Bibliography of Publications

(1872-2017)

Research and Investigations in Chilika Lake

Chilika Development Authority
Forest and Environment Department, Govt. of Odisha
BHUBANESWAR

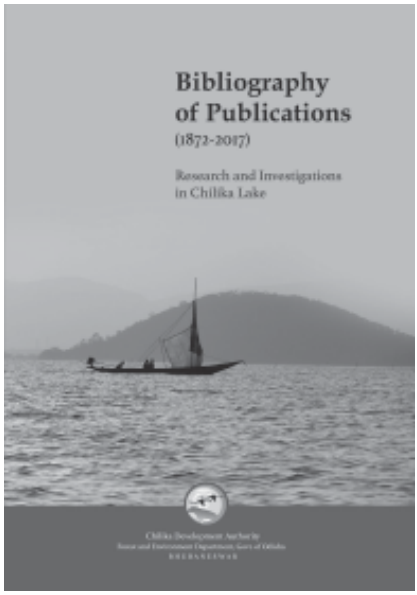
Bibliography of Publications

Research and Investigations in Chilika Lake (1872 - 2017)

Surya K. Mohanty
Krupasindhu Bhatta
Susanta Nanda

2018

Chilika Development Authority
Forest & Environment Department,
Government of Odisha, Bhubaneswar



Bibliography of Publications

Research and Investigations in Chilika Lake (1872 - 2017)

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Chilika Development Authority
(A Government of Odisha Agency)
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Citation:
Mohanty, Surya K., Krupasindhu Bhatta and Susanta Nanda (2018).
Bibliography of Publications: Research and Investigations in Chilika Lake (1872–2017).
Chilika Development Authority, Bhubaneswar : 190 p.

Published by:
Chief Executive,
Chilika Development Authority,
C-11, B.J.B. Nagar, Bhubaneswar - 751 014

Design & Print
Third Eye Communications
Bhubaneswar
thirdeyecoindia@gmail.com

Foreword

Chilika Lake with unique ecological character featured by amazing biodiversity and rich fishery resources is the largest brackishwater lake in Asia and the second largest in the world. Chilika with its unique biodiversity wealth, ecological diversity and being known as an avian paradise is the pride of our wetland heritage and the first designated Indian Ramsar Site. The ecosystem services of Chilika are critical to the functioning of our life support system in general and livelihood of more than 0.2 million local fishers and other stakeholders in particular. It is also one of the few lakes in the world which sustain the population of threatened Irrawaddy Dolphin.

Chilika also has a long history of its floral and faunal studies which begun since more than a century ago. Enormous studies and investigations in different areas of the Chilika Lake have been conducted and by now large number of research publications are available, the sources of which are widely scattered which poses great deal of difficulties in a research exercise. Keeping in view the need of further research activities in Chilika Lake in the context of changing scenario of the lake ecosystem and its bio-resources during the post-restoration period after opening of the new lake mouth and also in the context of likely impact of climate change, Chilika Development Authority has established a state-of-art research laboratory at Wetland Research & Training Centre (WRTC), Barkul (Balugaon) with ambitious planning to pursue research in various subjects valuing the management and conservation need for wise use of the lake resources.

It is a matter of great pleasure that recognizing the need of hour to carry forward the research and investigation activities in Chilika ecosystem to help promote wise use of resources of internationally famous Chilika Lake and sustainable livelihoods of local communities, Chilika Development Authority has taken the initiative to publish the long awaited well-crafted comprehensive bibliography on the hitherto completed research and investigations in Chilika since inception. The present document is a compilation of published papers, reports, books, Government documents, conference and seminar proceedings, dissertations etc which would be the most important element as strong fact checking tool in the future research exercise in the lake. This would greatly help the researchers, students, wetland managers, management authorities, research institutions, universities and stakeholders.

I sincerely thank the authors and those who have collected the reference materials from different sources through their unstinted efforts to make it an accomplished work. I hope that this will be of tremendous help to all interested in Chilika Lake for generations to come.

Suresh Chandra Mohapatra, IAS
Addl. Chief Secretary,
Forest & Environment Department,
Government of Odisha

Preface

The outstanding universal value of Chilika Lake, apart from its status as the largest brackishwater lake in Asia and second in the world, is justified because it is the rich repository of faunal and floral resources in the country, largest wintering ground for migratory water fowl found anywhere on the Indian subcontinent, unique ecological characteristics, one of the biodiversity hotspots in the country and some threatened species including the vulnerable Irrawaddy Dolphin listed in the IUCN Red List of threatened animals inhabit the lake for at least part of their life cycle and supports the livelihood and nutritional security for more than 0.2 million local fishers.

Research and investigations in Chilika Lake dates back to 1872, a long span of 145 years from now, and have resulted in the generation of huge volume of research information. Collection and compilation of literature on the vast subject of wetland research in Chilika over a century old period is a herculean task and we strongly believe that the present compilation work in the form of a comprehensive bibliography will be immensely useful not only for the future researchers but also for the students, wetland managers and policy makers who are presently engaged in various fields of research and investigation in Chilika Lake and management authorities who are concerned about sustainable management of Chilika in the face of climate change impacts, overexploitation of bio-resources, social and livelihood issues, sustainability issues relating to ecosystem functioning, biodiversity conservation etc.

The present bibliography documents 1047 references of the scientific papers on various subjects published in large number of national and international journals, memories, monographs, books, proceedings, reports, conference papers, Govt. documents etc during the period 1872 to 2017. A wide range of subjects have been covered which are grouped under fourteen sections *viz.* (1) Fish and Fisheries (2) Water and Sediment Quality (3) Biodiversity, Ecology, Eco-restoration and Conservation (4) Avifauna (5) Mammalia and Irrawaddy Dolphin (6) Zoobenthos (7) Macrophytes and Macroalgae (8) Hydrology, Hydrodynamics, Geology & Geomorphology (9) Phyto and Zooplankton (10) Reptiles and Amphibians (11) GIS and Remote Sensing Studies (12) Microbiology and Biotechnology (13) Socio-Economics and Livelihoods (14) Tourism and Culture and (15) Miscellaneous. The decadal publication shows that maximum publications (300) were registered during 2011-2017 followed by 287 publications during 2001-2010 and 146 publications during 1991-2000. This will make subject wise bibliography search easy for the researcher and those who are engaged in preparing technical documents / reports. Standard format for listing the references has been used in the present compilation.

The bibliography search has been facilitated by using various indices based on author (s) and broad subjects. Author (s) name under each section (subjects) are arranged alphabetically for quick search. Only published papers and other documents have been included in this bibliography and in future more publications could be added, since it is impossible for a bibliography ever to be complete. We sincerely hope that this first ever bibliography published by Chilika Development Authority will go a long way in planning and implementing research programmes during the post-restoration phase of the famous Chilika Lake since a bibliography is particularly important for historical research as they often include older and less common sources not likely to be found using online databases.

The Authors

Acknowledgements

We express our indebtedness to Dr. Ajit K. Pattnaik, IFS, Rtd., Former PCCF & Chief Executive, Chilika Development Authority, Bhubaneswar for his keen interest, moral support and constant encouragement for preparing this valuable document.

Sincere thanks are also due to Dr. R. N. Samal, Scientific Officer, Dr. Gurdeep Rastogi, Senior Scientist, Dr. P. R. Muduli, Scientific Officer, Dr. Muntaz Khan, Ex-Dolphin Researcher, CDA, Dr. Debasish Mahapatro, Research Fellow, Dr. Suchismita Srichandan, Ex-JRF, CDA, Shri Saroj K. Barik, Ex-JRF, CDA, Shri Sujit Kumar Mishra, Project Scientist and Ms. Jajnaseni Rout, JRF for their unstinted help in collecting and compiling the large volume of published literatures relating to various research areas of Chilika Lake for making this document accomplished.

We wish to express our appreciation for the unfailing cooperation we have received from the staff of Chilika Development Authority, Bhubaneswar and Wetland Research & Training Centre (WRTC), Barkul (Balugaon). We sincerely acknowledge the untiring help of Shri Ganesh Behera, Computer Assistant, CDA for preparing computerized document and bringing it to final printable shape.

The Authors

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Introduction

Known as the largest brackishwater lake in Asia and the second largest in the world and an avian paradise with unique ecological diversities, rich biodiversity wealth, estuarine characteristics of a coastal wetland and repository of rich fishery resources, Chilika Lake has been designated as the first Indian Ramsar Site of international importance. It is one of the few brackishwater lakes in the world which sustains the population of threatened Irrawaddy Dolphin. The ecosystem services of Chilika are critical to the functioning of our life support system in general and livelihoods of more than 0.2 million impoverished local fishers.

Hydrologically, Chilika Lake is influenced by three hydrologic sub-systems, the Mahanadi distributaries, 52 rivulets and streams draining into the lagoon from the western catchment and the sea (Bay of Bengal). Ecologically, Chilika Lake is an assemblage of shallow to very shallow marine, brackish and freshwater ecosystems. The lake is a highly complex ecosystem influenced by a diverse range of factors within its river basin and coastal zone. Sustainable management of this coastal wetland ecosystem with wise use of natural resources would thus require scientific information base relating to limnology, ecology, bio-resources including fisheries, hydrology & hydrodynamics, faunal resources, socio-economics, biodiversity etc which need to be reviewed and considered together for formulating the effective management planning framework for Chilika wetland.

Chilika Lake witnessed continued eco-degradation during past decades since 1960s until the classic hydrological intervention for eco-restoration by opening of a new lake mouth in 2000. Eco-restoration measures implemented by Chilika Development Authority brought stunning positive changes in the ecosystem functioning and fishery resources giving a new lease of life to the lake ecosystem. The rejuvenated lake with resources enhancement in general and fishery resources in particular helped enhance livelihoods of 0.2 million local fishers bailing out from utter miseries.

Research and investigations in Chilika Lake on various aspects dates back to 1872 and has progressed through a long journey of 145 years. The Zoological Survey of India (ZSI) during British regime was established on 1st July, 1916 being separated from the zoological section of the erstwhile Indian Museum, Kolkata. The faunal studies in Chilika Lake was first initiated by Dr. Nelson Annandale of erstwhile Indian Museum in 1907 when he first investigated on reptiles and batrachians from an island in the Chilika Lake. The studies on faunal resources of Chilika Lake in organized manner begun in 1915 when crustacea decapoda fauna was first studied by S. Kemp of Indian Museum, Kolkata. During the early years of 1920s, Dr. B. L. Chaudhuri and S. L. Hora of erstwhile ZSI published several good ichthyological papers on the Chilika

Lake. The floral studies in Chilika begun in 1920s when Biswas (1924) reported the subaerial algae of Barkuda Island. Studies on water and sediment quality begun in 1950s with the published report on Periodicity of the plankton diatoms of the Chilika Lake for the year 1950 by Roy (1954) when he studied the salinity of some stations in northern and outer channel sector of Chilika. Socio-economic and livelihood studies begun in 1908 with the observations of O' Malley as reported in Bengal district gazetteers: Puri. GIS and remote sensing studies in Chilika Lake commenced in 1980s when Sudarshan and Rao (1986) and Rao *et al.* (1986) published remote sensing of temporal changes of Chilika Lake and Geomorphic analysis of Chilika Lake respectively. Avi-faunal studies in Chilika begun in 1930s when Fooks (1939) reported occurrence of Sheldrake and Godwits in Chilika. Studies on biodiversity, ecology, eco-restoration and conservation started in 1980s when degradation of Chilika Lake was reported by Sahu (1988). Studies on tourism and culture of Chilika Lake begun in 1970s. Microbiology and biotechnological studies started during the last part 1980s.

Large number of research articles, book chapters, reports, books, Government documents, conference and seminar proceedings, dissertations etc have been published during the long span of 145 years but it is quite difficult to collect them from widely scattered sources. It is the first endeavored to provide a comprehensive bibliography of those publications encompassing different areas of research and investigations in Chilika Lake as a single source document which would basically help researchers to keep track of the resources for consultation and citation in there written materials. The bibliography designates both a kind of document and a field of study which is characterized by containing references to other documents. The bibliography provides information on what has been published in a given subject area and can save hours of research; it reduces the more tedious and mechanical part of doing research - the process of pouring over many indexes and databases searching for relevant information. It serves as an invaluable tool for researchers to quickly access the literature of a subject. It is particularly important for historical research as they often include older and less common sources not likely to be found using online databases. Apart from the above, the bibliography is key element of a research work which is used to judge the quality of the work done by the researcher.

With this background, Chilika Development Authority has attempted to accomplish this stupendous job of collating publications in last 145 years from widely scattered sources and document them in the form of a bibliography to help the researchers and wetland managers to strategically plan and carry out the needed / targeted research and investigations in the benefit of the wetland management during the post-restoration phase in Chilika Lake. In spite of utmost endeavor it cannot be claimed that the document covers cent percent contributions on Chilika Lake and some might have been omitted inadvertently.

Section

I

Fish and Fisheries

291 Publications (1916-2017)

Collection and Compilation:
Surya K. Mohanty, K. S. Bhatta & S. K. Karna

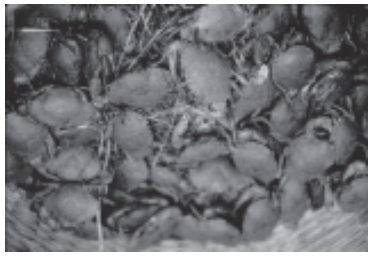
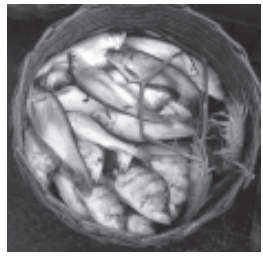
Fisheries in general, whether it relates to inland, marine and coastal ecosystems, contribute to a better livelihood in a variety of ways: directly as food, as a source of income and through other social benefits, such as reduced vulnerability to poverty. Fisheries can reduce economic and food vulnerability, but they are themselves vulnerable to external influences such as environmental degradation and climate change. Therefore, to implement effective management, decision makers have to recognize the roles and importance of fisheries to livelihoods and ensure fisheries are sustainable.

