



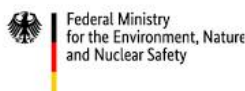
## **Ethiopian Biodiversity Institute**

### **Biodiversity and Ecosystem Services Network (BES-Net) Phase II Project “Implementation of Component I in Ethiopia of Post-National Ecosystem Assessment Results Framework**

### **Assessment on “the Need and Inputs Required for Making the National Biodiversity Platform Effectively Functional in Delivering Tasks related to Biodiversity and Ecosystem Services”**

**December 2023**

**Addis Ababa**



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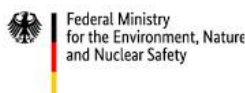
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## Abstract/ Summary

National biodiversity platforms are science-policy-practice interfaces which convene key stakeholders in dialogue and collaborations that lead to an improved consideration of biodiversity and ecosystem services in decision-making. The Ethiopian Biodiversity Platform was established through the initiative of the Ethiopian Biodiversity Institute in April 2022. This study assess the need and inputs required for making the National Biodiversity Platform effectively functional in delivering tasks related to Biodiversity and Ecosystem Services. Questionnaires were used in order to collect data about the specific needs and the type of inputs required by the platform member organizations in addition to using literature review. The respondents stated that the government should demonstrate strong political commitment to the NBP by allocating adequate resources, providing policy support, and ensuring its long-term sustainability. Evidence based lobbying and having an advocacy and communication strategy can help ensure the involvement of the government as well as the other stakeholders. The results of the assessments also revealed that majority of the NBP members required inputs such as capacity building through comprehensive training programs to enhance the knowledge sharing and developing skills of NBP members and other stakeholders. They also highlighted the importance of having a sustainable and secure funding source as well as a user-friendly data management system. Having a standardized data collection, data-sharing and data reporting platforms in addition to affecting an open data policy can be very instrumental.

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## Introduction:

Climate change and other human-driven (anthropogenic) environmental changes will continue to cause biodiversity loss in the coming decades (Sala et al. 2000), in addition to the high rates of species extinctions already occurring worldwide (Stork 2010). Biodiversity is a term that can be used to describe biological diversity at a variety of different scales, but in this context we will focus on the description of species diversity. Species play essential roles in ecosystems, so local and global species losses could threaten the stability of the ecosystem services on which humans depend (McCann, 2000).

Biodiversity and its vital contributions to people are deteriorating worldwide at a higher rate than ever before, mostly due to changes in humans' use of land and the sea, unsustainable management of ecosystems, direct exploitation of organisms, climate change, pollution, and invasive alien species (IPBES, 2019).

These direct drivers are the consequence of several underlying causes, or indirect drivers – such as societal values and behaviors, including production and consumption patterns, human population dynamics and trends, trade, and technological factors – that will need to be transformed in order to restore biodiversity and its contributions to the wellbeing of people (IPBES, 2019).

For enabling such inclusive and meaningful discussions and collaborations across all sectors of society, multiple countries have established or are establishing science policy-practice interfaces for biodiversity at the national level – often called National Biodiversity Platforms (NBPs). The overarching goal of an NBP is to bring together key knowledge holders and decision-makers in collaborative relationships that lead to the better consideration of biodiversity and ecosystem services to society and human well-being in decision-making towards sustainable development (Khan et al, 2023).

National biodiversity platforms are science-policy-practice interfaces which convene key stakeholders in dialogue and collaborations that lead to an improved consideration of biodiversity

and ecosystem services in decision-making. These platforms can provide a wide suite of benefits to different stakeholder groups and rights holders (Khan et al, 2023).

The Ethiopian Biodiversity Platform was established through the initiative of the Ethiopian Biodiversity Institute in April 2022 at Adama, Ethiopia. The overarching objective of the platform is a better inclusion of biodiversity and ecosystem services considerations in decision-making towards sustainable development (EBI, 2022).

