National implementation of the Convention on Biological Diversity

REVIEW REPORT

FINLAND

Prepared for the trial phase of an Open-ended Forum on review of implementation, to be held online September 17th 2020.

This report is an extract from:

Impact Assessment of the Implementation of National Strategy and Action plan for the Conservation and Sustainable use of Biodiversity in Finland (2012–2020)

by

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Introduction

In 2018, the government of Finland ordered an evaluation of the present National Biodiversity Strategy and Action Plan 2012–2020, to be carried out by July 2020. A group of researchers and experts from the Finnish Environment Institute and the Natural Resources Institute Finland carried out the evaluation under guidance from a steering group led by the Ministry of the Environment. The evaluation took on from the sixth national report to the CBD submitted in March 2019 by focusing not only on the implementation, but also the trend, financial allocation, target, impacts and future potential of the actions taken.

This review report prepared for trial phase of an Open-ended Forum on review of implementation contains a ten-page Executive Summary from the evaluation report as well as the figures and conclusions of the thematic evaluation of the actions and a summary based on them. The five broad sections that each country taking part in the trial phase was asked to present – actions, outcomes, resources, need for adjustment and unresolved challenges – are not presented as headlines in this review report. Rather, these issues are tackled thematically and in the summary of all of the actions.

Review method

The evaluation group assessed all of the 105 action of the NBSAP systematically by focusing on:

- status of implementation (based on the sixth national from 2019),
- direction and magnitude of the change sought after by the action,
- financial allocation in implementing the action (sum total of the whole NBSAP period)
- direct and indirect target of the action (direct: share of the total area and number of species in Finland; indirect: share of the total population of Finland),
- impact on biodiversity over the NBSAP period, and
- the future potential of the action

Several hearings, workshops and information sharing events were organised and 75 additional experts were consulted over the course of the evaluation project. The multisectoral National Biodiversity Monitoring Group was involved in the process. There was large-scale communications along the way and the project and its findings were featured quite extensively in the national media.

Executive summary

Objective, implementation, main results and recommendations of the project

The second Finnish National Strategy and Action Plan for the Conservation and Sustainable use of Biodiversity was drawn up for 2012–2020. The five objectives and 20 targets of the National Strategy, confirmed with a Government resolution, align in principle with the Aichi Targets of the Convention on Biological Diversity agreed in Nagoya, Japan in 2010. Some adjustments to the Aichi Targets, however, were made based on national needs and starting points.

The National Action Plan for implementing the strategy, "Saving Nature for People", contains 105 measures for the period 2013–2020. A mid-term review of the Action Plan was submitted to the Government in 2016. The assessment stated that the mainstreaming of biodiversity had progressed well in different administrative branches, but the actions taken were not sufficient to halt the loss of biodiversity. The implementation of the actions was assessed the following time in Finland's sixth country report, which was submitted to the Secretariat of the Convention on Biological Diversity in spring 2019.

A need for assessing the impacts of the actions specified in the National Biodiversity Strategy (2012–2020) and Action Plan (2013–2020) was identified at the Ministry of the Environment as Finland begun to prepare for the next Action Plan period (2021–2030). In autumn 2018, the Government announced applications under its Analysis, Assessment and Research Activities Grants (VN TEAS) for a project titled "Impact Assessment of the Implementation of National Strategy and Action Plan for the Conservation and Sustainable use of Biodiversity in Finland (2012–2020)". The Finnish Environment Institute (SYKE) and the Natural Resources Institute Finland (Luke) were tasked to implement the project between 1 January 2019 and 30 June 2020.

This report presents the results of the evaluation project on the implementation of the Finnish National Biodiversity Strategy and Action Plan (NBSAP). The report focuses on the implementation of the principle of sectoral responsibility, and on the impact that actions

taken have had on biodiversity. In addition, the report briefly describes the current state of nature in Finland and the societal drivers and pressures behind the loss of biodiversity. These descriptions are based on the country profile in Finland's sixth country report in 2019 and the information in the Red Lists of Species and Habitats.

Based on the impact assessment, the report also includes proposals for the structure, themes and measures for the next NBSAP (2021–2030). The most important proposal in the report concerns the need to implement a socially and economically fair ecological transition throughout the society. The authors of this report consider that such a transition is necessary in order to reduce the pressures that cause biodiversity loss in Finland and to strengthen the forces that revive it. The final report of the project and this summary also contain answers to the seven research questions presented to the research group when the project was commissioned (in the boxes below).

The state of biodiversity in Finland

What is the state, trend and rate of change of biodiversity in Finland?

What are the factors and background forces that reduce biodiversity in Finland and how can they be changed?

Biodiversity in Finland remains on a downward trend – measured by the number of threatened species, the decline has even accelerated. The most extensive habitat type in Finland is forest, and over 40% of our species live in forested habitats. In the Red List of Finnish Species published in 2019, the number of forest species considered to be threatened was clearly the highest, almost one third of all threatened species. Due to changes in agricultural practices, the percentage of threatened species in rural biotopes and cultural habitats was also considerable, almost a quarter of all threatened species.

According to the Red List of Habitats published in 2018, the share of threatened habitats was also the highest in seminatural grassland and wooded pastures as well as in forests. The most rapid increase in threatened species and habitats has occurred in alpine habitats, where the impact of climate change is most evident. In aquatic habitats, the situation is worst on the coast, in streams and in small water bodies. Southern parts of Finland host the highest number and share of threatened species and habitats. This is due to a high level of pressures from land use.

The most important societal driver behind biodiversity loss is the use our natural resources, especially forest resources, in industrial activities in order to increase Finnish wealth, consumption and global trade. Forest industry products account for one fifth of Finland's goods exports. So far, economic growth has inevitably meant using natural resources to an accelerating extent, and it has not been possible to decouple increasing material well-being from the decline in biodiversity. Based on the Red Lists of threatened species and habitats, this project identified the most acute pressures to biodiversity to originate from four sources: 1) forestry, 2) agriculture, 3) building and land use, as well as 4) pollution and climate change.

Evaluation of the themes and measures of the Action Plan

How has the Strategy been implemented with the National Action Plan 2013–2020?

How has the implementation of the Action Plan succeeded with the division of responsibilities between several ministries?

How do cross-cutting measures – such as mainstreaming, communication and financial steering – work as key starting points for both the Strategy and the Action Plan?

How did implementation include the private and third sector as well as consumption and production, which are central to the pressures placed on nature?

Have Finland's National Biodiversity Strategy and Action Plan (NBSAP) met previous expectations as key tools for implementing the strategic objectives of the Convention on Biological Diversity?

Implementation: According to Finland's sixth country report, the best-implemented themes of the NBSAP in the beginning of 2019 were communications and education, international affairs and monitoring as well as, considering habitats, forests and the Baltic Sea. Most of the actions in these themes were estimated to have either been completed or turned into established practice. At the beginning of 2019, it was estimated that there was room for improvement in several actions that had broad objectives and impact the activities of several actors. It was assessed that the implementation of two actions related to tourism and the recreational use of nature had not been started at all. It was later revealed that an action related to the management plan of the salmon population in the EU had not been initiated either. Delays or otherwise inadequate implementation were partly due to unclear responsibilities and dependence on other processes outside actual biodiversity work.

Monitoring: More than half of the actions of the NBSAP have been monitored at least partially, although not all of them are monitored with a specific focus on biodiversity. More than a quarter of the actions have not been monitored. Some of the actions have even been formulated so obscurely that they could not be monitored at all. Due to a lack of resources, the biodiversity indicators on the Biodiversity.fi portal have not been updated comprehensively since the early 2010s. This has contributed to the difficulty of assessing the implementation and performance of the actions.

Trend: Although the number of completed or established actions was high (see Implementation above), only one in ten actions was estimated to have led to a clear improvement in the trend sought by the action. This was partly due to the fact that not all actions were sufficiently clear and ambitious enough to result in a positive trend even if fully implemented. The actions that had the highest positive impact on biodiversity contained extensive cooperation, independent implementation, sufficient funding and effective production of information. It was assessed that one fifth of the actions had a stable trend. These actions have been implemented, but not to the extent that would improve the state of biodiversity or clearly change the activities that impact biodiversity. The trend of ten actions (10%) was estimated to be declining or slightly declining. The trend of eleven actions (10.5%) was not known or could not be assessed. In addition to unclearly formulated agricultural actions, these included three actions concerning genetically modified organisms. The implementation of these actions has not been topical so far.

Financial allocation: Financial allocation to the implementation of the actions has mainly been insufficient. For nearly half of the actions, the financial allocation was less than EUR one million during the entire NBSAP period. The largest investments, over EUR 100 million during the NBSAP period, have been allocated to eleven actions. Their impact on the development of biodiversity has been fairly good, which means that investments have mainly been made in the right issues. In some cases, such as communications, significant results have also been achieved with small financial inputs. A significant decrease in financial input was observed in international development cooperation actions that had previously produced good results.

Target: The scope of the direct impacts of the actions on habitats and species varied considerably. A little less than half of the actions targeted a relatively large share (> 10%) of the total area of Finland and a large number of species (> 10% of all known species). On the other hand, every sixth action targeted at a small share (< 1%) of Finland and few of our species (< 1% of all known species), such as a certain habitat or a small number of economically significant species. More than a quarter of the actions have not directly affected habitats and species. Some of these are societally cross-cutting actions, such as communication and education, while some relate to information and administrative

measures, such as monitoring biodiversity and drafting legislation for nature reserves. The actions also have indirect impacts on citizens. More than one third of the actions have impacted a large share of Finns. These include legislative and financial steering measures. For the majority of the actions, the target group has been narrow, consisting mainly of farmers, forest managers, experts, researchers or authorities.

Impact: The actual impact of the actions was mainly assessed to be small: two thirds of the measures have so far had few positive impacts on the development of biodiversity. The most common reasons for low impact include insufficient resources, delayed implementation and other conflicting development goals, such as increased or continued use of natural resources and uncompensated land use. In addition, some of the actions have been either unclearly formulated, had modest goals or were limited in scope. Progress has been made, but it has not been significant regarding the overall state of biodiversity. The least significant actions in terms of an overall impact on the state of biodiversity are the ones related to tourism, alternative habitats, geological formations, built environments and genetic diversity as well as fish stocks and game animals. However, these actions are important for some species and habitats, and some of these topics have great economic importance.

The actions of the NBSAP that had the most wide-ranging impacts were assessed to fall under the themes of communications and education, financial steering, legislation, planning and land use as well as restoration and nature management. From the perspective of indigenous peoples and local communities whose role is central in the Convention on Biological Diversity, actions related to the Sámi people's traditional knowledge, legal status and relationship with nature were also assessed to be potentially impactful, although their implementation has been inadequate so far. For the preservation of biodiversity, measures related to threatened habitats and species, forests, agricultural environments, mires, inland waters and the Baltic Sea have also been quite impactful, although their implementation has not progressed as planned in all cases. Only one measure, the Research Programme of Deficiently Known and Threatened Forest Species (PUTTE, 2003–2016), was considered to have the highest level of impact, as the programme increased species information and communication significantly.

Potential: More than a quarter of the actions were considered to have great potential to influence the development of biodiversity in the future. However, this requires that the measures be more effective and that their implementation be initiated without delay. Over a quarter of the measures were assessed to have medium potential. The impact of most of these has so far been low and needs to be strengthened in the future. Nearly half of the measures were assessed to have a low potential due to, for example, low coverage, inadequate objectives, lack of ambition or unclear framing.

Success of actions based on the sectoral responsibility principle: Shared responsibility and comprehensive engagement of different parties are the best ways to promote the safeguarding of biodiversity. The implementation of the NBSAP has progressed well on the administrative level following the principle of sectoral responsibility: the objectives and policies are fairly well represented in the objectives of several ministries. The research group estimates that most of the methods and policies needed for halting the loss of biodiversity exist, but their implementation has not been sufficient.

The evaluation of the impact of the NBSAP was hampered in many cases by the fact that the implementation of several actions was delayed towards the end of the NBSAP period. Therefore, their impacts were not yet visible. More concrete and quantitative targets, as well as indicators describing development towards those targets, would have been necessary for monitoring the implementation of the actions. Funding for biodiversity has been insufficient in all sectors, and human resources in biodiversity conservation have been decreasing continuously. The Helmi programme, which focuses on the restoration and management of habitats, is expected to bring improvements to the implementation of urgent measures in the next few years, but the impacts of the measures included in the Government Programme of Prime Minister Sanna Marin[8] will not become evident in nature during the current NBSAP period.

Several laws affecting biodiversity have been reformed during the NBSAP period. These include the Forest Act and the Forest Damages Prevention Act whose reforms have, however, not achieved positive biodiversity impacts in all respects. Many other laws have been partially amended. During the NBSAP period, important reforms promoting the protection of mires were made to the Environmental Protection Act and the reform of the Nature Conservation Act was started. Instead, the reform of the Off-Road Traffic Act has not progressed. The scarcity of economic or other incentives for measures that strive to change the structures of society in order to safeguard biodiversity, indicates that biodiversity is not yet sufficiently integrated into the economy, consumption and production. For example, the removal of financial subsidies that undermine biodiversity has progressed slowly.

According to the Constitution of Finland, the responsibility for nature belongs to everyone. This responsibility has not been fully realised, although the participation of civil society, business sectors and other non-state actors in safeguarding biodiversity had a good start in the 2010s. Still, the integration and implementation of biodiversity in the private and third sectors has not yet become a permanent perspective and part of all activities. Non-governmental actors have significant potential to promote biodiversity, which is why

8 Government Programme of Prime Minister Sanna Marin 10 December 2019. (2019). Inclusive and competent Finland – a socially, economically and ecologically sustainable society. Government publications 2019/33: 1–213.

the interest and readiness of these actors to increase their social responsibility should be integrated into the next NBSAP.

