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Green Bond Framework

Principles for a continuous, annual Green Bond programme

by the German federal State of Baden-Württemberg



Baden-Württemberg

MINISTRY OF FINANCE

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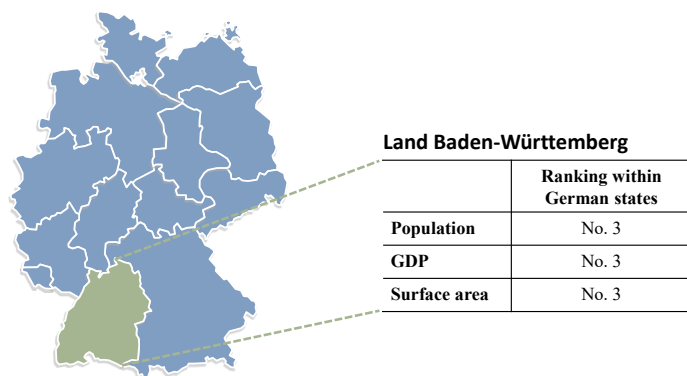
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1 Introduction

In terms of surface area, population size and GDP, the federal State of Baden-Württemberg ("Baden-Württemberg") is the third biggest of the 16 German States. An area of 35,751 square kilometres supports a population of more than 11 million people. Located in the south-west corner of Germany and neighbour to three other German States, Baden-Württemberg lies at the very heart of Europe, and shares a border with France, Switzerland and Austria.



As a federal state, Baden-Württemberg has its own government, parliament and judiciary. The constitution and various laws specify the separation of administrative duties, tax income streams and cost accountability between federal and state level. Important areas of state activity and expenditure are schools, police and universities, subsidies for local and regional public transport, construction of public buildings and the court and prison system, among other things.

Due to the implementation of the federal debt brake in the state constitution, the state's treasury focuses on refinancing. New debt can be issued in extraordinary emergencies (e.g. natural disasters) or in an asymmetric fashion for counterbalancing business cycles in accordance with the applicable annual budget law.

2 Strategy and Rationale

2.1 Environmental objectives of the State of Baden-Württemberg

With regard to climate change, the State of Baden-Württemberg committed itself to specific greenhouse gas emission reduction targets back in 2013, when the Baden-Württemberg Climate Protection Act was passed. Since then, the targets have been tightened several times. In February 2023, the state parliament of Baden-Württemberg passed the Climate Protection and Climate Change Adaptation Act¹. This law continues to develop the Climate Protection Act from 2013, which was amended in 2020 and 2021.

Addressing climate change and protecting the environment are interlinked, and the State of Baden-Württemberg is committed to addressing both challenges. Through the legislation framework², the State of Baden-Württemberg actively supports the conservation, restoration and sustainable use of biodiversity and ecosystems.

The State of Baden-Württemberg first established a sustainability strategy³ in 2007. The realignment of the

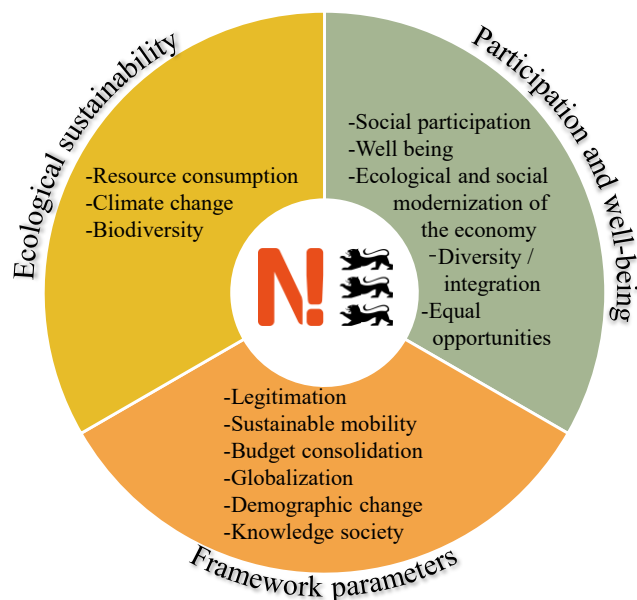
¹ <https://um.baden-wuerttemberg.de/de/klima/klimaschutz-in-bw/klimaschutz-und-klimawandelanpassungsgesetz-baden-wuerttemberg>

² <https://um.baden-wuerttemberg.de/de/umwelt-natur/naturschutz/instrumente-des-naturschutzes/naturschutzrecht/>

³ <https://um.baden-wuerttemberg.de/de/umwelt-natur/nachhaltigkeit/nachhaltigkeitsstrategie/>

strategy in 2011 was then aimed at making sustainability a central criterion for governmental and administrative decisions in Baden-Württemberg. It follows a systematic approach of identifying overall sustainability challenges for the federal state and determining guiding principles, which each ministry then details with specific objectives and measures.

