Biodiversity Financial Needs Assessment

The draft document was developed as part of the initiative:
UNDP Biodiversity Finance Initiative

Bishkek - 2019
The basis of the Biodiversity Financial Needs Assessment (FNA) is the draft Action Plan for the implementation of the Priorities for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023, the Program for the Development of Nut Crops in the Kyrgyz Republic until 2025, and the costs of the SAEPF foreseen for biodiversity conservation measures.

According to the results of the FNA, the total need for financing biodiversity for 2019–2023 amounted to 1 958.0 million KGS (see Table 1). Of which about 38.7% or 1 758.1 million KGS have confirmed sources of financing from the national budget and funds of development partners, including donors. The financing gap amounted to 61.3% of the need or 1 199.8 million KGS.

This includes the need for financing of 1 184.6 million KGS for the execution of the revised Action Plan for the implementation of the Priorities (2030) for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023. Of which at the moment, funds in the amount of 423.4 million (or 64.3 % of needs) have been confirmed for the implementation of the NBSAP Action Plan by development partners for financing. The financing gap is 761.3 million KGS or 64.3 % of the total expenditures needed for the Plan implementation.

For the further implementation of the Program for the Development of Nut Crops in the Kyrgyz Republic until 2025, according to estimates, the need is 773.3 million KGS. Of which 43% or 334.8 million KGS will be financed by the national budget. The financing gap is 57% or 438.5 million KGS.

According to the BIOFIN methodology, which makes it possible to more fully take into account the expenditures for biodiversity conservation, an analysis was made for the FNA. The FNA identified eight of nine categories of BIOFIN. Of all the categories of BIOFIN, the major amount of resources necessary for such categories as: “Sustainable use” – 41 %; “Biodiversity awareness and knowledge” – 28 % and “Biodiversity and development planning” – 15 % and “Protected areas and other conservation measures” – 11 %: The remaining categories fall within less than 3 %.

- “Sustainable use”
- “Biodiversity awareness and knowledge”
- “Biodiversity and development planning”
- “Protected areas and other conservation measures”
- The remaining categories
The BIOFIN categories are closely aligned with the Aichi targets - Strategic Plan of the Convention on Biological Diversity. The results of the financial needs assessment are distributed according to the Aichi targets. The major expenses will be required to achieve the Strategic Goal B. “Reduce the direct pressures on biodiversity and promote sustainable use” – it will require 44% of total expenditures and Strategic Goal A. “Address the underlying causes of biodiversity loss” – 29% of total expenditures.

According to the forecast of the “Public and Private Environmental Expenditure Review with a Focus on Biodiversity and Climate Change Adaptation” and the FNA, the national budget will have to play an important role in financing biodiversity conservation. With the current trend of financing, 4 200.0 million KGS can be allocated from the national budget in 2019-2023. These are direct and indirect costs of all ministries and agencies involved in biodiversity conservation. This amount also includes the costs of the budget program of the SAEPF “Biodiversity conservation” (not included in the FNA).

At the same time, according to the draft Action Plan for the implementation of the Priorities for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023 (NBSAP) confirmed level of funding of Action Plan measures from the republican budget is 176.3 millions KGS.

Confirmed financing allocated for the Program for the Development of Nut Crops in the Kyrgyz Republic until 2025 for the period from 2019 to 2023 is 334.4 millions KGS.
The FNA was developed as part of the overall assessment of the environmental policy of the Kyrgyz Republic conducted by the UNDP Biodiversity Finance Initiative (BIOFIN).

The project is implemented by the BIOFIN national team, using the tools of coordination and cooperation in the form of the Project Advisory Board under the Ministry of Finance of the Kyrgyz Republic, interagency working groups under the Ministry of Finance and SAEPF, as well as other platforms uniting key ministries and agencies, civil sector, research institutes.

The BIOFIN model is based on a four-stage process:

1. **Review of the policy and institutional framework** for financing environmental protection with a focus on biodiversity conservation and climate change adaptation measures.
2. **Review of public and private expenditures** on environmental protection with a focus on biodiversity conservation and climate change adaptation measures.
3. **Assessment** of biodiversity conservation financial needs.
4. **Development of a financial plan and resource mobilization plan** to reduce the financing gap for biodiversity conservation.

The FNA uses information and analytical data developed in the framework of the national BIOFIN process.

The main strategic documents for the FNA were analyzed in the Review of the policy and institutional framework for environmental financing with a focus on biodiversity and climate change adaptation measures (see Section 3.3.).

**The system of strategic documents** defining the state policy in the field of biodiversity in accordance with the Review consists of the following national and sectoral documents:

1. Program of the Government of the Kyrgyz Republic “Unity. Trust. Creation» until 2023, which defines the key actions necessary for the sustainable development of the country (*at the time of the FNA was under development*).
2. Priorities for Biodiversity Conservation of the Kyrgyz Republic for the period up to
1. Introduction

5. Concept for Forest Industry Development for the period up to 2025.  

The principles and main activities of the Kyrgyz Republic in the field of biodiversity conservation were determined by the national strategy and action plan for the conservation of biodiversity “Priorities for Biodiversity Conservation of the Kyrgyz Republic for the period up to 2024” and the Action Plan for their implementation for 2014-2020. The main goal of the Priorities is the conservation and rational use of biodiversity of the Kyrgyz Republic for the purposes of sustainable socio-economic development.

The revision of the Priorities and the Action Plan is currently underway. It has been initiated due to the fact that the Priorities for Biodiversity Conservation do not sufficiently reflect the goals and objectives of the Strategic Plan for the Conservation and Sustainable Use of Biodiversity for 2011-2020 of the Convention on Biological Diversity and the Aichi goals and in connection with the adoption of the Sustainable Development Goals. In addition, the lack of specific performance indicators for the implementation of measures of the current Plan does not allow to evaluate the effectiveness of the work of government agencies and the actual dynamics of the state of biodiversity in the country.

As part of the revised Priorities for Biodiversity Conservation of the Kyrgyz Republic until 2030 and the Action Plan for their implementation, new priorities are based on the five strategic goals and 19 targets of Aichi, as well as on 12 objectives of the Sustainable Development Goals.

In order to preserve and restore the number of snow leopards, a National Strategy for the Conservation of the Snow Leopard in the Kyrgyz Republic for 2013–2023 and a Plan for its implementation for 2013–2017 have been developed. The Global Snow Leopard & Ecosystem Protection Program until 2020, is being implemented, aimed at supporting the national priority actions of 12 countries of the snow leopard habitat, promoting transboundary cooperation on common issues throughout the area.

The Priorities for Wetlands Conservation of the Kyrgyz Republic until 2023 and the Implementation Action Plan for 2013-2017 are being implemented, the main purpose of which is to preserve wetlands of international importance and increase the number of waterfowl in the Kyrgyz Republic.
Considering that the strategic framework for the implementation of national objectives for the conservation of biodiversity and the fulfillment of international obligations to the Convention on Biodiversity is the National Strategy (Priorities) and Action Plan for the Conservation of Biodiversity, the draft Action Plan for the implementation of the Priorities (2030) for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023 includes the measures to implement the National Strategy for the Conservation of the Snow Leopard and the Priorities for Wetlands Conservation. Approved implementation plans for these two documents were completed in 2017.