Chilika Lake (also lagoon) is a coastal, lacustrine waterbody with estuarine characters that is influenced by both land drainage inputs and marine inputs. The lake fishery is strongly migratory species-dependent and characterized as multi-species and multi-gear fishery and also as an assemblage of marine, brackish and freshwater finfish and shellfish species.

Fisheries of Chilika Lake stand out as the prime renewable natural resource (but not infinite) unless sustainable management through wise use following scientific approaches are ensured with community participation. It contributes more than 96% to the total economic valuation of provisioning services of the ecosystem and support livelihood of 0.2 million local fisher folk. The annual fisheries output generates revenue of more than 1900 million INR. It substantially contributes to the state economy and foreign exchange earnings from export of processed shellfish items.

Although the history of research and investigation in fish and fisheries of Chilika Lake dates back to 1916, i.e. more than a century with a total of 291 listed publications, still more studies are to be carried out in future in the context of climate change impacts on fisheries and ecogeomorphology of coastal wetlands, hydrological process, sustainability of eco-restoration measures, stock assessment studies of commercially important fish and shellfish species at regular intervals, study of biology of many economic species, sustainable management of fish biodiversity, nutrient profiling of fishes, fishery regulations etc. The present compiled bibliography on **fish and fisheries** of Chilika Lake will no doubt help accomplish future studies.

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Section

II

Water and Sediment Quality

90 Publications (1962-2017)

Collection and Compilation:
K. S. Bhatta, P. R. Muduli, Surya K. Mohanty, S. K. Barik& A. T. Behera

The importance of monitoring the water and sediment qualities in Indian coastal wetlands in general and Chilika Lake (largest brackishwater lake in Asia and the first Indian Ramsar Site of International importance) in particular, and the studies of environmental factors in the face of impacts of climate change, rising trend in aquatic pollutions, anthropogenic activities etc are well recognized. Water quality is fundamental for good health of aquatic ecosystem. It sustains ecological processes that support native fish populations, vegetation, wetlands and birdlife. Water quality monitoring activities are essential to be undertaken which can help establish a baseline database and the current monitoring projects can document changes in the lake ecosystem when compared with the past historical data. Water quality is an important contributor to many different services, from recreation to human health. One of the fundamental challenges of mainstreaming ecosystem services into decision making involves linking ecosystem processes with changes in human wellbeing. This is especially true for water quality related ecosystem goods and services. There is no generalizable framework for linking changes in water quality to changes in multiple ecosystem goods and services. There is a great scope to establish framework for water quality valuation. Salinity dynamics plays vital role in coastal lagoons / wetlands in shaping fish assemblage pattern. Fish species richness decrease with salinity in tropical coastal lagoon. The freshwater inflows plays important role in the nutrient cycling in Chilika Lake which along with remineralization of nutrients and coupling heterotrophic and autotrophic processes provide the greater contribution to the lake's productivity.

Generally, water quality monitoring focuses on the physical and chemical parameters, and a few key biological parameters such as indicator bacteria associated with sewage contamination. These parameters and their importance in monitoring the health of the wetland ecosystem is universally emphasized. The dynamics of coastal waters in coastal wetlands support many fish species for at least part of their life cycle offering the most productive fisheries habitats. Environmental factors help structure fish composition and assemblages in wetlands of estuarine characters.

Although the history of research on water and sediment quality of Chilika Lake dates back to 1962, for a long span of 55 years with a total of 90 listed publications, still there is vast scope of further studies to be undertaken in future in the above context, more importantly long term monitoring of water and sediment quality of Chilika to establish time series database will be of great help in the overall management of Chilika wetland and periodical assessment of ecosystem health and services.

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Section

III

Biodiversity, Ecology, Eco-restoration and Conservation

56 Publications (1988-2017)

Collection and Compilation:
Surya K. Mohanty & K. S. Bhatta

Biodiversity

Coastal wetlands are among the most productive, valuable, and yet most complex and threatened ecosystems in the world. These wetlands can retains, and transform, or sometimes even act as sources of nutrients and sediments. Coastal wetlands protect spawning and feeding grounds for valuable fish and shellfish species. Within the wetland, the environmental characteristics are determined largely by hydrologic processes which may exhibit wide fluctuations. In these wetlands with extremely variable conditions in many habitats they contain the variety of leaving organisms which have adopted to the different habitat conditions tends to be high with all major groups of plants and animals. They also provide a range of valuable ecosystem services. Thus, it is important that existing natural coastal wetlands be prioritized for conservation and that best management plans be developed to reduce sediment and nutrient losses from terrestrial watersheds and for sustainable biodiversity management.

Ecology

Ecology of coastal wetlands plays significant role in providing valuable ecosystem services to the human society. Both inappropriate exploitation of and constant human activity influences on coastal wetlands have caused numerous ecological problems. The vital ecological functions of the coastal wetlands are mitigation of climate change, protection of

water and soil, purification of water, habitat for wild animals and biological production. The ecology of coastal wetlands is greatly influenced by natural changes couple with anthropogenic pressure. This is more so in coastal wetlands with estuarine characters. In general, gradual reduction in freshwater inflow from rivers and catchment streams and ingress of seawater through semi-diurnal tidal process due to continued siltation process and shrinking and shifting of sea mouth (connectivity with the sea) and increasing anthropogenic pressure together leads to eco-degradation of wetland which in turn causes loss of biodiversity and negative impact on ecological functions. The interrelationship of ecosystem structure, function, and economic value is critical to coastal management decisions.

Restoration and Conservation

The increasing loss and degradation of wetlands has undermined the capacity of these habitats to provide their valuable ecosystem services and has raised global concerns, given that these services may become more important with ongoing climate changes. A wide range of activities have been undertaken to conserve and restore wetlands which has increasing focus on climate change adaptation. Chilika Lake being an important coastal wetland with estuarine character was undergoing serious eco-degradation heading towards a freshwater ecosystem before 2000 which was successfully restored / rejuvenated through effective hydrological intervention and other restoration measures. Although the updated list of 56 publications under this section since 1988 till date have provided many valuable information, it is still important that future studies on the sustainable management of biodiversity, ecology, ecosystem function and conservation strategies would help make the restoration impacts sustainable.

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Section

IV

Avifauna

54 Publications (1921-2017)

Collection and Compilation:
Surya K. Mohanty & K. S. Bhatta

Chilika, the largest brackishwater lake in Asia and the first Indian Ramsar site is a coastal wetland of international importance and has a pride of place in Odia literature and culture from time immemorial. Its natural beauty and biodiversity have inspired philosophers, poets and naturalists. The natural beauty of Chilika and the millions of colourful migratory and residential birds that can be seen during the winter, attract nature lovers, scientists and tourists to the lake. The lake hosts more than 229 species of birds of which at least 97 species are intercontinental migrants. Birds from as far as the Caspian Sea, Lake Baikal, Aral Sea and other remote part of Asia, Kirghiz steppes of Mongolia, Central and Southeast Asia, Ladakh and Himalayas come here. Chilika is one of the largest wintering grounds for birds along the Central Asian Flyway where over a million birds congregate for feeding and roosting. Migration commences in late September and the birds remain up to April, but the peak congregation period is mid-December to middle of January. The Nalabana Island in the central sector of Chilika with 15.53 km^2 area was notified by State Government as a Sanctuary in 1987 considering its unique features as a potential avifauna habitat.

The avifaunal studies in Chilika Lake which began in 1921 have yielded 54 publications till 2017 of which quite a good number were contributed by the scientists of Bombay Natural History Society (BNHS), Mumbai. Avian studies in Chilika focus on the habitat ecology in relation to feeding spectrum of the birds. The lake has been experiencing ecological and environmental stress due to natural changes and excessive human activities which is likely to be more aggravated under the impact of climate change. The variation in water level, proliferation of *Phragmites karka*, formation of more mud flats due to siltation and dredging operation and increasing population of motorized boats in the lake the waterfowl habitats are likely to be further impacted in future which would provide further scope for avian studies in the lake. The documented bibliography on avian studies would help provide adequate benchmark information for the future studies.

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Section

V

Mammalia and Irrawaddy Dolphin

44 Publications (1915-2017)

Collection and Compilation:
Muntaz Khan, Surya K. Mohanty & K. S. Bhatta

During the first faunistic survey (1910-1919) in Chilika by the erstwhile Indian Museum and Zoological Survey of India (ZSI) during British regime the first account of mammalia of an Island of Chilika Lake was published in 1921. Later, ZSI during its second survey (Chilika expedition) conducted during 1985-87 reported occurrence of 18 species of mammals which was, for obvious reasons, was not complete and exhaustive for the total account of the mammal fauna. Hence further investigations seem to be imperative.

An inhabitant of marine and freshwater environments, Irrawaddy Dolphins are distributed in shallow, near-shore, tropical and sub-tropical marine waters in small isolated populations around south-east Asia. They are primary found in estuaries and semi-enclosed water bodies such as bays and lagoons; freshwater populations occur in river systems. They are also occurring in isolated brackish water bodies, such as Chilika Lake in India and Songkhla Lake in Thailand. The sub-populations in Laos and Cambodia, Indonesia, Philippines and Burma are classified as Critically Endangered (CR) as per IUCN red list while the sub-populations in India (Brackishwater Chilika Lake) and Bangladesh are classified as Vulnerable (VU).

Irrawaddy Dolphins have a seemingly mutualistic relationship of cooperative fishing with traditional fishers; they love the fishers and drive the fish shoals to the fishers' nets. Their charismatic appearance and unique behavior, including spitting of water, spyhopping and fluke-slapping make greater attraction for the tourists during dolphin watching. The Irrawaddy Dolphin is known as flagship animal of Chilika Lake and is included in the Indian Wildlife Protection Act, Schedule I. The classic

hydrological intervention to restore Chilika in 2000 resulted in increase in the population of Irrawaddy Dolphin due to increase of prey species of fish and shellfish.

Irrawaddy Dolphins are more susceptible to human conflicts than most other dolphins occurring in the marine waters. Drowning in gill nets is the main threat to them the majority of reported dolphin deaths is due to accidental capture and drowning in gill nets and drag nets. In Chilika, the identified threats are floating gill nets and hook & line fishing in combination with decreasing habitat, noise pollution from speeding motorized boats and hitting with the propeller blades of those OBM boats operating under unmanaged tourism activities.

Although 44 publications since 1915 have been documented, the aforesaid facts call for further studies with regard to dolphin conservation efforts, underwater acoustics studies using hydrophone array for Irrawaddy Dolphin, shifting of habitats, range extension between Bhitarkanika WLS and Chilika including coastal waters etc.

Irrawaddy Dolphin of Chilika

Entries

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Section

VI

Zoobenthos

98 Publications (1913-2017)

Collection and Compilation:
Debasish Mahapatro, Surya K. Mohanty & K. S. Bhatta

Wetland invertebrates have historically received only limited attention from ecologist. In recent decades, however, an increased emphasis have been placed on the study of wetland ecosystems including the invertebrate fauna. Yet, knowledge of species composition and life histories specific to wetland type is still in its infancy. Understanding invertebrate communities in wetlands is especially challenging. Invertebrate occupy a central role in most wetland food webs, linking primary producers (i.e., plants and algae) to these higher trophic level animals. Therefore the integrity of invertebrate communities as a food source for fish and bird populations is important and is often evaluated in wetland conservation and restoration efforts. Wetland invertebrates perform other functions as well, including the physical breakdown of plant detritus; this accelerates decomposition and nutrient cycling. Zoobenthic species influents energy flows and nutrient cycling. These organisms contribute substantially to complex food webs in the ecosystem.

Environmental conditions in wetlands are often harsh and can change dramatically throughout the year. Therefore invertebrate must have adaptations for surviving these conditions. Extreme conditions may include but are not limited to fluctuating hydrology, hypoxic or anoxic cognition resulting from the decomposition of accumulated organic matter, and widely fluctuating temperatures. Burrowing and tube-building by deposit feeding benthic invertebrates helps to mix the sediment and enhances decomposition of organic matter. Macro zoobenthic fauna are also important constituents of fish diets and thus are an important link for transferring energy and nutrients between trophic levels. It is for these reasons and others, that benthic invertebrates are extremely important

indicators of environmental change. The sedimentary processes also influence the diversity of zoobenthic species and biocomplexity of habitats. Importance of individual benthic organisms in ecosystem processes is also well recognized. There is insufficient information about how individual zoobenthic species interact with one another under the dynamic range of natural conditions in water and sediments.

The aforesaid scientific facts justify the important role of zoobenthic organisms in wetlands, particularly relating to fishery productivity, food source for water birds, overall ecological health and complex food webs in the aquatic ecosystem.

Studies on zoobenthos of Chilika Lake dates back to 1913 and 98 number of listed publications during a long span of 104 years have embodied many useful information which could be used for management of fishery resources, water fowl habitats and assessment of ecosystem health. As could be understood from the aforesaid account, monitoring of diversity, density and biomass of zoobenthos in four ecological sectors of Chilika Lake in relation to environmental variables and substratum nature and quality in general and accumulation of organic carbon in particular in Chilika ecosystem which is influenced by riverine environmental flows and seawater input through semi-diurnal tides and antagonistic hydrological process influencing the species richness would provide enough scope for future research.