The Ethiopian Biodiversity Platform consists of 106 organizational members from six categories namely policy makers, academic and research institutions, private sectors, communities, civil societies, development partners and the media (EBI, 2022)

This study will be looking at the need and inputs required by the platform members to help make the NBP effectively functional in delivering tasks related to the National Biodiversity and Ecosystem Services assessment.

## Objective

Assess the need and inputs required for making the National Biodiversity Platform effectively functional in delivering tasks related to Biodiversity and Ecosystem Services

### Specific Objectives

To assess the needs (recognition, political commitment, legislative backing) required by the NBP members to make it effectively functional

To assess the inputs (human, financial and technical capacity) required by the NBP members to make it effectively functional

To examine the means used by other countries to address the needs and input required for an effective platform

## Literature Review:

Ethiopia, the second most populous country in Africa, is located between 3°24' to 14°53'N latitude and 33°00' to 48°00'E longitude. Its 1.13 million km<sup>2</sup> total land area lies within the altitudinal range between 125 m b.s.l. and 4533 m a.s.l. The Country's diverse topographic features and associated environmental variations are comprised of varied habitats that house 12 vegetation types well established (EBI, 2022).

Ethiopia is endowed with a variety of ecosystems (established but incomplete), the recognition of which is mainly based on the twelve vegetation types, and a newly established Intermediate evergreen Afromontane Forest: 1. Desert and semi-desert scrubland; 2. Acacia-Commiphora woodland and bushland; 3. Wooded grassland of the western Gambella region; 4. Combretum Terminalia woodland and wooded grassland; 5. Dry evergreen Afromonane forest and grassland complex; 6. Moist evergreen Afromontane forest; 7. Transitional rain forest; 8. Ericaceous belt; 9. Afroalpine belt; 10. Riverinevegetation; 11. Freshwater lakes, lake shores, marshes, swamps and floodplains vegetation; 12. Salt-water lakes, lake shores, salt marshes and pan vegetation and the Intermediate evergreen Afromontane Forest (EBI, 2022).

Human well-being, long-term economic progress and biodiversity are inseparably linked. Realizing local, national and international aspirations and biodiversity related commitments on sustainable development depends on healthy ecosystems .Therefore; decision-makers need access to knowledge on biodiversity and ecosystem services (BES) which fits their information needs. Further, different sectors of society need to be included in the dialogue on how conservation and sustainable use of BES and sustainable development can be realized (Khan, et al, 2023).

We are in the middle of the Anthropocene and need more than ever to be equipped to predict and prevent biodiversity and ecosystem change. Advances in biology, computer science, artificial intelligence, and computing power can help to address this challenge quickly and allow us to decrease uncertainties and develop better evidence-based mitigation and adaptation strategies

(Urban et al, 2022). It is also becoming increasingly clear that multi-stakeholder coordination and integrated landscape approaches are critical to resolving the extinction crisis (Tian Lin et al, 2021).

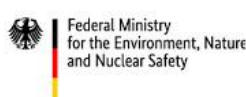
Despite the achievements of Multi-Stakeholder Platforms in fostering nation-wide and cross-border collaboration, there are many gaps in the literature. In addition, the effectiveness of such initiatives for biodiversity conservation is not well scientifically backed. (Kusters et al. 2018; Garard et al. 2018). It is also vital to establish standards for evaluating the success of such platforms.

Collaboration through national and cross boundary platforms can help distribute knowledge as well as to improve conservation outcomes and provide legitimacy in decision-making (Markopoulos 2012).

Let alone a national platform, a universal biodiversity projection platform is essential to help advance biodiversity understanding, prediction and conservation (Urban et al, 2022). Effective data sharing practices are foundational for collaborative efforts within institutions to facilitate the information exchange for the NBP. The accessibility of internet facilities and services plays a pivotal role in enabling electronic data and information exchange within and between institutions that are members and even non-members of the Platform. The widespread availability of internet services in all the Platform actor institutions will play a crucial role in enabling a swift sharing of biodiversity related information (CIFOR, 2023).