The Concept for Forest Industry Development for the period up to 2025\(^{10}\) defines the strategy for the development of the forest industry and ensures the creation of the necessary conditions for the conservation, enhancement, rational use of forests and sustainable development of the forest sector. In 2017, the development of a new Concept for forest industry development for the period up to 2030 began.

In order to preserve rare crops, which mainly grow in regions with a higher population density, the Program for Nut Crops Development in the Kyrgyz Republic until 2025 is being implemented.

Based on the analysis of the above strategic documents, the main documents have been identified for use in calculating the FNA expenses:
- Draft Action Plan for the implementation of the Priorities (2030) for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023;
- Program for Nut Crops Development in the Kyrgyz Republic until 2025.

The FNA is designed to answer the following questions:
- What kind of funding does a country really need to achieve its stated biodiversity targets?
- What are the amounts of future expenditures for biodiversity financing categories according to the BIOFIN classification?
- To what extent are the costs consistent with government policies and government priorities?
- What are the amounts of internal and external financing and their ratio?

The FNA covers the period from 2019 to 2023 and focuses on identifying the biodiversity financial needs and the scarcity of funds for implementing biodiversity strategies.

Costs include actually allocated and spent funds. Consideration of these three different “stages” of expenditures in the budgeting process will allow us to identify the relevant problems of distribution and absorption. This definition is based on the BIOFIN methodology, and a similar definition is commonly used in the standard cost review.

Objectives of the FNA include:
- Analyze financial needs and integrate their assessment in the national planning and budgeting process to achieve optimal impact.
- Refine strategies and measures of national biodiversity plans (NBSAPs) to describe the

\(^{10}\) Resolution No. 256 of the Government of the Kyrgyz Republic dated 14 April 2004
cost-measurable measures that are associated with the expected biodiversity results allowing for the calculation of expenses.

- Provide a detailed budget for each cost-measurable measure by determining the unit costs within the planned period.
- Use detailed budgets to develop a more robust rationale for financing biodiversity, linking the expenses for achieving specific results with the national budget process, using program budgeting tools.
- Establish priority biodiversity strategies and measures based on specific biodiversity criteria and expenses.
- Establish interdependency of the FNA and the Review of biodiversity expenditures through the attribution of allocations by BIOFIN categories and subcategories.
- Calculate the funding gap as the difference between the planned and confirmed biodiversity expenditures and financial needs identified in the FNA.

The FNA document consists of four functional sections:

1. Introduction.
2. A brief description of the methodology, which describes the approaches used to carry out FNA for calculating biodiversity expenditures. They cover the procedure for the formation of action plans for the implementation of strategies and the calculation of measures necessary for the implementation of the Biodiversity Strategies.
3. Results of the FNA. The section provides general figures for calculation of expenses. Cost estimates, cost comparisons and priorities for various biodiversity outcomes (by categories, national priorities, organizations and sectors) are described. At the end of the section an analysis of the biodiversity financing gap is presented.
4. Findings and recommendations developed as a result of the FNA.
The process of assessing financial needs consisted of 6 stages (see Fig. 1). The assessment was carried out by the BIOFIN team in close cooperation with the developers of the draft Action Plan for the implementation of the Priorities (2030) for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023, the main stakeholders and experts in the field of sustainable development, biodiversity and public finance.

**Figure 1. Biodiversity financial needs assessment process**

1. **Preparation**
   Scope definition

2. **Identification of actions**
   to implement strategies and clarifying NBSAP measures

3. **Construction of tables for calculation of expenses.**
   Conducting financial and economic evaluation of strategies

4. **Clarification of expenses, coordination with experts**

5. **Analysis of the result**
   of the calculation of costs

6. **Assessment**
   of financial needs

Methodological guidelines for financial and economic calculation and assessment of the possible expenses for implementing bills, developed by a group of experts in 2015, were used to assess the financial needs for implementing biodiversity strategies. In accordance with them the following works were carried out:

1. **Determination of the FNA scope**, for which strategic documents related to biodiversity were analyzed.

2. **Identification of actions for the implementation of strategies and clarification of measures of strategic documents**. The tasks and measures that should be implemented during their implementation were clarified based on the focus of strategic documents. The purpose of the clarification is to understand whether the measures fully cover the achievement of the task, as there must be a link between the goals, objectives and means/measures to achieve them.

The expected results were analyzed, responsible performers and deadlines were determined. Long-term results at the end of the implemented period and short-term results of measures were evaluated.
Meetings, consultations were held in coordination with the parties involved in the activities and expected results to develop a common understanding between the developers and the performers of how the document should be implemented. The essence of measures of the Action Plan was clarified with developers. The activities for the implementation of the strategy were coordinated with performers. Clarification of objectives and measures is necessary to detail the measures and transmit the activities into “cost-measurable measures” and determine the expenses, since in order to calculate the expenses for implementing the measure, it is necessary to understand the various details regarding this measure, including the timing, scale, location, responsible organization, etc. If the measures described in the Strategy are too ambiguous, do not have quantitative results and are not defined spatially, the assessment of budget expenditures will be of poor quality and are at risk of being not taken by financing decision makers.

3. **Construction of tables for calculation of expenses and conducting financial and economic evaluation of strategic documents.** The results of the identification of actions were arranged in a logical structure. A financial and economic assessment of strategies was carried out on the basis of the cost estimation algorithm (budgeting) of the execution of the action plan for the implementation of strategies. A list of the cost items was compiled (price list) for NBSAPs.

Successful implementation of the bill as a whole will consist in the consistent implementation of a set of measures and objectives. Accordingly, one of the most important components of the cost estimate of a strategy is the “price” of each of the resources that will be involved in the implementation of this set of measures and objectives.

The cost of implementing each measure essentially depends on the cost and quantity of all the resources that are supposed to be used. At the same time, in a market economy, when the cost of goods and services varies depending on the market situation, it is important to establish a single cost of goods and services, which will be used in further calculations. This will avoid inconsistencies in the overall cost estimates of the strategy.

Cost indicators of the price list are divided into two groups: (1) remuneration of labor (human resources), (2) cost of goods and services.

To calculate the cost of strategies, a bottom-up method was applied – from measures to goals, and the calculation sequence is presented in Figure 2.

**Figure 2. Calculation sequence**

- The cost of measures is determined
  - The cost of the measure is equal to the sum of the expenditures for all the resources to be used for its implementation, while the expenditures for one resource is the product of quantity, price and time period.

- The cost of objectives is determined
  - The cost of the objective = the sum of the costs of the measures included in each objective

- The cost of goals is determined
  - The cost of the goal = the sum of the costs of all objectives envisaged to achieve the goal
The need for funding the objective is the sum of the total needs for all the measures laid down in the Action Plan for the implementation of this objective. In addition, the breakdown by year was taken into account when summing, that is, the needs are summed up by the respective years (the timeline for each measure is indicated in the Action Plan for the implementation of the strategy). As a result, a consolidated budget table has been obtained, which includes calculated needs and all available funding opportunities for all priorities, objectives and measures.