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Section

VII

Macrophytes and Macroalgae

72 Publications (1921-2017)

Collection and Compilation:
Surya K. Mohanty & K. S. Bhatta

Aquatic macrophytes play an important role in structuring communities in aquatic environments. These plants provide physical structure, increase habitat complexity and heterogeneity and affect various organisms like invertebrates, fishes and water birds. Macrophytes generally colonies shallow ecosystems where they become important components influencing ecological process (*viz.* nutrient cycling) and attributes of other aquatic assemblages (i.e. species diversity). Macrophytes may influence several other physico-chemical properties of the water column.

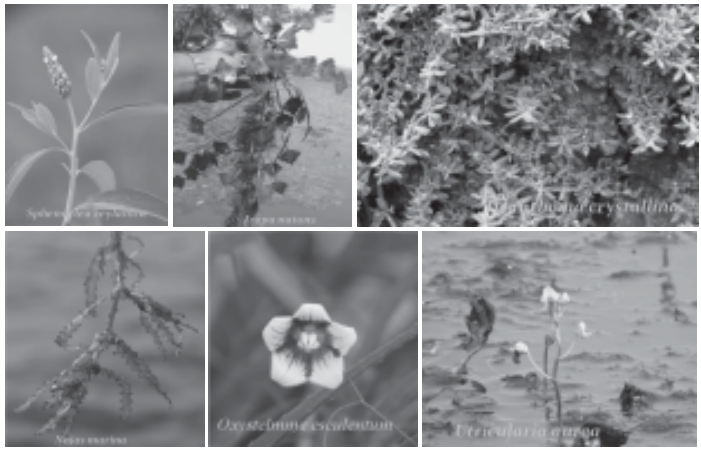
Owing to their high rate of biomass production macrophytes have primarily been characterized as an important food resource for aquatic organism, providing both living (grading food webs) and dead organic matter (detrivores food webs). It is true that macrophytes may represent an important source of organic matter for aquatic herbivores and detrivores in some ecosystems. The effect of macrophytes on populations and communities has been widely demonstrated for a variety of organisms such as micro and macro invertebrates and water birds.

Diversity of macrophytes and macroalgae in Chilika Lake are very high exhibiting spatio-temporal variations in four ecological sectors, maximum diversity and biomass existing in the riverine inflow influenced northern sector. Mostly the green macroalgae group forms the preferred food item for most of the mullet species in Chilika Lake.

Seagrass meadows provide important ecosystem services in the form of nutrient cycling, enhancing coral reef fish productivity, habitat for thousands of fish, birds and invertebrate species and major food source for

endangered dugong (nonexistent in Chilika at present). Most importantly, seagrass meadows are highly efficient in long term carbon sequestration and storage. It supplies food to mega-herbivores such as dugongs, sea turtles, sea urchins, manatees, water birds and herbivorous fish. They provide nursery grounds to migratory and resident fish and to other invertebrate organisms. Seagrass leaves reduce hydrodynamics stress by attenuating currents and waves, improved transparency by trapping suspended sediment and nutrient. Recent scientific reviews have shown that seagrass herbivory is a highly important link in the food chain, with hundreds of species feeding on seagrass worldwide. Globally seagrasses are in decline during the recent decades, mainly due to human disturbance, most notably eutrophication, mechanical destruction of habitat and over fishing. Excessive input of nutrients is directly toxic to seagrass. Chilika Lake has seagrass beds covering substantial areas in the central and southern sectors and also in the outer channel sector covering less area. In general, seagrass meadows enhances aquatic ecosystem health.

Although much work has been done in the past on macrophytes of Chilika, little work has been done on seagrass of the lake. Thus, it is imperative that extensive studies on the seagrass meadows of Chilika Lake which largely contributes to the values and function of coastal wetland be planned and executed in future. Studies on macrophytes and macroalgae of Chilika dates back to 1921 and the updated list of 72 publications during the last 96 years have documented many useful information which could be used for the management of Chilika wetland and planning for future strategic research initiatives.



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Section

VIII

Hydrology, Hydrodynamics, Geology and Geomorphology

100 Publications (1872-2017)

Collection and Compilation:
Surya K. Mohanty, Sujit K. Mishra & K. S. Bhatta

Chilika is a dynamic assemblage of shallow to very shallow marine, brackish and freshwater ecosystems exhibiting estuarine characters in an ephemeral environment. Hydrological regimes of Chilika are influenced by river basin as well as coastal process and the lake is subject to sedimentation from its extensive catchments as well from the flood water discharge from Mahanadi river system. Hydrological regimes provide the template on which the components and processes of wetlands are structured. The interrelationship of water regimes to biodiversity and ecosystem services can be expressed in several ways and at multiple scales; linkage of water regimes of the lake to fisheries, vegetation, water birds and Irrawaddy dolphin can be mentioned in this regard. The distributaries of river Mahanadi and the catchment streams are the principal source of freshwater and sediment input for Chilika and the sea water inflow through semi-diurnal flow tides from the sea (Bay of Bengal) make the water body of the lake brackish and the antagonistic hydrological process between freshwater drainage into the lake and ingress of sea water from the sea greatly influence the species richness in fisheries. Hydrological connectivity in the lake plays crucial role in maintaining the ecology and biodiversity and environmental flow from Mahanadi river system is critical to the productive fishery of the lake.

Geological studies in Chilika have thrown light on its formation in the Pleistocene era when the coastline was extended along the western shore of the lake and the northern region lying under the sea. The geological features of Chilika's catchment area and the age estimation

of the lake from a fossil unearthed the southwestern edge of the spit and the chronological development of the outer barrier spit of the lake were some of the important geological studies in the past. With the continued changes in the physiography of the lake further studies on the geology and geomorphology of Chilika would be important.

Monitoring the dynamic changes in Chilika Lake is no doubt a challenging and demanding task due to the importance of the environmental aspects which maintain the ecological balance. Efforts to the study the changes in Chilika Lake was quite extensive in the past starting with Annandale and Kemp who published 13 papers in the Memoirs of Indian Museum between 1913 and 1924. However, the problem of changes in time and space would perhaps be addressed through geomorphic studies in coming years.

The updated studies on hydrology, hydrodynamics, geology and geomorphology of Chilika Lake have so far produced 100 publications which are documented in this bibliography. The afore-stated background and rationale certainly generate interest and impetus among the researchers to undertake further studies in future.

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Section

IX

Phyto and Zooplankton

41 Publications (1913-2016)

Collection and Compilation:
G. Rastogi, Surya K. Mohanty & K. S. Bhatta

Phytoplankton

The challenge of deciphering the rules of phytoplankton community assembly remains a central problem of aquatic ecology. Estuaries and lagoons with estuarine characters are called the "nurseries of the sea" because the protected environment and abundant food provide an ideal location for organisms to inhabit and reproduce. Phytoplankton is an assemblage of heterogeneous microscopic algal forms of aquatic systems whose community structure is an important indicator of coastal ecosystem health. Phytoplankton is the main representative of primary production in estuarine and lagoonal ecosystems. Also, phytoplankton composition influences various processes such as nutrient recycling, grazing, particle sinking and food webs. Phytoplankton community also acts as useful indicators of water quality. In Chilika lagoon (also lake) with estuarine characters freshwater supplied by rivers and catchments is mixed with sea water brought in by the tides which creates estuarine salinity gradient, with higher salinity near the mouth of the lake to freshwater near the head of the estuarine zone *i.e.* near the outfall zone of the rivers in the northern sector. Such antagonistic hydrological process with varied salinity gradients make the characteristic composition of phytoplankton with marine, estuarine and freshwater species. A knowledge of the plankton community of any water body is not only important in assessing its productivity but would permit a better understanding of the population dynamics and life cycles of the fish community. Estuarine plankton communities can respond to both climatic change and human activities at different time scale which

may serve as a bio-indicator to monitor ecosystem environment for both pollution or as a modeling for fish population dynamics.

Although several good works of the phytoplankton of Chilika Lake have been carried out in the past beginning with the work of R. B. S. Sewell in 1913, more studies are yet to be carried out in the changing scenario of rejuvenated Chilika ecosystem during post-restoration phase.

Zooplankton

In aquatic ecosystem zooplankton form an important link in the food chain from primary to tertiary level leading to the production of fishery. Its abundance and intermediatary role between phytoplankton and fish, they are considered as the chief index of utilization of aquatic biotope at the secondary trophic level. Hence they play an important role as the intermediaries for nutrients / energy transfer between primary and tertiary trophic levels. Zooplanktons are being used as the indicator organisms for the physical, chemical and biological processes in the aquatic ecosystem. While most of the zooplankton in freshwater are members of three main taxonomic groups i.e. protozoa, rotifer and crustacean, the marine / estuarine environment differs mainly in having few rotifers or cladocera, more extensive representation of protozoa groups and wide spread occurrence of planktonic larvae of sedentary forms ranging from mollusks and malacostracan to chordata. The presence or absence of healthy zooplankton populations can determine some commercial fisheries success in both fresh and salt water bodies. So far investigations on zooplankton have been confined mainly to taxonomic, zoogeography, distribution pattern, community structure and trophic relationships. The use of new sampling and analysis technologies in zooplankton research would greatly facilitate rapid data inquisition for evaluation of biological resources and understanding the processes in the marine and lagoonal ecosystems. Hence phytoplankton studies in future would provide essential information for the assessment of Chilika's ecosystem health. The present bibliography contains 41 publications documented since 1913.

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Section

X

Reptiles and Amphibians

18 Publications (1907-2002)

Collection and Compilation:
K. S. Bhatta & Surya K. Mohanty

The first ever publication on the faunistic studies in Chilika Lake by Indian Museum was on the reptiles inhabiting the Gopakuda Island in Chilika near Keshpur way back in 1907 which marked the beginning of faunistic survey in Chilika Lake. Dr. N. Annandale described a new genus of limbless skink from Barakuda Island in Chilika, as new to science. Later, the extension of range of the burrowing limbless skink of Barkuda Island in Chilika to the sandy coasts of Waltair in Andhra Pradesh was reported by Ganapati *et al.* (1952, 1955). The *Barkudia insularis* Annandale, 1917 is a Critically Endangered (CR) limbless lizard was rediscovered in the wild (Chilika) in 2003. Little is known about the species, particularly the habitat ecology including its occurrence in other areas in and around the lake, food and feeding etc which needs to be studied in future. In general, herpetology study in Chilika is interesting, which calls for future investigations. Although the updated list of 18 publications on reptiles and amphibians of Chilika Lake documented so far, the herpetology study in the lake being interesting, calls for future investigations.

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Section

XI

GIS and Remote Sensing Studies

36 Publications (1986-2016)

Collection and Compilation:
R. N. Samal, Jajnaseni Rout,
Surya K. Mohanty & K. S. Bhatta

The sustainable use and management of important tropical coastal ecosystems including coastal is incomplete without understanding the direct and indirect impacts of anthropogenic activities. The ecosystem's resilience and recovery capacity following such impacts need to be determined. The efficacy of mitigation measures must also be considered. Remote Sensing (RS) and Geographic Information System (GIS) are excellent tools to use in such studies. There is need for more comprehensive approaches that deal with new remote sensing technologies and analysis in a GIS environment and that integrate findings collected over longer periods with the aim of prediction. It is also imperative to collect and integrate data from different disciplines. These are essential in the spirit of sustainable development of coastal ecosystems, which are often more vulnerable to environmental degradation. The role of remote sensing in deriving information on various aspects of coastal wetland such as shoreline changes, land use, sediment dynamics, living and non-living resources, water quality etc has been well recognized which are used to generate on baseline inventory, change detection, areas of erosion and deposition etc. Geographic Information System (GIS) is used for spatial and temporal assessment, which help in identifying and monitoring the impacts due to point and non-point sources of pollution. Remote sensing technology is also used as a monitoring tool for basin management.

During the recent years, application of remote sensing and GIS as vital tools in the management of the Chilika ecosystem as a whole, coastal process, habitat characteristics, mapping of fishing grounds, illegal prawn Ghery expansion, use of unauthorized destructive fishing gears, invasive macrophytes etc in particular has been emphasized. Wetland remote sensing and GIS studies will play a critical role in the overall management of Chilika Lake basin in future.

GIS and remote sensing studies in Chilika had its beginning in 1986 and so far produced 36 publications which are documented in the present bibliography.