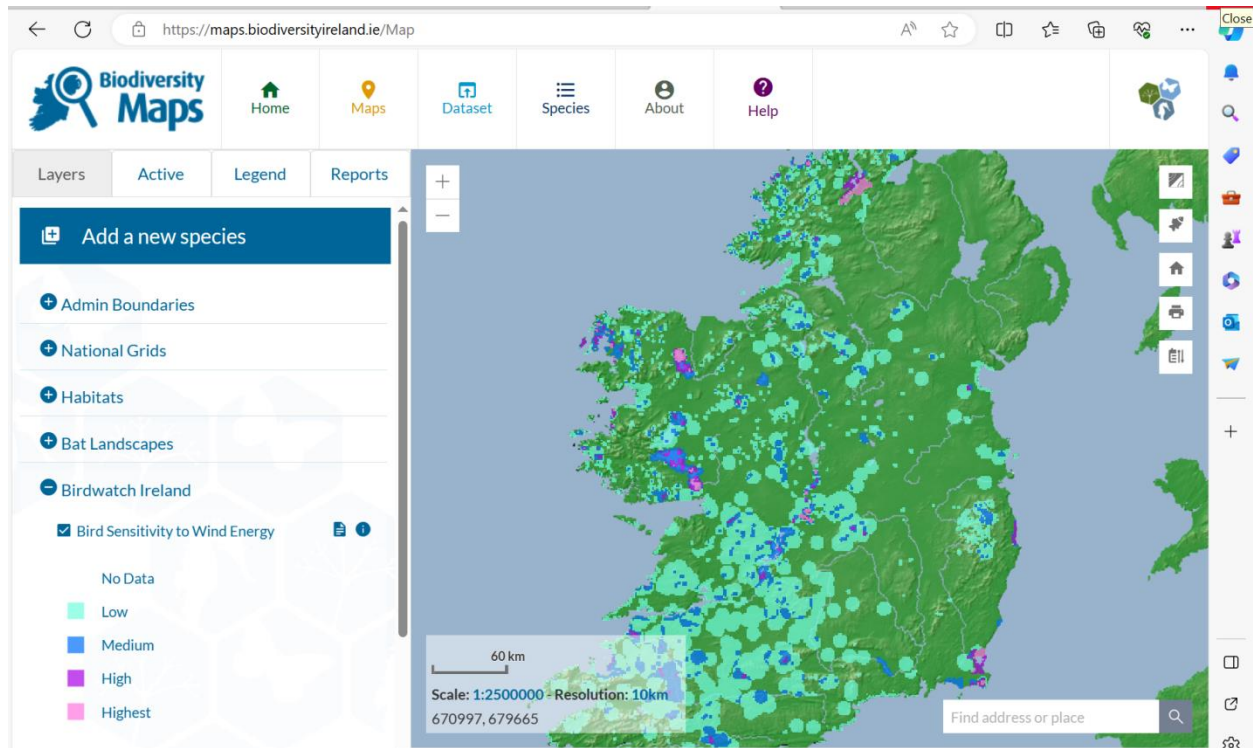
Countries in Eastern Europe have gotten together a network of people and organizations involved in biodiversity and nature conservation. Through the network they developed a sustainable, easy-touse and open source platform, giving users the ability to choose how to share collected data and photos (Popovic et al., 2020).

And countries such as Ireland have also been very successful in centralizing data and making it available for decision makers. They use a national portal called Biodiversity Maps and they have



been able to accumulate more than 6 million records of more than 17,000 species. The mapping page allows users to easily view the spatial distribution of species observations, datasets and surveys ([Maps - Biodiversity Maps \(biodiversityireland.ie\)](https://maps.biodiversityireland.ie)).

It has also developed tools to allow developers to view and select sites for developments such as wind energy. One such example is the Bird sensitivity tool which shows the various sites suitable for wind energy and which of those sites are more likely to affect bird population (areas of high bird sensitivity). So it easily allows decision makers and wind energy developers to make sustainable development decisions.



