

An IGNOU initiative for our Sustainable Future

**Appreciation Programme
on
“Sustainable Management of Wetlands”**



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**Chair for Sustainable Development,
Indira Gandhi National Open University,
Maidan Garhi, New Delhi – 110068, India**

● **About IGNOU**

The Indira Gandhi National Open University (IGNOU) was established by an Act of Parliament in 1985 to broad-base the reach of education and provides cost-effective and quality learning facilities to large sections of our population, including those living in remote and far-flung areas. Today, it serves the educational aspirations of about 2.6 million students in India and about 36 other countries. IGNOU imparts the study programmes through 21 Schools of Study, with a network of 62 regional centres, more than 3000 study centres/tele-learning centres and around 60 overseas centres. The University offers need based academic programmes, including professional, vocational and general awareness programmes to the seekers. Most of these programmes have been created to fulfil the learners' need for:

- ◆ acquisition of academic and professional qualifications;
- ◆ continuing education and professional development at the workplace; and
- ◆ skill-enhancement

The methodology of instruction in the University is learner-centric. The teaching-learning process is through self-instructional learning materials, based on the credit system. The self-study is aided by the support facilities provided at study centres throughout the country. The Virtual Class provides an e-learning platform to deliver online programmes of the University. The online platform is a complete virtual learning environment suite covering all activities from registration to certification.

IGNOU offers 350 Certificate, Diploma, Degree and Doctoral programmes comprising around 1,600 courses. These are supported by faculty members and academic staff at the headquarters and Regional Centres. The academic counsellors drawn from conventional institutions of higher learning, and professionals from various organizations also give the necessary back-up. As of now, IGNOU has about 700 centres equipped with one-way video and two-way audio facility and more than 134 EduSat television based centers with interactive facility. The application of state-of-the-art ICTs has further helped in reaching out to the hitherto un-reached sections of the society. Access, quality and equity are IGNOU's guiding principles.

IGNOU is also actively involved in research, training, extension and capacity building activities. It also co-ordinates and monitors distance education system throughout the country in its capacity as an Apex Body christened as the "Distance Education Council". It uses innovative technologies and methodologies and fosters convergence of existing systems of massive human resource required for promoting integrated national development and global understanding. To know more about the University please visit the website at <http://www.ignou.ac.in>.

● **Chair for Sustainable Development**

With the declaration of 2005-2014 as the decade of education for Sustainable Development by the United Nations, Indira Gandhi National Open University (IGNOU) established in March 2007, a University level Chair, cutting across disciplines and schools, to develop and promote Education for Sustainable Development in India.

The eminent agricultural scientist Professor M.S. Swaminathan has been appointed as the Honorary Chair for Sustainable Development at IGNOU. He is among the most distinguished and an internationally acclaimed leader in agriculture and sustainable rural development. His original concepts and operationalisation of **Agenda 21** in the nature of ever-green revolution, biovillages and village knowledge centres for technological and knowledge empowerment respectively of the rural women and men, have set models not only for India, but for most of the developing countries.

Through the Honorary Chair, the IGNOU would enhance awareness and know-how to a wide spectrum of scientists, environmentalists, administrators, social scientists, policy makers and enlightened corporate sectors on the urgent and imperative need to put sustainability in the centre of all their endeavours. Wherever appropriate policy interventions are required, the Appreciation Programme on Sustainable Development offered by IGNOU is expected to be a guidepost. The programme is rooted in the principles of **Agenda 21**. It endeavours to promote Sustainable Development with a global spirit of “**Our Common Future**”, to rescue planet Earth from the brink of collapse. The Appreciation Programme also takes cognizance of the threat of climate change to sustainable development. To know more about the Chair please visit the website at <http://www.ignou.ac.in/csd/home.htm> www.ignouonline.ac.in/save.

- **Appreciation Programme on “Sustainable Management of Wetlands”**

Wetlands are transitional areas between deep water environments and well-drained uplands. Water usually moves very slowly through

wetlands which is an important factor in determining their properties and functions. There are many different types of wetlands depending on soil factors, climate, water chemistry and the local anthropogenic impacts. Wetlands have played a crucial role in the human history in the local regions. Major stages in the evolution of life itself probably took place in nutrient-rich coastal waters. Rich civilizations in the world including Indus Valley Civilization also developed on the banks of great rivers.