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Section

XII

Microbiology and Biotechnology

25 Publications (2009-2017)

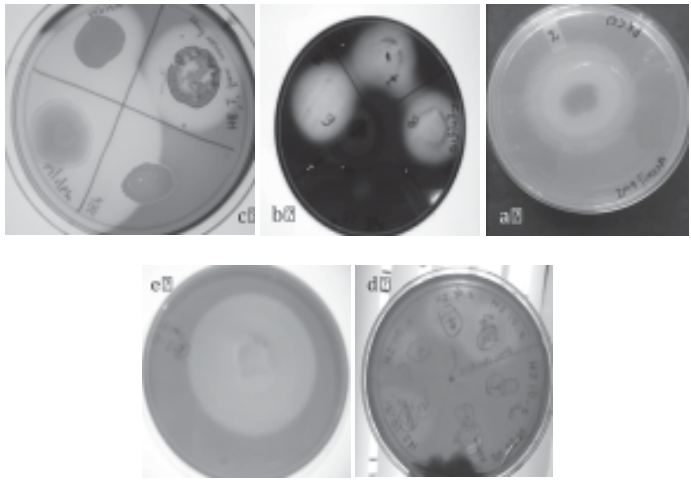
Collection and Compilation:
G. Rastogi, Ms. P. Behera & K. S. Bhatta

Coastal water bodies in general and shallow coastal wetlands with estuarine characters in particular are extremely dynamic and productive ecosystems which are dominated by macro-organisms and plants. Many studies conducted in Chilika Lake in the past have focused mainly on the macro-size organisms and investigated the species composition typically from a 'macrobial' perspective. An efficient ecosystem functioning, with high productivity, with low carbon and nitrogen retention in wetland ecosystem eventually depends on the interaction between microbial and macrobial component. There is growing evidence that biodiversity decrease might reduce ecosystem services through feedback mechanism, which could impact the sustainable functioning of ecosystem and cause social and economic consequences. Recent studies have suggested the analysis of microbial diversity including bacteria and phytoplankton community should be a priority area in current ecological research. However, literature search reveals that an understanding of microbial level ecosystem functioning of Chilika Lake remains completely unexplored. Very recently, the tools of modern biotechnology have been implemented in the lake with a view to providing greater understanding of microbial communities of the lake. In Chilika, microbial communities are the major drivers in controlling nutrient cycling, yet they are poorly characterized due to their high complexity. There is need to bridge this knowledge gap by generating a systemic inventory of microbial communities and the major drivers that drive their composition. Linking microbial community composition with biogeochemical cycles with the

tools of modern biotechnology such as high-throughput DNA sequencing will provide greater insight into the mechanisms that drive wetland ecosystem.

The unique ecological features combined with salinity dynamics with annual cycling nature support the rich biodiversity of the lake and there is every possibility that many bacteria in the outer channel and southern sector with higher salinity regime would be adopted to survive in high salinity conditions. Thus, Chilika is a good source for bioprospecting of moderately and extremely halotolerant bacteria. The application of modern biotechnology approaches in the bioprospecting is further important considering the fact that > 99% bacteria from aquatic environments are not culturable under typical laboratory conditions. Recent developments in the next generation sequencing technology allow sequencing of the whole metagenomic DNA which could be searched for the presence of novel families of hydrolases through *in silico* approaches. The ecological and biotechnological potential of microbes present in Chilika Lake ecosystem are yet to be effectively explored and studies using functional metagenomics are still warranted and the future studies need to be explores these areas.

Biotechnological study in Chilika Lake is relatively a very recent area of research which had its beginning in 2009. During the last eight years (2009-2017), a total of 25 publications have been produced which are documented in the present bibliography.



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Section

XIII

Socio-economics and Livelihoods

67 Publications (1908-2017)

Collection and Compilation:
Surya K. Mohanty & K. S. Bhatta

Wetland habitats, in general, are valuable for the services that they provide in water storage as well as for safeguarding innumerable species of plants and animals. In a world reeling under the full brunt of global changes (human encroachment, loss of habitats, climate change, fragmentation, invasive species, overexploitation of natural resources etc), Chilika Lake as a dynamic coastal wetland is no exception which has exhibited over the last decades a marked eco-degradation until the restoration effort through hydrological intervention in 2000. Coastal zone being densely populated, the lake-dependent communities particularly local fishers of more than 0.2 million population have been grappling with socio-economic and livelihood problems. Consistent decline in fishery resources of Chilika Lake since the mid-eighties combined with climate change impacts (flood, cyclone, drought etc) gradually brought miseries to then with increased socio-economic issues and problems which threatened their livelihoods. The wetland and catchment communities experienced socio-economic problems mainly due to decline in resource base and lack of social infrastructure availability in villages mostly inhabited by impoverished fishers during the eco-degradation phase.

The ecosystem-based management of wetlands in tropical nations creates a new series of challenges, problems and opportunities that must be considered in light of existing governance and management framework in a local context. There are several factors that influence sustainable / wise use of wetlands resources where the local communities heavily depend on the wetland. These factors range from socio-economic, socio-cultural, socio-political and bio-physical aspects. Socio-economic factors

include lack of capital to invest in different socio-economic projects and irrational fishing practices leading to resource degradation, lack of extension services due to manpower shortage and lack of managerial support. Socio-cultural factors include crosscutting issues that comprise gender and youth consideration and wetlands related health hazards. Socio-political factors include resource use conflicts and conflict management, and the bio-physical factors include mostly the climate change related factors such as tropical cyclones, high floods, drought condition etc.

With the above background information, Chilika Lake as a dynamic, resource and biodiversity-rich, densely populated, largest coastal wetland ecosystem (first Indian Ramsar site) of international importance has been encountering many issues and problems relating to socio-economic and livelihoods of the wetland communities, mostly steaming from conflicts for access and right over the natural resources of the lake which is a common property resource. These are required to be addressed with a rational fulfillment of aspirations of the local communities within the framework of sustainable and ecosystem based management of lake resources. Although a total of 67 publications on socio-economics and livelihoods have been documented since 1908, further studies on these aspects will focus greater significance in future.

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Section

XIV

Tourism and Culture

35 Publications (1970-2017)

Collection and Compilation:
Surya K. Mohanty & K. S. Bhatta

Wetlands are home to some of the richest biodiversity on the planet and the ecosystem services they provide play an important role in sustainable development impacting directly the lives of millions of people worldwide, most especially the poor, who depend on the essential ecosystem services wetlands provide. The world tourism today focuses at reinforcing the role of wetlands and their biodiversity ecosystems for sustainable tourism development. Wetlands fulfill a variety of ecological functions in the lifecycles of numerous plants and animals, usually on a local scale, but often on a regional scale. Chilika Lake being the largest brackishwater lake in Asia functions as a summer range, migration stopover, wintering area and / or breeding site for migratory waterbirds. The birds' migration routes may cover thousands of kilometers, and this emphasizes the need for the conservation and wise use of wetlands. Their long migrations and tendency to concentrate in large numbers in Chilika Lake make waterbirds both visible and attractive. They are important indicators of the ecological conditions and productivity of wetland ecosystems, and their presence is widely valued by numerous stakeholders, including local people, tourists and associated enterprises. Tourism can also seriously impact the very resource it depends on. These impact may be both direct and indirect, may vary from global warming and climate change to local effects. Since many environmental risk are related to tourism, obviously, decision making at the local level on developing tourism in wetland areas is part of a much larger and more complex process in which stakeholders with competing interests need to work together to find common solutions and bridge their differences. It is also important to consider tourism development in wetlands designated as Ramsar sites

where wise use of wetlands need to be ensured, since tourism is only one of the ecosystem services that wetland provide, and ensuring the sustainability of tourism in and around wetlands contributes to the health of the wetland so that other services can be sustained.

In Chilika, sighting of Irrawaddy Dolphin in their natural habitats in the lake, the new lake mouth in the outer channel sector, waterbird sanctuary of Nalabana in the central sector, the marshy waterbird habitat at Mangalajodi, birds island for resident and migratory birds, Kalijai the abode of island goddess, Brahmapura and Rajahansa for scenic beauty, honeymoon island and many old temples are the major attraction for tourists in the lake. Chilika, a carpet of emeralds, vast expansion of blue waters and millions of colourful migratory birds in winter provide greater scope for development of eco-tourism. Chilika is also known for its pristine glory of traditional arts and culture. However, maximum management precautions and care need to be ensured to preserve the pristiness of its ecology, biodiversity and ecosystem health while implementing the tourism development plan in the lake.

Quite a good number of studies on the tourism and culture of the Chilika Lake were carried out in the past commencing from 1970s have produced a total of 35 publications which are documented in the present bibliography. In view of the proposed tourism master plan for Chilika Lake more scientific impact assessments in the field of ecology, biodiversity, socio-economics and livelihoods in relation to tourism development seems to be imperative in future.

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Section

XV

Miscellaneous

20 Publications (1912-2016)

Collection and Compilation:
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Out of the total documentation of 1047 number publications on research and investigations in Chilika Lake during the last 145 years, 20 publications could not be accommodated under the presiding subject specific chapters, which are placed under "Miscellaneous" chapter as they relate to miscellaneous subject areas. These publications are also of significance and values which would help undertake future studies in those areas.

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739.	Razauddin, Md.	603 & 604
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744.	Reddy, N. T.	783
745.	Reeves, Randall R.	525
746.	Remesan, M. P.	265
747.	Riekhof, M. C.	217
748.	Riplay, S. D.	445
749.	Rizvi, S. A. R.	691
750.	Robin, R. S.	310, 312, 315, 328, 329, 353, 365 & 812
751.	Robson, J.	982
752.	Rosamma, S.	358
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754.	Roshith, C. M.	266 & 815
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756.	Rout, D. K.	698
757.	Rout, Jajnaseni	179, 880, 881, 882, 883, 892, 893, 894, 895 & 898
758.	Rout, N. P.	705
759.	Rout, S. D.	125

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760.	Routray, M. D.	267
761.	Routray, P.	267
762.	Routray, R. K.	225 & 504
763.	Routray, R. S.	350
764.	Roy, Anirban	268, 639, 699 & 700
765.	Roy, B. K.	5
766.	Roy, J. C.	269, 270, 701, 808 & 835
767.	Roy, M. K. Dev	428
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769.	Roy, S. K.	733 & 771
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771.	Roychaudhuri, B.	983
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774.	Ryan, Gerard Edward	524
775.	Saaltink, H. J.	396
776.	Sadakata, N.	785
777.	Saha, Subhendu Sekhar	526
778.	Sahana, Mihir	984
779.	Sahoo, D. P.	125
780.	Sahoo, Debasish	702
781.	Sahoo, Debendra Kumar	90, 93 & 272
782.	Sahoo, Dillip Kumar	15, 91, 92, 95 & 271
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784.	Sahoo, Jagamohan	683
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786.	Sahoo, N.	269 & 270
787.	Sahoo, S. K.	366
788.	Sahoo, Subhashree	295, 367 & 368
789.	Sahu, B. K.	318, 369, 370 & 836
790.	Sahu, B. N.	429 & 430
791.	Sahu, Bijaya Kumar	305
792.	Sahu, H. K.	125, 439, 470, 471, 473, 474, 484, 485, 486, 527 & 1035
793.	Sahu, J.	635, 636 & 704
794.	Sahu, K. C.	295, 345, 346, 367, 368, 378, 749, 837 & 843
795.	Sahu, N.	908, 909 & 911

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796.	Sahu, Nivedita	702
797.	Sahu, P.	613 & 616
798.	Sahu, Rajani Kanta	335, 336, 342, 914 & 915
799.	Sajeela, K. A.	924
800.	Sakamaki, T.	499, 500 & 513
801.	Salagrama, Venkatesh	985
802.	Samal, Kailash Chandra	276, 277, 913, 986 & 987
803.	Samal, R. C.	299, 307, 732, 786, 787, 865, 872, 877, 896 & 897
804.	Samal, R. K.	516
805.	Samal, R. N.	15, 179, 300, 323, 330, 487, 601, 655, 671, 750, 751, 774, 776, 778, 783, 784, 842, 881, 892, 893, 894, 895, 898 & 1040
806.	Samant, N. C. S.	781
807.	Samanta, S.	54 & 226
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809.	Samantaray, Subhalata	563 & 957
810.	Samantray, Debyani	335
811.	Sanilkumar, V.	707 & 721
812.	Sanjay L. Nalbalwar	492
813.	Santra, P.	788
814.	Sarangi, B.	789
815.	Sarkar, A.	371
816.	Sarkar, B.	907
817.	Sarkar, S. K.	278, 348, 372 & 827
818.	Sarma, A. L. N.	617, 618, 619, 620, 626 & 829
819.	Sarma, K. V. L. N. S.	797
820.	Sarma, V. V. S. S.	312
821.	Saroj, N.	783
822.	Sasaki-Yamamoto, Y.	493 & 494
823.	Sasamal, S. K.	487
824.	Sasikala, C.	906, 912, 922 & 923
825.	Sastry, D. R. K.	621
826.	Satapathy, K. K.	278 & 821
827.	Satapathy, S.	617, 619 & 626
828.	Sathiyaselvam, P.	451 & 452
829.	Sathyan, N.	199
830.	Satpathy, D.	118, 279, 280 & 790

Sl. No.	Name of Author	Serial Number
831.	Satyanarayana Murty, A.	331, 761, 764 & 1037
832.	Satyanarayana, Ch.	359, 831, 838, 839 & 845
833.	Saw, A. K.	710
834.	Scharf, Burkhard W.	381, 654 & 678
835.	Schilling, Janpeter	991
836.	Sellamuttu, S. S.	948
837.	Sen Gupta, S. K.	281
838.	Sen, Areen	622 & 623
839.	Sen, S. K.	712 & 713
840.	Senapati, Asish	489
841.	Sengupta, A.	6
842.	Sengupta, Meghna	769
843.	Sengupta, P.	793
844.	Sengupta, Sanghamitra	298 & 916
845.	Sengupta, Sushmita	921
846.	Senthil Kumar, P.	648
847.	Seong, C. N.	923
848.	Seth, J. K.	95
849.	Sethi, P. K.	282
850.	Sethy, P. G. S.	616
851.	Sewell, R. B. S.	624, 625, 794 & 840
852.	Shah, K. L.	209 & 213
853.	Sharma, A. P.	200, 201, 202, 219, 266, 815, 816 & 817
854.	Sharma, Pankaj	1023
855.	Sharma, Shubha Rani	899
856.	Shaw, B. P.	373 & 705
857.	Shaw, R.	51, 52, 53 & 939
858.	Shrivastava, P.	925
859.	Sibley	490
860.	Siddiqi, S. Z.	613 & 616
861.	Signum, S.	798
862.	Silvestri, F.	627
863.	Simmat, R.	736
864.	Singh, Kartar	899
865.	Singh, N. K.	901 & 902
866.	Singh, R.	1039
867.	Singh, Rajagopal	805