4. Clarification of expenses, coordination with experts. Preliminary calculations were agreed with the NBSAP developers. During the test and coordination with the developers of the Strategy, various options for the implementation of measures were considered and realistic expected expenses were selected.

5. Analysis of the result of the calculation of expenses. The results of calculation of expenses for the implementation of the Strategies were summed up and summarized for stakeholders and broken down according to the BIOFIN categories and performers.

6. Assessment of financial needs. Financial security of biodiversity strategies is key to successful implementation. In the case of lack of or insufficient funding, the realistic achievement of the goals of the strategic document becomes questionable, and the Action Plan is obviously unfeasible.

In the course of this work, all available funding opportunities were analyzed for all priorities, objectives and measures, and an assessment of the funding gap for the NBSAP Action Plan was determined.

Information base for the biodiversity FNA are:

- interviews with stakeholders and experts of the draft NBSAP development team;
- data and information from official reports and strategic documents of state bodies;
- statistical and analytical materials;
- documents of international organizations;
- normative legal acts of the Kyrgyz Republic.

The amounts of financing for biodiversity conservation from the state budget are obtained from official sources: reports of the Ministry of Finance of the Kyrgyz Republic, ministries and agencies. The program budget of SAEPF for 2019-2021 is very informative about the future expenditures of the national budget. The FNA provides calculation of expenses for biodiversity conservation in general and in each ministry and agency involved in the implementation of the NBSAP.

The data on and expenses of official development partners and non-governmental organizations are obtained from official information, as well as through interviews with the draft NBSAP developers and SAEPF specialists.

Calculations of expenses for the implementation of NBSAPs were discussed at working meetings with the consultative group on the development of the draft NBSAP and SAEPF specialists. The FNA was reviewed at the meetings of the Interagency Working Group of BIOFIN and PEI Initiatives.

11 The interagency working group for the development and implementation of measures aimed at integrating components of sustainable development, aspects of poverty and environment, biodiversity, green economy into the budgeting process was formed by the Order No. 153-p of the Ministry of Finance of the Kyrgyz Republic dated 26.09.2016.
3. Results of Biodiversity Financial Needs Assessment

In Kyrgyzstan, there is no convincing justification for financing environmental protection measures, which reduces their priority for state budget decision makers. In particular, this happened for the former and current NBSAPs - most of them did not include detailed budgets at all.

3.1. General Parameters

The strategic framework for the implementation of national objectives for the conservation of biodiversity and the fulfillment of international obligations to the Convention on Biodiversity are NBSAPs until 2030, which are currently being updated.

Within the framework of the new NBSAPs, priorities correspond to the five strategic goals and 19 Aichi targets, as well as the 12 targets of the fifteenth sustainable development goal “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”.

In Kyrgyzstan, there are strategic documents in the field of biodiversity. For two of them, the formal deadlines for action plans for the implementation of the first stages were completed:

- Plan for the implementation of the first stage (2013-2017) of the National Strategy for the Conservation of the Snow Leopard in the Kyrgyz Republic for 2013-2023\(^\text{12}\)
- Plan for the implementation of the first stage (2013-2017) of the Priorities for the Conservation of Wetlands of the Kyrgyz Republic until 2023\(^\text{13}\).

The activities and plans for the subsequent stages of these strategic documents are included in the draft Action Plan for the implementation of the Priorities (2030) for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023.

The Program for Nut Crops Development in the Kyrgyz Republic until 2025 continues to be implemented\(^\text{14}\)

According to the results of the assessment, the total biodiversity financing needs for 2019–2023 are 1,958.0 million KGS (see Table 1 and Figure 2), of which 1,184.6 million KGS is required to achieve the NBSAP goal, which is 60.5% of the total biodiversity financing needs and 773.3 million KGS or 39.5% of the total needs for the implementation of the Program for Nut Crops Development in the Kyrgyz Republic.

\(^{12}\) Resolution of the Government of the Kyrgyz Republic No. 732 dated 19 October 2012
\(^{13}\) Resolution of the Government of the Kyrgyz Republic No. 569 dated 18 October 2013
\(^{14}\) Resolution of the Government of the Kyrgyz Republic No. 293 dated 2 June 2014
3.1. General Parameters

Table 1. Biodiversity financial needs by strategic documents for 2019-2023, million KGS

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Total in 2019-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grand total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required</td>
<td>407.5</td>
<td>485.8</td>
<td>365.6</td>
<td>346.1</td>
<td>353.0</td>
<td>1958.0</td>
</tr>
<tr>
<td>Existing</td>
<td>176.4</td>
<td>166.5</td>
<td>151.4</td>
<td>136.9</td>
<td>126.9</td>
<td>758.1</td>
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<tr>
<td>Gap</td>
<td>231.0</td>
<td>319.3</td>
<td>214.1</td>
<td>209.2</td>
<td>226.1</td>
<td>1199.8</td>
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<td><strong>NBSAP</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required</td>
<td>252.8</td>
<td>331.2</td>
<td>210.9</td>
<td>191.4</td>
<td>198.4</td>
<td>1184.6</td>
</tr>
<tr>
<td>Existing</td>
<td>109.5</td>
<td>99.5</td>
<td>84.5</td>
<td>69.9</td>
<td>60.0</td>
<td>423.4</td>
</tr>
<tr>
<td>Gap</td>
<td>143.3</td>
<td>231.6</td>
<td>126.4</td>
<td>121.5</td>
<td>138.4</td>
<td>761.3</td>
</tr>
<tr>
<td><strong>Program for Nut Crops Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required</td>
<td>154.7</td>
<td>154.7</td>
<td>154.7</td>
<td>154.7</td>
<td>154.7</td>
<td>773.3</td>
</tr>
<tr>
<td>Existing</td>
<td>67.0</td>
<td>67.0</td>
<td>67.0</td>
<td>67.0</td>
<td>67.0</td>
<td>334.8</td>
</tr>
<tr>
<td>Gap</td>
<td>87.7</td>
<td>87.7</td>
<td>87.7</td>
<td>87.7</td>
<td>87.7</td>
<td>438.5</td>
</tr>
</tbody>
</table>

Source: NBSAP, Program for the Nut Crops Development, MF KR, own calculations

Not all financial needs of strategic documents are covered by financing: the government has to find 1 199.8 million KGS or 61.3% of the total needs for the implementation of all planned measures under two strategic documents. The contribution of NBSAPs to the overall biodiversity conservation deficit is 38.9 percentage points, the remaining 22.4 - the Program for Nut Crops Development in the Kyrgyz Republic until 2025.

The calculation does not include the projected expenditures of the national budget for measures that are implemented by state bodies within their powers. Thus, the budget of the SAEFP in 2019-2023 can spend up to 1 109.4 million KGS on the implementation of biodiversity conservation measures.

