and fish seed in the state has consistently increased over the past ten years. For the economy of Assam which is, basically, an agrarian economy it appears to be a very encouraging indication. But a huge potential in the concerned sector, as warranted by the number of and area covered by fisheries in the state (as per Table No.1), still lay untapped. Thus, the existing situation of Assam's fishery sector warrants constant positive interventions by the State Government and other concerned authorities for sustainable development of this sector and to meet the ever increasing demand for fish.

The Department of Fishery of the State has undertaken various measures to enhance fish production and productivity through:

Horizontal expansion of area through construction of new pond;
Reclamation of low lying areas & derelict water bodies;
Development and sustainable management of wet land/beel fisheries, pen and cage culture;
Integrated fish farming;
Species diversification;
Improvement in quality of fish seed and regulation on fish seed production through Assam Fish Seed Rules, 2010;
Conservation of fish and fishery resources through intensive sensitization programme and implementation of Assam Fishery Rules;
Commercialization of indigenous fishes for entrepreneurship development;
Infrastructure development through establishment of feed mill, hatchery, hygienic fish market for remunerative price for both producers and consumers etc.;
Development of model Fishermen/ Fishery villages;
Initiation of organic Fish Farming in the State with provision of certification;
Strengthening of extension networking through “Para fishery extension workers” etc.

Schemes introduced for the development of Fishery Sector

For enhancement of fish production in the State the following Schemes/ Programmes have been implemented in the State during the last five years:

Women Empowerment Programme

Fish Seed Farming

Under the Women Empowerment Programme women beneficiaries are imparted with required training and provided with inputs for rearing of fish seed to produce fingerlings in the backyard ponds as part time employment to provide additional income to their families. The number of beneficiaries was 1028 in 2010-11.

Employment Generation Programme

Chief Minister's Special Employment Generation Programme

This newly introduced program aims at generating employment and increasing fish production through development of water areas and scientific fish farming managed by SHGs. Provision of fishing tools like nets, boats, bicycle etc are also made under the programme. The expenditure incurred for implementation of the scheme was Rs.274.00 lakh during the year 2010-11.

Employment Generation Scheme through SHG under Fishery Extension Service

The aim and objective of the scheme is to engage the unemployed youth of the locality in fish farming where low-lying areas are available. Under this programme assistance was extended to Matsya Mitras for taking up fisheries development activities, training imparted to educated unemployed youth as Matsya Mitra and organising the 'Assam Matsya Mahotsav'.

Development of Fresh Water Aquaculture through FFDA

This is a centrally sponsored scheme with 75% of funding for development component being shared by the Government of India. The scheme aims at development of individual ponds through involvement of fish farmers by providing them with financial assistance in the form of subsidies and bank loans. The water area developed under aquaculture through FFDA was 144 hectare in 2010-11.

Reclamation of derelict Water Bodies

The State is having about 39,000 hectare of derelict water bodies which are unsuitable for agriculture. There is great potential for fish farming in these water bodies by converting them into scientific fisheries. The objective of the Scheme is to reclaim the derelict water bodies for enhancement of fish production and to provide employment to the rural unemployed youth. After development, the management is vested with local communities/ SHGs supported by technical guidance of the Department. The achievement in reclamation of derelict water bodies was 238 hectare against the target of 398.08 hectare.

Fisheries Extension and Training

For increasing farm output, training and extension support with transfer of fish farming technologies has been accorded due importance. The aim and objective of the scheme is to impart training to the fish farmers on scientific fish farming and publication of training manual to popularise scientific fish farming among fish farmers. The one time assistance and training to unemployed youth as Matsya Mitra was provided to 109 and 90 numbers respectively under the scheme of Fishery Extension and Training.

National Welfare Fund for Fishermen (Centrally Sponsored Scheme)

- a) **Saving-cum-Relief:** The objective of Saving-cum-Relief scheme is to provide financial assistance to the fishermen during the lean fishing period. The contribution by the fisher folk is ? 600.00 which is collected over a period of 9 months. This contribution is matched by Government of India contribution of Rs.900.00 and State Government's contribution of Rs.300.00. The accumulated amount is distributed among the fishermen in three equal installments at the rate of Rs.600.00 per month.
- b) **Fishermen's Insurance:** Under the scheme, fisher folk licensed, identified or registered with the State Government could be insured for ? 1.00 lakh against death or permanent disability and ? 0.50 lakh for partial disability.