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868.	Sinha, A.	505
869.	Sinha, B. N.	795
870.	Sinha, B.K.	1024
871.	Sinha, J.	311
872.	Sinha, M.	283 & 297
873.	Sinha, R. K.	314, 528 & 529
874.	Sivakholundu, K. M.	707
875.	Sivakumar, G.	925
876.	Sk. Md. Equeen	870 & 871
877.	Smita	989 & 990
878.	Smith, Brian D.	525
879.	Society for Ecological Restoration International	431
880.	Solanki, M. K.	925
881.	Sorongon-Yap, Patricia	524
882.	Souche, Y.	902
883.	Southern, R.	628
884.	Southwell, T.	284 & 1045
885.	Sowman, M.	931
886.	Srichandan, Suchismita	836, 841, 842, 843 & 895
887.	Srinivasa Rao, D.	629
888.	Srinivasa Rao, K.	868 & 878
889.	Srinivasan, M.	838, 844 & 845
890.	Srinivasu, P. D. N.	357 & 782
891.	Srivastava, S. S.	518
892.	Stella, C.	648
893.	Stephenson, J.	630, 631 & 632
894.	Suar, M.	901, 902, 903, 908, 909, 911, 918, 919 & 920
895.	Subba Rao, M. V.	375 & 376
896.	Subba Rao, N. V.	633
897.	Subrahmanyam, A. S.	768, 796 & 797
898.	Subrahmanyam, M.	285, 286 & 287
899.	Subrahmanyam, Vandrapu	768, 796 & 797
900.	Subramanian, B. R.	310, 312, 315, 328, 329, 353, 358, 365, 783 & 812
901.	Subramanian, S. K.	890 & 891
902.	Subramanian, V.	772
903.	Subudhi, Durga P.	798

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904.	Subudhi, M.	516
905.	Sucharita, K.	906, 922 & 923
906.	Sudarshan, R.	873, 890, 891 & 900
907.	Sudhakar, S.	377
908.	Sugimatsu, H.	493, 494, 499, 500, 513 & 530
909.	Sujansinghani, K. H.	75, 76, 77 & 78
910.	Sundaray, S. K.	345
911.	Suresh, V. R.	97, 99, 100, 101, 104, 105, 200, 201, 202, 219, 266, 815, 816 & 817
912.	Surya Rao, K. V.	633
913.	Sutaria, Dipani	519, 521, 531, 532, 533 & 534
914.	Swain, G. C.	352, 914 & 915
915.	Swain, P. K.	189, 667 & 669
916.	Swaminathan, Raja T.	924
917.	Takahashi, H.	499, 500 & 513
918.	Takekawa, John Y.	481 & 483
919.	Talwar, P. K.	288
920.	Tanabe, S.	314
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923.	Thatoi, H. N.	914 & 915
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927.	Torimoto, J.	717
928.	Treutler, H. C.	381
929.	Tripathi, Y. R.	289
930.	Tripathy, Balaram	1025
931.	Tripathy, H. K.	1033
932.	Tripathy, J. K.	378
933.	Tripathy, Madhusmita	330, 432, 892 & 895
934.	Tripathy, N.	1032
935.	Tripathy, P. K.	649
936.	Tripathy, S. D.	17
937.	Tripathy, S. K.	318, 343, 378, 379, 799 & 800
938.	Tripati, Sila	261, 801, 1021, 1026 & 1046
939.	Trisal, C. L.	424, 433, 434, 435, 529 & 1027
940.	Tudu, Prasad Chandra	194 & 195

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941.	Tyagi, R. K.	54
942.	Ura, T.	493, 494, 499, 500 & 513
943.	Vaishampayan, P.	901 & 902
944.	Vardhan, K. V.	310, 365 & 812
945.	Vargas, Luz H. Rodriguez	519
946.	Varma, P. S.	357
947.	Varshney, C. K.	290
948.	Vass, K. K.	813
949.	Venkataraman, K.	436
950.	Venkataratnam, K.	802 & 803
951.	Venugopal, P.	588 & 833
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954.	Vijayan, V.	191 & 192
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956.	Vora, K. H.	801
957.	Wafar, Mohideen	436
958.	Wakchaure, G. C.	907
959.	Welters, R.	524 & 1006
960.	Wetland International – South Asia (WISA)	992
961.	Wikner, J.	821
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963.	Wolanski, Eric	716
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966.	WWF India	1047
967.	Xess, S. S.	909
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969.	Yadav, D.	798
970.	Yandigeri, M. S.	925
971.	Young, William J.	805
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973.	Zachmann, D. W.	381
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976.	Zavagli, M.	948
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978.	Zulkarnaen, Mohammad	519

Decadal number of publications

Period	*Number of Publications*										*Total*
1871-1880	-	1	-	-	-	-	-	-	-	-	**1**
1881-1890	-	-	-	-	-	-	-	-	-	-	-
1891-1900	-	-	-	-	-	-	-	-	-	-	-
1901-1910	-	-	-	-	-	-	1	1	-	-	**2**
1911-1920	-	1	2	3	18	8	4	1	-	2	**39**
1921-1930	16	6	5	5	2	-	-	1	-	-	**35**
1931-1940	1	1	-	-	-	-	-	-	2	-	**4**
1941-1950	1	-	-	-	-	3	-	-	-	2	**6**
1951-1960	3	3	-	7	3	-	4	1	2	-	**23**
1961-1970	2	4	4	5	3	9	7	2	2	14	**52**
1971-1980	6	6	13	1	7	5	7	5	5	9	**64**
1981-1990	6	3	3	3	6	9	10	30	12	6	**88**
1991-2000	10	12	14	11	31	8	10	17	14	19	**146**
2001-2010	15	48	24	13	20	27	26	48	38	28	**287**
2011-2017	24	33	45	48	58	50	42	-	-	-	**300**
									Total		**1047**

Number of publications by author

Sl. No.	Name of Author	First Author	Co-author	Total
1.	Abbasi, S. A.	1		**1**
2.	Abdul Raheman	1		**1**
3.	Abhilash, K. R.		3	**3**
4.	Acharjyo, L. N.		1	**1**
5.	Achary, S. M.		1	**1**
6.	Acharya, Ankita		1	**1**
7.	Acharya, Asutosh		1	**1**
8.	Acharya, B. C.		6	**6**
9.	Acharya, P. K.		2	**2**
10.	Acharya, S.	8	3	**11**
11.	Acharya, S. K.		1	**1**
12.	Acharyya, Anshuman		3	**3**
13.	Adair, Joanne	1		**1**
14.	Adduci, M.	1		**1**
15.	Adhikary, S. P.	3	8	**11**
16.	Adhurya, S.		1	**1**
17.	Adhya, Tapan K.		6	**6**
18.	Adiseshasai, K.		1	**1**
19.	Afsal, V. V.		1	**1**
20.	Ahmad, J.		1	**1**
21.	Ahmed, M. K.	1		**1**
22.	Akamatsu, T.	2	2	**4**
23.	Alagarswami, K.	2	1	**3**
24.	Ali, Salim	1	1	**2**
25.	Ali, Y.		1	**1**
26.	Amin, N.		1	**1**
27.	Anand, N. M.	2		**2**
28.	Andrachuk, M.		1	**1**
29.	Andrewes, H. E.	1		**1**
30.	Anil Kumar, R.	3		**3**
31.	Annandale, N.	24	1	**25**
32.	Anon	19		**19**
33.	Ansari, K.G.M.T.	2		**2**
34.	Antal, Jaswant S.	1		**1**
35.	Arima, M.		1	**1**

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36.	Armitage, D.		1	**1**
37.	Arora, D. K.		1	**1**
38.	Arrow, G.J.H.	1		**1**
39.	Arthur, R.		1	**1**
40.	Arya, A. N.		1	**1**
41.	Asthana, V.	1		**1**
42.	Asutosh, A. T.		1	**1**
43.	Badapanda, H. S.	1	3	**4**
44.	Bahl, R.	2	3	**5**
45.	Baidya, S.		2	**2**
46.	Baik, K. S.		1	**1**
47.	Baker, C.		1	**1**
48.	Balabantaray, Sachikanta		1	**1**
49.	Balachandran, S.	2	1	**3**
50.	Balapure, K. M.		1	**1**
51.	Balasubramanian, C. P.	1		**1**
52.	Balasubramanian, K.		1	**1**
53.	Baliarsingh, M. M.		3	**3**
54.	Baliarsingh, S. K.	1	3	**4**
55.	Ballatore, T. J.		1	**1**
56.	Banarjee, K.		1	**1**
57.	Bandhopadhya, S. N.		1	**1**
58.	Bandyopadhyay, S.	1		**1**
59.	Banerjee, A. C.	2		**2**
60.	Banerjee, B. K.	1	1	**2**
61.	Banerjee, L. K.	1	1	**2**
62.	Banerjee, M.		1	**1**
63.	Banerjee, R. K.	2		**2**
64.	Banerjee, Satabdi	1	1	**2**
65.	Bangaku Naidu, K.		1	**1**
66.	Banik, S. K.		4	**4**
67.	Bansal, Anil	1		**1**
68.	Baral, N. C.	1	1	**2**
69.	Baral, R.		1	**1**
70.	Barik, S. K.	2	5	**7**
71.	Barman, B. C.		1	**1**
72.	Basak, P.		1	**1**
73.	Basheer, V. S.		1	**1**

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74.	Bastia, T. K.		1	**1**
75.	Basu, Jayanta	1		**1**
76.	Basu, N. C.	1	2	**3**
77.	Batbayar, Nyambayar		1	**1**
78.	Bavinck, M.	1		**1**
79.	Beasley, Isabel	1		**1**
80.	Behera, A. T.		3	**3**
81.	Behera, Aurobinda	1		**1**
82.	Behera, B. K.		2	**2**
83.	Behera, B. P.		2	**2**
84.	Behera, Bhagirathi	1		**1**
85.	Behera, D.		1	**1**
86.	Behera, D. P.	1	3	**4**
87.	Behera, G.		2	**2**
88.	Behera, Manoj Kumar		1	**1**
89.	Behera, P. K.	1	1	**2**
90.	Behera, Pratiksha	3		**3**
91.	Behera, R. K.		1	**1**
92.	Behera, S.		2	**2**
93.	Behera, S. K.		3	**3**
94.	Behera, Santosh K.		2	**2**
95.	Behura, S.		2	**2**
96.	Beja, S.		1	**1**
97.	Benthall, E. C.	1		**1**
98.	Berkes, F.		6	**6**
99.	Bhadury, P.		7	**7**
100.	Bhandari, Bishnu		1	**1**
101.	Bhatta, Brajabandhu	5		**5**
102.	Bhatta, K. S.	20	31	**51**
103.	Bhattacharya, A.		1	**1**
104.	Bhattacharya, A. K.		1	**1**
105.	Bhattacharya, D. R.	1		**1**
106.	Bhattacharya, S.	5	2	**7**
107.	Bhattacharyya, Maitree		2	**2**
108.	Bhaumick, U.		1	**1**
109.	Bhimachar, B. S.	1		**1**
110.	BirdLife International	1		**1**
111.	Biswas, K. P.	3		**3**

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112.	Biswas, S.	1		**1**
113.	Blair, K. G.	1		**1**
114.	Blanford, W. T.	1		**1**
115.	Bogart, M. V. D	1		**1**
116.	Bohidar, K.		5	**5**
117.	Bonthu, Subbareddy	1		**1**
118.	Bose, S.	2	1	**3**
119.	Bramha, S. N.	1	2	**3**
120.	Bressem, Marie-Francoise Van	1		**1**
121.	Buckton, S. T.		1	**1**
122.	Carlgren, O.	1		**1**
123.	Carter, H. G.		1	**1**
124.	CDA	4		**4**
125.	CDA-JICA	10		**10**
126.	Chakraborty, S.		2	**2**
127.	Chand, Pradeep Kumar		1	**1**
128.	Chandramohan, P.	3	3	**6**
129.	Changder, S.	1		**1**
130.	Charan Kumar, B.		4	**4**
131.	Charles, A.		1	**1**
132.	Chaterjee, A. B.	1		**1**
133.	Chatrath, K. J. S.	1		**1**
134.	Chatterjee, D.		1	**1**
135.	Chatterjee, N.	1		**1**
136.	Chatterjee, S. K.		1	**1**
137.	Chattopadhyay, Dhrubajyoti		2	**2**
138.	Chattopadhyay, S.	1		**1**
139.	Chaudhary, A. K.		1	**1**
140.	Chaudhuri, B. L.	5		**5**
141.	Chaudhury, R.		1	**1**
142.	Chaudhury, S. B.		1	**1**
143.	Chauhan, M.		1	**1**
144.	Chellaiyan, D.		1	**1**
145.	Chilton, C.	3		**3**
146.	Choudhury, Anirvan		1	**1**
147.	Choudhury, Janmejay	1		**1**
148.	Choudhury, S. B.		1	**1**
149.	CIFRI	4		**4**