In addition, Kyrgyzstan is developing a concept for the development of the forest sector. At the time of the development of this review (November 2018), this concept was not approved and the financial need was not known.

Figure 3. Biodiversity financial needs from all sources in 2019-2023, million KGS, %

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations
Separate consideration of strategic documents shows that both are experiencing a shortage of funds (see Table 1 and Figures 3 and 4).

For the implementation of NBSAPs, it is necessary to find additional 761.3 million KGS, which is 64% of the financial needs of the strategic document (see Fig. 4.a). At the same time, out of more than 160 NBSAP measures, only 23 have no financial gap. All others require the mobilization of additional resources, sources of which should be official development partners and NGOs.

The Program for Nut Crops Development in the Kyrgyz Republic until 2025 was underfunded by 57%. For its full implementation, additional 438.5 million KGS must be found. It should be noted that during the development the Plan of measures was not broken down by years. Therefore, for evaluation, the program budget was divided equally for the forecast period (see Figure 4.b).

Figure 4. Biodiversity financial needs by each strategic document from all sources in 2019-2023, million KGS, %

a) Action Plan of the Priorities (2030) for Biodiversity Conservation of the Kyrgyz Republic for 2019-2023

b) Program for Nut Crops Development in the Kyrgyz Republic until 2025

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations
3.2. Financial Needs Assessment according to the BIOFIN Methodology

Financial needs assessments were carried out using the BIOFIN approach: expenditures are classified into BIOFIN categories, which are a grouping of various areas of environmental policy. The BIOFIN categories are very well aligned with the Aichi strategic goals - the strategic plan of the Convention on Biological Diversity.

The NBSAP provides for measures corresponding to eight of the nine BIOFIN categories. Table 3 shows these categories and how they correspond to Aichi strategic goals. In contrast to the results of the Public and Private Expenditure Review in the Kyrgyz Republic for 2011-2016, in which seven of the nine BIOFIN categories were identified, the Biosafety category was identified in the Biodiversity Financial Needs Assessment, which included measures to combat invasive alien species.

Table 2. BIOFIN categories and Aichi strategic goals: spending need according to BIOFIN Financial Needs Assessment (FNA) and current costs according to 2011-2016 Public and Private Expenditure Review (PPER)

<table>
<thead>
<tr>
<th>BIOFIN categories</th>
<th>Aichi Goals</th>
<th>FNA</th>
<th>PPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environmental and biodiversity awareness and knowledge</td>
<td>Goal A. Address the underlying causes of biodiversity loss</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>2. Green economy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Pollution management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sustainable use</td>
<td>Goal B. Reduce the direct pressures on biodiversity and promote sustainable use</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>5. Biosafety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Protected areas and other conservation measures</td>
<td>Goal C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>7. Restoration</td>
<td>Goal D. Enhance the benefits to all from biodiversity and ecosystem services</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>8. Access and benefit sharing</td>
<td>Goal E. Enhance implementation through participatory planning, knowledge management and capacity building</td>
<td>■</td>
<td>■</td>
</tr>
</tbody>
</table>

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations

Based on the financial needs assessment, 95% of financial needs fall into 4 BIOFIN categories: “Sustainable use”, “Biodiversity awareness and knowledge”, “Biodiversity and development planning”, “Protected areas and other conservation measures” (see Table 3 and Figure 5.).

The NBSAP measures cover all eight BIOFIN categories, while the Program for Nut Crops Development until 2025 is present in only three.
The financial gap, as seen in Table 3, is significant for all BIOFIN categories. The planned biodiversity conservation measures are very well aligned with the Aichi Strategic Goals - the strategic plan of the Convention on Biological Diversity (see Table 3).

- For the Goal A. «Address the underlying causes of biodiversity loss», the required resources amount to 328.6.0 million KGS with a need for 575.4 million KGS. That is, the gap is 57.1% of the required resources.

- The highest costs will be required to achieve the Goal B. “Reduce the direct pressures on biodiversity and promote sustainable use”, which will require 864.0 million KGS. The gap is 57.8%.

- 221.9 million KGS is needed to achieve the Goal C. in Kyrgyzstan “Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity”. Of these, 39.5 million KGS or 17.8% were confirmed.

- The financial needs for the Aichi Goal D. “Enhance the benefits to all from biodiversity and ecosystem services” are 12.6 million KGS, the gap is 73.8%.

- Policy and legislation development as well as biodiversity coordination activities that are at the core of the Goal E. “Enhance implementation through participatory planning, knowledge management and capacity building” require 284.2 million KGS, of which the Government and development partners are ready to allocate 103.6 million KGS. The remaining funds must be sought.

### Table 3. Results of biodiversity financial needs assessment by BIOFIN categories in 2019-2023, million KGS

<table>
<thead>
<tr>
<th>Goal A. Address the underlying causes of biodiversity loss</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green economy</td>
<td>575.4</td>
<td>246.8</td>
<td>-328.6</td>
</tr>
<tr>
<td>Biodiversity awareness and knowledge</td>
<td>544.9</td>
<td>239</td>
<td>-305.9</td>
</tr>
<tr>
<td>Pollution management</td>
<td>28.3</td>
<td>7.7</td>
<td>-20.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>864.0</strong></td>
<td><strong>364.9</strong></td>
<td><strong>-499</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal B. Reduce the direct pressures on biodiversity and promote sustainable use</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biosafety</td>
<td>64.4</td>
<td>11.4</td>
<td>-52.0</td>
</tr>
<tr>
<td>Sustainable use</td>
<td>799.6</td>
<td>353.5</td>
<td>-446.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>864.0</strong></td>
<td><strong>364.9</strong></td>
<td><strong>-499</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected areas and other conservation measures</td>
<td>221.9</td>
<td>39.5</td>
<td>-182.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>221.9</strong></td>
<td><strong>39.5</strong></td>
<td><strong>-182.4</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal D. Enhance the benefits to all from biodiversity and ecosystem services</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restoration</td>
<td>12.6</td>
<td>3.3</td>
<td>-9.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12.6</strong></td>
<td><strong>3.3</strong></td>
<td><strong>-9.3</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal E. Enhance implementation through participatory planning, knowledge management and capacity building</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiversity and development planning</td>
<td>284.2</td>
<td>103.6</td>
<td>-180.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>284.2</strong></td>
<td><strong>103.6</strong></td>
<td><strong>-180.6</strong></td>
</tr>
</tbody>
</table>

**Total for biodiversity conservation** | 1958.0 | 758.1 | -1199.8 |

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations
3.2 Financial Needs Assessment according to the BIOFIN Methodology

Figure 5. Structure of biodiversity financial needs by BIOFIN categories in 2019-2023, %

Source: MF KR, own calculations

Category «Sustainable Use»

Measures of the category “Sustainable use” occupy the largest share in financial needs - 40.8% or 799.6 million KGS (see Table 3 and Figure 4). Within this category, measures are planned for both strategic documents analyzed in this review.