Sustainability challenges⁴:



The guiding principles: *Acting sustainably in Baden-Württemberg means...*

- (I)... implementing the energy transition quickly, safely and affordably with the involvement of civil society.
- (II)... perceiving climate protection as a cross-sectional task and minimising environmental-related threats due to climate change.
- (III)... promoting and implementing innovative, environmentally friendly and social mobility concepts.
- (IV)... implementing a future-oriented urban and spatial development.
- (V)... optimising the use of resources and decoupling economic growth from the consumption of natural raw materials.
- (VI)... protecting and preserving the livelihood, diverse nature and unique cultural landscapes of the state and keeping the impact on humans, nature and the environment as low as possible beyond the state boundaries.
- (VII)... promoting economic change in the direction of sustainability with global responsibility, taking the interests of employees, the maintenance of competitive ability and the strengthening of adaptability into consideration.
- (VIII)... promoting responsible ways of consumption and fair trading.
- (IX)... consolidating the budget in favour of future generations in a socially responsible way.

⁴ https://www.nachhaltigkeitsstrategie.de/fileadmin/Downloads/Publikationen/Strategie/N_Berichte/N-Bericht_Zielsetzung.pdf

(X)... taking on responsibility (within the scope of globalisation) for a fair development, positioning the strengths of Baden-Württemberg internationally and supporting the different groups of players in their developmental engagement.

(XI)... promoting powerful science and research for enabling first class performances and facilitating innovations.

(XII)... promoting educational justice for all, as well as design competence for sustainable development.

(XIII)... granting all citizens fair and equal participation, as well as equal opportunities in society and reducing the proportion of people living in poverty.

(XIV)... making decisions transparent with early involvement of civil society and reinforcement of civic engagement.

(XV)... accrediting social and cultural diversity as enrichment, promoting intercultural dialogue and effectively prohibiting any form of exclusion.

(XVI)... providing a healthy living environment.

(XVII)... providing a secure life for all people.

2.2 Existing environmental strategy reports

The State of Baden-Württemberg publishes a status indicator report which tracks relevant outcome parameters across all identified sustainability challenges. The most recent report is available for 2022 (see link in footnote, available only in German language⁵). Each indicator is analysed with respect to status, trend and contribution to the UN Sustainable Development Goals.

Furthermore, the State of Baden-Württemberg has established a management by objectives reporting system for its sustainability strategy. The first series of these reports was published in 2014. The second series of reports for 2019 both evaluates whether the objectives from 2014 have been met and defines updated objectives for the future.⁶

Finally, the State of Baden-Württemberg regularly publishes monitoring reports on the fulfilment of greenhouse gas emission targets and the status of implementation of the measures in the climate protection strategy (see link in footnote, only available in German language⁷).

2.3 Rationale for issuing Green Bonds

Sustainable finance has been an important cornerstone of the sustainability strategy: The UN Sustainable Development Goals (SDGs) were incorporated in 2018. A sustainable procurement strategy was implemented in 2018, and the pension fund management incorporated sustainability criteria in a multi-stage process from 2017 to 2020. Finally, the state parliament passed the Sustainable Financial Investment Act in March 2023 (see link in footnote, only available in German language⁸).

Issuing Green Bonds on a regular basis is an important next step in this evolution: The state intends to set an example in implementing sustainable finance in the funding activities of local authorities. The issuance of at least one Green Bond per year is aimed at making the use of proceeds from the refinancing of green projects accessible for investors in a predictable and regular fashion.

⁵ <https://www.nachhaltigkeitsstrategie.de/indikatorenbericht-2022>

⁶ <https://www.nachhaltigkeitsstrategie.de/strategie/landesverwaltung/nachhaltigkeitsberichte>

⁷ <https://um.baden-wuerttemberg.de/de/klima/klimaschutz-in-bw/klima-massnahmen-register-kmr/monitoring>

⁸ https://www.landtag-bw.de/files/live/sites/LTBW/files/dokumente/WP17/Drucksachen/4000/17_4199_D.pdf

Green Bonds ensure that refinancing takes place in a manner that is directly linked to the issuer's green objectives, and highlights them to all stakeholders in an impact report. Projects that are being refinanced through Green Bonds are presented with full transparency and benchmarked against green definitions and taxonomies with input from external reviewers. This ensures that the proceeds contribute to sustainability and allows investors to assess and monitor the development of the green project portfolio over time.