A greater shared responsibility is gradually being realised, and good independent initiatives have appeared in different sectors. For example, the corporate natural capital training organised by the FIBS corporate responsibility network and the Finnish Environment Institute has received a lot of positive attention. However, the impact of this training on the policies of the participating companies should be assessed more thoroughly in the future. With the mainstreaming of the concept of biodiversity, financial institutions also have growing interested in the biodiversity impacts of their operations. The potential of voluntary efforts in safeguarding biodiversity is great: many species enthusiasts and NGOs are actively involved in the monitoring of different species groups and in the management of habitats. The voluntary protection of habitats has increased substantially.

The Finnish NBSAP (2012–2020) covers all the strategic objectives of the Convention on Biological Diversity (CBD) well, and our national actions include the central content of the Aichi Targets. Nevertheless, national actions have not been formulated to meet the Aichi Targets in the extent of detail and ambition that they would require. Still, Finland is one of the countries that have been considered exemplary in the implementation of the CBD. The development needs observed in the structure and implementation of the Finnish NBSAP are similar to those of many other parties of the CBD. The research group has striven to take these development needs into account in its recommendations for the next NBSAP period.

Recommendations for the next Action Plan period (2021–2030)

After the completion of the present NBSAP 2013–2020, Finland can be expected to have gained a sufficient level of knowledge and the put required structures in place that allow us to improve the state of biodiversity in practice. The new NBSAP should promote the protection and sustainable use of biodiversity in a concrete way. The actions of the new NBSAP should be focused, concrete and measurable so that their implementation and impacts can be monitored and assessed. Like the current NBSAP, the new NBSAP will also need to include cross-cutting actions that support its implementation, such as financial steering, communications, environmental education, advice as well as research and monitoring.

Administrative measures related to the conservation and sustainable use of biodiversity are necessary for the progress of different processes. However, they should not as such be included as actions in the new NBSAP unless they include a clear objective to increase biodiversity. As a rule, the actions should produce added value, i.e. include something

new and concrete for the protection of biodiversity and support the everyday work of central government and its stakeholders. The actions should also be scheduled so that their implementation can be started as soon as possible after the NBSAP has been approved. Many central themes of the NBSAP already have a prepared strategy or action plan, such as the management plans for threatened species and game species, the action plan for threatened habitats, and the national climate strategy. These existing strategies and action plans as well as corresponding new strategies and action plans – such as the upcoming circular economy promotion programme – should be taken into account in the formulation of the new NBSAP, in order to increase synergies between the different policies.

Rapid changes of our environment, such as the advance of climate change, require that old themes are strengthened and updated, or that entirely new themes are included in the next NBSAP. These include developing the nature-related objectives of legislation and reviewing permit practices, strengthening synergies between climate change, biodiversity and circular economy, identifying and applying nature-based solutions for carbon sequestration and increasing carbon sinks, and safeguarding the natural foundation of agricultural production (insect pollination, carbon and nutrient cycle, etc.). In terms of the mainstreaming of biodiversity, it is important to invest in communications, education and lifelong learning in a more goal-oriented manner. The implementation of the NBSAP should also involve closer cooperation with companies and the third sector. Cooperation should also be increased in monitoring efforts such as the efficient use of information systems and spatial data. The potential of regional biodiversity programmes should be fully utilised during the next NBSAP period. As population centres grow and urbanisation progresses, the significance of local nature for people's well-being and health should be clearly highlighted. Finland should also strengthen its role in international biodiversity issues and in safeguarding global biodiversity; our country has a good foundation for these tasks thanks to our previous efforts and our high-quality ecological expertise.

Ecological transition: The main objective of the upcoming NBSAP should be the transition to an ecologically sustainable society. The transition must take into account the social and economic impacts of the required reforms. The measures must be fair, which may require financial or other kinds of compensation, for example for small-businesses that may have to change their operations in order to safeguard biodiversity. In the ecological transition, international cooperation is important, as the implementation of the transition also requires changing the structures of international trade and production. In the ecological transition that concerns all levels of society, biodiversity will be considered in all planning and decision-making that have an impact on nature and natural resources. The starting points for the transition are the protection and sustainable use of biodiversity within an ecological framework that takes into account the capacity of the environment

and natural resources. The main focus is to reduce the pressures identified in this assessment.

Reducing biodiversity should be made economically unprofitable by developing legislation as well as taxation and other economic steering mechanisms. Economic steering needs to be backed up by robust monitoring schemes and compensation practices related to the use of natural resources. All legislative reforms should include safeguarding biodiversity and combatting climate change as one of the starting points. The central objective land and water use should be to eliminate and reduce pressures on biodiversity and to apply the "no net loss" principle. Municipalities and cities play a key role in protecting biodiversity and safeguarding green and blue infrastructure by, most importantly, ensuring the connectivity of natural habitats in land use planning. In order to improve water management, measures need to be taken throughout entire drainage basins. Under the theme of production and consumption, the importance of circular economy, consumer labels and responsibility should be emphasized. Ecosystem services should be secured by regulating the use of natural resources, securing food production and promoting the positive impacts of nature on people's health and wellbeing.

Considering the effectiveness of the NBSAP, it is essential to ensure the continuity of resources, both financial and human, and operating policies over NBSAP periods and government terms. The participation of the Prime Minister's Office in the coordination and implementation of biodiversity actions could add weight to the required reforms and the work that has been carried out. In this respect, safeguarding biodiversity should play a bigger part in sustainable development measures and the work of the National Commission on Sustainable Development led by the Prime Minister.

The appendix of this report presents the 62 most important biodiversity actions or themes of action drafted by the research group for the upcoming NBSAP period. Instead of detailed proposals for actions, operational requirements are presented as headlines. The aim of the research group has been to reduce the number of actions from the current 105 while preserving a comprehensive societal scope for the NBSAP. The proposed actions have been divided into seven themes: 1) Ecological transition, 2) Information and awareness, 3) Improving the status of habitats and species, 4) Genetic diversity, 5) New initiatives and solutions, 6) Sámi culture and biodiversity, and 7) Finland as a global actor.

Finland must continue to actively monitor and evaluate international policy developments related to biodiversity, anticipate and influence the development, and strive for active interaction with EU Member States and other like-minded countries. The EU Green Deal and the related EU Biodiversity Strategy 2030 and Farm to Fork Strategy create a European framework for Finland's next NBSAP. Finland has already achieved or is in the process of achieving many sustainability objectives. The biggest remaining challenges relate to

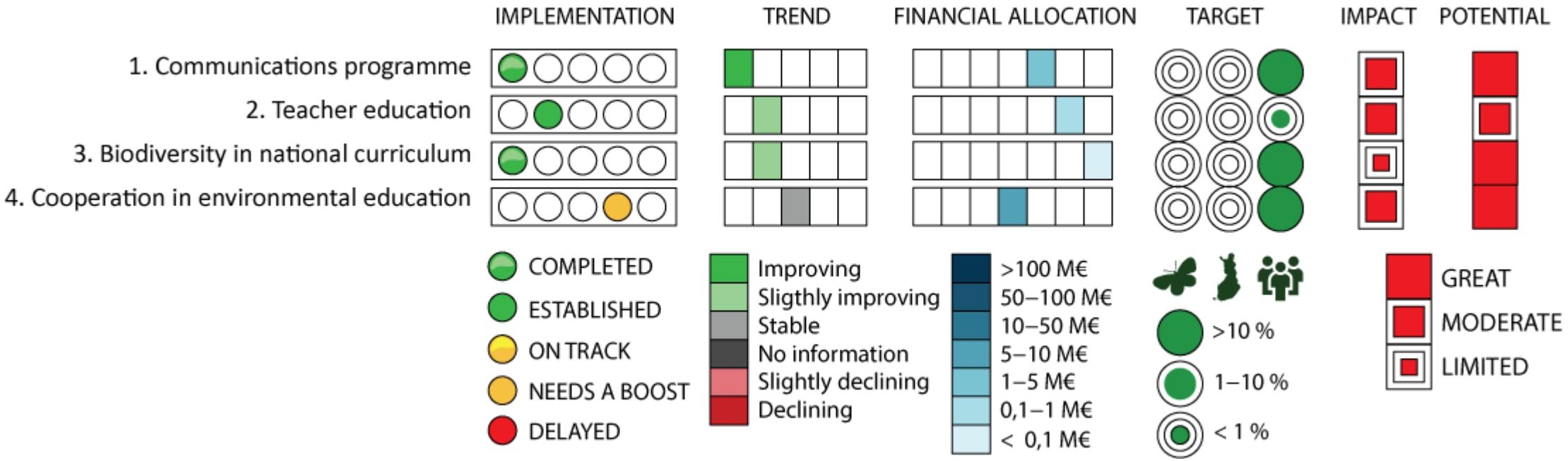
climate change, consumption and production, biodiversity and the level of development cooperation funding. Responses to these challenges must be included in our current and future sustainable development policies.

EVALUATION OF THE ACTIONS

THE 105 ACTIONS OF THE FINNISH NBSAP ACCORDING TO 24 THEMES:

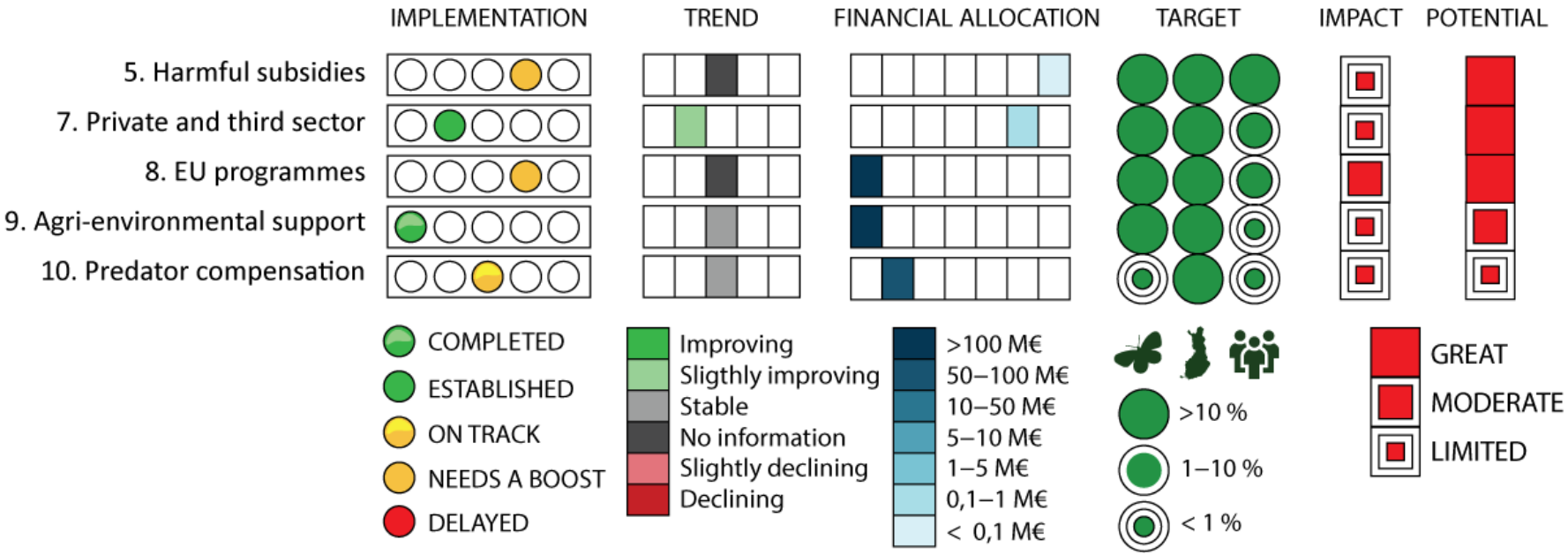
1. COMMUNICATION AND EDUCATION
2. FINANCING
3. LEGISLATION
4. PLANNING AND LAND USE
5. PROTECTED AREAS
6. THREATENED HABITATS AND SPECIES
7. CLIMATE CHANGE AND INVASIVE ALIEN SPECIES
8. RECREATION AND TOURISM
9. RESEARCH AND MONITORING
10. FORESTS
11. MIRES AND WETLANDS
12. AGRICULTURAL HABITATS
13. SUBSTITUTE HABITATS
14. GEOFORMATIONS
15. INLAND WATERS
16. BALTIC SEA AND THE COAST
17. FISH STOCKS
18. GAME ANIMALS
19. URBAN AREAS
20. RESTORATION AND NATURE MANAGEMENT
21. SAMI PEOPLE AND NORTHERN AREAS
22. GENETIC DIVERSITY
23. INTERNATIONAL ISSUES
24. MONITORING

1. COMMUNICATION AND EDUCATION



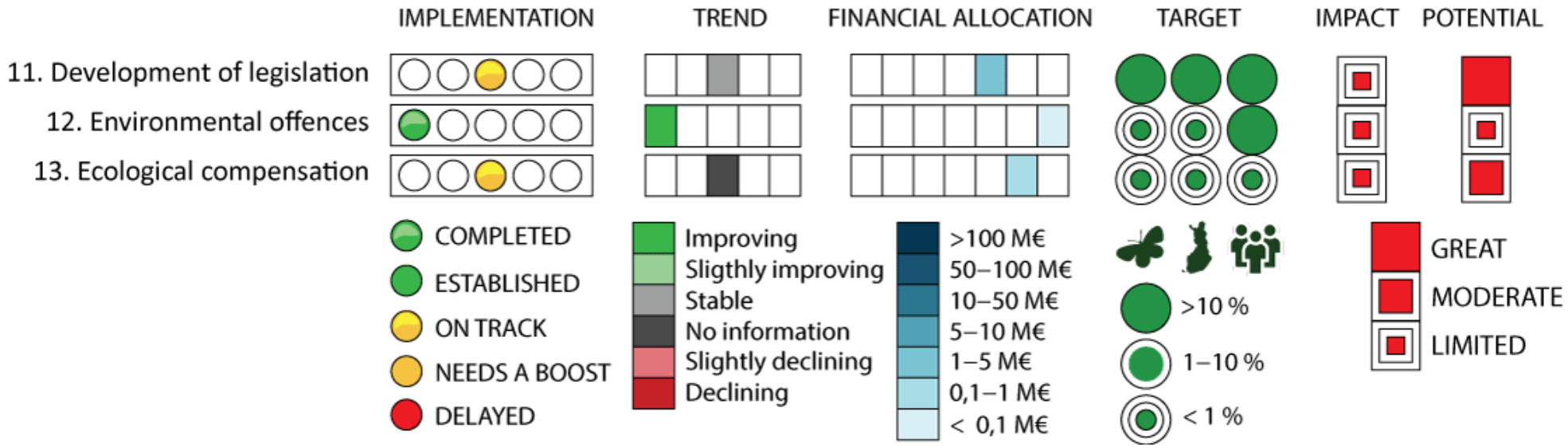
- The actions in this theme have had a relatively strong impact even though resource allocation on their implementation has been small and partly decreasing.
- The potential of the actions in this theme is even larger. Actions on communication and education will be essential in the future also and more resources need to be allocated to them.
- All actions in this theme need to have quantitative goals and indicators to track them.
- Biodiversity awareness needs to increase among students and the public at large too. The awareness of children and youth needs to be monitored regularly with a purpose-built test (possibly linked with climate awareness).
- A survey of the attitudes of Finns towards biodiversity was repeated in June 2020. The continuation of this survey must be guaranteed in order to get data on trends.
- Three actions on the theme will suffice in the next NBSAP: one on communication, education and environmental education each. An action on teacher education is not necessary since teacher education is only a means to an end, not an end in itself.