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150.	Cooper, G.		1	**1**
151.	Craven, L. A.		1	**1**
152.	Crespo, Enrique A.		1	**1**
153.	Crowley, J. L.		1	**1**
154.	CWPRS	4		**4**
155.	CWRDM	2		**2**
156.	D'Lima, C.	4	1	**5**
157.	Dalabehera, H. B.		1	**1**
158.	Dandge, P. B.		1	**1**
159.	Das Sharma, Satyabrata	1	3	**4**
160.	Das, A.		1	**1**
161.	Das, A. C.	1		**1**
162.	Das, A. K.	1	4	**5**
163.	Das, Amit		1	**1**
164.	Das, B.	1		**1**
165.	Das, B. B.		1	**1**
166.	Das, B. S.		1	**1**
167.	Das, Banka Behary	1		**1**
168.	Das, Bishnu P.	1		**1**
169.	Das, C. R.		2	**2**
170.	Das, G. S.	3		**3**
171.	Das, J. Srikrishna	1		**1**
172.	Das, K.	1	2	**3**
173.	Das, K. M.		1	**1**
174.	Das, K. N.		1	**1**
175.	Das, Lalu	1		**1**
176.	Das, Manas R.		1	**1**
177.	Das, N.		3	**3**
178.	Das, N. C.	1	2	**3**
179.	Das, N. K.	3	3	**6**
180.	Das, N. R.		1	**1**
181.	Das, P.		1	**1**
182.	Das, P.		1	**1**
183.	Das, P.		1	**1**
184.	Das, Prafulla	1		**1**
185.	Das, S.		3	**3**
186.	Das, Samir Kumar	1		**1**
187.	Das, Simanchala		1	**1**

Sl. No.	Name of Author	First Author	Co-author	Total
188.	Das, Snehalata	1		**1**
189.	Das, Subhasish		1	**1**
190.	Das, Subrat	1		**1**
191.	Das, Surajit		1	**1**
192.	Das, Tapan Kumar	1		**1**
193.	Dasgupta, S.	1	1	**2**
194.	Dash, A. P.	2		**2**
195.	Dash, Jatindra	1		**1**
196.	Dash, Kailash Chandra	1		**1**
197.	Dash, M. C.	1		**1**
198.	Dash, S.	1		**1**
199.	Dash, S. K.		2	**2**
200.	Dash, S. S. Jiban		1	**1**
201.	Daspattanayak, Pritirekha		5	**5**
202.	DasSarma, Priya Arora		1	**1**
203.	DasSarma, Shiladitya		1	**1**
204.	Dattatri, Shekar	1		**1**
205.	David, A.		1	**1**
206.	Davidson, N. C.		1	**1**
207.	Dean, P. B.	1		**1**
208.	Deb, M.	1		**1**
209.	Degermendzhy, Andrei G.		1	**1**
210.	Deomurari, M. P.		1	**1**
211.	Dev, U. N.	6		**6**
212.	Devasundaram, M. P.	5	1	**6**
213.	Devi, G.	1		**1**
214.	Dey, S. K.		4	**4**
215.	Dey, Sarkar S. R.	1		**1**
216.	Dhananjayan, V.	1		**1**
217.	Dhandapani, P.	5		**5**
218.	Dias, A. C. E.		1	**1**
219.	Digwal, Deven	1		**1**
220.	Divyasree, B.		1	**1**
221.	Do, Y.		2	**2**
222.	Dobmeier, C.	2	1	**3**
223.	Doi, Masanori		1	**1**
224.	Dora, B. B.	1		**1**
225.	Doubleday, N.		1	**1**

Sl. No.	Name of Author	First Author	Co-author	Total
226.	Dover, C.	5	2	**7**
227.	DOWR	1		**1**
228.	Dube, A.	4	2	**6**
229.	Dubey, A. K.		1	**1**
230.	Dujovny, E.	1		**1**
231.	Dunkley, D. J.		1	**1**
232.	Durani, P. K.		1	**1**
233.	Dutta, I. B.	1		**1**
234.	Dutta, Monami		1	**1**
235.	Dutta, N. R.		1	**1**
236.	Dutta, S. K.	2		**2**
237.	Elliot, C.	1		**1**
238.	ENVIS Odisha	1		**1**
239.	Equations	1		**1**
240.	Feruguson, A.	1		**1**
241.	Flaherty, M.		1	**1**
242.	Fooks, H. A.	1		**1**
243.	Fukuoka, M.		1	**1**
244.	Gaikwad, B. H.		1	**1**
245.	Galappaththi, Eranga K.	1		**1**
246.	Ganapati, P. N.	1		**1**
247.	Gangadhara Rao, K.		1	**1**
248.	Ganguly, Dipnarayan	2	4	**6**
249.	Garada, Rabindra		1	**1**
250.	Garcia-Rodriguez, Felipe		1	**1**
251.	Ghosh, A. K.	6	1	**7**
252.	Ghosh, E.	1		**1**
253.	Ghosh, H. C.	1		**1**
254.	Ghosh, L. K.		3	**3**
255.	Ghosh, Mili		1	**1**
256.	Ghosh, P. K.		1	**1**
257.	Godwin-Austen, H.H.	1		**1**
258.	Gopal, B.		1	**1**
259.	Gopalakrishnan, A.		1	**1**
260.	Gopalakrishnan, T. C.		2	**2**
261.	Gopalakrishnayya, Ch.	2		**2**
262.	Gopikrishna, B.	1		**1**
263.	Goswami, S. B.		1	**1**

Sl. No.	Name of Author	First Author	Co-author	Total
264.	Gouda, R.		1	**1**
265.	Government of India	1		**1**
266.	Govt. of Odisha	1		**1**
267.	Gravely, F. H.	1		**1**
268.	Griffin, A. L.		1	**1**
269.	Gulati, S. C.		1	**1**
270.	Gupta, B. P.	1	1	**2**
271.	Gupta, G. V. M.	1	1	**2**
272.	Gupta, H. P.	3	4	**7**
273.	Gupta, M.	1	1	**2**
274.	Gupta, V.	1		**1**
275.	Gurreddy, M.		1	**1**
276.	Guru, B. C.		14	**14**
277.	Haines, H. H.	1		**1**
278.	Haldar, B. P.	2		**2**
279.	Hamann, M.		2	**2**
280.	Hamid, A.	1		**1**
281.	Harding, W. A.	1		**1**
282.	Hariharan, G.		1	**1**
283.	Hatfield, C.		1	**1**
284.	Hay, D.		1	**1**
285.	Hazra, R. K.		3	**3**
286.	Hema Malini, B.	1		**1**
287.	Henderson, J. R.	1		**1**
288.	Hiramatsu, K.		1	**1**
289.	Hora, S. L.	1		**1**
290.	Horwitz, P.		1	**1**
291.	Hunninghaus, A.	1		**1**
292.	Hussain, S. A.	1	1	**2**
293.	Ikmal, S. S.		1	**1**
294.	Ingole, Baban	1		**1**
295.	Inoue, T.	1	2	**3**
296.	IPE Global	1		**1**
297.	Ito, K.		1	**1**
298.	Iwasaki, S.	5		**5**
299.	J. Vaidehi		1	**1**
300.	Jadhao, S.		3	**3**
301.	Jagadiswara Rao, R.	1		**1**

Sl. No.	Name of Author	First Author	Co-author	Total
302.	Jai Kumar, M.	1	1	**2**
303.	Jally, Sujit Kumar	1		**1**
304.	Jayakumar, S.		1	**1**
305.	Jayalakshmy, K. V.	3	2	**5**
306.	Jayaraman, G.	2	7	**9**
307.	Jayasankar, P.	1		**1**
308.	Jellison, Robert	1		**1**
309.	Jena, B. K.		2	**2**
310.	Jena, Jaygopal		8	**8**
311.	Jena, Ram Chandra		1	**1**
312.	Jena, S.		2	**2**
313.	Jeong, Kwang-Seuk	1		**1**
314.	Jha, B. C.	2	4	**6**
315.	Jhingran, V. G.	15		**15**
316.	JICA	1		**1**
317.	Jnanendra, R.	6	1	**7**
318.	JNU	1		**1**
319.	Job, T.J.	1		**1**
320.	Jones, S.	4		**4**
321.	Joo, Gea-Jae		3	**3**
322.	Joseph, N.		1	**1**
323.	Jutapruet, Suwat		1	**1**
324.	Kaburaki, T.	1		**1**
325.	Kachar, K. S.	1		**1**
326.	Kacker, R. K.		1	**1**
327.	Kadekodi, Gopal K.	1		**1**
328.	Kajiwara, N.		1	**1**
329.	Kaladhar, R.		2	**2**
330.	Kalavati, C.	1	4	**5**
331.	Kamath, S.	1		**1**
332.	Kameswara Rao, K.	2	3	**5**
333.	Kameswari Devi, D.		1	**1**
334.	Kanagu, L.		1	**1**
335.	Kankara, R. S.		1	**1**
336.	Kannan, K.	1		**1**
337.	Kanuri, V. V.	1	4	**5**
338.	Kar, C. S.		4	**4**
339.	Kar, S. K.	10	16	**26**

Sl. No.	Name of Author	First Author	Co-author	Total
340.	Kara, P. K.		1	**1**
341.	Karmakar, Subrata		1	**1**
342.	Karna, S.	26	9	**35**
343.	Kasabe, P. J.	1		**1**
344.	Kasipathi, C.		1	**1**
345.	Katre, D. V.	1		**1**
346.	Kelkar, Nachiket		1	**1**
347.	Kemp, S.	4	5	**9**
348.	Khan, M.	4	9	**13**
349.	Khandelwal, Asha	5	3	**8**
350.	Khuntia, R.	4		**4**
351.	Khushwaha, B.		1	**1**
352.	Kim, Dong-Kyun		3	**3**
353.	Kim, Ji Yoon	2	3	**5**
354.	Kimura, S.		2	**2**
355.	Kodarkar, M. S.	1		**1**
356.	Kohli, M.P.S.		1	**1**
357.	Kojima, J.		3	**3**
358.	Kothari, Ashish	1		**1**
359.	Koumans, F. P.	1		**1**
360.	Kowtal, G. V.	8		**8**
361.	Krishnan, L.	1	2	**3**
362.	Kudale, M. D.		1	**1**
363.	Kumar, A.	2	1	**3**
364.	Kumar, B. C.		4	**4**
365.	Kumar, D.		1	**1**
366.	Kumar, M.		1	**1**
367.	Kumar, Nandini	1		**1**
368.	Kumar, P.	1	1	**2**
369.	Kumar, R.	8	1	**9**
370.	Kumar, T. S.	1		**1**
371.	Kund, G. C.	1		**1**
372.	Kwatra, Mansi	1		**1**
373.	Laidlaw, F. F.	1		**1**
374.	Lakra, Wazir S.		1	**1**
375.	Lakshmana Rao, G. R.		1	**1**
376.	Lakshmi, K.V.	1		**1**
377.	Lata, N.	1		**1**

Sl. No.	Name of Author	First Author	Co-author	Total
378.	Lavkumar, K. S.	1		**1**
379.	Lele, N.		1	**1**
380.	Lenka, S. K.	1		**1**
381.	Levy, D.		1	**1**
382.	Lotliker, Aneesh A.		3	**3**
383.	Lovaraju, A.		1	**1**
384.	Lu, Shiau-Yun		1	**1**
385.	Madhavi, R.		1	**1**
386.	Madhavirani, K. S. V. K. S.		1	**1**
387.	Mahadevan, R.		1	**1**
388.	Mahanty, M. M.	2	3	**5**
389.	Mahapatra, A. K.		1	**1**
390.	Mahapatra, Basudev	1		**1**
391.	Mahapatra, K.	2		**2**
392.	Mahapatra, L. K.	1		**1**
393.	Mahapatra, N.		1	**1**
394.	Mahapatra, Sofia		1	**1**
395.	Mahapatro, D.	8	6	**14**
396.	Maharana, B.		1	**1**
397.	Mahendra, R. S.		1	**1**
398.	Majumdar, S.		1	**1**
399.	Mali, G. T.		1	**1**
400.	Mallick, S.		1	**1**
401.	Malviya, N.		1	**1**
402.	Manas H. M.		3	**3**
403.	Mandal, S.	1	2	**3**
404.	Mangla, B.	1		**1**
405.	Manikandan, M.		1	**1**
406.	Manna, R. K.		14	**14**
407.	Manna, R. N.		1	**1**
408.	Mansingh, L.		1	**1**
409.	Mansur, Rubaiyat M.		1	**1**
410.	Marsh, H.		3	**3**
411.	Matthai, G.	1		**1**
412.	Meaden, G. J.	1		**1**
413.	Meena, K.K.	1		**1**
414.	Meenakumari, B.		1	**1**
415.	Meher, Jitendra Kumar		1	**1**

Sl. No.	Name of Author	First Author	Co-author	Total
416.	Meher, S.		3	**3**
417.	Mehrotra, N.		1	**1**
418.	Melack, John M.		1	**1**
419.	Menon, M. A. S.	1		**1**
420.	Milton, R. G.		1	**1**
421.	Minton, Gianna		1	**1**
422.	Mirza Imran Baig		1	**1**
423.	Mishra, A.		1	**1**
424.	Mishra, A. K.		2	**2**
425.	Mishra, Akhila Kumar		1	**1**
426.	Mishra, B. B.		1	**1**
427.	Mishra, Biranchi	2		**2**
428.	Mishra, C.		1	**1**
429.	Mishra, C. R.		1	**1**
430.	Mishra, D.		1	**1**
431.	Mishra, D. R.		3	**3**
432.	Mishra, G.		2	**2**
433.	Mishra, H. K.	1		**1**
434.	Mishra, J.		1	**1**
435.	Mishra, K. N.		1	**1**
436.	Mishra, L.	2		**2**
437.	Mishra, P.		1	**1**
438.	Mishra, P. M.	1	1	**2**
439.	Mishra, Pravakar		8	**8**
440.	Mishra, R.		1	**1**
441.	Mishra, R. K.	1	5	**6**
442.	Mishra, R. N.		1	**1**
443.	Mishra, S.		2	**2**
444.	Mishra, S. C.	1		**1**
445.	Mishra, S. K.		1	**1**
446.	Mishra, S. P.	8		**8**
447.	Mishra, S. S.	1	3	**4**
448.	Mishra, Samir R.	2	5	**7**
449.	Mishra, Sandeep Ranjan	1		**1**
450.	Mishra, Shibani Rosyshree	1		**1**
451.	Mishra, Snehasish		1	**1**
452.	Mishra, Sujata	3		**3**
453.	Mishra, Suman	3		**3**