Furthermore, Baden-Württemberg wishes to contribute to the further development of green capital markets and act as an example for the regional business community, which may also turn to green financial instruments in the future.

3 Basis and core components of the Green Bond Framework

3.1 Basis of this Framework

Baden-Württemberg has established this Green Bond Framework under which the federal state intends to issue Green Bonds to refinance green projects with a positive environmental benefit. This Green Bond Framework is based on the International Capital Markets Association ("ICMA") Green Bond Principles ("GBP"), 2021 version (with June 2022 Appendix)⁹.

Moreover, this Green Bond Framework takes into consideration, where possible, the EU Taxonomy Regulation¹⁰. As the green bond market continues to evolve, Baden-Württemberg's Framework may be subsequently revised or updated to remain consistent with shifting expectations, best market practices and regulatory landscape. Further, eligibility criteria included in this Framework may not necessarily apply to outstanding Green Finance instruments issued under previous versions of the Framework.

The Green Bond Framework has four core components:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting

This Green Bond Framework also follows the recommendations of the Green Bond Principles regarding External Reviews.

3.2 Use of Proceeds

Due to the wide scope and diversity of activities, Baden-Württemberg has not defined its own "green" categories, but uses the categories of the existing Frameworks as a basis for project identification and reporting. The following table shows these categories and the relevant eligibility criteria¹¹, which are shown as an illustration rather than an exhaustive list, since the relevant technical criteria and/or legal definitions of the EU Taxonomy are applied, where possible.

As long as there are environmental objectives for which the EU has not yet defined any technical screening criteria, Baden-Württemberg bases eligibility decisions on the definitions in the EU Taxonomy regulation and established standards such as Natura 2000 as well as specific requirements (listed in the table below).

The proceeds of Baden-Württemberg's Green Bonds will be used to refinance the eligible green project categories as defined below, together forming the "eligible green projects" and/or "eligible green expenditures". Eligible green projects may include capital expenditures and/or operations expenditures, as

⁹ To be found [here](#).







¹⁰ To be found [here](#).

¹¹ In exceptional cases other combinations of environmental objectives and ICMA categories may apply.

well as subsidies to finance these type of expenditures or research and development in the respective categories.

The following activities are excluded in all categories without exception:






- Coal
- Nuclear
- Armament
- Landfill expansion








GBP Category	Description of Eligible Projects and Eligibility Criteria	UN SDG(s)	EU Environmental Objective
Renewable energy	<p>Expenditures relating to the production, acquisition, operation, distribution and transmission of renewable energy with life cycle emissions of less than 100g CO₂e/kWh.</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Onshore and offshore wind energy • Solar photovoltaic and concentrated solar power • Hydropower¹² • Geothermal energy • Bioenergy¹³ • Transmission and distribution networks with the purpose of connecting renewable sources and improving the overall efficiency of the electrical grid • Storage linked only to renewable energy generation plants 		<p>Climate change mitigation</p> <p>Objective: Substantial contribution to the stabilisation of greenhouse gas concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system that is consistent with the long-term temperature goal of the Paris Agreement by avoiding or reducing greenhouse gas emissions or increasing greenhouse gas removal, also by means of process innovations or product innovations</p>
Energy efficiency	<p>Expenditures linked to energy management developments to increase energy efficiency at industry, public and service buildings. Funding of enabling technologies for shift towards less energy intensive future.</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Installation of energy-efficient technologies and products • Energy-efficiency improvements involving changes in processes, reduction of heat losses and/or increased waste heat recovery, and the development of energy efficient technologies • Broadband infrastructure enabling modal shift/home office work and leading to energy savings compared to conventional connections 	 	
Green buildings	<p>New buildings built after 31 December 2020 with energy performance at least 10% better than the threshold for Nearly Zero-Energy Buildings (“NZEB”) in the local market and building renovations that meet current requirements for major renovations¹⁴.</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • New public buildings (e.g. administrative buildings, universities) • Renovation of existing public buildings (e.g. administrative buildings, universities) 	 	
Clean transportation	<p>Expenditures intended to support the development and maintenance of vehicles and infrastructure needed for sustainable mobility of personal and mass public mobility.</p> <p>Examples of eligible green projects:</p>		

¹² Power density > 5W/m² or life cycle emission above mentioned for hydropower plants built before 2020 and minimum density of 10W/m² or GHG intensity < 50gCO₂/kWh for projects commencing operations in 2020 or after.