Table 4. Required and existing resources for financing biodiversity conservation measures for BIOFIN category “Sustainable use” in 2019–2023, million KGS, % against subcategory needs

<table>
<thead>
<tr>
<th>BIOFIN subcategories</th>
<th>Required mln KGS</th>
<th>Existing mln KGS</th>
<th>%</th>
<th>Gap mln KGS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBSAP</td>
<td>57,2</td>
<td>32,1</td>
<td>56,1</td>
<td>-25,1</td>
<td>-43,9</td>
</tr>
<tr>
<td>Sustainable wildlife</td>
<td>7,4</td>
<td>7,4</td>
<td>100,0</td>
<td>0</td>
<td>0,0</td>
</tr>
<tr>
<td>Sustainable forestry</td>
<td>1,6</td>
<td>1,6</td>
<td>100,0</td>
<td>0</td>
<td>0,0</td>
</tr>
<tr>
<td>Sustainable agriculture</td>
<td>27,7</td>
<td>2,6</td>
<td>9,4</td>
<td>-25,1</td>
<td>-90,6</td>
</tr>
<tr>
<td>Sustainable rangelands</td>
<td>20,4</td>
<td>20,4</td>
<td>100,0</td>
<td>0</td>
<td>0,0</td>
</tr>
<tr>
<td>Program for Nut Crops Development</td>
<td>742,4</td>
<td>321,4</td>
<td>43,3</td>
<td>-421,0</td>
<td>-56,7</td>
</tr>
<tr>
<td>Sustainable forestry</td>
<td>742,4</td>
<td>321,4</td>
<td>43,3</td>
<td>-421</td>
<td>-56,7</td>
</tr>
<tr>
<td>Total for the category</td>
<td>799,6</td>
<td>353,5</td>
<td>44,2</td>
<td>-446,1</td>
<td>-55,8</td>
</tr>
</tbody>
</table>

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations

It should be noted that measures of the Program for Nut Crops Development require 742.4 million KGS, which is 92.8% of the category funds (see Table 4). All of them are necessary for the implementation of measures of the subcategory “Sustainable forestry”: creation of plantations of nut crops, fight against pests, creation of workshops for processing nuts and fruits, as well as creation of the necessary material and technical base of forest enterprises. These measures are partially financed for implementation- the gap is 446.1 million KGS or 56.7%.
Figure 6. Required and existing resources for financing biodiversity conservation measures for BIOFIN category “Sustainable use” in 2019–2023

The main subcategory in this category is “Sustainable forestry”, for which is planned 743.8 million KGS or 78.5% of the FNA costs, all of which should be incurred in the framework of implementation of the Program for Nut Crops Development – 742.4 million KGS and partly in the framework of NBSAP – 1.4 million KGS (see Figure 5). The NBSAP contributes to this subcategory through certification of the forest management system of Toktogul and Toguz-Toro forest enterprises according to FSC standards.

The remaining subcategories of the described BIOFIN category are covered by NBSAP measures:

- “Sustainable agriculture”. The main measure here is the creation and restoration of forest shelter belts on agricultural lands. The measure is very important, but full funding is not yet provided for it – the gap is 90.6% of the required resources.
- “Sustainable rangelands” – here it is supposed to create a pilot fund of adaptation practices at pasture user organizations to create alternative sources for them. 17
- “Sustainable wildlife” is a resource efficient subcategory. Within its framework, it is proposed to allocate micro-grants to promote sustainable use.

Category «Biodiversity awareness and knowledge»

The category “Biodiversity awareness and knowledge” is the second most resource-intensive category of BIOFIN, which requires 221.9 million KGS for the implementation of its measures, which represents 27.8% of the needs of two strategic documents in the field of biodiversity (see Table 3 and Figure 6).

All subcategories of this category are implemented by NBSAPs, and the Program for Nut Crops Development makes a small contribution in the amount of 22.0 million KGS to the subcategory...
3.2 Financial Needs Assessment according to the BIOFIN Methodology

“Biodiversity awareness” - the most resource-intensive subcategory, the financial needs of which are 234.4 million KGS. (43.0% of the category needs - see Table 5 and Figure 7). The contribution to NBSAP measures is much more and amounts to 212.4 million KGS. Both documents propose measures for information support of the development of walnut forests, activities for environmental awareness and education of the population, with a view to developing its proper attitude towards sustainable use.

The second most resource-intensive subcategory in this category is “Biodiversity scientific research”. It corresponds to research activities in the field of biodiversity planned by the NBSAP, for which will be allocated 146.1 million KGS (see. Figure 5). As part of the NBSAP, 20 research studies are planned, including:

- study of the state of pasture resources;
- assessment of habitat reduction of biodiversity objects;
- identification of the places of passage of migration routes of animals to create ecological corridors;
- study of the state of endemic fish species in the Issyk-Kul lake;
- assessment of the status of rare and endangered plant and animal species;
- study of waterfowl in Issyk-Kul, Son-Kul and Chatyr-Kul lakes, as well as in other water bodies;
- study of snow leopard;
- etc.

Table 5. Required and existing resources for financing biodiversity conservation measures for BIOFIN category “Biodiversity awareness and knowledge” in 2019–2023, million KGS, % against subcategory need

<table>
<thead>
<tr>
<th>BIOFIN subcategories</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mln KGS</td>
<td>mln KGS</td>
<td>%</td>
</tr>
<tr>
<td>NBSAP</td>
<td>522,9</td>
<td>229,5</td>
<td>43,9</td>
</tr>
<tr>
<td>Biodiversity communication</td>
<td>44,1</td>
<td>20,1</td>
<td>45,6</td>
</tr>
<tr>
<td>Biodiversity scientific research</td>
<td>146,1</td>
<td>24,7</td>
<td>16,9</td>
</tr>
<tr>
<td>Non-formal biodiversity education, including technical training</td>
<td>21,6</td>
<td>8,7</td>
<td>40,3</td>
</tr>
<tr>
<td>Valuation of biodiversity and ecosystems</td>
<td>79,4</td>
<td>75,5</td>
<td>95,1</td>
</tr>
<tr>
<td>Biodiversity awareness</td>
<td>212,4</td>
<td>95,2</td>
<td>44,8</td>
</tr>
<tr>
<td>Formal biodiversity education</td>
<td>19,2</td>
<td>5,2</td>
<td>27,1</td>
</tr>
<tr>
<td>Program for Nut Crops Development</td>
<td>22</td>
<td>9,5</td>
<td>43,2</td>
</tr>
<tr>
<td>Biodiversity awareness</td>
<td>22</td>
<td>9,5</td>
<td>43,2</td>
</tr>
<tr>
<td>Total for the category</td>
<td>544,9</td>
<td>239</td>
<td>43,9</td>
</tr>
</tbody>
</table>

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations

As part of the BIOFIN subcategory «Formal environmental education» it is planned in the framework of the NBSAP to develop and introduce conservation topics and biodiversity values in the national educational curricula of universities, as well as to introduce teaching materials for secondary schools and others. 19.2 million KGS or 3.5% of NBSAP costs per category will be required to do this in

Training for employees of state and municipal authorities, organizing and conducting environmental summer camps for young people, etc. are planned by NBSAPs in the framework of the subcategory “Non-formal biodiversity education, including technical training”. For which 21.6 million KGS or 4.0% of the category needs is planned for 5 years.