2. FINANCING



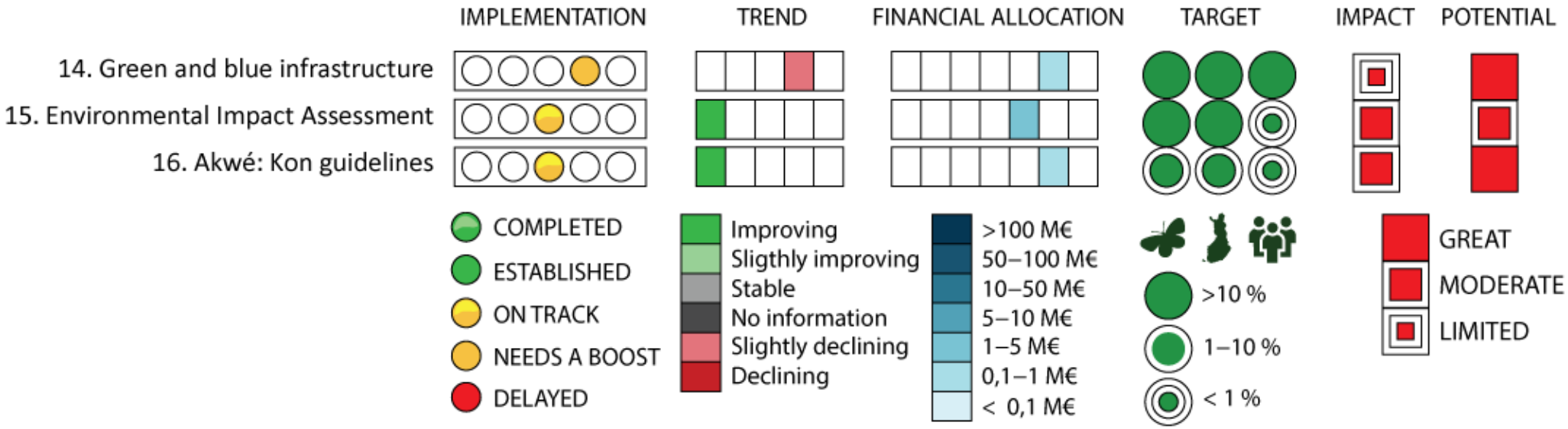
- Actions related to financing hold great potential. Therefore, their role needs to be central in the new NBSAP.
- Eliminating harmful subsidies has been recognised as one of the most important action. Yet their removal or reformation has not started for real. The positive economic and social impacts (incl. employment) of harmful subsidies need to be considered and possibly compensated for when removing or reforming those subsidies.
- Parallel to removing harmful subsidies, new incentives for voluntary conservation of biodiversity (direct financial compensation, tax policies etc.) need to be developed and implemented.
- EU programmes need to be more effective in terms of biodiversity and require better impact monitoring.
- LIFE projects are important for biodiversity. The continuation of this source of funding needs to be secured.
- The implementation of those actions of the agri-environmental support scheme that have been found most effective for biodiversity needs to be increased. They also need to be directed to the right locations.
- The new NBSAP should not include actions that limit to one moment in time such as the policies decision made at the beginning of the EU programme period in 2014 (actions 8 and 9).
- The compensation of damages caused by large carnivores is an important action in terms tolerating those animals especially south of the reindeer herding area. However, this action should not stand alone, but rather be integrated into some more comprehensive action.
- Investments in the prevention of large carnivore damages and related communication should be increased.

3. LEGISLATION



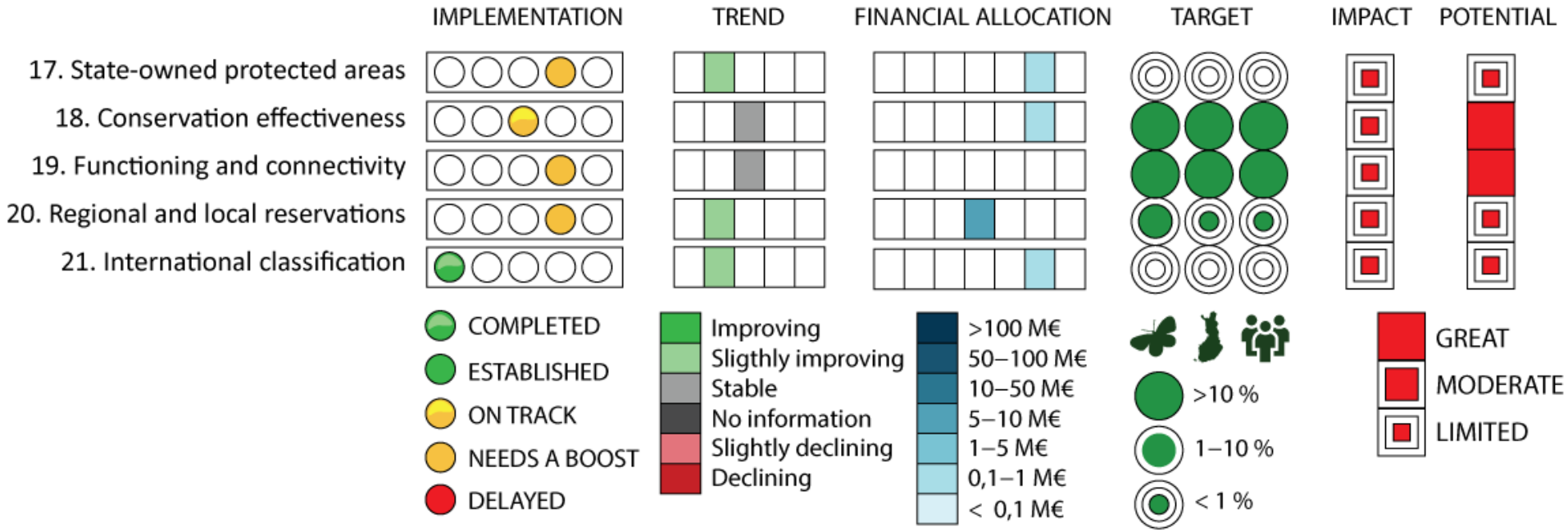
- Although the impact of changes in legislation are potentially great, only minor changes were made to the most central law for biodiversity, the Nature Conservation Act.
- Several other laws impacting biodiversity have been revised during the 2010s (incl. Environmental Protection Act, Mining Act and forest legislation). Although changes have been made to consider the conservation of biodiversity, the impacts of these changes have most often been limited and sometimes even negative to biodiversity (forest legislation).
- In future, the comprehensive revision of the Nature Conservation Act and of the Land Use and Building Act is pivotal. These processes have started.
- There is a need for more research and monitoring on the impact of the revision of legislation.
- The present action on ecological compensation consist only of research and development. In the new NBSAP period we need to move forward to implementation and need to set measurable goals for compensation.
- The prevention of environmental crime has important local impacts. However, the scope of this action is limited.

4. PLANNING AND LAND USE



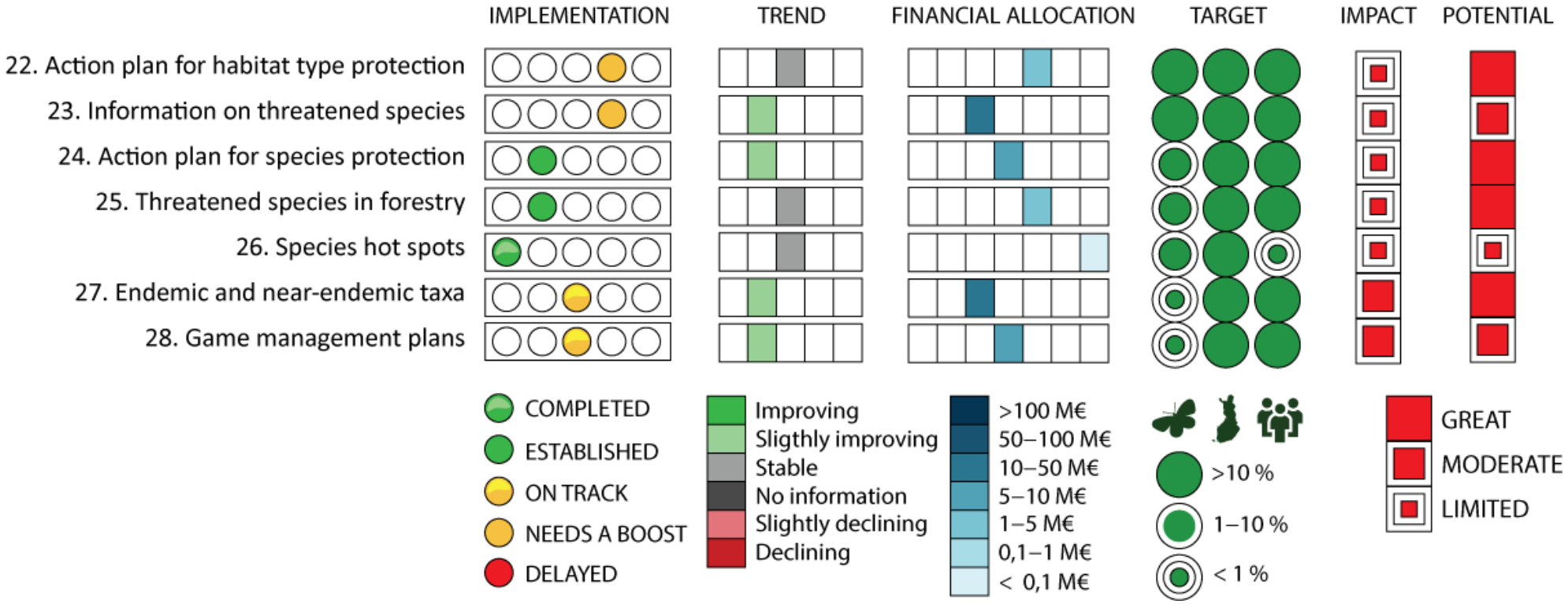
- The most ambitious and potentially the most effective of the actions in this theme, the application of the concept of green and blue infrastructure in land use planning, has advanced the least (connected to action 19).
- The next NBSAP must include an action on the operationalisation of green and blue infrastructure with clear goals regarding scope and impacts.
- The action on environmental impact assessment includes an added sentence “Increase knowledge of marine ecosystems”. This should be part of the action 69 on the inventory of underwater biodiversity of the Baltic Sea. On a general level, actions should focus on one theme only so that their implementation and impact can be monitored effectively.
- Environmental impact assessment (EIA) relates to activities that are continuous and are being continuously improved upon. Without any specific goal there is no need for an action the EIA in the next NBSAP.
- All actions relating to the Sámi Homeland and Sámi culture should be included under one theme which focuses primarily on the preservation of the Sámi culture and its connections with nature.