Development of Beel and Open Water Fisheries [State and Central Sponsored Programme (SCSP)]

The objective of the scheme is to develop small beels and open water fisheries within SCSP areas followed by community based management. The area developed under this scheme was 105 hectare in the year 2010-11.

Rural Infrastructure Development Fund

This is a programme under NABARD for infrastructure development in the rural areas contributing towards agriculture growth, rural connectivity and other social sector development. The programme is being implemented by Assam Fisheries Development Corporation.

Assam Agricultural Competitiveness Project (AACP)

During the period from 1995-96 to 2003-04 the Department of Fisheries, Assam has successfully implemented a multi-component World Bank Aided Project “Assam Rural Infrastructure and Agricultural Services Project” (ARIASP). As a follow up programme, the World Bank Aided Project namely the Assam Agricultural Competitiveness Project (AACP) is under implementation by the Department since 2004-05 with a total fund of Rs.6076 lakh with the objective to increase

competitiveness amongst poor and marginal farmers/communities dependent on fish farming as primary and secondary income. Up to 2010-11, an amount of ₹ 4468 lakh has been released by Project Coordination Unit, Khanapara under this programme. Major achievements under this project is development of over 3750 hectare of water area covering individual ponds, community tanks, beels benefiting more than 29,000 farmers; establishment of 24 improved mini hatcheries and capacity building of over 1200 departmental officers & staffs.

Rashtriya Krishi Vikash Yojana (RKVY)

This Scheme aims at holistic development of Agriculture and allied sector. The pattern of funding is 100 percent Central Government grant. The Department has been implementing various schemes viz. construction of new ponds, development of low-lying areas, beels/wet lands, fresh water prawn farming, kuchia culture, establishment of fish feed mills, hatcheries, development of Departmental Farms etc.

National Fisheries Development Board (NFDB)

National Fisheries Development Board (NFDB) is established as a nodal agency to work towards blue revolution with a focused attention basically aimed at fish production in the country. For addressing the issues related to production of enhancement through sustainable approach, NFDB has formulated various activities. The NFDB developed Farmers Pond covering water area of 113.12 Hectare in 2010-11 where the number of beneficiaries was 93.

Assam Fisheries Investment Facilitation Centre

For facilitating easy access to institutional credit to the prospective fish farmers and fishery entrepreneurs, the Assam Fisheries Investment Facilitation Centre, a Single Window System was established at Panbazar, Guwahati during the year 2008. The Centre has facilitated direct interaction of Bankers with the farmers besides assisting them in preparing fisheries projects for bank loan. As a result of this innovative initiative by the Department, an amount of Rs.10.31 Crore has already been sanctioned till 31st January, 2011 to 706 fish farmers by the various Banks like SBI, UBI, Assam Gramin Vikash Bank and Indian Overseas Bank. It is proposed to fully equip the Facilitation Centre with computerized facility, internet etc. for the benefit of the fish farmers

Assam Matsya Mahotsav, 2011

Assam Matsya Mahotsav is an annual Fish Festival cum Awareness Program organised with the objective of creating mass awareness on various aspects of scientific fish farming, role of various stake holders in the development of the Fishery sector in the State and various initiatives undertaken by the Department, Assam Agriculture University, Indian Council of Agriculture Research Institutions, academic institutions. It also provides a platform to all stake holders for discussion, exchange of ideas and dissemination of fisheries technologies. The Mahotsav was organized for the 5th time on 27th, 28th & 29th January, 2011 at Shilpgram, Guwahati with the participation of farmers, NGOs, SHGs, academicians, researchers, ICAR Institutions, AAU, Gauhati University, Dibrugarh University, College of Fisheries, Raha, National Fisheries Development Board and Bankers. The activities include exhibition, seminars, workshops, various competitions.