¹³ From agricultural or forestry residues (not competing with food production).

¹⁴ The energy performance before the renovation is based on reference energy data.

	<ul style="list-style-type: none"> • Low-carbon vehicles and rail rolling stock <ul style="list-style-type: none"> ◦ Fully electric, hydrogen or otherwise zero-emission passenger vehicles ◦ Electrified rail transportation for passenger and freight (e.g. light rail transit, metro, tram, trolleybus, bus and wagons) • Low-carbon transportation infrastructure <ul style="list-style-type: none"> ◦ EV charging, electrified railway, hydrogen fuelling stations, bicycle lanes • Projects supporting public transportation means 		
<p>Climate change adaptation</p>	<p>Expenditures to increase the resilience of eco-systems, including infrastructure measures to address drought, desertification, extreme weather events, rising water levels, declines in agricultural productivity, forest fires, epidemics, pests and the loss of biological diversity and ecosystem services resulting from global temperature increases.</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Subsidies for the development of climate resilient forests and/or (re-)afforestation • Timber construction measures 		<p>Climate change adaptation</p> <p>Objective: Substantial reduction of the risk of adverse impact on the current climate and the anticipated future climate without increasing the risk of adverse impact on people, nature or assets</p>
<p>Sustainable water and wastewater management</p>	<p>Expenditures relating to the development, construction, operation and maintenance of sustainable water, waste and waste-water projects that contribute to the improvement of water supply, distribution and quality, sanitation as well as waste and wastewater collection and treatment. All activities have to be in line with national and EU recommendations (Federal Water Act § 57, Surface Waters Ordinance, EU Water Framework Directive).</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Water and wastewater treatment plans • Projects to strengthen critical water infrastructure • Projects that monitor water security • Water recycling and reuse related projects 	 	<p>Sustainable use and protection of water and marine resources</p> <p>Objective: Substantial contribution to the sustainable use and protection of water and marine resources where the activity either contributes substantially to achieve good condition of bodies of water, including bodies of surface water and groundwater, or preventing the deterioration of bodies of water that are already in good condition, or contributes substantially to achieve good environmental condition of marine waters or preventing the deterioration of marine waters that are already in a good environmental condition</p>
<p>Circular economy adapted products, production technologies and processes, and/or certified eco-efficient products</p>	<p>Expenditures linked to reduction of use of raw materials and public procurement of sustainable products with a resource efficiency focus.</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Increased recyclability/reusability of products • Pilot plants for phosphorus recycling <p>Additional exclusions:</p> <ul style="list-style-type: none"> • No landfill activities • Biomass only, if part of a bigger value chain and/or if biomass originates from non-hazardous or non-recyclable waste • Heating/cooling and co-generation facilities using biofuel/biomass only, if energy conversion efficiency of 80 % is achieved 		<p>Transition to a circular economy</p> <p>Objective: Substantial contribution to the transition to a circular economy, including waste prevention, re-use and recycling</p>