5. PROTECTED AREAS



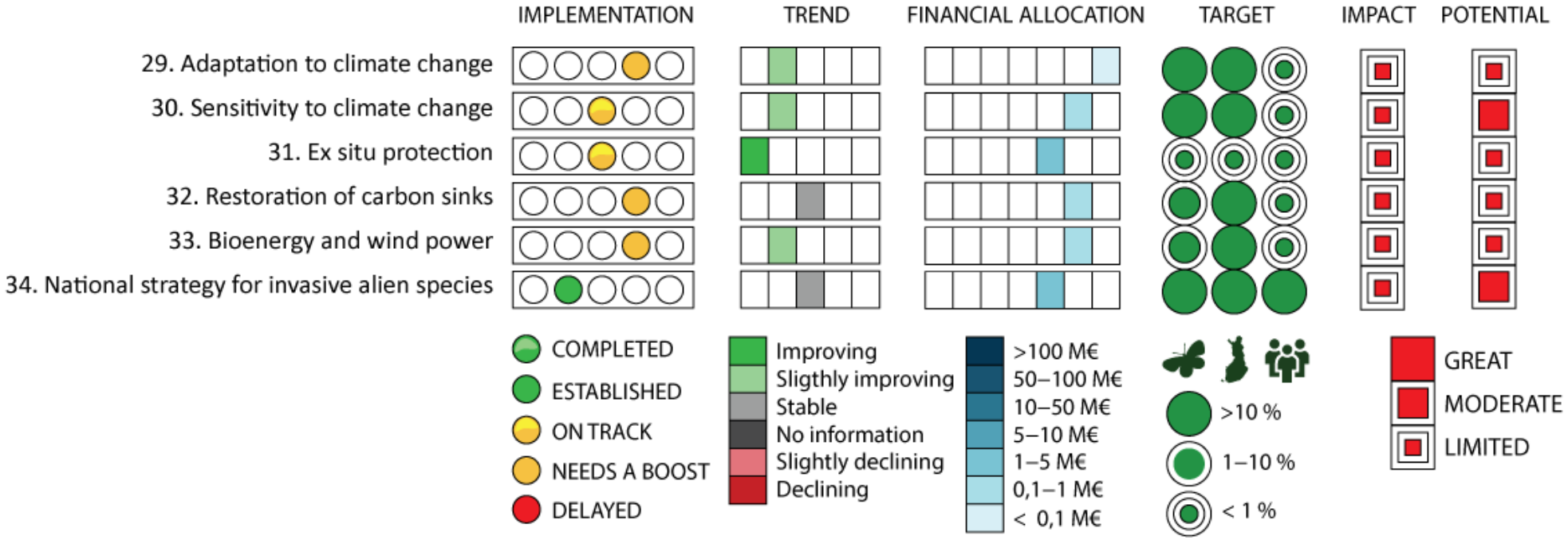
- The administrative tasks such as establishing previously purchased or nominated state-owned areas as protected areas (PAs) consist of normal office duties. There should not be action on such work in the NBSAP. These tasks are necessary in themselves, but do not contain any novelty aspects.
- The effectiveness of PAs is a wide-ranging action consisting of, for example, research, monitoring and assessment. The theme is important, but the action has been formulated obscurely and is difficult to monitor.
- The next NBSAP needs an action on the connectedness and on management of PAs. The connectedness of PAs can be increased by land use planning decisions.
- The research project Protected Area Network in a Changing Climate has created a basis for action on the theme. Its results must be considered in the planning future actions.
- The effectiveness and connectedness of the PA network are related to the green and blue infrastructure (action 14).
- In future, the administrative tasks related to new PAs should be carried out immediately after the areas have been purchased or nominated and the costs of this should be included in the process.

6. THREATENED HABITATS AND SPECIES



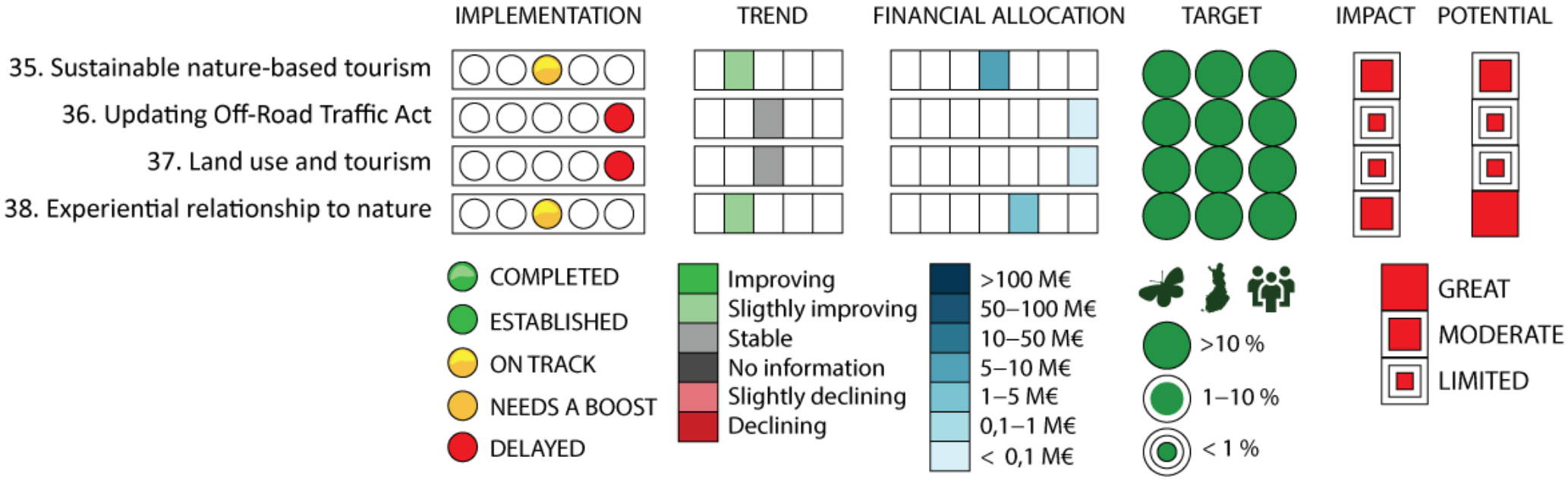
- If the action plans on threatened species and habitat types are carried out effectively and comprehensively, there is no need for action 26 on species hot spots.
- The action plan on threatened habitat types is outdated and needs an update based on the latest habitat red list assessment, taking into consideration the declining state of habitats and the increasing threat posed by climate change.
- Action 23 includes exchanging information which is also part of action 40 (joint use of data). Here we considered the compilation of the new red lists and related work in action 23 whereas efforts to develop information systems were counted in action 40.
- The action 27 mentions the management plans of threatened game species, which already have an action (28).
- On a general level, it should be assessed whether the new NBSAP needs to include actions referring to other more specific action plans and if so, how should they be formulated. There is a need for concrete goals.

7. CLIMATE CHANGE AND INVASIVE ALIEN SPECIES



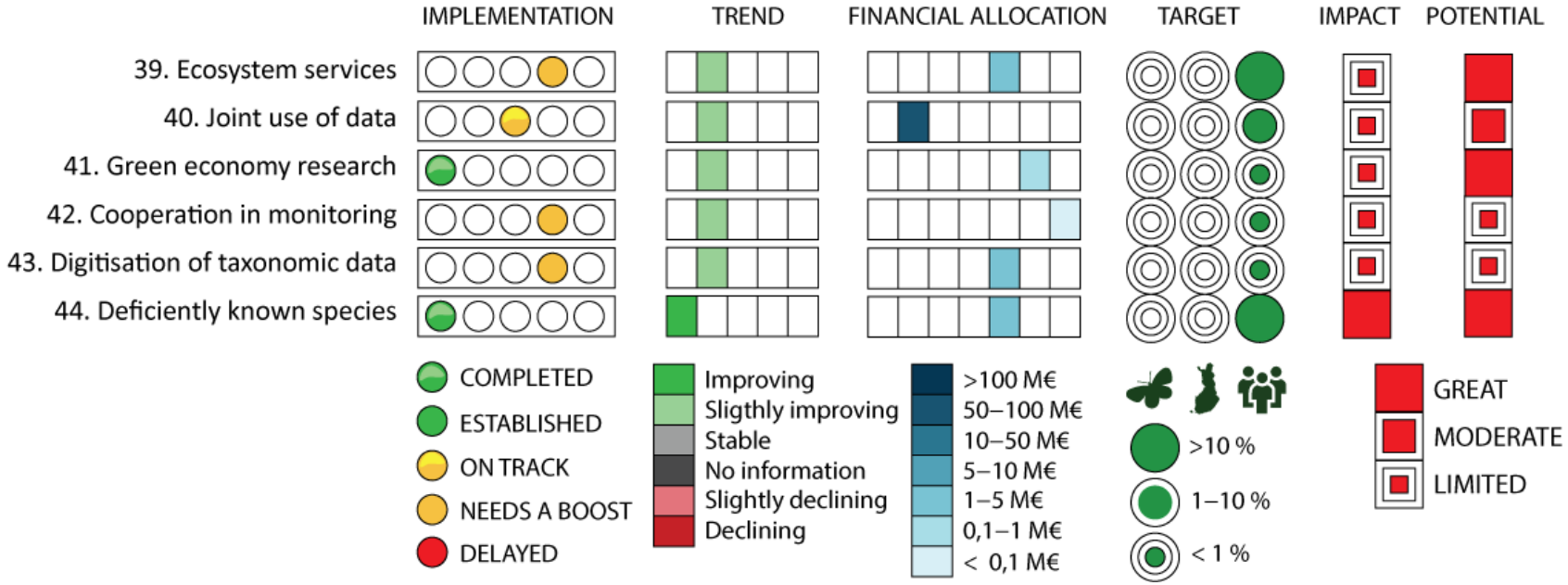
- In future, it is important to consider how the NBSAP could be better linked with the climate change mitigation and adaptation work done on national level and within sectors.
- Ex situ conservation falls better under the theme of threatened habitats and species. At least the goal of the ESCAPE Life programme was not climate change adaptation. In some cases in the future, ex situ conservation could help some acutely threatened species, but its role in safeguarding biodiversity remains small.
- The action on sensitivity to climate change refers to action 18 which has already been dealt with. The same activities and the related financial allocations should not be re-included and double-counted.
- The actions on restoration of carbon sinks and the impact of wind and bioenergy focus on research and development. In the next NBSAP such actions should be separated from more practical actions and the latter should be emphasized.
- In future, a research and development action on soil carbon balances is needed so that the implementation of nature-based solution benefitting both biodiversity and climate change mitigation is not hampered by critical knowledge gaps.
- The action on preventing damages by invasive alien species has gained momentum from new legislation both within the EU and nationally. However, the financial allocation has not been commensurate with the goals and needs. Resources are need for better monitoring of invasive alien species, for example.
- The impact of marine invasive alien species should be studied, and action should be taken based on the results.

8. RECREATION AND TOURISM



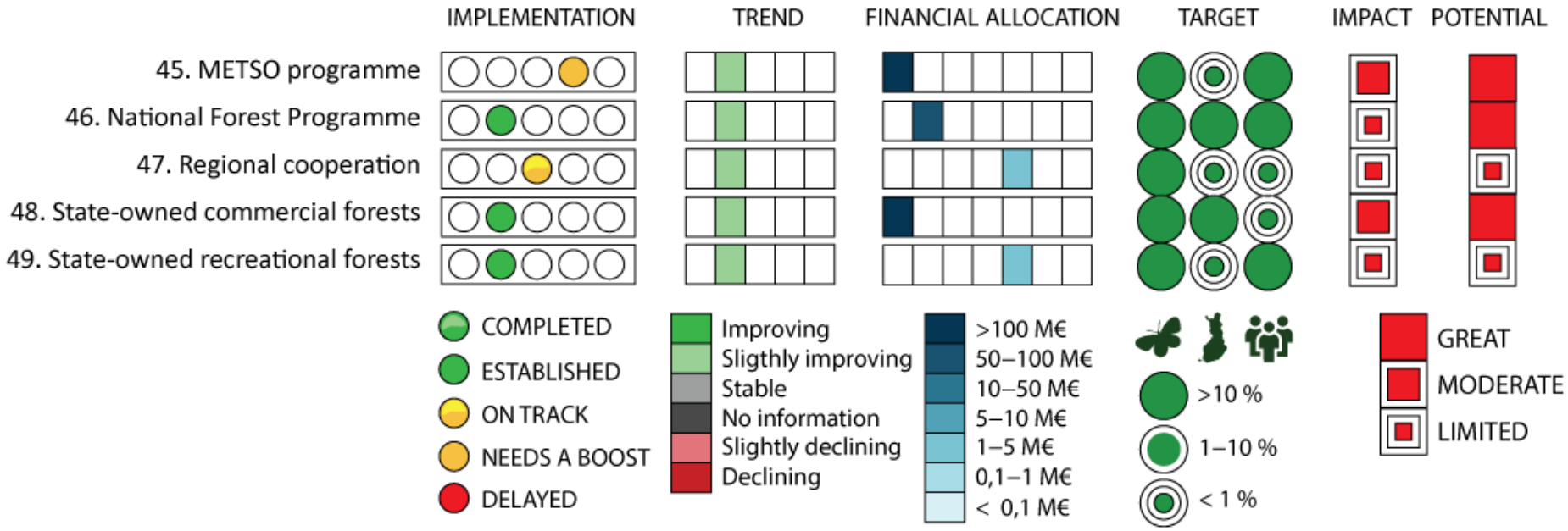
- From the point of view of biodiversity, the whole theme is somewhat secondary. However, the positive impact of nature tourism on local economies have significantly increased positive stances towards protected areas across the society. Therefore, nature tourism has an important indirect impact on attitudes towards biodiversity. In addition, the positive economic impacts fall upon areas of dispersed settlement.
- Action 35 on land use and nature-based tourism is very wide in its scope and it is unclear what concrete measures it could have resulted in. If a similar action remains in the next NBSAP its goals must be better articulated.
- Action 36 on off-road traffic relates to legislation which would be a more suitable theme for it. The implementation of the action has not started, and even if it had been, impacts on biodiversity could not have been expected to be great. In future, the action should probably not be included in the NBSAP.
- Action 38 on experiential relationship to nature relates better to communication and environmental education (theme 1). The action in itself is important and carries a lot of potential.
- Actions 35 and 37 relate to theme 4 (planning and land use).
- The delay in the implementation of actions 36 and 37 may be because it is unclear who is responsible for carrying them out. In future, the responsibilities must be spelled out and fall on more than individual persons.