Matsya Miitra

To strengthen the extension services at field level, the innovative scheme of Matsya Mitras was introduced in the year 2008. Educated unemployed youths are given short duration training for 15 days in the Fishery College, Raha on various aspects on fish farming and allied subjects. The trainees are provided with a kit box required for testing different aspects of water parameters required in fish farming. The Matsya Mitras provides the required extension services to the fish farmers on the spot besides helping them in scheme preparation for Government/ Bank assistance. The Matsya Mitras have also been assisted by the Department to take up fish farming in their own ponds, establish fishery service centres/ clinics. There are 410 trained Matsya Mitras in the State as on 2010-11.

Fresh Water Prawn Hatchery

Fresh water prawn is one of the most sought after aqua product. With a view to popularize and encourage prawn farming and to make prawn seed available in the State, the Department has established one Fresh Water Prawn Hatchery, in the Meen Bhawan Complex at Guwahati, the first of its kind in the State under RKVY. The works for establishment of two other such hatcheries in Dhubri & Silchar are under process.

State Fish Laboratory

A State Fish Laboratory has been established at the Directorate Complex, Guwahati under RKVY for testing of Soil and water quality parameters. In addition, the laboratory will also extend support to farmers for investigation on fish health and hygiene.

Live Gene Bank

Live Gene Bank, a joint venture of Department of Fisheries, Assam and National Bureau of Fish Genetic Research, Lucknow established at Ulubari Fish Seed Farm, Guwahati in 2007 has been continuing. Under this programme, conservation through breeding and propagation of local endangered economically important fish species has been taken up for future use and research. Species like Chital and Pavo has been successfully bred and reared in improved ponds in the farm.

Financial Allocation and Expenditure by the State Government

The financial allocation to and expenditure incurred for implementation of various schemes/ plan & programmes for development of Fishery sector during 2008-2011 is shown below:

Table No. 3
Financial Allocation and Eexpenditure in the Fishery Sector, Assam
(Rupees in lakh)

Name of the Schemes/ Plan & Programmes	2008-09		2009-10		2010-11	
	Outlay	Expen- diture	Outlay	Expen- diture	Outlay	Expen- diture
General Areas						
CM Special Employment Generation Programme					274.00	274.00
Grants in aid to Assam Fisheries Development Corporation	10.00	7.00	14.00	14.00	35.00	35.00
Marketing and Transport of Fish	5.00	0.00	10.00	3.00		
Fish Seed Farming	300.00	211.10	375.00	319.18	76.00	75.77
Women Empowerment programme in Fish Farming			150.00	150.00	45.00	45.00
Fish Farmer Development Agency	150.00	150.00	300.00	300.00	230.00	230.00
Extension and Training (CSS)	10.00	0.00	10.00	10.00	10.00	7.50
Development of Water logged areas and derelict water bodies (CSS)			10.00	0.00	10.00	10.00
Employment Generation Scheme through SHG	304.10	299.46	150.00	150.00		
Training in fisheries	40.00	5.00	28.20	25.08	3.70	1.62
Fishery Extension Service			50.50	15.74	169.30	150.00
Reclamation of Derelict Water bodies	404.00	393.20	750.00	745.00	350.00	300.00
Fishery Research & Investigation	12.00	4.85	10.00	9.98		
Survey of Fisheries and Collection of Statistics	29.00	29.00	15.00	3.55	2.00	2.00
Sub Total	1950.00	1586.35	2170.50	1958.02	1284.00	1201.75
Tribal Sub Plan						
Fish seed Farming	15.00	6.00	30.00	30.00	30.00	30.00
Reclamation of Derelict Water Bodies	35.00	35.00	30.00	30.00	30.00	-
Fish Farmers Development Agency	35.00	0.00	20.00	20.00	10.00	10.00
Sub -Total	85.00	41.00	80.00	80.00	70.00	40.00