Source: [Maps - Biodiversity Maps \(biodiversityireland.ie\)](https://maps.biodiversityireland.ie)



## Methodology:

Questionnaires were used in order to collect data about the specific needs and the type of inputs required by the platform member organizations. A sample of platform members was selected for the assessment.

Open-ended questions were asked to assess the needs (recognition, political commitment, legislative backing) and inputs (human, financial and technical capacity) required to assist the effective functioning of the Ethiopian Biodiversity Platform. The responses of the participating organizations was documented and summarized.

A Key informant interview was also held to get an update of the progress of the Ethiopian Biodiversity Platform since its establishment in early 2022.

Literature was also reviewed in order to examine the practices of other countries that have National Biodiversity Platforms. Emphasis was put on the data sharing and database use of some countries as a means of effective functioning of the Biodiversity Platform.

## Results/ Major findings:

Questionnaires were sent to 35 organizations that are members of the National Biodiversity Platform. Out of these organizations, about 50% were able to fill out the questionnaires on time. Two of the sections below summarize the responses of the participants with regards to the needs and inputs required for the effective functioning of the Ethiopian Biodiversity Platform.

### Needs of NBP members (recognition, political commitment, legislative backing)

Majority of the respondents indicated that the National Biodiversity Platform should be widely acknowledged as a critical tool for biodiversity conservation and sustainable development in

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Ethiopia. They mentioned that this recognition should mainly come from the government agencies, and needs support from scientific institutions, environmental organizations, and the public.

Some of the members stated that the government should demonstrate strong political commitment to the NBP by allocating adequate resources, providing policy support, and ensuring its long-term sustainability. Political leaders should actively promote the NBP and its importance in achieving national biodiversity conservation goals and sustainable development objectives.

They suggested that the NBP should be integrated into national strategies, plans, and policies related to biodiversity conservation, environmental management, and sustainable development. Clear policies and regulations should be established to mandate the use of the NBP as a primary source of biodiversity information for decision-making processes at various levels.

A few members suggested that the NBP should be a legal institution with its own constituency and that there is a need to prepare evidence based lobby and advocacy strategy to enhance the level of political commitment as well as develop policy and media briefs to show the profile of the NBP. This could enable it to engage policy makers and mobilize resources.

They suggested that the platform needs to have a very proactive engagement strategy that raises awareness and advocacy on the importance of biodiversity and the platform to policy makers and to the public. Some members indicated that it will be useful to develop a communication strategy and to strengthen a linkage among stakeholders and to enhance collective action. In addition, they highlighted the need for a comprehensive guideline for the platform with clearly indicated rules and responsibilities.

Regarding the legislative backing, the participants suggested that the platform needs to develop its own directives and guidelines which have emanated from relevant proclamations related to biodiversity and conservation. They indicated that providing a clear legal framework can strengthen the platforms' effectiveness in promoting biodiversity conservation and sustainable

development. These are some of the areas that the members suggested would require legislative backing.

- **Establishment and mandate of the NBP:** The legislation should clearly define the purpose and objectives of the NBP, as well as its institutional structure and governance mechanisms.
- **Stakeholder participation:** The legislation should provide for the broad participation of stakeholders, including government agencies, non-governmental organizations, academia, and the private sector, in the NBP's activities. Networking with international platforms could help in strengthening the NBP.
- **Data and information sharing:** The legislation should establish mechanisms for the collection, management, and sharing of biodiversity data and information, ensuring that these resources are accessible to all stakeholders.
- **Capacity building:** The legislation should recognize the need for capacity building and provide for the development of programs and initiatives to enhance the knowledge and skills of stakeholders in biodiversity conservation and sustainable use.

## Input requirements of NBP members (human, financial and technical capacity)

Some of the suggestions made by the platform members were to develop and implement comprehensive training programs to enhance the knowledge and skills of NBP members and other stakeholders in various areas such as biodiversity informatics, data management, conservation planning, and policy development.