9. RESEARCH AND MONITORING



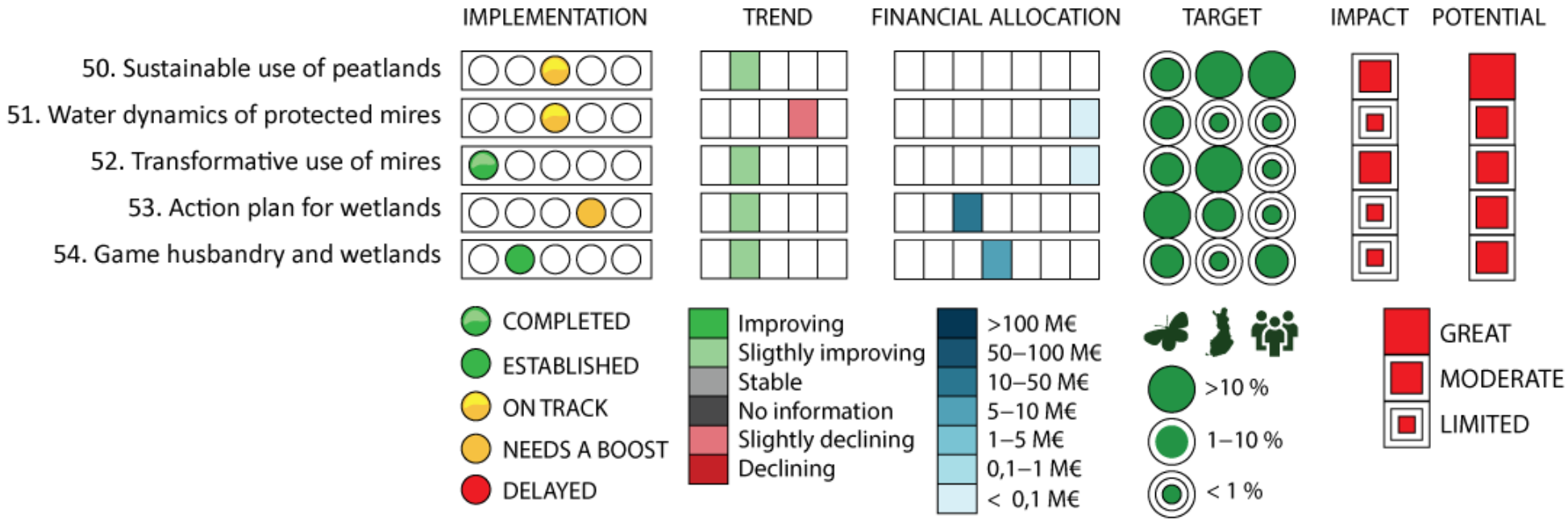
- Out of all themes in the NBSAP, the development of the actions related to research and monitoring has been the most positive. There have also been significant financial investments in the theme, especially in the development of information systems.
- The economic and other valuation of ecosystem services (action 39) links together with research and development of green economy (action 41).
- The joint use of data is a wide-ranging action. Here we took into consideration also the development of information systems that advance information exchange.
- The cooperation of the Finnish Natural History Museum and the Finnish Environment Institute (action 42) is only a small part of the cooperation of needed between authorities in biodiversity monitoring.
- The digitisation of museum samples is a is not an end in itself (action 43). Better use of taxonomic data is.
- The PUTTE programme on deficiently known species has been separated from other means of species protection (theme 6). Because knowledge should result in action this might be a better context for it.
- We need to assess how biodiversity and ecosystem services will feature in relation to one another in the next NBSAP. In terms of regulation services, focus could be put on the preservation of the functionality of ecosystems. Alongside with cultural services, the positive impact of biodiversity on human health should be included.

10. FORESTS



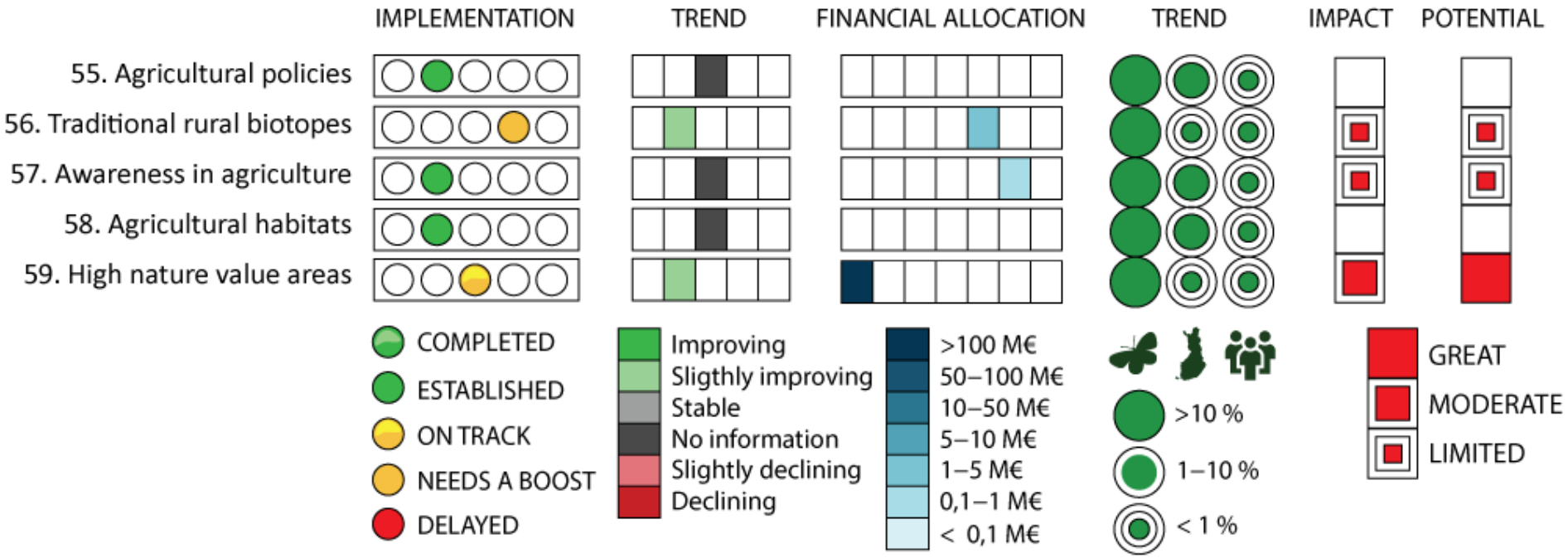
- A research-based assessment of the impacts of the Act on the Financing of Sustainable Forestry on biodiversity is needed.
- The METSO Forest Biodiversity Programme for Southern Finland continues until 2025. A similar programme aiming at increasing the area of protected forest area and of nature management is needed also thereafter.
- The measures of the nature management of commercial forests should focus on those characteristics (dead wood, tree species heterogeneity etc.) that are most important for species and habitats. Quantitative goals are needed on these.
- The action on regional cooperation is limited in scope. Since regional cooperation is a part of the METSO Programme there is no need for it as an individual action.
- State-owned recreational and research forests constitute a small part of the total area of state-owned multiple-use forests and the financial allocation directed at them cannot be separated from all the expenses of all state-owned forests.

11. MIRES AND WETLANDS



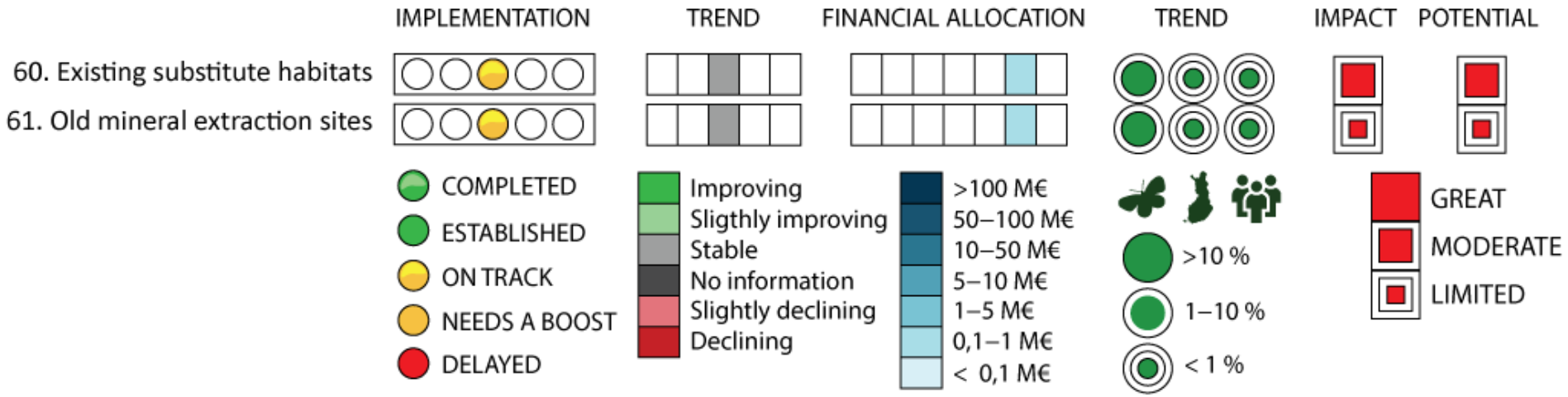
- The actions on mires have succeeded in decreasing pressures on mires, but not yet in improving the state of mires. Because of the previous widespread changes in mire habitats the improving the state of mire habitats is necessary for halting the decline of the population of mire species.
- The actions on mires are backed-up by a government resolution in principle on the sustainable use of mires and peatlands. This has most likely increased their weight.
- The financial allocation on the encompassing action on the sustainable use of peatlands could not be estimated due to overlaps with other actions. In future, these overlaps should be avoided.
- The action on the action plan for wetlands would be important for biodiversity, but its implementation has not started.
- The action on the wetland strategy for game husbandry stands separated from other game related actions. The importance of game wetlands for biodiversity is difficult to evaluate comprehensively because there is no systematic monitoring of these areas. Based on the available information game wetlands may not have had a great positive impact on biodiversity. However, more research is needed. If there is widespread and intensive hunting in these areas the overall impact may even be negative for some species.

12. AGRICULTURAL HABITATS



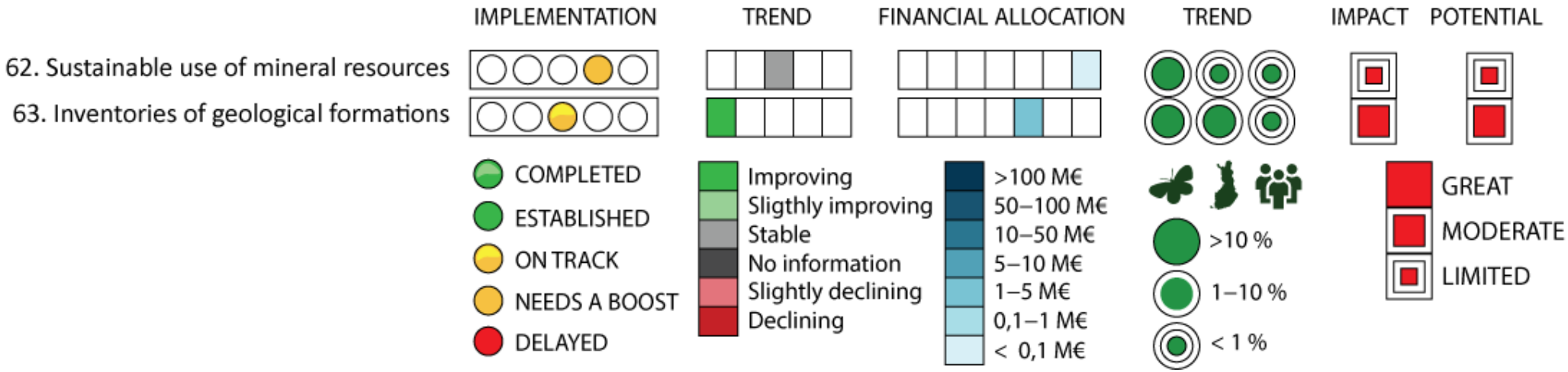
- The formulation of actions related to farms and agricultural policies was unsuccessful. No such measures relate to them that could be monitored and evaluated.
- Two actions focused on information and advice. As important as these are, such sectorial actions should not be individual actions in the next NBSAP. Information and the availability of information form a necessary basis for action and should automatically be a part of any action aiming at concrete changes.
- The action on the management of traditional rural biotopes is an example of an action that is much needed, well focused and has been implemented quite successfully.
- Actions of agricultural habitats need to more concrete, measurable and ambitious in the future.

13. SUBSTITUTE HABITATS



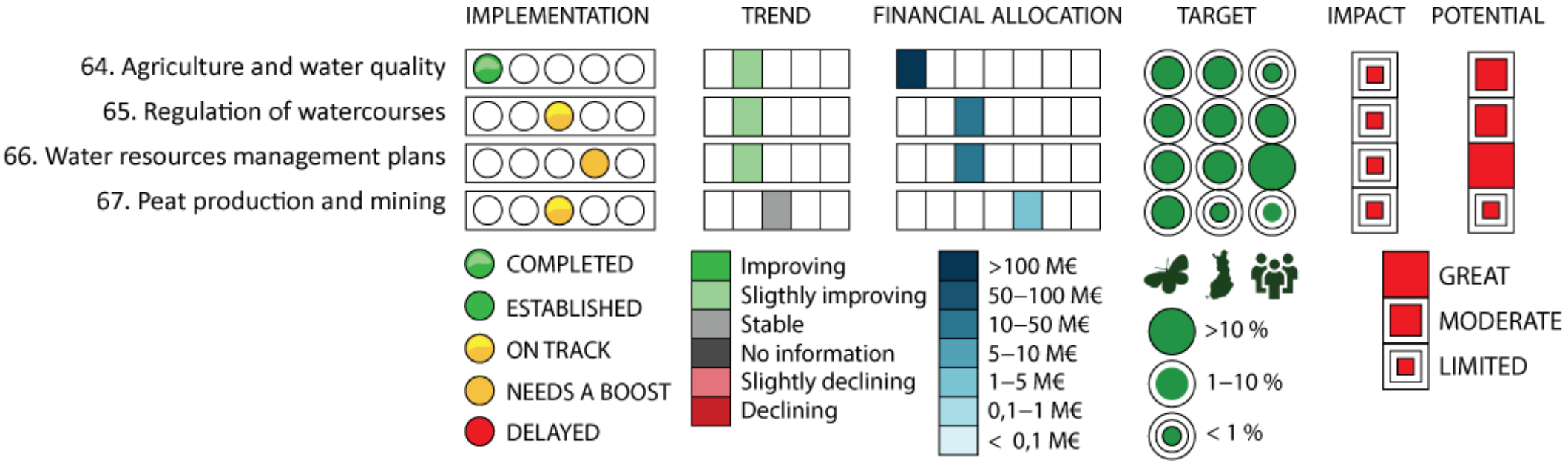
- Substitute habitats are already significant for some species and may be more significant in the future if their management is purposeful and comprehensive.
- On the contrary, the significance of old mineral extraction sites is minor. They can be important for some species if the landscaping of these areas is done by fulfilling the requirements of target species and the areas are kept open.
- The action on old mineral extraction sites could be combined with the action on the sustainable use of mineral resources under the theme of geoformations.