<p>Pollution prevention and control</p>	<p>Expenditures linked to waste prevention, reduction, reuse or recycling projects inducing the collection, sorting, processing, conversion and treatment of waste respecting the waste hierarchy.</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Construction of integrated waste management facilities, pre-treatment facilities such as material recovery facilities and transfer stations <p>Expenditures linked to reduction of air pollution via measures related to e-mobility, maintenance of leased vehicles, promotion of public transport and air solutions.</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Public procurement of low emission vehicles <p>Additional exclusions:</p> <ul style="list-style-type: none"> • Heating/cooling and co-generation facilities using biofuel/biomass only, if energy conversion efficiency of 80% is achieved 	 	<p>Pollution prevention and control</p> <p>Objective: Substantial contribution to pollution prevention and control and environmental protection from pollution</p>
<p>Terrestrial and aquatic biodiversity conservation</p>	<p>Expenditures linked to restoration and rehabilitation of ecosystems (e.g. renaturation of banks, reopening of urban rivers, planting of hedges).</p> <p>Expenditures linked to sustainable forest management (e.g. adaptation of tree species to climate change, safeguarding state forests), including afforestation, reforestation and rehabilitation of degraded forests.</p> <p>Expenditures linked to investments in protected areas in line with national and EU recommendations (Nature Conservation Areas, Natura 2000).</p> <p>Examples of eligible green projects:</p> <ul style="list-style-type: none"> • Preserving steep-hill grassland • Preserving manually cultivable vineyards in steep slope and terraced areas • Nature conservation contracts 	  	<p>Protection and restoration of biodiversity and ecosystems</p> <p>Objective: Substantial contribution to protecting, conserving or restoring biodiversity, achieving good condition of ecosystems, or protecting ecosystems that are already in good condition</p>
<p>Environmentally sustainable management of living natural resources and land use</p>	<p>Expenditures linked to preservation and sustainable use of terrestrial and aquatic of natural resources that include, but may not be limited to:</p> <ul style="list-style-type: none"> • Environmentally sustainable organic agriculture in line with EU Organic standard • Certified forestry in line with FSC, PEFC or equivalent standard <p>Examples of Eligible green projects:</p> <ul style="list-style-type: none"> • Investing in properties with importance for environmental protection • Research Programme Organic Farming 	 	

3.3 Process for Project Evaluation and Selection

Baden-Württemberg has established a coordination group which analyses the eligibility of the proposed green projects for ensuring compliance with the framework criteria.

3.3.1 Criteria for Project Selection

There are clearly defined criteria and requirements for green projects to be eligible for Green Bond refinancing:

Budgetary/systematic criteria:

- **Actual expenditure reference:** The green project results in an outflow of funds in the financial year preceding the year when the bond is issued. The cash outflow can be quantified, and therefore allocation reporting is already available when the Green Bond is issued.
- **Project expenditure:**
 - Any capital expenditure, public subsidies and any operating expenditure that increases the lifetime or value of a green asset is eligible.
 - Any operating or personnel expenditure without value or lifetime increase for a green asset is ineligible.
- **Net expenditure of the federal state:** Only the net expenditure of the federal state is taken into consideration, expenditure already funded by the federal government or the EU is excluded from the pool of eligible green projects.
- **Voluntary state activity:** Projects that are implemented due to EU or federal regulation or court decisions are excluded.

Impact criteria:

- **Substantial contribution to an environmental objective** as specified in the EU Taxonomy for sustainable economic activities in Articles 9 to 15 taking **technical screening criteria** from the EU Taxonomy into consideration, where possible. Eligible green projects are evaluated according to the criteria in the latest applicable version of the EU Taxonomy at the time of the assessment. Eligible green projects must be assessed to comply with the applicable Technical Screening Criteria ("TSC").
- Identification of the (primary) **ICMA Green Bond Principles category**.
- Fulfilment of **"do-no-significant-harm"** criteria as specified in the EU Taxonomy for sustainable economic activities in Article 17: Eligible green projects should, to a reasonable extent, be assessed to comply with the Do No Significant Harm ("DNSH") criteria. Such assessment is carried out by relevant experts within the ministries associated with the respective expenditures, to the best of their abilities. Demonstrating full alignment with the DNSH criteria may be challenging or unfeasible for certain public expenditure programmes, such as subsidy programmes and tax relief schemes. In such cases, any gaps in relation to alignment with the EU Taxonomy, e.g. due to lack of information, will be communicated transparently.
- Compliance with **minimum social safeguards** as specified in the EU Taxonomy for sustainable economic activities in Article 18: It is intended that all the eligible green expenditures will adhere to minimum social safeguards¹⁵. The German government has adopted international guidelines within the

¹⁵ Germany is a signatory of all the major UN human rights conventions and their supplementary protocols. "Human dignity shall be inviolable. To respect and protect it shall be the duty of all state authority." This is the clear duty imposed by Article 1 of the Basic Law, in which Germany has committed itself to "inviolable and inalienable human rights" as "the basis of every community, of peace and of justice in the world." Germany has adopted a National Action Plan to implement the UN Guiding Principles on Business and Human Rights at the federal level in 2016. The ten fundamental Conventions of the ILO

UN Guiding Principles on Business and Human Rights¹⁶ and the OECD Guidelines for Multinational Enterprises (as signatory).

- At least a qualitative **description of the expected impact**, ideally a quantitative indicator (e.g. greenhouse gas reduction).

