



KERALA STATE BIODIVERSITY BOARD

EKAA

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Study Report

Penned from KSBB

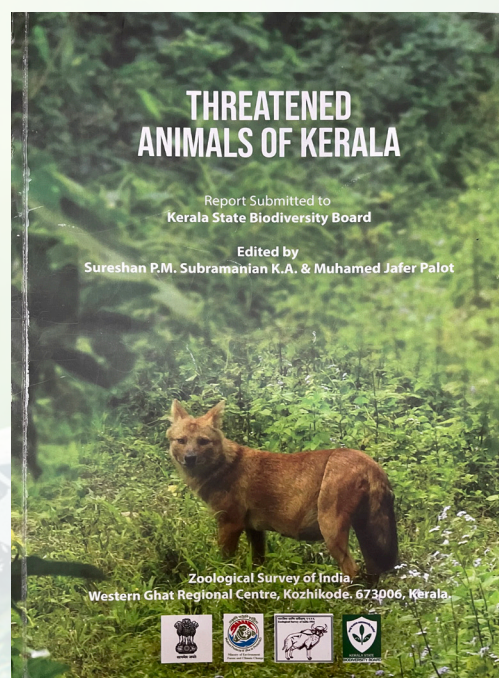
KSBB Activites

RKI Projects

New study report submitted to KSBB

An assessment of threatened animals of Kerala was conducted by a team of scientists from Zoological Survey of India (ZSI) supported by KSBB. Forty five experts belonging to 18 research organizations and NGOs participated in the study which was led by Sureshan PM, Subramanian K A and Jafer Palot of ZSI. The assessment covered major terrestrial fauna including fresh water fauna, which was conducted following the guidelines of IUCN red list criteria at regional level. A major objective was developing a priority list of species to be notified under section 38 of Biological Diversity (BD) Act, 2002. The Central Government in consultation with the concerned State Government, may notify any species which is on the verge of extinction or likely to become extinct in the near future as a threatened species and prohibit or regulate collection for any purpose and take appropriate steps to conserve those species. Ten faunal groups such as mammals, butterflies, reptiles, amphibians, freshwater birds, fishes, odonates, freshwater crabs, spiders and non-marine molluscs were considered for the threat assessment. A total of 37 species belonging to the above groups have been recommended for inclusion under section 38 of BD Act. The study found that 20 species of birds, 54 species of reptiles, 35 species of freshwater fishes, 49 species of butterflies, 38 species of odonates, 15 species of fresh water crabs and three species of non- marine molluscs face various levels of threat. Out of the 20 species

of birds seven species are considered as high conservation priority. In addition, the report also throws light on the major causes of biodiversity decline in different groups. The study also points out that invasive species are a major threat to biodiversity in Kerala.



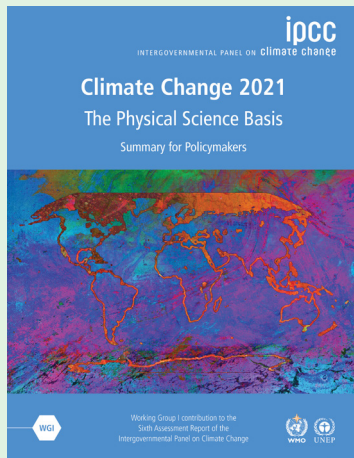
The report lists 30 freshwater alien fish species in Kerala of which 12 species have established strong breeding population and seven of them are invasive. Unfortunately, Periyar and Chalakudy rivers identified as important fish areas, harbour 17 and 15 alien species respectively. The report concludes with some of the major recommendations for improving the conservation efforts of these species in Kerala.



Is the IPCC AR6 report a myth or a code red for humanity ?

Dr. Vimal Kumar
Principal Scientific Officer, KSBB

The Intergovernmental Panel on Climate Change (IPCC) was formed during 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), and later endorsed by the United Nations General Assembly. It is an intergovernmental body of the United Nations responsible for assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. IPCC has three working groups in which Working Group I deals with the Physical Science Basis of Climate Change, Working Group II with Climate Change Impacts, Adaptation and Vulnerability and Working Group III with Mitigation of Climate Change.



The IPCC prepares comprehensive Assessment Reports about the state of scientific, technical and socio-economic knowledge on climate change, and the First Assessment Report was completed in 1990. Now IPCC is preparing its Sixth Assessment Report (AR6), in this regard, a report of the working Group I entitled “Climate Change 2021: The Physical Science Basis” has been released during the end of 2021. Key findings of the report are as follows.