Wetlands are one of the most productive ecosystems and play a significant role in the ecological sustainability of a region. The values of wetlands on the cultural, economical and ecological factors are immense. The geomorphological, climatic, hydrological and biotic diversity across continents have contributed to wetland diversity.

Despite the region's rapidly rising population, and the increasing demands being made upon the natural environments, Asia still possesses some of our planet's richest natural ecosystems. Among these are many of the most important tropical wetlands which provide their ecological and hydrological services to human society, especially in the extensive coastal wetlands of south and south-east Asia and along the river valleys which stretch through the continent. The wetland ecosystems provide several tangible economic resources for livelihoods of the dependent communities. However, the less obvious but equally important services are carbon absorption, reduction of soil erosion, shielding the coastal communities against high velocity of cyclonic storms, tsunami waves etc... thereby reducing loss of lives and livelihoods. Wetlands also provide detritus and nutrients as well as niche for breeding of a variety of fish, crabs, prawns, molluses etc...

India is blessed with water resources in the form of numerous rivers, streams and estuaries. By virtue of its geographical position and varied terrain and climatic zones, it supports a rich diversity of inland and coastal wetlands. According to Ministry of Environment and Forests (MoEF), India has 67429 wetlands covering an area of 4.1 million hectares. Out of these, 2175 are natural and 65254 man-made. Wetlands of India (excluding rivers) account for 18.4% of the country's geographical area of which 70% is under paddy cultivation.

Unfortunately, across the globe, wetlands are getting degraded due to manifold reasons, including anthropogenic and natural processes. Indian wetlands are no exception to this. Burgeoning population, developmental activities with harmful impact on wetlands, absence of management structure, lack of proper legislation and lack of awareness about the vital roles played by wetland ecosystems are some of the important causes that have contributed to their decline and extinction.

This Appreciation Programme provides strategies and approaches to link livelihood security to the local communities with the ecological security of the wetland ecosystems in a mutually-reinforcing manner. It also shows the way for sustainable management of wetlands.

- **Programme objectives**

- ◆ To provide introduction to the importance of wetlands, the cause of their degradation, restoration efforts and sustainable management.
- ◆ To enhance awareness on the role of wetlands on social, cultural and livelihood dimensions of the dependent communities.

- ◆ To build capacity to meet the challenges of global warming, sea level rise and safeguarding lives and livelihoods of the coastal communities.
- ◆ To enhance preparedness to mitigate harmful influences of changes in hydrological conditions due to altered rainfall both in pattern and intensity.
- ◆ To emphasize the uniqueness of the “below sea level farming” in Kuttanad, Kerala, as an example of traditional adaptation to sea level rise elsewhere.

- **Duration**

Programme can be completed in a minimum period of one month and a maximum period of six months.

- **Medium of Instruction**

The Programme is offered in English

- **Eligibility Requirements**

The programme is open to the candidates who are Graduate in any discipline or its equivalent from any recognised University. The preference will be given to the post graduate students, researchers, scientists and policy makers working in the areas of environmental science, agriculture, urban and rural development, and sustainable development.

- **Credit System**

The Appreciation Programme on Sustainable Management of wetlands is of four credits. One credit involves 30 hours of study by the students. Thus, for completing this course a student has to put in 120 hours of study.

● **Programme Structure**

The programme consist of four blocks.

Block 1	: General Information on Wetlands
Block 2	: Integrity, Productivity, Ecological, Economical and social Benefits of Wetlands
Block 3	: Degradation, Restoration, Conservation and Sustainable Management of Wetlands
Block 4	: Agenda 21 and Wetlands/Case Study

The detailed structure of Appreciation Programme on Sustainable Management of Wetlands is as follows:

Block 1 : General Information on Wetlands

- Unit 1 Introduction to wetland ecosystem
- Unit 2 Wetland characteristics
- Unit 3 Fresh water, brackishwater and estuarine wetlands
- Unit 4 Saltwater wetlands

Block 2 : Integrity, Productivity, Ecological, Economical and Social Benefits of Wetlands

- Unit 1 Integrity
- Unit 2 Productivity
- Unit 3 Farming in wetland ecosystem
- Unit 4 Recreation and social benefits of wetland ecosystem

Block 3 : Degradation, Restoration, Conservation and Sustainable Management of Wetlands

- Unit 1 Degradation due to natural processes
- Unit 2 Degradation due to anthropogenic interventions