**Figure 7. Required and existing resources for financing biodiversity conservation measures for BIOFIN category “Biodiversity awareness and knowledge” in 2019–2023**

a) structure, %

b) existing resources and gap, %

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations
Designations: PNC - Program for Nut Crops Development until 2025, BD - biodiversity

Measures to introduce a system of environmental-economic accounting for pasture ecosystems and approval of environmental management standards, taking into account ecosystem possibilities and benefits, are foreseen by NBSAPs for the subcategory “Valuation of biodiversity and ecosystems”. The financial needs for this subcategory are 79.4 million KGS or 14.6% of costs per category. This is the only subcategory with full financing.

The financial needs of the subcategory “Biodiversity communication” are 44.1 million KGS (8.1% of the category needs). As part of the subcategory, it is planned in the NBSAP to hold an information
campaign on legal acts and agreements on the distribution of monetary and non-monetary benefits from access to genetic resources, an information campaign on access to genetic resources and benefit sharing, information activities among communities for dissemination of information about the principles of Nagoya Protocol and Biodiversity Convention, to develop and implement the biodiversity component of the environmental data information system “Kerege”, etc.

Six of the seven subcategories of this category do not have sufficient financial coverage. The gap ranges from 50 to 80% of the required resources (see Figure 6.b). Thus, the category “Biodiversity awareness and knowledge” is at risk of not achieving its goals.

Category “Biodiversity and Development Planning”

“Biodiversity and development planning” is the third resource-intensive BIOFIN category, which in addition to NBSAP measures, includes measures of the Program for Nut Crops Development.

The total financial needs for measures corresponding to this category are 284.2 million KGS (14.5% of the total biodiversity financial needs for 2019–2023), including NBSAPs - 275.3 million and the Program for Nut Crops Development- 8.9 million KGS (see Tables 3 and 6 and Figure 5 and 8).

Table 6. Required and existing resources for financing biodiversity conservation measures for BIOFIN category «Biodiversity and development planning» in 2019–2023, million KGS, % against subcategory needs

<table>
<thead>
<tr>
<th>BIOFIN category</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mln KGS</td>
<td>mln KGS</td>
<td>mln KGS</td>
</tr>
<tr>
<td>NBSAP</td>
<td>275,3</td>
<td>99,8</td>
<td>-175,6</td>
</tr>
<tr>
<td>Biodiversity laws, policies, plans</td>
<td>154,0</td>
<td>52,6</td>
<td>-101,3</td>
</tr>
<tr>
<td>Biodiversity coordination and management</td>
<td>121,4</td>
<td>47,1</td>
<td>-74,3</td>
</tr>
<tr>
<td>Program for Nut Crops Development</td>
<td>8,9</td>
<td>3,9</td>
<td>-5,0</td>
</tr>
<tr>
<td>Biodiversity laws, policies, plans</td>
<td>8,9</td>
<td>3,9</td>
<td>-5,0</td>
</tr>
<tr>
<td>Total for the category</td>
<td>284,2</td>
<td>103,6</td>
<td>-180,6</td>
</tr>
</tbody>
</table>


These strategic documents intersect in the framework of the BIOFIN subcategory “Biodiversity laws, policies, plans” (see Table 6 and Figure 8).

The NBSAP plans to improve the state policy in the field of biodiversity conservation, creating the necessary institutional framework for this, through:

- development of sector-specific action plans, for example, for the conservation of migratory mammals or for adaptation to climate change, etc.;
- development of instructions and procedures, for example, Procedure for carrying out biotechnical measures, Procedure for artificial breeding of endemic fish, Procedure for
wildlife accounting, Instructions for the preparation of hunting management plans, etc.;

- improvement of normative legal acts, for example, approval of the Procedure for conducting a systematic study of ichthyofauna for scientific and economic purposes, approval of uniform standards for the collection, storage and presentation of information on biodiversity, etc.;
- inclusion of biodiversity in the strategic documents of the national level and regional plans for social and economic development.

The Program for Nut Crops Development involves the development of normative legal acts for the development of nut crops and measures for monitoring and evaluating the implementation of the Program itself.

Measures of the subcategory “Biodiversity coordination and management” will be implemented by NBSAPs. Financial needs of the subcategory for 2019-2023 are 121.4 million KGS. The subcategory includes such important activities as:

- carrying out reproduction (biotechnical) measures for the conservation of wild animals;
- creation of inventories of fauna and flora of the Kyrgyz Republic;
- update of the Red Book of the Kyrgyz Republic;
- development of mechanisms for organizing and conducting public control and monitoring of the activities of protected areas, forestry enterprises, hunting farms;
- organization of public councils of protected areas;
- development of a biodiversity financing plan;
- etc.

**Figure 7. FNA for the category “Biodiversity and development planning” in 2019-2023, million KGS,%**

a) structure, %

![Figure 7. FNA for the category “Biodiversity and development planning” in 2019-2023, million KGS,%](image)
The activities planned in the strategic documents in the field of biodiversity which correspond to the category “Biodiversity and development planning” are crucial for solving all the tasks and achieving the biodiversity conservation goal for the next 5 years, since they involve building an institutional framework for coordinating and managing biodiversity conservation processes. Therefore, the shortage of funds, averaging 63.5% for the category, is a threat to the success of the implementation of both strategic documents.

The government needs to make every effort to find resources for this category.

**Category “Protected Areas and Other Conservation Measures”**

Measures of the category “Protected areas and other conservation measures” will be fully implemented by the NBSAP. Financial needs of the category in 2019-2023, according to calculated data, will amount to 221.9 million KGS, which is 11.3% of the required biodiversity costs (see Table 3 and Figure 5).

Within the category it is necessary to finance measures of seven subcategories, the most resource-intensive of which is “Other effective area-based conservation measures, including buffer zones”, requiring 103.8 million KGS or 47% of the category needs (see Table 7 and Figure 9).

The subcategory is consistent with measures of key importance for the conservation of biodiversity:

- Creation of ecological corridors;
- Rotational use of pastures to reduce degradation and preserve the ecosystem;
- Creation and restoration of protective forest stands along roads and railways, stabilization of steep slopes and eroded ramps.