They indicated the importance of establishing partnerships with academic institutions, research organizations, and international experts to provide specialized training and capacity-building

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opportunities. These types of trainings will help to promote knowledge sharing and exchange among NBP members, other experts, and stakeholders through workshops, conferences, and online platforms. In addition, they suggested mapping out of the technical skills and areas of contribution of the platform members to be able to mobilize volunteer groups to develop advocacy, resources mobilization and communication strategies.

The participants highlighted the importance of securing sustainable funding sources to support the long-term operation and maintenance of the platform. This may include government funding, international grants, partnerships with private sector organizations, and innovative fundraising mechanisms. They even suggested the need for exploring opportunities for cost-sharing and collaboration with other biodiversity initiatives to optimize resource utilization. Some participants even recommended fundraising through the arrangement of payment for Ecosystem Services.

The members indicated the need for establishing a robust and user-friendly data management system to store, organize, and analyze biodiversity data. They highlighted the need for user-friendly tools and interfaces to enable stakeholders, including policymakers, researchers, and the general public, to easily access and utilize biodiversity data for decision making and research purposes.

Majority of the respondents recommended the need for understanding and exploring the different experiences that other National Biodiversity Platforms have had with regards to building capacity and sharing information among its members.

## **Progress of the NBP since its establishment**

We were able to hold a key-informant interview of an expert based at the Ethiopian Biodiversity Institute who works closely on the matter. According to our informant, we were able to find out the following:

After the establishment of the NBP in April 2022, a call was made to the National Biodiversity Platform members for the launching of the National Ecosystem Assessment composite book. This meeting was held in August 2023 and it served as a meeting to get the general assembly together.

The annual plan of the executive committee's for the NBP has been revised. The webpage for the NBP is being developed. A few experience sharing events of NBPs of other countries have been attended. Projects that enhance the functioning of the NBP such as CABES and BES-Net project are being implemented.

Some of the challenges that they are facing is the lack of follow-up and support by the NBP members and being unable to hold regular meetings of Executive Committee and the Platform Member organizations.

## **Practices of other National Biodiversity Platforms: Database and data sharing**

Creating a common information exchange interface between and among institutions engaged in the Platform will create effective interchange of knowledge on events, workshops, capacity building practices and other activities that have been held at any location within the national boundary. The development and availability of National Biodiversity strategies helps in enhancing the overall effectiveness of the Biodiversity Platform. However, the sole presence of the strategy will not take effect unless effort is made to mainstream these strategies among the platform member institutions (CIFOR, 2023).

Additionally, designing strategies for the long-term management and preservation of Biodiversity information exchange within Platform member Institutions, the data and information exchange practices should adapt itself to evolving technologies and standards (CIFOR, 2023). The presence of data and information policy at a national level can be utilized as an overarching legal instrument

to enforce Data and Information Sharing Practices among the Platform member institutions and to the public in general. Furthermore, effecting Open Data Policies and principles between institutions can further contribute to cultivate the culture of transparency, effective sharing and collaboration for the NBP (Mose et al, 2018). It can also serve as a legal instrument to ensure accountability and responsibility of data and information sharing among and within institutions. However, it is very important to identify data that are regarded as sensitive. These types of data should not be released to the public as they might result in negative effects with regards to certain groups of biodiversity (those which are threatened or have high commercial value) (BIDERSE, 2017).

There is no integrated platform for comprehensive use and there is no one-point access to environmental or biodiversity data, these data are scattered throughout individual institutions (Kim et al., 2021). Creating a common database system, storing biodiversity related semi-processed and raw data types in the databases of respective institutions working in partnership with the EBI and the NBP can serve as a valuable resource, fostering the effectiveness of information and data accessibility, as well as information and data sharing and utilization (EPHI, 2019). Complementing the practice storing biodiversity related information and data types via establishing a robust feedback mechanism allowing stakeholders at all level to actively participate in providing inputs, improve data quality, relevance, and usability can foster improvement and effectiveness of the platform (CIFOR, 2023).