Sl. No.	Name of Author	First Author	Co-author	Total
454.	Misra, A.	1		**1**
455.	Misra, C. K.		1	**1**
456.	Misra, K. S.	1		**1**
457.	Misra, P.	1		**1**
458.	Misra, P. K.		1	**1**
459.	Misra, P. M.	3		**3**
460.	Misra, Susant Kumar	1		**1**
461.	Mitra, G.N.	6		**6**
462.	Mitra, H. K.		1	**1**
463.	Mitra, Shreya	1	1	**2**
464.	Miura, H.		1	**1**
465.	Mohana Rao, K.		1	**1**
466.	Mohanti, Manmohan	1	4	**5**
467.	Mohanti, P. K.		1	**1**
468.	Mohanty, A.		1	**1**
469.	Mohanty, A. K.		2	**2**
470.	Mohanty, A. N.		1	**1**
471.	Mohanty, B.	2	4	**6**
472.	Mohanty, D.	1		**1**
473.	Mohanty, N. D.	1	1	**2**
474.	Mohanty, Nibedita	1		**1**
475.	Mohanty, P.		1	**1**
476.	Mohanty, P. K.	5	9	**14**
477.	Mohanty, P. R.	2		**2**
478.	Mohanty, Prafulla K.	1		**1**
479.	Mohanty, R. C.	1	1	**2**
480.	Mohanty, R. K.	8	13	**21**
481.	Mohanty, Ranjita	2		**2**
482.	Mohanty, S.	1		**1**
483.	Mohanty, S. K.	1		**1**
484.	Mohanty, Sanjeev K.		2	**2**
485.	Mohanty, Surya K.	38	25	**63**
486.	Mohanty, Swadhin Kumar		1	**1**
487.	Mohapatra, A.	15	8	**23**
488.	Mohapatra, G. N.		1	**1**
489.	Mohapatra, K. K.	2	1	**3**
490.	Mohapatra, K. N.	1	2	**3**
491.	Mohapatra, L. K.	1		**1**

Sl. No.	Name of Author	First Author	Co-author	Total
492.	Mohapatra, Madhusmita		1	**1**
493.	Mohapatra, N. K.		1	**1**
494.	Mohapatra, N. R.		1	**1**
495.	Mohapatra, P.	2	1	**3**
496.	Mohapatra, P. D.	1		**1**
497.	Mohapatra, S.	1		**1**
498.	Moharana, S. C.		1	**1**
499.	Mohsin, Mohammad		1	**1**
500.	Monroe		1	**1**
501.	Mookerji, R.	1		**1**
502.	Mooney, H. F.	1		**1**
503.	Mouri, H.		1	**1**
504.	Muduli, P. R.	3	15	**18**
505.	Mukherjee, A.		1	**1**
506.	Mukherjee, A. K.		1	**1**
507.	Mukherjee, M.	6	8	**14**
508.	Mukherjee, P. K.		1	**1**
509.	Mukherjee, Subham		1	**1**
510.	Mukherji, G. B.	1		**1**
511.	Mukhi, S. K.		1	**1**
512.	Mukhopadhaya, M. K.		2	**2**
513.	Munte, N.	1		**1**
514.	Murray, A. S.	1		**1**
515.	Murthy, A. V. R.		1	**1**
516.	Murthy, K. S. R.	1	2	**3**
517.	Murthy, T. S. N.	8		**8**
518.	Murthy, T. V. R.		1	**1**
519.	Murty, A. V. S.		2	**2**
520.	Murty, G.P.S.		2	**2**
521.	Mustika, Putu Liza Kusuma	1		**1**
522.	Nag, S. K.		1	**1**
523.	Nageswara Rao, K.	1	1	**2**
524.	Nageswarara Rao, G.		2	**2**
525.	Nagothu, Udaya Sekhar	3		**3**
526.	Nahak, Gayatri		2	**2**
527.	Naik, Kishore Chandra		1	**1**
528.	Naik, Prabir Kumar	2		**2**
529.	Naik, S.	1		**1**

Sl. No.	Name of Author	First Author	Co-author	Total
530.	Naik, Satyesh	1		**1**
531.	Nanda, D. K.	1		**1**
532.	Nanda, N. K.		1	**1**
533.	Nanda, Sachikanta	1		**1**
534.	Nanda, Susanta	1	2	**3**
535.	Nandy, Ajay Kumar	1		**1**
536.	Narasimhamurti, C. C.	1		**1**
537.	Narayan Das, G. R.		1	**1**
538.	Narayanswamy, V.	1		**1**
539.	Natarajan, A. V.	6	5	**11**
540.	Nath, D.		1	**1**
541.	Nath, Srabani	1		**1**
542.	Nayak, Arun K.	1		**1**
543.	Nayak, B. B.		1	**1**
544.	Nayak, B. K.	1	1	**2**
545.	Nayak, B. U.	1	2	**3**
546.	Nayak, Gouri Charan		1	**1**
547.	Nayak, L.	7	6	**13**
548.	Nayak, P. K.	9	3	**12**
549.	Nayak, S.		2	**2**
550.	Nayak, S. R.		1	**1**
551.	Nayak, Sagarika	2		**2**
552.	Nazneen, S.	2		**2**
553.	Nermark, Ulf.	1		**1**
554.	Newman, Scott H.		1	**1**
555.	Noack, F.	1		**1**
556.	Notarbartolo di Sciara, Giuseppe		1	**1**
557.	O'Malley, L. S. S.	1		**1**
558.	Ojha, Adikanda	5	5	**10**
559.	Ojha, S. K.		1	**1**
560.	Oliveira, L.		1	**1**
561.	ORSAC	3		**3**
562.	Otta, Sanjaya Narayan		1	**1**
563.	Padhi, S. B.	3		**3**
564.	Padhy, A.		1	**1**
565.	Padma, M.	1		**1**
566.	Pal, D. K.		1	**1**
567.	Pal, S. R.	1	4	**5**

Sl. No.	Name of Author	First Author	Co-author	Total
568.	Palita, S. K.		1	**1**
569.	Pallavi, A.		1	**1**
570.	Palm, Eric C.	1		**1**
571.	Panda, A. N.	1	4	**5**
572.	Panda, Chitta Ranjan		1	**1**
573.	Panda, D.	6	11	**17**
574.	Panda, D. S.	1		**1**
575.	Panda, M.	1		**1**
576.	Panda, P. C.	6	3	**9**
577.	Panda, R. P.		1	**1**
578.	Panda, S.	2	44	**46**
579.	Panda, U. S.	5	4	**9**
580.	Panda, Umesh Chandra	3	2	**5**
581.	Pandey, Nisha		2	**2**
582.	Pandey, S.	1		**1**
583.	Pandit, P. K.		2	**2**
584.	Panigrahi, A. K.		2	**2**
585.	Panigrahi, G.	1	1	**2**
586.	Panigrahi, H.		1	**1**
587.	Panigrahi, Jitendra Kumar	1	1	**2**
588.	Panigrahi, M.		1	**1**
589.	Panigrahi, S.	2	1	**3**
590.	Panigrahi, S. N.	1		**1**
591.	Panigrahy, R. C.	4	14	**18**
592.	Parag, B.	1		**1**
593.	Parida, N. C.	1		**1**
594.	Parida, S.	9	2	**11**
595.	Parida, Subhashree	1		**1**
596.	Parija, B.		2	**2**
597.	Parija, P. K.	2	1	**3**
598.	Park, S. C.		1	**1**
599.	Patel, A.		1	**1**
600.	Patel, Anuprita		1	**1**
601.	Patel, P.		1	**1**
602.	Pati, Gouranga Charana		1	**1**
603.	Pati, K. C.	4	1	**5**
604.	Pati, M. K.		2	**2**
605.	Pati, Mitali Priyadarsini	2	2	**4**

Sl. No.	Name of Author	First Author	Co-author	Total
606.	Pati, Premalata		2	**2**
607.	Patnaik, A. P.		1	**1**
608.	Patnaik, D. A.	2		**2**
609.	Patnaik, D. K.	1	1	**2**
610.	Patnaik, P. K.	1		**1**
611.	*Patnaik, Pranati*	2	2	**4**
612.	Patnaik, S.	12	5	**17**
613.	Patnaik, S. K.		1	**1**
614.	Patnaik, S. N.		7	**7**
615.	Patnaik, Sai Ram B.	1		**1**
616.	Patra, A. P.	1	2	**3**
617.	Patra, Ajit K.		1	**1**
618.	Patra, Benudhar		1	**1**
619.	Patra, J. K.	2	1	**3**
620.	Patra, Jyotiraj	1		**1**
621.	Patra, S.	1	6	**7**
622.	Patra, S. K.		1	**1**
623.	Patra, Sushanta Kumar	1		**1**
624.	Patro, B. C.		1	**1**
625.	Patro, B. N.	1		**1**
626.	Patro, J. C.		1	**1**
627.	Patro, J. N.	1	1	**2**
628.	Patro, L.		6	**6**
629.	Patro, S. N.	2		**2**
630.	Pattanaik, C.	1		**1**
631.	Pattanaik, S.		1	**1**
632.	Pattanaik, Sarmistha	5		**5**
633.	Pattanaik, Sunil K.	2		**2**
634.	Pattanayak, A. K.	1		**1**
635.	Pattanayak, J. G.	1		**1**
636.	Pattnaik, A. K.	21	59	**80**
637.	Pattnaik, B. K.		1	**1**
638.	Pattnaik, D. K.		1	**1**
639.	Pattnaik, P. K.	1		**1**
640.	Pattnaik, P. N.	1	1	**2**
641.	Pattnaik, S. K.		1	**1**
642.	Pattnaik, S. M.	1		**1**
643.	Pattnaik, S. S.	1	2	**3**

Sl. No.	Name of Author	First Author	Co-author	Total
644.	Paul, S. R.	1		**1**
645.	Peetabas, N.	1		**1**
646.	Peter, Cindy		2	**2**
647.	Peter, M.	1		**1**
648.	Phani Prakash, K.		1	**1**
649.	Pillai, S. M.		7	**7**
650.	Pillay, T. V. R.	1		**1**
651.	Porter, Lindsay		1	**1**
652.	Prabhakara Rao, Y.		2	**2**
653.	Prabhu, P.		1	**1**
654.	Pradhan, B. K.		1	**1**
655.	Pradhan, D.	3		**3**
656.	Pradhan, Manoj Kumar		1	**1**
657.	Pradhan, S.		1	**1**
658.	Pradhan, S. K.		2	**2**
659.	Pradhan, Subhasis	1	3	**4**
660.	Pradhan, Vidya	1		**1**
661.	Pramanik, Arnab	1	1	**2**
662.	Prasad, B.		1	**1**
663.	Prasad, B. S. R. V.	1		**1**
664.	Prasad, S. N.		1	**1**
665.	Prasadam, R. D.		1	**1**
666.	Prashad, B.	1	1	**2**
667.	Pravin, P.		1	**1**
668.	Preston, H. B.	2		**2**
669.	Priyadarshini, Subhra	1		**1**
670.	Prosser, Diann J.		1	**1**
671.	Puckett, Catherine	1		**1**
672.	Purohit, Makarand	1		**1**
673.	Radhakrishnan, K.		1	**1**
674.	Rahmani, A. R.		1	**1**
675.	Raina, V.		9	**9**
676.	Raith, M.	1	2	**3**
677.	Raja Babu, D.		1	**1**
678.	Rajagopal, M. D.		2	**2**
679.	Rajamani, Leela		1	**1**
680.	Rajan, S.	5		**5**
681.	Rajawat, A. S.	1		**1**

Sl. No.	Name of Author	First Author	Co-author	Total
682.	Rajesh, G.		5	**5**
683.	Raju, N. J.		1	**1**
684.	Raju, V. S. R.	1		**1**
685.	Rajyalakshmi, K.		1	**1**
686.	Rajyalakshmi, T.	3	2	**5**
687.	Rakhesh, M.	1	1	**2**
688.	Ram, R.N.	1		**1**
689.	Rama Moorthy, K. B.		1	**1**
690.	Rama Sarma, D. V.		1	**1**
691.	Ramachandran, Purvaja		1	**1**
692.	Ramachandran, Ramesh		1	**1**
693.	Ramakrishna, K. V.		2	**2**
694.	Ramakrishna, Siddiqui S.Z.	1		**1**
695.	Ramakrishnaiah, M.	2		**2**
696.	Raman, A. V.	4	8	**12**
697.	Raman, K.	1		**1**
698.	Raman, R. K.		1	**1**
699.	Ramana Murthy, M. V.		1	**1**
700.	Ramana, C. V.		4	**4**
701.	Ramana, V. V.		1	**1**
702.	Ramanandham, R.	2		**2**
703.	Ramsar	1		**1**
704.	Ramsar Bureau	1		**1**
705.	Ramu, K.		1	**1**
706.	Ranga Rao, V.	2	3	**5**
707.	Rani, R.	1	1	**2**
708.	Rao, A. D.		2	**2**
709.	Rao, A. V. P.	1		**1**
710.	Rao, B. M. G.	2	1	**3**
711.	Rao, B. R.		1	**1**
712.	Rao, C.A.N.	1		**1**
713.	Rao, D. G.	1	3	**4**
714.	Rao, D. P.	2		**2**
715.	Rao, D. V.	1		**1**
716.	Rao, I. K.		1	**1**
717.	Rao, K. K.	1	1	**2**
718.	Rao, K. N.	1		**1**
719.	Rao, K. V. R.	1	9	**10**