Unit 3	Restoration
Unit 4	Conservation and sustainable management

Block 4 : Agenda 21 and Wetlands/Case Study

Unit 1	Agenda 21 on sustainable management of wetlands
Unit 2	Case study – I : General features and agrarian distress and solutions in Kuttanad wetlands, Kerala, India
Unit 3	Case study – II : Challenges of revitalizing ecology and economy of Kuttanad wetlands, Kerala, India
Unit 4	Case study – III : Uniqueness of Dal Lake, Jammu & Kashmir and Loktak Lake, Manipur, India

● **Project Work**

The purpose is to provide an opportunity for applying the knowledge gained from this Appreciation Programme for sustainable use of the resources of wetlands. The learners may develop a research and development/policy paper or a plan of action based on the principles of Agenda 21 preferably as applicable to their own villages/home towns.

● **Counselling**

There shall be around 3 - 4 counselling sessions of one hour duration each.

● **Fee**

The fee for the programme is Rs.600/-

● **Evaluation System**

The Appreciation Programme shall have three components for evaluation:

S. No.	Component	Weightage
1.	Continuous assessment through assignments	30%
2.	Term end Examination	70%
3.	Project work	Satisfactory Report

● **Online Platform***

The Appreciation Programme shall be available online on the SAVE (Sustainable Action and Virtual Education) Platform. It is a complete virtual learning environment suite covering all the activities from registration to certification. The following features shall be available to the registered students.

1. **Walk in admission** : Admission will be available throughout the year. There shall be four cycles in an academic year i.e. **January, April, July and October**. The two months period between the two cycles shall be used for advertisement and registration of the students for the next cycle. Registration form shall be specially devised with the facility of uploading scanned certificates, other required documents and photograph. Registration will be confirmed only after verification of the certificates and payment of the required admission fee. Facility for online payment shall be available through the payment gateway (AXIS Bank) being offered by the University for online programme.
2. **Integrated multimedia courseware**: Once registered, learners will have access to personalized learning space (My Page). This includes self instructional material, related audio/video, slides, self check exercises, etc. weaved in one platform.

3. **Online Counselling and mentoring:** Web cast based counselling integrated with text based chatting facility shall be used for counselling purposes.
4. **24 x 7 learner supports:** Asynchronous and synchronous modes of interaction will be used to provide just in time support to learners.
5. **Online Project Platform:** Templates shall be made available for synopsis submission, project uploading and evaluation. Viva voce will be conducted through web based video conferencing tool.
6. **Online Term End Examination:** Online examinations will be conducted in specified centres.

** The programme may be offered through postal tuition and the examination pattern will be the same as other courses of IGNOU offered through postal tuition.*

● **Course Contributors**

- 1) Prof. G. Achuthan Nair
Chair for Sustainable Development (CSD), IGNOU
- 2) Prof. K.G. Padmakumar
Regional Agricultural Research Station (RARS)
Kerala Agricultural University
Kumarakom, Kottayam, Kerala
- 3) Prof. J. Rajasekharan Nair
College of Fisheries
Kerala Agricultural University
Panangad, Kochi, Kerala
- 4) Prof. P.C. Kesavan
MSSRF, Chennai

- **CSD, IGNOU**

- **Advisors:**

1. Prof. M.S. Swaminathan, Honorary Chair and Advisor to the Programme
2. Prof. V.N. Rajasekharan Pillai, Vice-Chancellor
3. Dr. Latha Pillai, Pro-Vice Chancellor and Executive Director, CSD

- **Faculty:**

1. Prof. P.C. Kesavan, Honorary Professor
2. Prof. G. Achuthan Nair, Senior Consultant
3. Prof. M.K. Salooja, Director, School of Agriculture
4. Dr. M. Prashanth, Assistant Professor
5. Mr. Y.S.C. Khuman, Senior Research Fellow (Programme Co-ordinator)

- **For further information kindly contact :**

Executive Director, Chair for Sustainable Development, IGNOU, Maidan Garhi, New Delhi – 110068.

Programme Coordinator, Appreciation Programme on “Sustainable Management of Wetlands”, Chair for Sustainable Development, IGNOU, Block-1, Room No. 22, Maidan Garhi, New Delhi – 110068.

Email: csd@ignou.ac.in,

IGNOU webpage: www.ignou.ac.in. [http: www.ignou.ac.in/csd/home.htm](http://www.ignou.ac.in/csd/home.htm)

www.ignouonline.ac.in/save