Dedicated common websites for the NBP that can serve as a hub for data downloading and uploading, coupled with periodic reporting systems within institutions, streamlines the data-sharing process can enhance the effectiveness and performance of the NBP. Stakeholder engagement and collaboration among other platforms (Forum for Environment, NABU, Biological Society of Ethiopia, Ethiopian Forestry Society etc) can further strengthen the network for sharing Biodiversity data types and information (CIFOR, 2023). Additionally, establishing platforms and collaboration for rigorous data quality assurance and verification processes can play a paramount role for ensuring the accuracy, reliability and effectiveness of shared information.

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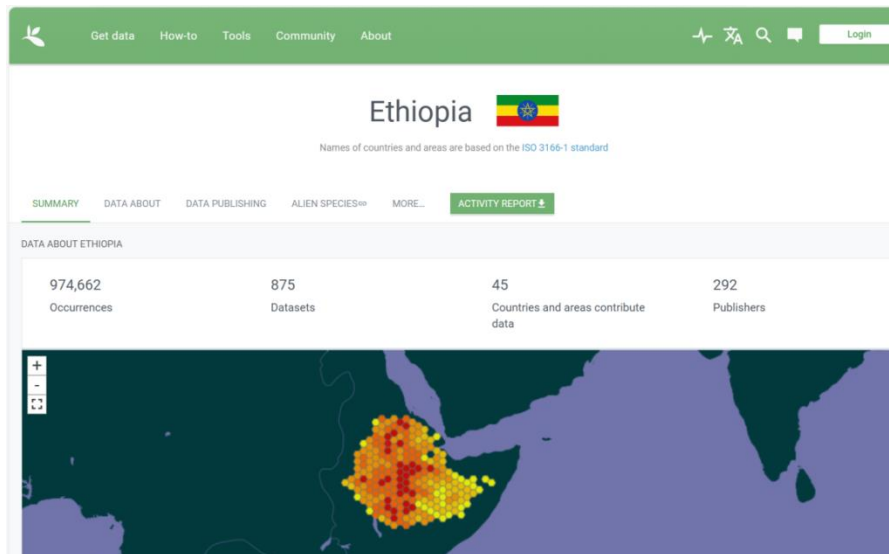


Establishing a mechanism supporting standardized data collection, data-sharing and data reporting platforms, in conjunction with collaborative efforts with relevant institutions such as Ethiopian Statistical Service and the Ministry of Planning, are critical to qualify the Monitoring Reporting and Verification of Biodiversity Related Information and Knowledge. Furthermore, adherence to the use of standard biodiversity related information and knowledge data collection templates (developed in collaboration with Ethiopian Statistical Service), analysis, sharing, and reporting protocols can establish a consistent and effective framework for data sharing, reporting and verification (CIFOR, 2023).

Creating a virtual platform could prove to be very effective in getting the National Platform Members together as it will not require much funds or travelling from place to place to attend the meetings.

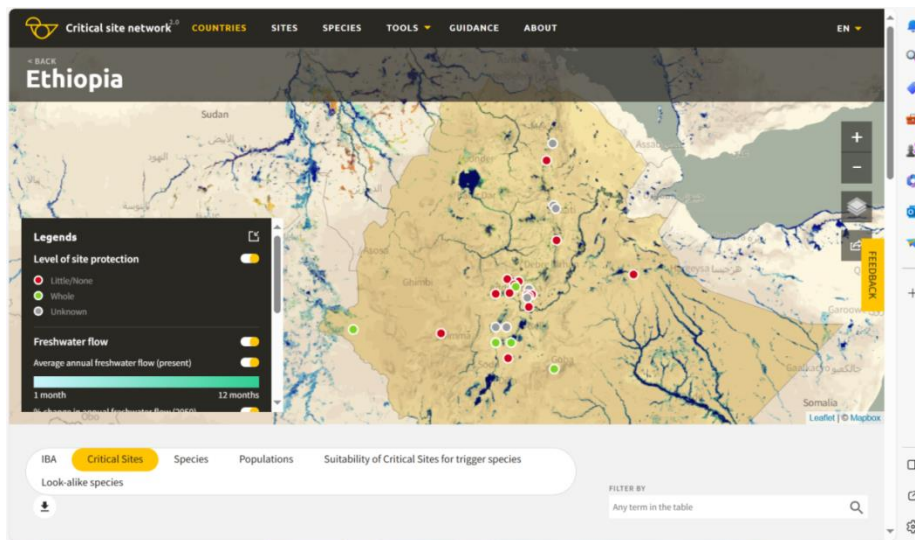
The Ethiopian Biodiversity Institute currently has a Geoportal which is a platform that facilitates the creation, sharing and collaborative use of biodiversity and protected area management geospatial data under Ethiopian Biodiversity and Protected Area Management Program (ETH-BIOPAMA). It currently has about 400 users and provides 39 layers of the available dataset.