Additional mapping requirements:

- Mapping to **UN Sustainable Development Goals (SDGs)**
- Mapping to **guiding principles of Baden-Württemberg's sustainability strategy**

3.3.2 Green Bond Baden-Württemberg Interministerial Working Group

An interministerial working group has been set up for continuous collaboration between the ministries involved. Each ministry has appointed a dedicated member to the working group, which has built up knowledge about the underlying concepts and principles of the Green Bond and can communicate effectively within the respective organisation. The interministerial working group ensures the traceability of decisions taken regarding project evaluation, selection and monitoring by documenting each meeting in a dedicated written paper.

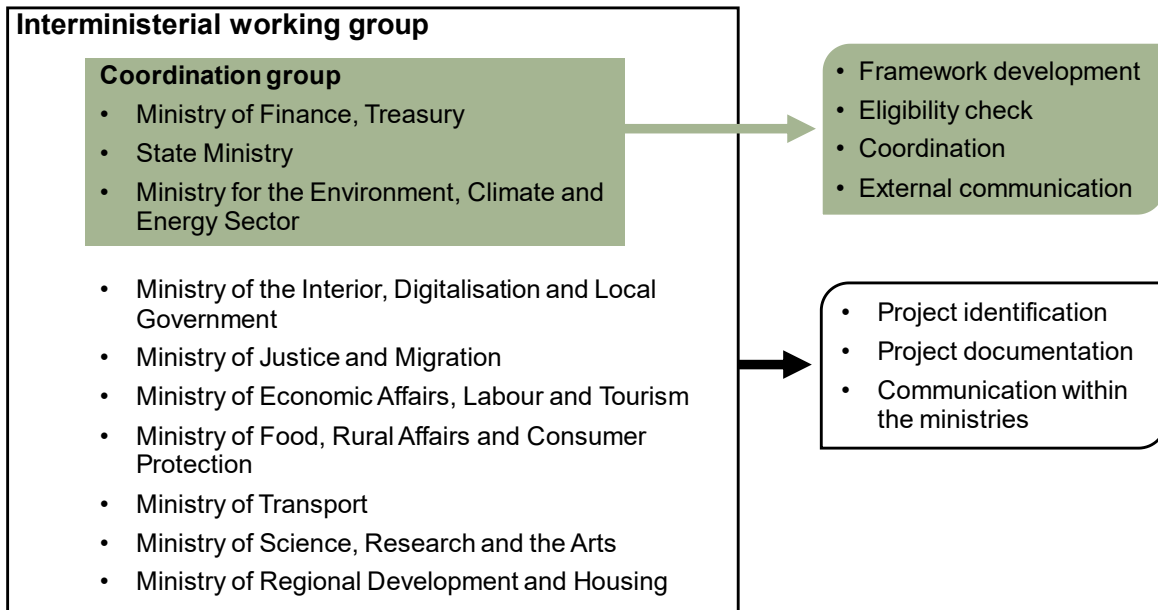
A coordination group ensures quality control and selects the projects and expenditures based on the proposals from the ministries. The coordination group makes a decision based on a structured project summary which is prepared by the proposing ministry. This determines both whether a project and which share of the actual expenditure is eligible for a given year (the "Eligible Expenditure").

Decisions regarding the Eligible Expenditure are documented in an Excel document and project documentation sheets that are stored on a central online platform to which all representatives of ministries have full access. The results of coordination group discussions are presented in a final presentation to the interministerial working group, in which any decisions that have relevance for all members of the group are incorporated. Individual discussions regarding project eligibility are documented in bilateral emails.

have been **ratified** in Germany. Country specific information for Germany on the ratification of international human rights treaties, reporting cycles and all related documentation are available **here**. In addition, the UN Human Rights Council Universal Periodic Review for Germany is available **here**.

¹⁶ On 21 December 2016, the Federal Cabinet adopted the National Action Plan for Business and Human Rights (NAP), which is based on the United Nations Guiding Principles that were approved in 2011.

The structure of the interministerial working group is shown in the following diagram:



Ministries that have not yet identified projects for outstanding green bonds can join the interministerial working group in the future, once they have identified project expenditure, which they submit to the coordination group.

The coordination group consults with external stakeholders in the decision-making process at regular intervals to discuss aspects of project selection. The main external stakeholders are expert teams of international banks with active roles in ICMA or EU working groups concerning the issue of Green Bond financing.

Possible ESG controversies and the (continued) fulfilment of eligibility criteria of projects that have been selected as Eligible Expenditure are evaluated in the annual impact report, which will always take a comprehensive look at the Eligible Expenditure of the current year and projects from previous years.