However, financing for only 10% or 89.8 million KGS is confirmed for this subcategory. Thus, the risk of failure to carry out the above measures is high.
Table 7. Required and existing resources for financing biodiversity conservation measures for BIOFIN category “Protected areas and other conservation measures” in 2019–2023, million KGS, % against subcategory needs

<table>
<thead>
<tr>
<th>BIOFIN subcategories</th>
<th>Required</th>
<th>Existing</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mln KGS</td>
<td>mln KGS</td>
<td>%</td>
</tr>
<tr>
<td>Poaching, wildlife trade and CITES</td>
<td>5.8</td>
<td>2.9</td>
<td>50%</td>
</tr>
<tr>
<td>Other effective area-based conservation measures (OECMs), including buffer zones</td>
<td>103.8</td>
<td>14.0</td>
<td>10%;</td>
</tr>
<tr>
<td>Loss of valuable habitats, including targeted conservation of species outside PAs</td>
<td>3.5</td>
<td>1.9</td>
<td>50%;</td>
</tr>
<tr>
<td>Expansion of protected areas</td>
<td>44.5</td>
<td>1.0</td>
<td>0%;</td>
</tr>
<tr>
<td>Ex-situ conservation of species (botanical gardens and gene banks)</td>
<td>50.8</td>
<td>8.6</td>
<td>20%;</td>
</tr>
<tr>
<td>Landscape/seascape conservation, including valuable ecosystem services</td>
<td>2.3</td>
<td>0.6</td>
<td>30%;</td>
</tr>
<tr>
<td>Protected areas management</td>
<td>11.2</td>
<td>10.4</td>
<td>90%;</td>
</tr>
<tr>
<td><strong>Total for the category</strong></td>
<td><strong>221.9</strong></td>
<td><strong>39.5</strong></td>
<td><strong>20%;</strong></td>
</tr>
</tbody>
</table>

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations
Designations: BD - biodiversity

NBSAP measures corresponding to the subcategory “Ex-situ conservation of species (botanical gardens and gene banks)” require 23% of the financial needs of the category - 50.8 million KGS. These funds are required for the development of the Botanical Garden named after Gareev, creation of school nurseries in pilot regions, creation of conditions for the conservation of genetic resources. The subcategory is at risk of non-execution, since only 20% of the required resources is confirmed. To implement the measures of this subcategory, the government needs to find 42.2 million KGS.

The subcategory “Expansion of protected areas” requires 20% of the resources of the category “Protected areas and other conservation measures”. Of the 44.5 million KGS, only 1 million is confirmed. Thus, the measure to create a protected area in Batken region for the protection of the three red book species of wild animals may not be implemented. The most likely scenario: the PA will be created formally, but there will be no resources for its functioning.

Other subcategories cover less than 5% of the financial needs of the category (see Figure 8). Measures in these subcategories are related to the organization of the activities of PAs, regulation of activities for the trade in wildlife and plants, including CITES species, settling cattle grazing in the hollows of Son-Kul and Chatyr-Kul lakes, preserving the endangered breed of Kyrgyz gray chicken and reviving the Kyrgyz aboriginal breed of dog «Taigan».
3.2 Financial Needs Assessment according to the BIOFIN Methodology

**Figure 9. Required and existing resources for financing biodiversity conservation measures for BIOFIN category “Protected areas and other conservation measures” in 2019–2023**

a) structure, %

- Expansion of protected areas: 20%
- Loss of valuable habitats, including targeted conservation of species outside PAs: 1%
- Other effective area-based conservation measures (OECMs), including buffer zones: 47%
- Ex-situ conservation of species (botanical gardens and gene banks): 23%
- Protected areas management: 5%
- Landscape/seascape conservation, including valuable ecosystem services: 1%
- Poaching, wildlife trade and CITES: 3%

b) existing resources and gap, %

- Protected areas management: +100%
- Landscape/seascape conservation, including valuable ecosystem services: +100%
- Ex-situ conservation of species (botanical gardens and gene banks): +100%
- Expansion of protected areas: +100%
- Other effective area-based conservation measures (OECMs), including buffer zones: +100%
- Poaching, wildlife trade and CITES: +100%
- Loss of valuable habitats, including targeted conservation of species outside PAs: -100%

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations

All seven subcategories of this category do not have sufficient financial resources. The gap is significant and ranges from -50 to 100% of the required resources (see Figure 7.b), with the exception of the subcategory “Protected areas management”, with a gap of 10%. Thus, the category “Protected areas and other conservation measures” is at risk of not achieving the goals set.

**Category «Biosafety»**

The category “Biosafety” and its subcategory “Invasive alien species” correspond to the measures of the NBSAP objective for the regulation, movement and introduction of alien (invasive) species. To achieve the objective, measures are envisaged for the development of normative legal acts and the identification of alien (invasive) species when imported into the country, for the creation of a quarantine zone for carrying out activities for the complete or partial elimination of foci of infection and for the temporary maintenance of alien species, etc.
The financial needs for the category are 64.0 million KGS. It is covered only by 17.7% (see Table 8).

Table 8. Required and existing resources for financing biodiversity conservation measures for some categories and subcategories in 2019–2023, million KGS, % against subcategory needs

<table>
<thead>
<tr>
<th>BIOFIN categories and subcategories</th>
<th>Required mln KGS</th>
<th>Existing mln KGS</th>
<th>Gap mln KGS</th>
<th>% mln KGS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biosafety</td>
<td>64,4</td>
<td>11,4</td>
<td>52,9</td>
<td>82,1%</td>
<td></td>
</tr>
<tr>
<td>Invasive alien species</td>
<td>64,4</td>
<td>11,4</td>
<td>52,9</td>
<td>82,1%</td>
<td></td>
</tr>
<tr>
<td>Restoration</td>
<td>12,6</td>
<td>3,3</td>
<td>9,3</td>
<td>73,8%</td>
<td></td>
</tr>
<tr>
<td>Reintroduction of species</td>
<td>7,5</td>
<td>3,1</td>
<td>4,3</td>
<td>57,3%</td>
<td></td>
</tr>
<tr>
<td>Site management</td>
<td>5,1</td>
<td>0,1</td>
<td>5</td>
<td>98,0%</td>
<td></td>
</tr>
<tr>
<td>Green economy</td>
<td>2,2</td>
<td>0,1</td>
<td>2,1</td>
<td>95,5%</td>
<td></td>
</tr>
<tr>
<td>Sustainable extractive industries</td>
<td>2,2</td>
<td>0,1</td>
<td>2,1</td>
<td>95,5%</td>
<td></td>
</tr>
<tr>
<td>Pollution management</td>
<td>28,3</td>
<td>7,7</td>
<td>20,6</td>
<td>72,8%</td>
<td></td>
</tr>
<tr>
<td>Protection and remediation of soil,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groundwater and surface water</td>
<td>25,3</td>
<td>6,8</td>
<td>18,5</td>
<td>73,1%</td>
<td></td>
</tr>
<tr>
<td>Other pollution reduction measures</td>
<td>2,9</td>
<td>0,9</td>
<td>2,1</td>
<td>72,4%</td>
<td></td>
</tr>
</tbody>
</table>

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations

Category «Restoration»

In the framework of the category “Restoration”, NBSAP measures are planned in two BIOFIN subcategories:

- “Reintroduction of species”, which will include work to restore the natural ecosystems of the Lake Issyk-Kul (artificial breeding and revival of endemic fish species in the Lake Issyk-Kul; restoration of the ecosystems of the coastal waters of the lake)
- “Site management”, within which it is planned to restore lost habitats of biodiversity objects and destroyed natural ecosystems.