Another database which is being used globally for biodiversity related work is GBIF. The Global Biodiversity Information Facility (GBIF) is an international organization that focuses on making scientific data on biodiversity available. The data are provided by several institutions and GBIF helps to make these data accessible and searchable through a single portal. Data available through the GBIF portal are primarily distribution data on plants, animals, fungi, and microbes for the world, and scientific names data. GBIF facilitates free and open-access biodiversity data. In Ethiopia, there are more than 900,000 records of free available data about various aspects of our biodiversity.



Source: [Ethiopia \(gbif.org\)](https://gbif.org)

There are also other organizations which provide valuable information for practitioners as well as for decision makers. This include the critical site network tool (shown below) and the sensitivity mapping which show the location of important sites for birds as well as the population for different species of birds to help the placement of development projects.



Source: [Critical Sites Network \(CSN\) Tool | CMS](https://criticalsitesnetwork.org/)



## Discussion:

National and regional platforms are very good in raising the standards of national biodiversity research and improve the exchange of information between national researchers and policy makers (European Platform for Biodiversity Research Strategy, 2003). Effective implementation will require a series of coordinated policy processes, high-level political commitment across sectors, and the inclusion of groups and sectors with conflicting interests. NBP can help continue to raise awareness for biodiversity among a variety of stakeholders at different levels if they are complemented by an adequate communication strategy (Khan et al, 2023).

Their relevance beyond the conservation sector can be increased by linking targets to relevant policies, addressing synergies and trade-offs with economic activities, and by stipulating them as an official reference for all related policy processes (Tian Lin, 2021).

Beyond strengthened awareness, however, biodiversity governance will require engaging with trade-offs between different policy goals and involving sectors in long-term planning procedures to ensure shared commitment and accountability to adopted biodiversity policies (Khan et al, 2023).

There is currently unequal usage of biodiversity data in the world. This leads to further discrepancies in benefit sharing including in capacity building (Wettberg and Khoury, 2022). A centralized and unified biodiversity projection platform can play an important role in prioritizing data collection (Urban et al., 2022). Citizen–science platforms offer a great potential to add value to traditional field data collection by professionals (Echeverria et al, 2021). However, it is very vital to help trigger the motivation of the citizen scientists to enable them to regularly collect good quality data to help to different project (Ganzevoort et al., 2017).

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It is very vital to invest time and resources to develop a guideline for data sharing and management along with the various involved stakeholders (EPHI, 2019). The absence of a well-established and functioning common data/information exchange interface between and within member institutions is a great challenge. Additionally, challenges such as the absence or insufficient open data policies, resistance to adopting new technologies, and bureaucratic procedures impede the seamless flow of information hindering the effectiveness of the platform in knowledge dissemination (CIFOR, 2023). The creation of open-access and promotion of user contributions can facilitate an interconnected and diverse user community (Fer et al, 2021).

Insufficient technical infrastructure, including internet connectivity and data storage facilities, may create bottlenecks in the effectiveness and performance of the NBP. Challenges like the poor practice of updating and uploading data on websites and the failure to engage all relevant stakeholders and member institutions of the NBP can hinder the inclusivity and outreach capacity of the Platform (CIFOR, 2023).