Furthermore, Baden-Württemberg actively contributes information for sustainability rating providers, in which ESG controversies (for any project, whether it is part of the Green Bond or not) are identified.

3.3.3 Green project list

The selection of green projects is based on the yearly budget in the year prior to the issue of the Green Bond. The ministries can submit project expenditure to the coordination group, which will accept it as eligible expenditure if all criteria are met. The following information is required to submit a green project:

- Responsible ministry
- Project name
- Description of the project
- Type of economic activity (including NACE code, if available)
- (Primary) environmental objective from the EU Taxonomy to which the project substantially contributes
- Green Bond Principles category (ICMA)

- Corresponding guiding principle from sustainability strategy of the federal State of Baden-Württemberg
- Relevant UN Sustainable Development Goals (SDGs)
- Type of activity: Own activity, enabling or transition activity
- Confirmation of fulfilment of "do-no-significant-harm" (DNSH) criteria, where possible
- Explanation of compliance with eligibility criteria/ technical screening criteria (TSC)
- Budget expenditure title (in the case of contributing federal funds, also the revenue title)
- Budgeted expenditure in year prior to bond issue, only net expenditure of federal state (for internal reference, not relevant for bond issue volume)
- Actual expenditure in year prior to bond issue, only net expenditure of federal state
- Description of the expected impact with respect to the environmental objective
- Quantitative indicator for measuring impact, if available
- (Planned) impact evaluations for the project by the responsible ministry, if any

Each project is also documented in a project summary which includes more detailed information about the background of the project. Based on this information, the criteria specified above must be met in full.

3.4 Management of Proceeds

The proceeds of the Green Bonds issued under this Framework will be managed by Baden-Württemberg (and, more specifically, its Interministerial Working Group) using a portfolio approach. Baden-Württemberg will allocate the proceeds from the Green Bonds to an eligible green project portfolio that meets the Use of Proceeds eligibility criteria and in accordance with the evaluation and selection process presented above.

The proceeds of the Green Bond issuances refinance the identified eligible expenditures of the previous budget year; all proceeds will therefore be allocated to eligible expenditures at the time of issuance.

If for any reason the State of Baden-Wuerttemberg faces a major controversy on eligible expenditures or if projects to which proceeds have been allocated no longer meet the eligibility criteria listed above (Use of Proceeds table), it will reallocate the net proceeds to other eligible projects which meet the eligibility criteria of the Framework within 24 months of the reallocation decision. Such reallocation would be disclosed in the following reporting.

3.5 Reporting

Baden-Württemberg will undertake and publish annual reporting on the allocation and impact of the portfolio of eligible green projects. This reporting will start within one year after the first issuance of the Green Bonds, to be renewed annually.

3.5.1 Allocation reporting

The allocation report may provide indicators such as:

- The total amount of Baden-Württemberg's Green Bonds outstanding
- The amount of proceeds allocated to eligible green project categories

Any material changes from the last allocation report (especially reallocation due to major controversies or non-eligibility of previous projects) will also be incorporated on a timely basis.

The expenses included in the allocation report will be verified as part of the yearly budget audit of the Court of Audit.

3.5.2 Impact reporting

An annual impact report will be published at the latest one year after issuance. It will be compiled and verified by an independent research organization. Additional reporting will be done on a timely basis in case of material developments. Baden-Württemberg intends to align its impact reporting with the ICMA Handbook 'Harmonized Framework for Impact Reporting', June 2022 version¹⁷.

The impact metrics to be evaluated in the report are specified in the eligible green project list for each individual project, provided that these are available and already in use by the state government. Quantitative indicators for the contribution to environmental objectives will be provided, wherever possible. The calculation method will be made transparent in the report.

The “do-no-significant-harm” alignment will be confirmed when the bond issue takes place and queried by

¹⁷ To be found here: <https://www.icmagroup.org/sustainable-finance/impact-reporting/>

the external agency as part of the impact evaluation. Available metrics from the EU Taxonomy and ICMA will be taken into consideration (also quantitative indicators, if data is available).