Name of the Schemes/ Plan & Programmes	2008-09		2009-10		2010-11	
	Outlay	Expen- diture	Outlay	Expen- diture	Outlay	Expen- diture
Scheduled Cast Sub Plan						
Reclamation of Derelict water Bodies	130.00	124.59	178.00	178.00	236.00	236.00
National Welfare Fund for Fishermen						
a) Housing	20.00	0.00	20.00	20.00	18.00	
b) Saving-Cum Relief	12.00	0.00	12.00	12.00	10.00	10.00
c) Fishermen Insurance			2.00	2.00	4.00	4.00
Fish Farmer Development Agency	88.00	88.00	88.00	88.00	10.00	10.00
Development of <i>Beel</i> / Fisheries/ Open Water Fisheries	200.00	22.16	190.00	190.00	200.00	200.00
Sub-Total	450.00	234.75	490.00	490.00	478.00	460.00
Externally Aided Project						
ARIASP & AACP	1037.00	1037.00	444.00	444.00	441.00	39.45
Sub-Total	1037.00	1037.00	444.00	444.00	441.00	39.45
Rural Infrastructure Dev. Project					700.00	227.00
Sub-Total					700.00	227.00
CENTRAL SHARE						
AQUACULTURE DEV. UNDER (FFDA)	320.00		624.00	75.02	420.00	75.00
National welfare Fund for Fishermen	30.00		60.00	14.60		
a) Housing					54.00	
b) Saving cum Relief Scheme	5.00		36.00		30.00	
c) Fishermen Insurance			6.00	6.00	12.00	12.00
Development of waterlogged areas	15.00		30.00		30.00	
Strengthening of Data base and Information Networking	20.00	3.30	20.00	5.00	15.00	
Training and extension	20.00		3.30	15.80	30.00	
Sub Total	410.00	3.30	779.30	116.42	591.00	87.00
Total (State Plan + EAP)	3932.00	2902.40	3990.00	3088.44	3564.00	2055.72
RKVY (Rastriya Krishi Vikash Yojana)	2000.00	2000.00	1000.00	812.62	1400.00	625.21
Sub Total	2000.00	2000.00	1000.00	812.62	1400.00	625.21
NFDB (National Fisheries Development Board)	10.35	10.35	134.45	75.19	94.71	44.63
Sub Total			134.45	75.19	94.71	44.63
Grand Total	5942.35	4912.75	5124.45	3976.25	5058.71	2725.56

Source: Economic Survey of Assam, 2011-12

CONCLUSION

Fish farming has now become popular and more and more people are taking up fish farming on a commercial basis as a result of extensive awareness campaign by the Department. Considering the potential of the fishery sector on rural employment, income and livelihood, Government has been making a number of positive interventions for sustainable development of this sector and to meet the ever increasing demand for fish. The focus is on bridging the gap between the demand and supply of fish. Moreover, such positive interventions, on the part of the government, have been a remarkable source of entrepreneurial motivation for the unemployed youth of the state which is evident from the significant increase in the number of fisheries over the past few years. Hopefully, in the long run, such interventions by the government along with the co-operation from financial institutions, SHGs, NGOs etc. will tap the potential of the fishery sector of the state up to its optimum thereby making more increased contributions towards meeting the broad objectives of economic growth, employment generation, empowerment of women and resource utilization.

REFERENCES

1.Goswami & Sathiadas. (2000). Fish Farming through Community Participation in Assam. Naga, The ICLARM Quarterly (Vol. 23, No. 3) July-September 2000.

2.Baishya.(2012). Human Development and Economic Growth: A Case Study on traditional Assamese Fishermen of Niz-Saldah Village, Sarthebari Revenue Circle, Barpeta District, Assam. International Journal of Scientific and Research Publications, Volume 2, Issue 11, November 2012, ISSN 2250-3153

3.Kumar, Katiha and Joshi. (2003). A Profile of People, Technologies and Policies in Fisheries Sector in India. National Centre for Agricultural Economics and Policy Research, New Delhi. Proceedings Series 10.

4.Economic Survey Report of Assam, 2011-12, Directorate of Economics & Statistics, Government of Assam

5.Economic Survey Report of Assam, 2010-11, Directorate of Economics & Statistics, Government of Assam

6.www.fishassam.gov.in- Official Website of the Department of Fisheries, Government of Assam.

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Book Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- ★ International Scientific Journal Consortium
- ★ OPEN J-GATE

Associated and Indexed, USA

- Google Scholar
- EBSCO
- DOAJ
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database
- Directory Of Research Journal Indexing

Indian Streams Research Journal
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.isrj.net