Insufficient funding for implementing and maintaining knowledge and information exchange platforms, coupled with inadequate lobbying efforts before, during and after of the Platform initiatives and efforts can negatively affect the performance of the Platform. In order to tackle the issue of funding, countries in Latin America have used a different approach. They have used the bank's initiative to tackle disaster risk management and climate change through dedicating funds for mainstreaming emerging issues into the country's dialogue thus supporting the platform (IDB, 2012).

Assigning an expert at the main organization (EBI) may be beneficial to accomplish the objectives of the platform. In some countries like Belgium, the 'platform core' is composed of paid officers that initiate or co-ordinate activities for or with the wider network of national biodiversity and ecosystem services experts (Marquard et al., 2016). It could be worthwhile to involve some businesses in Ethiopia to help fund and support the platform activities as a means of fulfilling their corporate social responsibility.

## Conclusion:

According to the respondents of the study, some of the major needs of the National Biodiversity Platform are recognition and strong political commitment from the side of the government. This can lead to the provision of policy support, allocation of adequate funds and hence ensure its sustainability. Some members indicated the need for making the platform a legal institution with its own constituency.

They emphasized the need for a strategy which enables a very proactive engagement. This will raise awareness and aid advocacy on the importance of biodiversity and the platform to policy makers and to the public. Having a comprehensive guideline for the platform with clearly indicated rules and responsibilities as well as a communication and data sharing strategy will be instrumental.

The results of the assessments also revealed that majority of the members required inputs such as comprehensive training programs to enhance the knowledge sharing and developing skills of NBP members and other stakeholders. They highlighted the significance of securing sustainable funding sources to support the long-term operation and maintenance of the platform. Furthermore, they indicated the requirement of user-friendly tools and interfaces to enable stakeholders, including policymakers, researchers, and the general public, to easily access and utilize biodiversity data for decision making and research purposes.

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Effecting Open Data Policies and principles between institutions can further contribute to cultivate the culture of transparency, effective sharing and collaboration for the NBP. Having a standardized data collection, data-sharing and data reporting platforms are critical for reporting and verification of the biodiversity data.

Making use of the Geoportal developed by the Ethiopian Biodiversity Institute in combination with other freely available biodiversity databases such as GBIF, Critical Site Network Tool, Bird Sensitivity mapping will be a good start to help Ethiopia lean towards better and sustainable development projects.

## Recommendations:

There is a great need to raise awareness among the platform member organizations. This could be done through holding regular in-person meetings. It could also be done through distributing brief documents regularly to the members to help raise awareness and encourage their participation. Holding regular virtual meetings will also be helpful if the infrastructure allows.

Political leaders should actively promote the NBP and its importance in achieving national biodiversity conservation goals and sustainable development objectives. Developing clear policies and regulations should be established to mandate the use of the NBP as a primary source of biodiversity information for decision-making processes at various levels. The strong commitment of the government can be demonstrated through allocating adequate resources, providing policy support, and ensuring its long-term sustainability.

Revising the EBI guideline to make it more comprehensive and detailed will make it clearer and easily adaptable. Revising the duties and responsibilities expected from the executive committee and the sub-committees is vital to accomplish the objectives.

Designing a user friendly data platform that platform members including decision makers can make use of can help make development projects more sustainable and evidence based. It will also be very important to explore and make use of other such platforms that are already in use.

Developing and implementing comprehensive training programs to enhance the knowledge and skills of NBP staff and stakeholders in various areas such as biodiversity informatics, data management, conservation planning, and policy development. Promote knowledge sharing and exchange among NBP members, experts, and stakeholders through workshops, conferences, and online platforms. Partnerships could also be established with academic institutions, research organizations, and international experts to provide specialized training and capacity-building opportunities.

Having members of the media is very advantageous and they can be used to raise nation-wide awareness about the tasks and accomplishments of the Biodiversity Platform.

Temporarily assigning an expert at EBI to encourage the involvement of the platform members could be helpful to accomplish the objectives of the platform. The expert can help to regularly contact and update the platform members.

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