- Global surface temperature has increased by 1.09°C from 1850–1900 to 2011–2020, of these, 1.07°C warming is due to anthropogenic activities
- Global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO₂ and other greenhouse gas

emissions.

- Every additional 0.5°C of global warming causes increases in the intensity and frequency of hot extremes, and heavy precipitation, as well as agricultural or ecological droughts and meteorological droughts.
- The global water cycle will intensify with an increase in global temperatures rise, with precipitation and surface water flows projected to become more variable over most land regions within seasons and from year to year.
- Monsoon precipitation is projected to increase at the global scale, the monsoon season is also projected to have a delayed onset at some regions and a delayed retreat in some other places. Extreme daily precipitation events are projected to intensify by about 7% for each 1°C of global warming. The frequency and intensity of heavy precipitation events have increased since the 1950s over most land area and there is an increases in agricultural and ecological droughts in some regions due to increased land evapotranspiration.
- Human-induced climate change increases heavy precipitation associated with tropical cyclones and the global proportion of major tropical cyclone occurrences and peak wind speeds has increased over the last four decades.
- Due to heating of the climate system, the global mean sea level has risen faster since 1900 than over any preceding century in at least the last 3000 years. Thermal expansion caused 50% of sea level rise during 1971–2018, while ice loss from glaciers contributed 22%, ice sheets 20% and changes in land-water storage 8%. The global mean sea level will rise by about 2 to 3 m if warming is limited to 1.5°C, 2 to 6 m if limited to 2°C and 19 to 22 m with 5°C of warming (over the next 2000 years), and it will continue to rise over subsequent millennia. There will be an increase in upper ocean stratification, ocean acidification and ocean deoxygenation.

- Mountain and polar glaciers are committed to continue melting for decades or centuries. Continued ice loss over the 21st century is virtually certain for the Greenland Ice Sheet and likely for the Antarctic Ice Sheet.

regional and local scales. Carbon dioxide (CO₂) is the main driver of climate change, even as other greenhouse gases and air pollutants also affect the climate. The future course of climate deeply depends upon anthropogenic actions. Hence for stabilizing the climate, strong, rapid, and sustained reductions in greenhouse gas emissions and reaching net zero CO₂ emissions are highly essential. Hence it is the sole responsibility of every person to actively engage in reduction of emission and taking care of our planet.

The IPCC report affirms how the climate system responds to the interplay between human influence, natural drivers and internal variability. It provides physical climate information and knowledge of the climate response with climate change at global,

KSBB activites

Local Biodiversity Heritage Tree (LBHT) in Ayarkunnam Gramapanchayat

The Biodiversity Management Committees (BMC) of Ayarkunnam gramapanchayat declared a local variety of mango tree as heritage tree. It is estimated to be around 200 years old and the area where the tree stands is highly rich in biodiversity. The tree situates on the banks of Meenachil river which is providing drinking water to Kottayam town, Pala, Erattupetta and nearby 20 panchayaths. The area is specifically called ‘Ta puzha’ as the river flows here like the Malayalam letter “Ta”. About half a kilometer radius around the tree is ecologically important and fertile due to a patch of riparian vegetation. Marotty, Nanch, Odal are some other tree species present in the area. *Ixora malabarica* , an endemic plant of western ghats and a threatened species categorized in IUCN list is present in this area. Tree lizards are also seen on the mango tree. The protection of the tree and the surrounding area is an initiative for local biodiversity conservation. The panchayath prepared DPR and based on it adequate funding has been provided by KSBB for the conservation of this LBHS Tree along with its seed conservation.

Training for Biodiversity Management Committees (BMCs)

The BMCs in the 1200 local bodies of Kerala are reconstituted after the local body elections held in 2020. In order to strengthen them in the biodiversity related conservation activities, various district level awareness creation programmes have been initiated by KSBB. The programme includes various awareness classes on subjects like the roles and responsibilities of BMCs, general awareness on the biodiversity and its importance, and the role of BMCs in the biodiversity conservation activities. The classes are delivered by experts including Chairman, and KSBB Board Members.