Sl. No.	Name of Author	First Author	Co-author	Total
720.	Rao, M. L. V.		1	**1**
721.	Rao, P. K.		1	**1**
722.	Rao, T. A.	1		**1**
723.	Rastogi, G.	1	16	**17**
724.	Rath, G.		1	**1**
725.	Rath, J.	5	1	**6**
726.	Rath, K. C.		1	**1**
727.	Rath, P.		3	**3**
728.	Raut, A.		2	**2**
729.	Raut, L.N.	1		**1**
730.	Rautray, T. R.		2	**2**
731.	Ravichandran, P.	1	3	**4**
732.	Ray, A. K.	1		**1**
733.	Ray, Dipanjan		2	**2**
734.	Ray, L.	3	3	**6**
735.	Ray, S.		1	**1**
736.	Ray, Soumen	3		**3**
737.	Raychaudhuri, B.	1		**1**
738.	Razafindrabe, Bam Haja Nirina		1	**1**
739.	Razauddin, Md.		2	**2**
740.	Reddy, C. S.		1	**1**
741.	Reddy, K. Narapu	1		**1**
742.	Reddy, M. P. M.	2	2	**4**
743.	Reddy, N. P. C.		1	**1**
744.	Reddy, N. T.		1	**1**
745.	Reeves, Randall R.	1		**1**
746.	Remesan, M. P.	1		**1**
747.	Riekhof, M. C.		1	**1**
748.	Riplay, S. D.		1	**1**
749.	Rizvi, S. A. R.		1	**1**
750.	Robin, R. S.	1	7	**8**
751.	Robson, J.	1		**1**
752.	Rosamma, S.		1	**1**
753.	Rosen, Michael R.		1	**1**
754.	Roshith, C. M.	1	1	**2**
755.	Rout, A. K.		1	**1**
756.	Rout, D. K.	1		**1**
757.	Rout, Jajnaseni	4	6	**10**

Sl. No.	Name of Author	First Author	Co-author	Total
758.	Rout, N. P.		1	**1**
759.	Rout, S. D.		1	**1**
760.	Routray, M. D.		1	**1**
761.	Routray, P.	1		**1**
762.	Routray, R. K.		2	**2**
763.	Routray, R. S.		1	**1**
764.	Roy, Anirban	3	1	**4**
765.	Roy, B. K.		1	**1**
766.	Roy, J. C.	4	1	**5**
767.	Roy, M. K. Dev	1		**1**
768.	Roy, S.		1	**1**
769.	Roy, S. K.		2	**2**
770.	Roy, U. S.		1	**1**
771.	Roychaudhuri, B.	1		**1**
772.	Roychoudhury, N. C.		1	**1**
773.	Roychowdhury, A.		2	**2**
774.	Ryan, Gerard Edward		1	**1**
775.	Saaltink, H. J.		1	**1**
776.	Sadakata, N.		1	**1**
777.	Saha, Subhendu Sekhar	1		**1**
778.	Sahana, Mihir	1		**1**
779.	Sahoo, D. P.		1	**1**
780.	Sahoo, Debasish	1		**1**
781.	Sahoo, Debendra Kumar	1	2	**3**
782.	Sahoo, Dillip Kumar	4	4	**8**
783.	Sahoo, Dinabandhu		1	**1**
784.	Sahoo, Jagamohan		1	**1**
785.	Sahoo, Jangyeswar	1		**1**
786.	Sahoo, N.		2	**2**
787.	Sahoo, S. K.	1		**1**
788.	Sahoo, Subhashree	2	1	**3**
789.	Sahu, B. K.	3	1	**4**
790.	Sahu, B. N.	2		**2**
791.	Sahu, Bijaya Kumar		1	**1**
792.	Sahu, H. K.	4	7	**11**
793.	Sahu, J.	1	2	**3**
794.	Sahu, K. C.	1	8	**9**
795.	Sahu, N.		3	**3**

Sl. No.	Name of Author	First Author	Co-author	Total
796.	Sahu, Nivedita		1	**1**
797.	Sahu, P.	1	1	**2**
798.	Sahu, Rajani Kanta		5	**5**
799.	Sajeela, K. A.		1	**1**
800.	Sakamaki, T.		3	**3**
801.	Salagrama, Venkatesh	1		**1**
802.	Samal, Kailash Chandra	4	1	**5**
803.	Samal, R. C.	4	6	**10**
804.	Samal, R. K.		1	**1**
805.	Samal, R. N.	1	23	**24**
806.	Samant, N. C. S.		1	**1**
807.	Samanta, S.		2	**2**
808.	Samantaray, B. R.		1	**1**
809.	Samantaray, Subhalata		2	**2**
810.	Samantray, Debyani		1	**1**
811.	Sanilkumar, V.		2	**2**
812.	Sanjay L. Nalbalwar		1	**1**
813.	Santra, P.	1		**1**
814.	Sarangi, B.	1		**1**
815.	Sarkar, A.	1		**1**
816.	Sarkar, B.		1	**1**
817.	Sarkar, S. K.	2	2	**4**
818.	Sarma, A. L. N.	5	1	**6**
819.	Sarma, K. V. L. N. S.		1	**1**
820.	Sarma, V. V. S. S.		1	**1**
821.	Saroj, N.		1	**1**
822.	Sasaki-Yamamoto, Y.		2	**2**
823.	Sasamal, S. K.	1		**1**
824.	Sasikala, C.		4	**4**
825.	Sastry, D. R. K.	1		**1**
826.	Satapathy, K. K.		2	**2**
827.	Satapathy, S.		3	**3**
828.	Sathiyaselvam, P.		2	**2**
829.	Sathyan, N.		1	**1**
830.	Satpathy, D.	3	1	**4**
831.	Satyanarayana Murty, A.	2	2	**4**
832.	Satyanarayana, Ch.	2	3	**5**
833.	Saw, A. K.		1	**1**

Sl. No.	*Name of Author*	*First Author*	*Co-author*	*Total*
834.	Scharf, Burkhard W.		3	**3**
835.	Schilling, Janpeter		1	**1**
836.	Sellamuttu, S. S.		1	**1**
837.	Sen Gupta, S. K.	1		**1**
838.	Sen, Areen	2		**2**
839.	Sen, S. K.		2	**2**
840.	Senapati, Asish	1		**1**
841.	Sengupta, A.		1	**1**
842.	Sengupta, Meghna		1	**1**
843.	Sengupta, P.	1		**1**
844.	Sengupta, Sanghamitra		2	**2**
845.	Sengupta, Sushmita	1		**1**
846.	Senthil Kumar, P.		1	**1**
847.	Seong, C. N.		1	**1**
848.	Seth, J. K.		1	**1**
849.	Sethi, P. K.	1		**1**
850.	Sethy, P. G. S.		1	**1**
851.	Sewell, R. B. S.	4		**4**
852.	Shah, K. L.		2	**2**
853.	Sharma, A. P.		8	**8**
854.	Sharma, Pankaj	1		**1**
855.	Sharma, Shubha Rani		1	**1**
856.	Shaw, B. P.	2		**2**
857.	Shaw, R.		4	**4**
858.	Shrivastava, P.		1	**1**
859.	Sibley	1		**1**
860.	Siddiqi, S. Z.	1	1	**2**
861.	Signum, S.		1	**1**
862.	Silvestri, F.	1		**1**
863.	Simmat, R.		1	**1**
864.	Singh, Kartar	1		**1**
865.	Singh, N. K.		2	**2**
866.	Singh, R.		1	**1**
867.	Singh, Rajagopal		1	**1**
868.	Sinha, A.		1	**1**
869.	Sinha, B. N.	1		**1**
870.	Sinha, B.K.	1		**1**
871.	Sinha, J.		1	**1**

Sl. No.	Name of Author	First Author	Co-author	Total
872.	Sinha, M.	1	1	**2**
873.	Sinha, R. K.	2	1	**3**
874.	Sivakholundu, K. M.		1	**1**
875.	Sivakumar, G.		1	**1**
876.	Sk. Md. Equeen		2	**2**
877.	*Smita*	2		**2**
878.	Smith, Brian D.		1	**1**
879.	Society for Ecological Restoration International	1		**1**
880.	Solanki, M. K.		1	**1**
881.	Sorongon-Yap, Patricia		1	**1**
882.	Souche, Y.		1	**1**
883.	Southern, R.	1		**1**
884.	Southwell, T.	2		**2**
885.	Sowman, M.		1	**1**
886.	Srichandan, Suchismita	3	2	**5**
887.	Srinivasa Rao, D.	1		**1**
888.	Srinivasa Rao, K.		2	**2**
889.	Srinivasan, M.	2	1	**3**
890.	Srinivasu, P. D. N.		2	**2**
891.	Srivastava, S. S.		1	**1**
892.	Stella, C.		1	**1**
893.	Stephenson, J.	3		**3**
894.	Suar, M.		9	**9**
895.	Subba Rao, M. V.	2		**2**
896.	Subba Rao, N. V.	1		**1**
897.	Subrahmanyam, A. S.		3	**3**
898.	Subrahmanyam, M.	3		**3**
899.	Subrahmanyam, Vandrapu	2	1	**3**
900.	Subramanian, B. R.		10	**10**
901.	Subramanian, S. K.		2	**2**
902.	Subramanian, V.		1	**1**
903.	Subudhi, Durga P.	1		**1**
904.	Subudhi, M.		1	**1**
905.	Sucharita, K.	2	1	**3**
906.	Sudarshan, R.	1	3	**4**
907.	Sudhakar, S.	1		**1**
908.	Sugimatsu, H.	1	5	**6**

Sl. No.	Name of Author	First Author	Co-author	Total
909.	Sujansinghani, K. H.		4	**4**
910.	Sundaray, S. K.		1	**1**
911.	Suresh, V. R.		14	**14**
912.	Surya Rao, K. V.		1	**1**
913.	Sutaria, Dipani	4	2	**6**
914.	Swain, G. C.		3	**3**
915.	Swain, P. K.		3	**3**
916.	Swaminathan, Raja T.	1		**1**
917.	Takahashi, H.		3	**3**
918.	Takekawa, John Y.		2	**2**
919.	Talwar, P. K.	1		**1**
920.	Tanabe, S.		1	**1**
921.	Tattersall, W. M.	1		**1**
922.	Teixeira, W.		1	**1**
923.	Thatoi, H. N.		2	**2**
924.	Thomas, J. V.		1	**1**
925.	Tilden, H. B.	1		**1**
926.	Tomar, S. K.		1	**1**
927.	Torimoto, J.		1	**1**
928.	Treutler, H. C.		1	**1**
929.	Tripathi, Y. R.	1		**1**
930.	Tripathy, Balaram	1		**1**
931.	Tripathy, H. K.		1	**1**
932.	Tripathy, J. K.	1		**1**
933.	Tripathy, Madhusmita	1	3	**4**
934.	Tripathy, N.		1	**1**
935.	Tripathy, P. K.		1	**1**
936.	Tripathy, S. D.		1	**1**
937.	Tripathy, S. K.	4	2	**6**
938.	Tripati, Sila	3	2	**5**
939.	Trisal, C. L.	4	2	**6**
940.	Tudu, Prasad Chandra		2	**2**
941.	Tyagi, R. K.		1	**1**
942.	Ura, T.		5	**5**
943.	Vaishampayan, P.		2	**2**
944.	Vardhan, K. V.		3	**3**
945.	Vargas, Luz H. Rodriguez		1	**1**
946.	Varma, P. S.		1	**1**

Sl. No.	Name of Author	First Author	Co-author	Total
947.	Varshney, C. K.	1		**1**
948.	Vass, K. K.		1	**1**
949.	Venkataraman, K.	1		**1**
950.	Venkataratnam, K.	2		**2**
951.	Venugopal, P.		2	**2**
952.	Veron, Rene	1		**1**
953.	Vettivel, S.		1	**1**
954.	Vijayan, V.		2	**2**
955.	Vivekananda, Janani	1	1	**2**
956.	Vora, K. H.		1	**1**
957.	Wafar, Mohideen		1	**1**
958.	Wakchaure, G. C.		1	**1**
959.	Welters, R.		2	**2**
960.	Wetland International – South Asia (WISA)	1		**1**
961.	Wikner, J.		1	**1**
962.	Wilsanand, V.		1	**1**
963.	Wolanski, Eric		1	**1**
964.	World Bank	1		**1**
965.	WWF	1		**1**
966.	WWF India	1		**1**
967.	Xess, S. S.		1	**1**
968.	Xiao, Xiangming		1	**1**
969.	Yadav, D.		1	**1**
970.	Yandigeri, M. S.	1		**1**
971.	Young, William J.	1		**1**
972.	Z News	1		**1**
973.	Zachmann, D. W.	1		**1**
974.	Zadereev, Yegor S.		1	**1**
975.	Zambrana, Germàn		1	**1**
976.	Zavagli, M.		1	**1**
977.	Ze, Luo		1	**1**
978.	Zulkarnaen, Mohammad		1	**1**

Bibliography of Publications (1872-2017)
Research and Investigations in Chilika Lake

Susanta Nanda | Surya K. Mohanty | Krupasindhu Bhatta