This category requires 9.7 million KGS, of which only 26.2% is covered (see Table 8)

Category «Green Economy»

In the NBSAP, a measure is planned to conduct analysis and assessment of the activities of the mining sector on the impact on the state of biodiversity, which corresponds to the subcategory «Sustainable extractive industries» of the BIOFIN category «Green economy». 2.2 million KGS are required to implement the measure, of which only 4.5% of resources are found (see Table 8).

Category “Pollution Management”

Within this category NBSAP measures are planned in two BIOFIN subcategories:

- «Protection and remediation of soil, groundwater and surface water». The government plans
to achieve the goal of reducing environmental pollution to levels where ecosystem functioning and biodiversity are not impaired. The goal will be achieved by cleaning the bottom of the coastal zone of Lake Issyk-Kul from household waste, cleaning the bottom of Lake Son-Kul from sunken fishing nets, cleaning the Khan Teniri glacier, Lenin Peak and Ala-Archa gorge from household garbage, etc.

- “Other pollution reduction measures” - efforts will be made here to minimize the negative impact of road transport on Lake Chatyr-Kul.

The required resources for measures included in the category for a five-year period is 28.3 million KGS. Only 27.2% of this amount has been found. The remaining funds must be found.
3.3. Financing Gap Analysis

The biodiversity financing gap is significant - it is 1 199.8 million KGS or 61.3% of the needs (see Table 3 and Figure 10). Financing gap exists currently for all BIOFIN categories and, accordingly, for Aichi targets, with a minimum gap of 56.1% of the needs (category “Biodiversity awareness and knowledge”), the maximum- 95.5% (category “Green economy”).

![Figure 10. Existing resources for financing biodiversity conservation measures for Aichi targets and BIOFIN categories in 2019-2023,%](image)

<table>
<thead>
<tr>
<th>GOAL A</th>
<th>Green economy</th>
<th>-95.5</th>
<th>-57.1</th>
<th>42.9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Environmental and biodiversity awareness and knowledge</td>
<td>-56.1</td>
<td>43.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pollution management</td>
<td>-72.8</td>
<td>27.2</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>-57.1</td>
<td>42.9</td>
<td></td>
</tr>
</tbody>
</table>

| GOAL B | Biosafety | -82.1 | 17.7   | 42.2 |
|        | Sustainable use | -55.8 | 42.2   |      |
| TOTAL  |               | -57.8 | 42.2   |      |

| GOAL C | Protected areas and other conservation measures | -82.2 | 17.8   |      |
| TOTAL  |               | -82.2 | 17.8   |      |

| GOAL D | Restoration | -73.8 | 26.2   |      |
| TOTAL  |               | -73.8 | 26.2   |      |

| GOAL E | Biodiversity and development planning | -63.5 | 36.5   |      |
| TOTAL  |               | -63.5 | 36.5   |      |
| TOTAL FOR BR |               | -61.3 | 38.7   |      |

Source: NBSAP, Program for Nut Crops Development, MF KR, own calculations

Of the 162 NBSAP measures, only 23 have fully confirmed financing in the amount of 107.5 million KGS, which is 5.5% of the required resources. The rest all have partially confirmed financing, with the exception of one measure- completely with no financing.

The Program for Nut Crops Development does not have measures that would not be short of funds.

By years of implementation, the gap is distributed fairly evenly- from 57 to 70% for NBSAPs. For the Program for Nut Crops Development until 2025- 57% in all years from 2019 to 2023.
3.3. Financing Gap Analysis

Such levels of unconfirmed financing are extremely threatening for the implementation of strategic documents. The probability of their implementation is small.

- all planned normative legal acts, the majority of procedures and instructions will be developed; biodiversity issues will be incorporated into strategic documents at all levels of government. For many of them, assistance will be provided by projects of official development partners. However, not all of them will be approved, and for the approved ones the implementation will be difficult, because it also requires resources.
- most of the studies for which no information on confirmed or planned funds was available at the time of the development of the NBSAP will not be performed;
- the majority of measures requiring capital investments or the purchase of large volumes of goods and services will not be executed.
During the Biodiversity Financial Needs Assessment, the following was identified:

1. Due to a significant shortage of funds, achieving the objectives of the strategic documents on biodiversity conservation within the planned time frame can be problematic.

2. The funds to fill the gap are supposed to be searched among development partners. This reduces the sustainability of activities in the future. This is reflected in management decisions and reduces the long-term effectiveness of government biodiversity policy.

3. The implementation of the bulk of activities falls on state bodies funded from the national budget. It should be noted that work with local government bodies on biodiversity conservation is practically not foreseen. Meanwhile, it is obvious that many of the problems associated with poaching and economic activities in the territories of forestry enterprises and protected areas are the result of insufficient work with the population at the local level.

4. The strategic documents on biodiversity conservation do not envisage the work on the involvement of the private sector in the biodiversity conservation, except for holding roundtables on wetland issues. Meanwhile, business community has significant resource potential.
Despite the rather optimistic forecasts of economic growth in the Kyrgyz Republic, the state budget will always be under pressure from all sectors that require funding, primarily social. And now it is clear that a sharp increase in government spending on biodiversity conservation is impossible.

The following recommendations are the result of the “Public and Private Environmental Expenditure Review with a Focus on Biodiversity and Climate Change Adaptation”. They can increase the likelihood of achieving the goals of strategic documents on biodiversity conservation and contribute to solving many problems. The recommendations cover four fundamental areas:

1. **Creating conditions for improving the efficiency of public expenditures in Kyrgyzstan.** This will create a solid basis for improving government funding for biodiversity conservation. The transparency of budgeting will be increased, which will lead to an increase in the transparency of the work of state bodies. As a result, confidence in government from the private sector will improve, leading to increased business cooperation with the state in all areas, including in the field of biodiversity conservation.

2. **Considering the environment, biodiversity and adaptation to climate change when planning and budgeting and improving coordination between agencies and sectors.** The program budget, based on budgetary performance, should be a tool to ensure better alignment between government priorities and expenditures, improve the use of complementarity between environmental, biodiversity and climate change adaptation activities, as well as ensure balancing of current expenditures and capital investments.

3. **Continuing decentralization of public administration and transferring functions related to the environment and biodiversity to local authorities.** The Ministry of Finance and the SAEPF should cooperate with the State Agency for Local Government Affairs to continue the decentralization of public administration and delegate to local authorities the development and implementation of measures to protect the environment, including biodiversity in accordance with the legislation. Delegation of functions must be accompanied by appropriate budgets.

4. **Prioritizing measures and tasks with reallocation of available financial resources.** In this connection at the first stage of implementation of strategic documents, priority should be given to measures consistent with Aichi strategic goals E. “Enhance implementation through participatory planning, knowledge management and capacity building” and C. “Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity” as well as scientific research constituting the core of goal A. «1. Environmental and biodiversity awareness and knowledge» since they will create the necessary legal, informational and institutional environment for biodiversity conservation.

These are the minimum necessary steps to approximate biodiversity conservation goals in Kyrgyzstan.