14. GEOFORMATIONS



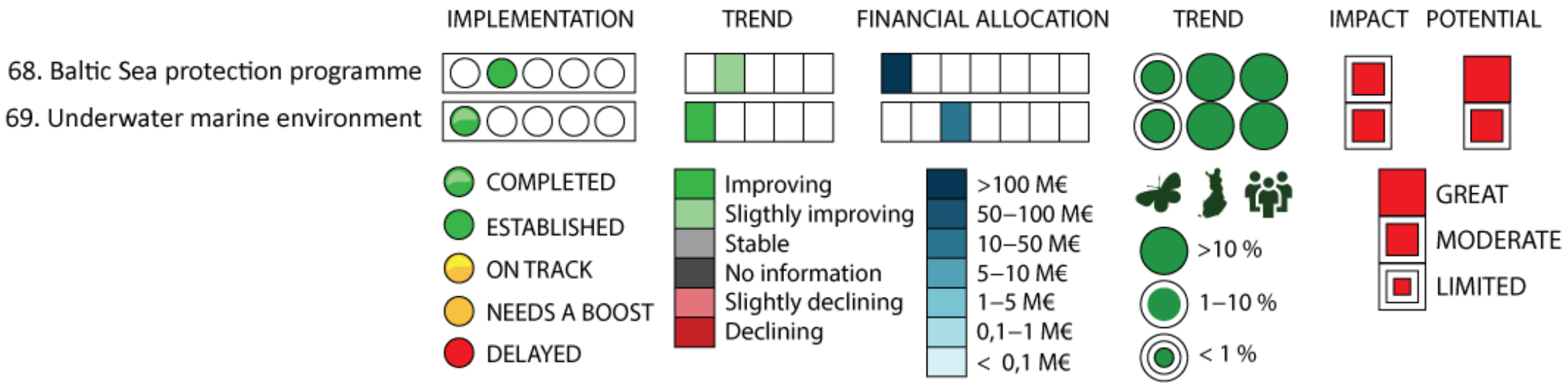
- The only action related to rocky habitats deals with the inventories of geological formations. The basic information on geological formations has now been collected, which gives a good basis for their protection and sustainable use.
- If the next NBSAP contains an action on geological formations it should result in concrete action in protecting rocky habitats and contain quantitative goals.
- Including geological formations in an NBSAP is quite rare internationally. Geological formations are not mentioned in the CBD since they are abiotic in themselves. However, geological formation host many specialised species and diverse habitats. Therefore, actions focused on geological formation may be reasonable in the future too.

15. INLAND WATERS



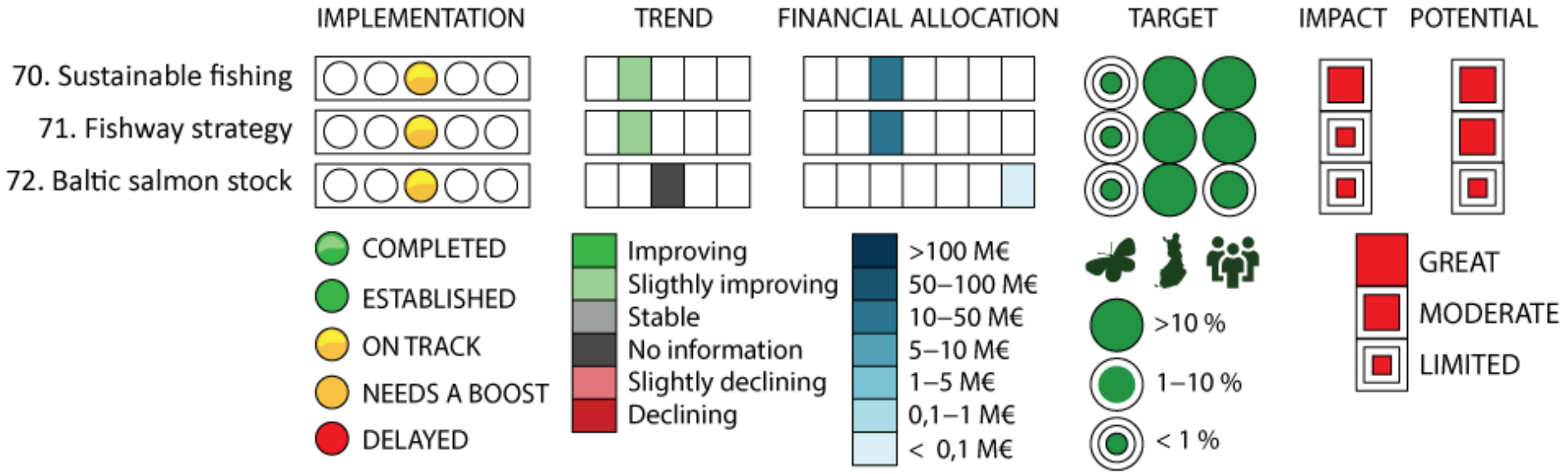
- Financial allocation for agri-environmental subsidies has been exceptionally great, but results on the ecological status of inland waters and biodiversity have been inadequate. In future, actions need to be better targeted and more efficient.
- Three of the actions aim at decreasing pressures and one on improving the status of inland waters. In future, one action on both issues should be enough.
- The target and potential of water resource management plans is the greatest. Resources should be directed at implementing those plans.
- The water protection measures of forestry are not included at all among the actions of the NBSAP.
- The extraction of peat for energy is about to end and the impacts of mines are local. There is probably no need to have an action on those at the level of the NBSAP.
- The impacts of climate change on inland waters should be taken into account when revising the NBSAP.
- In future, the watershed approach should be used in the actions related to inland waters. This will increase efficiency and underline interlinkages of terrestrial and aquatic ecosystems.

16. BALTIC SEA AND THE COAST



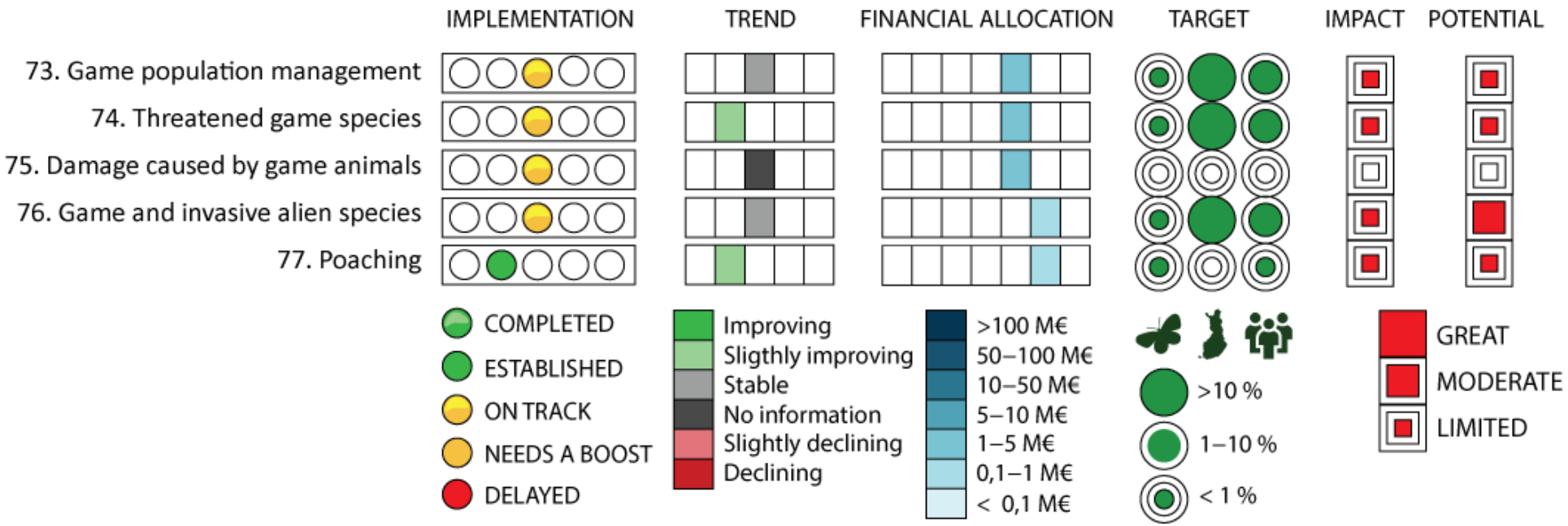
- Actions in this theme have been comprehensive and quite well implemented.
- Compared with many other habitats, there has been substantial investment in implementing actions related to the Baltic Sea. This is, in part, thanks to international commitments and cooperation (especially HELCOM).
- A stronger socioeconomic perspective needs to be built into the development of the actions in the future.
- The safeguarding of the Baltic Sea depends largely on the decisions related to economy and production. Circular economy may play a significant role in transforming these.

17. FISH STOCKS



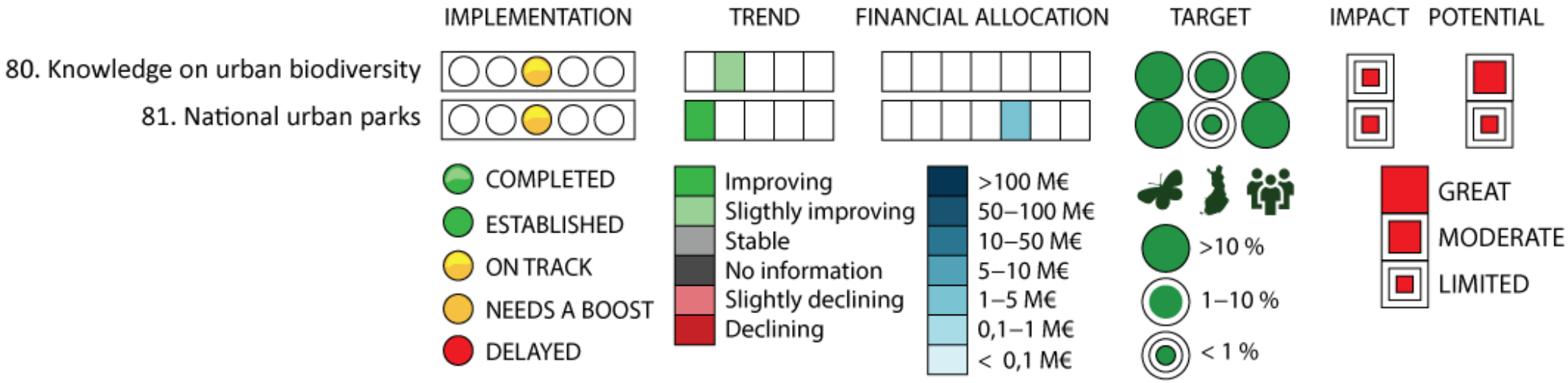
- The NBSAP contains three actions related to fish stocks. In addition, there is an action on fish genetic resources under the theme of genetic diversity. All these actions could be combined into one.
- The action 72 concerns only one species (Baltic salmon). Its implementation has not proceeded within the EU. On a general level, the actions of the NBSAP should not rely on such international processes. The actions should also not focus on one species only.
- In future, the action on fish stock should be more closely linked with biodiversity of the Baltic Sea and inland waters, and it should also affect those species that are not commercially exploited.

18. GAME ANIMALS



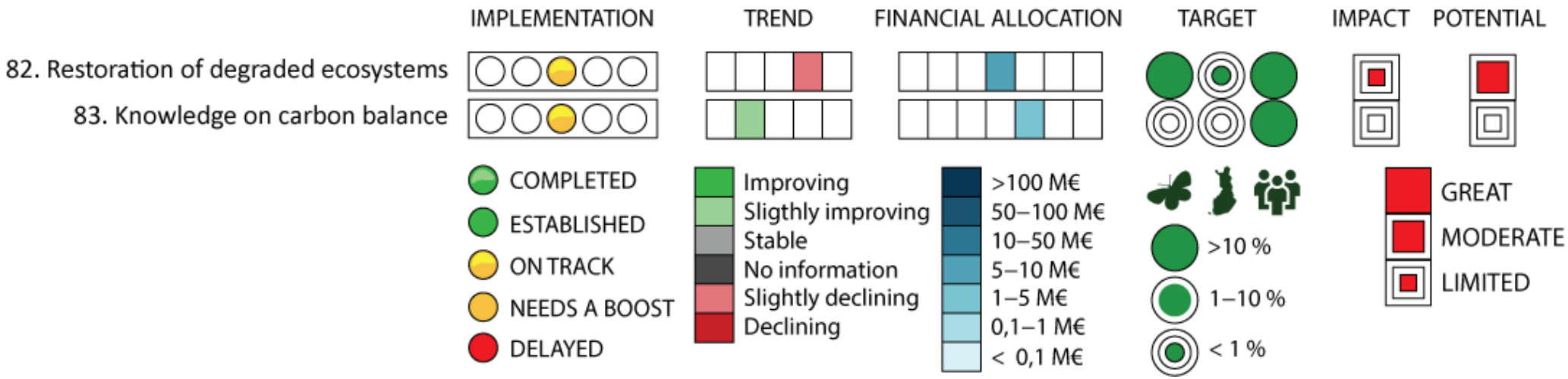
- There are many actions related to game animals, and the actions are spread throughout the NBSAP. The significance of these actions is limited on the level all biodiversity in Finland. There is approximately 60 game species in Finland.
- The goal of safeguarding biodiversity needs further strengthening in the game related actions in the next NBSAP.
- The action 75 on damage caused by game animals relates to action 10 on predator compensation.
- The action 54 on the wetland strategy for game husbandry falls under this theme.
- The action 76 on game and invasive alien species overlaps with the action 34 on the national strategy for invasive alien species.
- The action 74 on threatened game species overlaps with action 28 on game management plans under the theme of threatened habitats and species.
- In future, one broad-ranged action on the sustainability of hunting and the viability of game animal population is likely to suffice.

