

# IT ENABLED MONITORING TOOL INDO-GERMAN BIODIVERSITY PROGRAMME

## SITUATION:

Currently in India, most Users accessing biological resources for research and commercial purposes are outside the purview of the National Biodiversity Authority (NBA), leading to potentially illegal and unsustainable use. In addition, benefits arising out of utilisation cannot reach the Providers due to lack of awareness. Thus, the NBA is seeking to enhance its capacity to monitor the utilisation of Indian biological resources and associated traditional knowledge with the help of a digital application called the Access and Benefit Sharing Monitoring System (ABS-MS) under the scope of Biological Diversity Act 2002 and Access and Benefit Sharing Guidelines.

## **OBJECTIVE**:

The tool aims to monitor utilisation of biological resources in two scenarios:

• Access and utilisation with the approval of the NBA: In the case of access to biological resources and associated knowledge from India for commercial utilisation, research, transfer of research result, applying for any Intellectual Property Right within or outside India, after obtaining prior approval of NBA. • Access and utilisation in the absence of approval from the NBA: In such cases enabling the NBA to effectively monitor and perform regulatory actions against any non-compliance within and outside India.

### **APPROACH**:

The ABS-MS will be able to access globally available database on information related to biodiversity in India via scientific publications, patent databases, taxonomic data and information on bio-resource based commercial products. The tool will track information on the use of biological resources and associated traditional knowledge of Indian origin and convey it to the NBA. It will also indicate if prior permission for access was obtained by the User and suitable actions would be taken in the case of non-compliance.

The need to access global information related to individuals and institutions accessing biological resources from India for research and commercial use has been recognised. Such information is scattered across the internet in dissimilar formats, with patent offices of multiple countries from different publication houses. Manually, it is not possible to refer to all this information to monitor the usage of biological resources from India. What is desired is the unification of this information in one standard format for easy access, along with a sophisticated software that would be able to browse this big volume data efficiently.



#### APPLIED DIGTIAL TECHNOLOGY:

ABS-MS is a cloud-based system, integrating real-time information from globally available data sources like EU patents, US patents, CrossRef, Web of Science, GBIF, Microsoft Academic Graphs (MAG) etc. It will filter information specific to India using sophisticated data mining and create a metadata repository. This data repository will be updated dynamically through Application Programming Interfaces (APIs), ensuring an up-to-date dataset. It will also carry a userfriendly front-end, providing statistics and references to analyse this information efficiently.

## ACHIEVEMENTS THROUGH DIGITALIZATION:

• Pilot test-run of the ABS-MS identified over 300,00 Users (research and patent) of Indian biological resources

• Integration of information on patents, scientific literature and taxonomic data form various relevant data sources available across the world into a single standardised format for effective access

• Automatically tracking the activities of Users. Readily available statistics will help in highlighting trends on the use of Indian biological resources

• Seamless scanning through complex documents on patents and scientific literature to obtain relevant information for monitoring

 Automatically capturing new information published online on the use of Indian biological resources or traditional knowledge

• System generates reports, statistics and alerts mechanism





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