The Green Bond Framework covers a wide range of different projects, some allowing others to become more sustainable (e.g. by means of grants), and some improving the sustainability of own activities. Environmental impact is therefore reached in different ways - from changing the mindset of the people and companies in the state (which is important, but not measurable) to reducing the greenhouse gas emission footprint of the state activities itself (which can be measured). For illustration, Baden-Württemberg may use the following indicators (examples):

Environmental Objective	GBP Category	Output indicators	Outcome indicators
Climate change mitigation	Renewable energy	<ul style="list-style-type: none"> - Generated liquid hydrogen (in tons) - Additional battery storage facilities linked to photovoltaic systems - Number of researchers in improved infrastructure 	<ul style="list-style-type: none"> - GHG emission reduction (tCO₂e)
Climate change mitigation	Energy efficiency	<ul style="list-style-type: none"> - Additional broadband connections enabling behavioral change and business models without transport/mobility needs - Energy savings from network access compared to conventional connections - Length of supported line meters (heat networks) (km) - Number of on-site inspections and implemented measures in companies based on annual reporting - Number of researchers in improved infrastructure 	<ul style="list-style-type: none"> - GHG emission reduction (tCO₂e)
Climate change mitigation	Green buildings	<ul style="list-style-type: none"> - Reduced CO₂ emissions compared to "Nearly Zero-Energy Building"-standard - Reduced CO₂ emissions compared to non-restructured buildings 	<ul style="list-style-type: none"> - GHG emission reduction (tCO₂e)
Climate change mitigation	Clean transportation	<ul style="list-style-type: none"> - Number of diesel railcars replaced by electric railcars - Number of supported programs for electric vehicles - Absolute reduction of mobility related emissions - Increased share of usage of public transport and bicycles 	<ul style="list-style-type: none"> - GHG emission reduction (tCO₂e)
Climate change adaptation	Climate change adaptation	<ul style="list-style-type: none"> - Increased surface area of forests adapted to climate change (in square meters) - Number of dialogue events - Number of approved timber buildings 	<ul style="list-style-type: none"> - Improvement of climate resilience and carbon dioxide balance of forests - Increase in scientific knowledge on transformative research and municipal and sustainable concepts

Sustainable use and protection of water and marine resources	Sustainable water and wastewater management	<ul style="list-style-type: none"> - Number of supported sewage measures - Number of supported water supply measures - Number of funded communities 	<ul style="list-style-type: none"> - Improvement of water quality
Transition to a circular economy	Circular economy adapted products, production technologies and processes, and/or certified eco-efficient products	<ul style="list-style-type: none"> - Number of experimental plants and industrial-scale pilot plants - Number of future employees in new research buildings - Future potentials of recovered phosphorus (in t/a) 	<ul style="list-style-type: none"> - Water use reduction (m³)
Pollution prevention and control	Pollution prevention and control	<ul style="list-style-type: none"> - Increased number of hybrid vehicles - Capacity usage of express bus lines and number of passengers (in %) - Zero CO₂ and NO_x emissions by using motorcycles with an electric motor - Number of implemented measures of remediation 	<ul style="list-style-type: none"> - Environmental and health hazards reduction
Protection and restoration of biodiversity and ecosystems	Terrestrial and aquatic biodiversity conservation	<ul style="list-style-type: none"> - Increased surface area of subsidized vineries (m²) - Increased number of mapped/ updated biotopes - Number of individual projects and thereby incorporated total sum of areas per year - Number of visitors and number of classes (in the new building of the visitor and information center of the Black Forest National Park) 	<ul style="list-style-type: none"> - Nature conservation - Awareness for biodiversity
Protection and restoration of biodiversity and ecosystems	Environmentally sustainable management of living natural resources and land use	<ul style="list-style-type: none"> - Number of companies with organic production and surface area of organic production - Investments in properties with importance for environmental protection 	<ul style="list-style-type: none"> - Enhancing biodiversity - Preservation of resources

The impact reporting will be a work in progress and will evolve over time. Investors will be given full transparency of this evolution, since impact reports will not only focus on an isolated eligible green project list from a given year, but take a cumulative look at all projects that have been refinanced within the Green Bond Framework. Measurable indicators, especially with respect to greenhouse gas emissions, will be presented both in absolute figures as well as pro-rata with respect to the actual allocation.

3.6 External Review

The Green Bond Framework (2021 version) has received an initial Second Party Opinion by V.E.

Furthermore, an annual update of the Second Party Opinion for the Green Bond Framework has been provided by Moody's Investors Service (formerly Moody's ESG Solutions) for 2022 and 2023, giving assurance that the new eligible green project lists also fulfil all criteria of the underlying standards. These updates will be provided annually for the Green Bond issuance of the respective year in the future.