19. URBAN AREAS



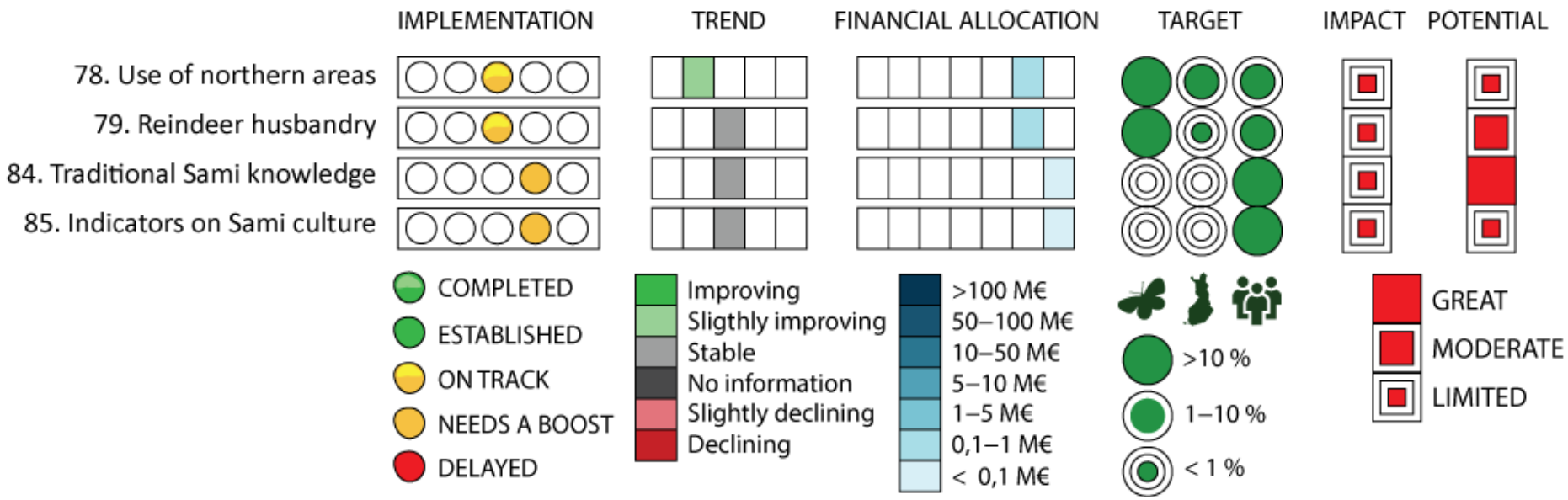
- Urban areas are often species rich habitats, although many of the species are generalists that cope well with changing conditions. However, urban areas may be secondary habitats for some threatened species.
- The theme links with the theme of land use and planning (theme 4) as well as with substitute habitats (theme 13).
- The importance of natural areas of cities for peoples' health and relationship with nature is likely to grown as urbanisation proceeds. There should be an action on this theme in the next NBSAP.
- It is possible to apply much more nature-based solutions in cities than at present.

20. RESTORATION AND NATURE MANAGEMENT



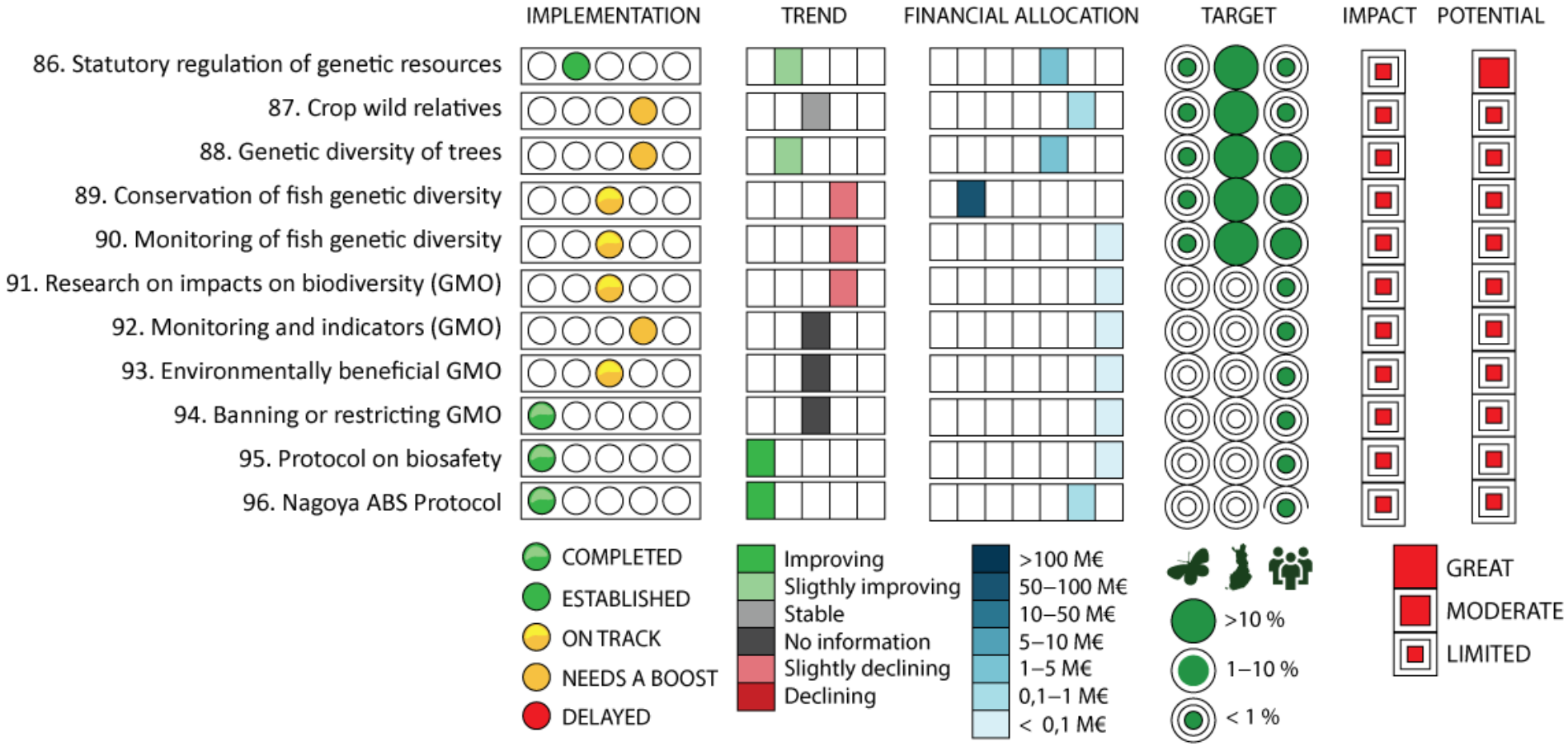
- Actions related to restoration and management of habitats could all appear together or alongside with the habitats in question.
- The management of traditional rural biotopes appears under the theme of agricultural habitats (theme 12, action 59).
- The management of wetlands is part of the action plan for wetland (theme 11, action 53).
- The action 83 on knowledge of carbon balance could fall under themes of mires and wetlands (theme 11) or climate change (theme 7). Nevertheless, is it an action focused on producing more information without any specific action to improve the state of biodiversity.

21. SAMI PEOPLE AND NORTHERN AREAS



- The theme relates to the theme of planning and land use (theme 4); for example, to action 16 on the Akwé: Kon guidelines.
- The theme also relates to recreation and tourism (theme 8).
- The question relating to the Sami people and their homeland would be better addressed in a separate section where the preservation of biodiversity is connected with continuation of the Sami culture and Sami way of life. The traditional livelihoods of the Sami people have developed in close connection with nature and maintain biodiversity, for the most part. From this point of view preserving the Sami culture and way of life supports the preservation of the biodiversity of northmost areas.
- The actions related the Sami people and northern areas need to be more goal-oriented and financed properly.
- All the actions related to the Sami people must be formulated in close cooperation with the Sami Council.

22. GENETIC DIVERSITY

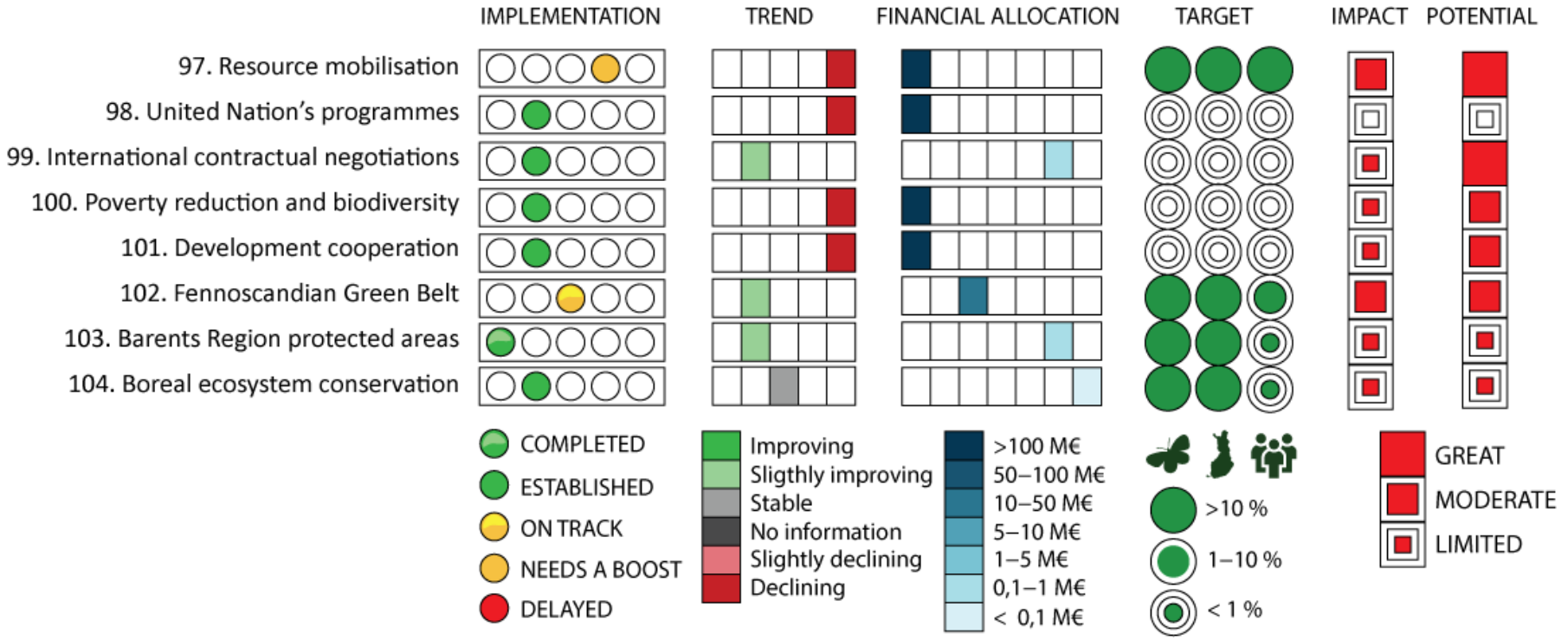


[See next page for conclusions.]

22. GENETIC DIVERSITY

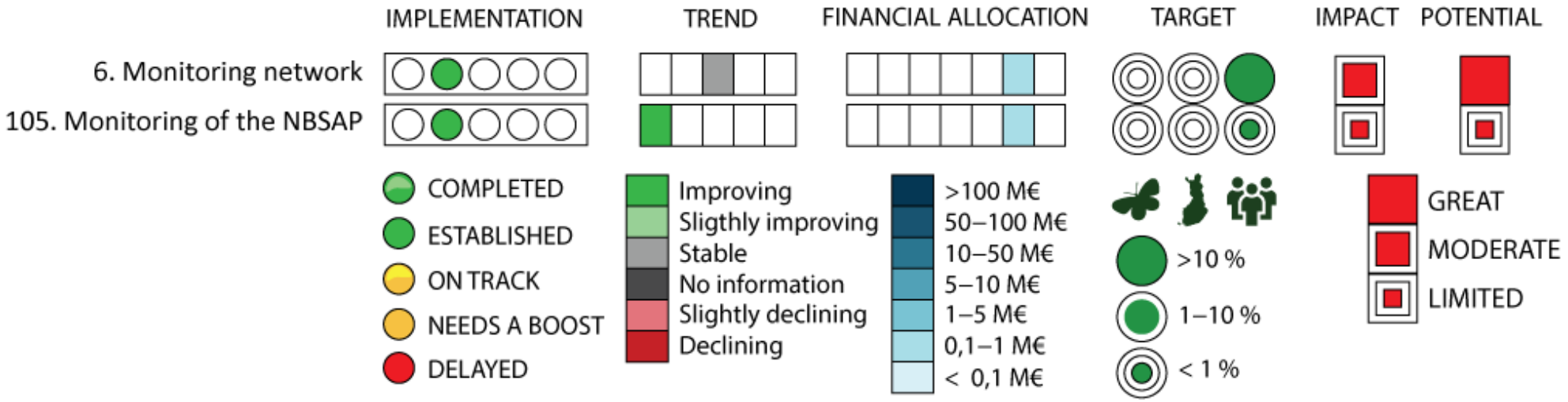
- The theme contains many actions that are closely related to one another. There is plenty of room for eliminating and combining.
- The actions on fish species and populations (89 and 90) could be included in the theme/action on viable fish populations and sustainable fishing (theme 17).
- In Finland, the foremost factors causing the loss of fish biodiversity are the eutrophication of waters and related growth in the dominance of cyprinids. In addition, there are a few taxa threatened with extinction including the European eel (*Anguilla anguilla)*, the Baltic Sea populations of grayling (*Thymallus thymallus*), landlocked salmon (*Salmo salar* m. *Sebago*) and the arctic chars of the lake Saimaa (*Salvelinus alpinus*). The genetic diversity of salmonid species is most acutely threatened by population crashes and isolation.
- Because no genetically modified varieties are cultivated in Finland at present, the actions on genetically modified organisms (GMOs) have so far been of little significance. The matter is being monitored as a part of normal authority work. Little if any research is carried out on GMOs.
- The action 86 on the preservation and sustainable use of genetic resources is important, especially if it covers all genetic resources.
- All conservation work on species and habitats contributes to the preservation of genetic resources, but the dimension of genetic diversity is integral part of the conservation of only a few species or species groups. This is the case of, for example, species that can be reproduced artificially. The preservation of the diversity of the Saimaa ringed seal and other endemic taxa also count as preservation of genetic diversity (see theme 6, action 27).
- The actions on the preservation of genetic resources call for a broader approach that includes also species of no direct economic significance.