In Pathanamthitta district, the awareness programme was held on 05.01.2022 at Geethanjali Auditorium, Pathanamthitta. In this programme, representatives from 59 BMCs attended including 25 BMC chairpersons, 29 BMC Secretaries, 29 Standing Committee Chairpersons and 59 other members. In Kollam district, 61 out of 160 BMCs attended the training programme held at Kollam on 04.01.2022. A total of 161 persons attended the meeting including 3 BMC chairpersons, 16 BMC Secretaries, 9 Standing Committee Chairpersons and 129 other members.



RKI - Agrobiodiversity Project, Farm Schools

Alappuzha



Wayanad



Ernakulam



Idukki



Field visit by Agrobiodiversity project team at Pathanamthitta



ഫാം സ്കൂൾ കർഷകപരിശീലനം



ഫാം സ്കൂൾ വിദ്യാർത്ഥികൾക്ക് കർഷകപരിശീലനം
ജില്ലാപഞ്ചായത്തം സഹായം ഉൾക്കൊള്ളിച്ചു

പത്തനംതിട്ട സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡ് നേതൃത്വത്തിൽ നടന്നു കുന്നംകുന്ന് കാർഷിക ജൈവവൈവിധ്യ സംരക്ഷണ പ്രോജക്റ്റിലെ ഫാം സ്കൂൾ വിദ്യാർത്ഥികൾക്ക് തിരഞ്ഞെടുക്കപ്പെട്ട കർഷകപരിശീലനം ജില്ലാ പഞ്ചായത്തം സഹായം തോമസ് ഉൾക്കൊള്ളിച്ചു. എട്ട് ബ്ലോക്കുകളിൽനിന്നുള്ള കർഷകർ പങ്കെടുത്തു. ഇവരിലൂടെ പല തിരഞ്ഞെടുക്കപ്പെട്ട കർഷകരിലേക്കും കോഴഞ്ചേരി ഗ്രാമപഞ്ചായത്ത്

സ്റ്റാൻഡിങ് കമ്മിറ്റി ചെയർമാൻ രോയ് ഫിലിപ്പ് അധ്യക്ഷത വഹിച്ചു. സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡ് ചെയർമാൻ ഡോ. കെ. സ. സി. കൃഷ്ണൻ മുഖ്യപ്രഭാഷണം നടത്തി. ഡോ. സി.കെ.പി.നാ.ബാബു, ഡോ. സി.കെ.ഷാജു എന്നിവർ ചർച്ചകൾക്ക് നേതൃത്വം നൽകി. ഡോ. ടി.എ.സുരേഷ്, ജില്ലാ കോ-ഓർഡിനേറ്റർ അരുൺ സി.രാജൻ, അസിസ്റ്റന്റ് പ്രോഗ്രാം കോ-ഓർഡിനേറ്റർ എസ്.അരുൺ എന്നിവർ പങ്കെടുത്തു.

ഫാം സ്കൂൾ ട്രെയിനിങ് കോണം

സംസ്ഥാന സർക്കാരിന്റെ റീബ്രിഡിംഗ് കേരളയുടെ ഭാഗമായി ജൈവവൈവിധ്യ ബോർഡ് തൊണ്ടർനാട് പഞ്ചായത്തിലെ പൊർളോത്ത് ഫാം സ്കൂൾ ട്രെയിനിങ് കോസ് സംഘടിപ്പിച്ചു. വാർഡ് ചെയർമാൻ വി.ടി.അരുൺകുമാർ ഉദ്ഘാടനം ചെയ്തു. തൊണ്ടർനാട് സർവീസ് സഹകരണ ബാങ്ക് പ്രസിഡന്റ് എ.എം.ശങ്കരൻ അധ്യക്ഷനായി. ജൈവവൈവിധ്യ ബോർഡ് ജില്ലാ കോ-ഓർഡിനേറ്റർ പി.ആർ.ശ്രീരാജ്, എം.കെ.നിശാന്ത് എന്നിവർ ക്ലോസെടുത്തു. എ.കെ.മാധവൻ നായർ വിതരണ റോട്ടേഷനും നിർവഹിച്ചു. എം.കെ.നിശാന്ത് സ്വാഗതവും വാസന അനിൽകുമാർ നന്ദിയും പറഞ്ഞു.

Dr. C. George Thomas
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 Member Secretary (i/c)
Editor
 Dr. Yamuna S, Principal Scientific officer
Design & Layout
 Praveen.KP

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