23. INTERNATIONAL ISSUES



- The cutbacks in the financial allocation to development cooperation in 2012–2017 diminished Finland's contributions to the solving of international challenges markedly. This development should be reversed.
- Although Finland is a small country its visibility in the context of the CBD has been quite considerable and the financing granted by Finland has been important when successfully focused. This tradition should be continued. In a global context, Finland could be one of the good examples of the national implementation of biodiversity policies.
- The question of mobilising resources is critical for the implementation of the NBSAP. More robust solutions must be found in this respect.
- Clearer monitoring and evaluation of results is needed in the case of actions on development cooperation. The assessment of the focusing of resources must be continuous.
- The actions related to regional cooperation have been quite successful. This tradition should continue.

24. MONITORING

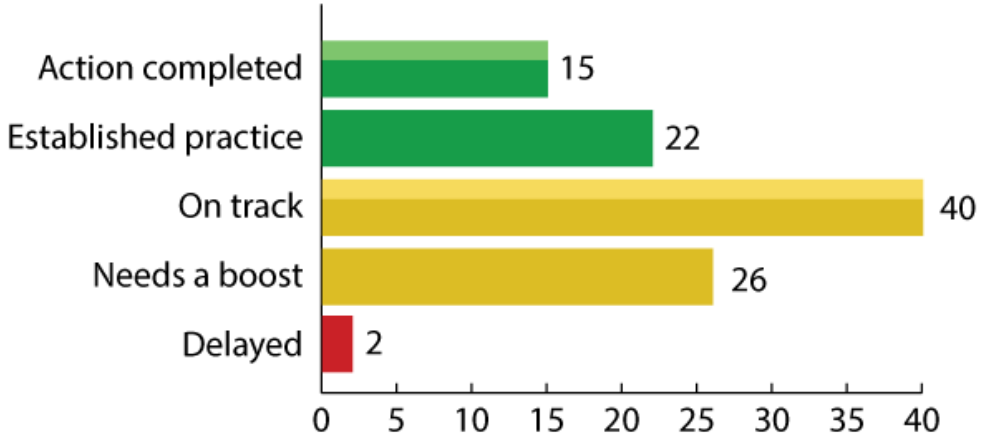


- The theme is crucial, but the actions only relate information. A better context for them might be in the enabling conditions and support mechanisms of the next NBSAP, and not as actions per se.
- It must be comprehended more widely that there cannot be any sensible actions for the preservation of biodiversity without comprehensive enough monitoring of biodiversity.
- The resources of biodiversity monitoring have been declining for the most part. This development must be reversed.
- The monitoring of the implementation and impact of actions must be built in into every action of the next NBSAP, and enough resources must be allocated for their monitoring.

SUMMARY OF ALL THE ACTIONS

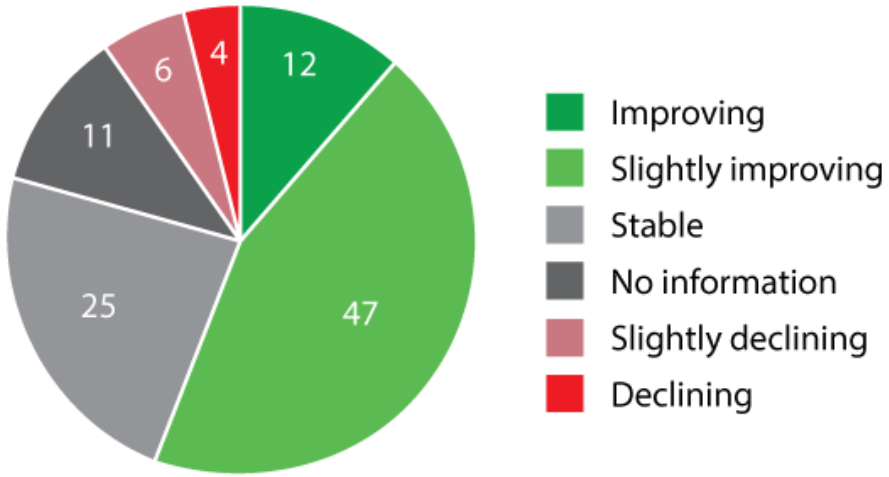
IMPLEMENTATION, TREND, FINANCIAL ALLOCATION, TARGET, IMPACT & POTENTIAL

IMPLEMENTATION



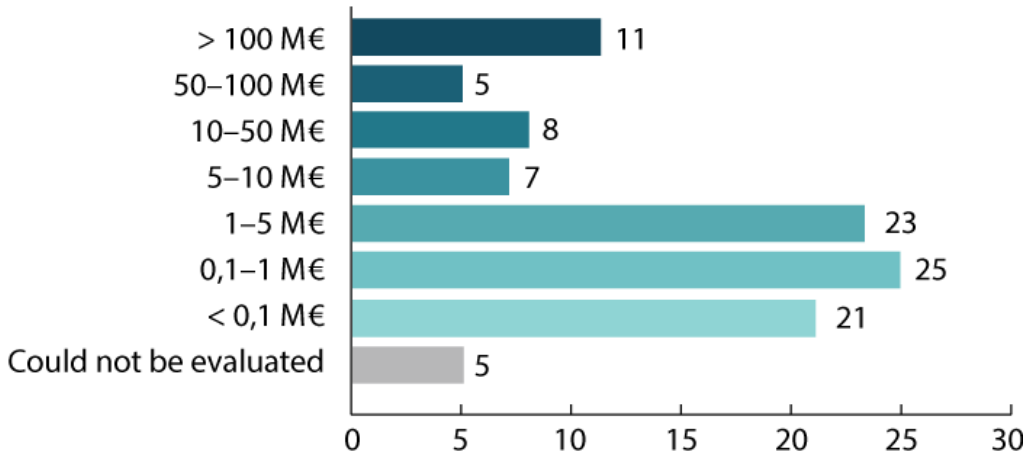
- The actions that have been completed or have turned into established practice (35% of all actions) have often had a relatively low impact on biodiversity. These actions have not been very ambitious, their financing has been inadequate, or their formulation is inexact (“will be developed”, “furthered”, “ensured” etc.). This has resulted in little extra resource allocation into their implementation.
- A few completed or established actions have, however, also been effective. Common to these action is their concrete goal setting and robust organisation of implementation.
- Actions that are still ongoing (63% of all actions), with several behind schedule, have often considerable future potential. Many important policies and processes have been initiated, yet their full implementation requires more resources.
- In future, there should not be one-off actions such as drafting an action plan, performing a review or establishing a new policy. Actions that rely heavily on other independent processes should also not be included.
- In the case of some actions, there have been shortcomings in scheduling. The implementation of several important actions has started only at the end of the NBSAP period and therefore they have not had an impact on biodiversity yet.

TREND



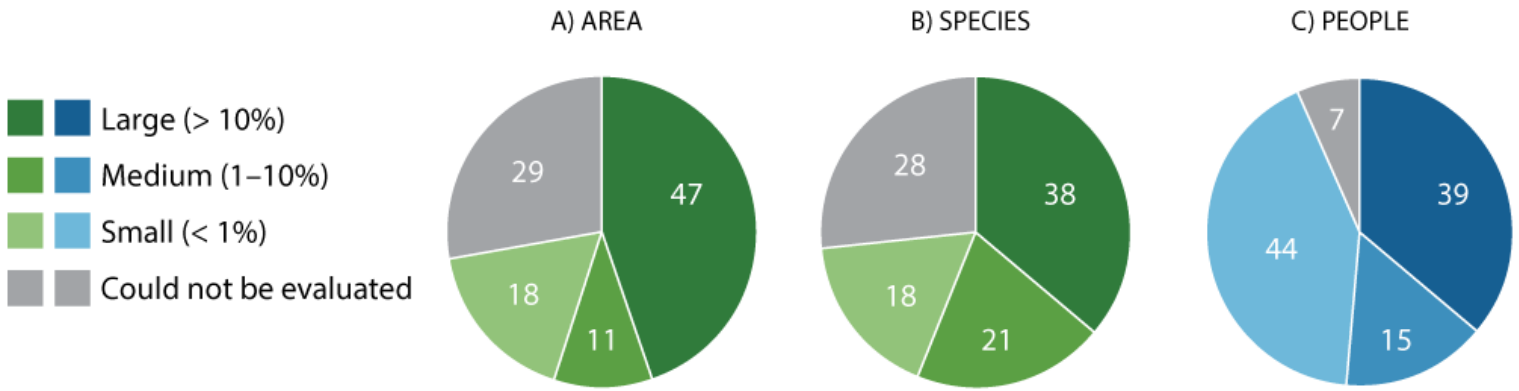
- Just over half of the actions (56%) have resulted in a positive trend in terms of the development they have sought after. In future, we should make sure this proportion is higher.
- The most pronounced improving trends were often observed in actions with a low level of ambition. Only in the case of a small number of actions the positive trend was observed in connection with a relative strong impact on biodiversity. These actions relate to communication and the production of new inventory type of information.
- A slightly improving trend was observed in the case of many actions which had been partially implemented, which implementation started late in the NBSAP period or which dealt with new ways of operation. These include several actions which, with enough investment in the future, could yield in notable results.
- The actions with a stable trend were often characterised by the fact that they had been implemented as a part of the work that authorities have to carry out in any case. There were no clear extra investments in them. In future, all actions should aim at a clear improvement of the status quo.
- The declining trend of actions related to development cooperation was due to cutbacks in the general funding of development cooperation. Financing is no straightforward guarantee of any action (cf. action 1 on communication were considerable results have been reached thanks to close cooperation of several actors, despite scant resources). However, the implementation of no actions can cope with a pronounced cutback in funding.

FINANCIAL ALLOCATION



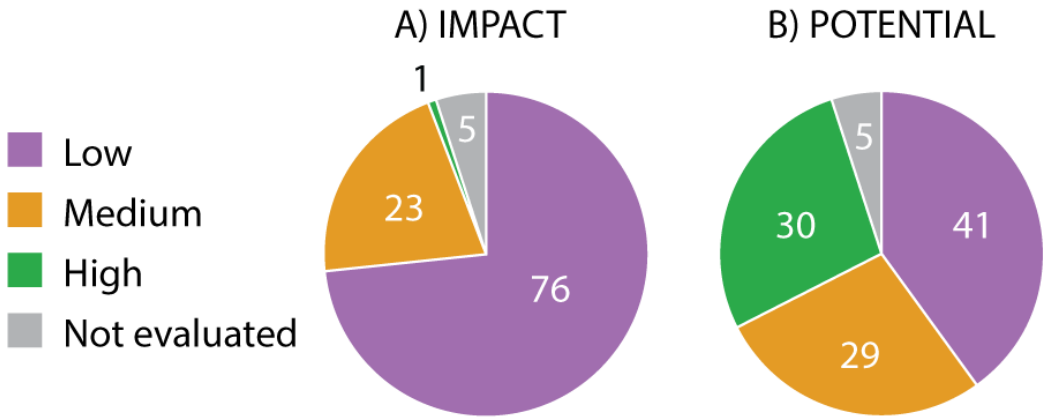
- The allocation of financial resources to the implementation of actions is crucial and reveals a great deal about what is really being focused on, and what not so.
- There are some actions in the NBSAP which have received a great deal of investment, but where the main focus is some other than biodiversity (e.g. National Forest Strategy, agri-environmental subsidies and predator compensation). In these cases, we should be able to better pinpoint the investment in promoting biodiversity.
- There were five actions which had simultaneously a high level of financial allocation, moderate impact and great potential. These dealt with criteria of EU programmes, the METSO Forest Biodiversity Programme, nature management in state-owned commercial forests, the management of high nature value farmland areas and the Baltic Sea Action Plan. In these cases, resources have been successfully invested in actions had have and can yield considerable results.
- There are also actions in the case of which small financial investments by the state have yielded in marked positive development and/or have great potential to do so in future. Examples include communication, education, cooperation with the business sector and legislation.

TARGET



- Less than half of the action target a large share (> 10%) of the total area and of the total number of the species of Finland. More than a third of the actions do not have a direct target at all.
- It is understandable that some actions, including those cross-cutting action focusing on communication and education, do not have a direct impact on biodiversity. However, there are too many actions in the NBSAP without any concrete impact on biodiversity or with only a limited direct target in terms of area and/or species.
- Over one third of the actions target indirectly a large share (> 10 %) of the Finnish population. However, a larger part of actions (42%) target only a small share of Finns.
- In some case, the small indirect target group is well justified, as in the case of farmers. In most cases, however, the actions have been targeted solely at professionals and experts. This has not been a very successful strategy.

IMPACT AND POTENTIAL



- One action had a high impact on biodiversity during the NBSAP period and 23 (22%) had a medium impact. Correspondingly, 30 actions (29%) had a high future potential and a similar share had a medium potential. More than half of the actions can thus yield notable results if their implementation is stepped up.
- The potential of 41 actions (39%) was evaluated to be low. These actions should not feature as independent actions in the next NBSAP, yet they can act as components of future actions. This holds true especially for action focusing on information. In the case of biodiversity conservation, information is almost always a necessary component of influential action, but it is not a goal in itself.