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Second-Party Opinion *  <b>Federal Republic of Germany</b> <b>Green Bond Framework</b>  August 2021	<b>Kalina Dimitrova</b> , Project Manager k.dimitrova@bcra-bg.com
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## Issuer Overview

**Table 1: Federal Republic of Germany Green Bond Framework - Green Bond Scorecard**

Evaluation factor	Score	Notes	Weight
<b>Part I</b>	<b>5 (overall)</b>		<b>70% (overall)</b>
Use of proceeds	5	Full alignment with EU GBS and EU taxonomy.	50%
Project evaluation and selection	4	A more detailed methodology needed	20%
Proceeds management	5	Clear and transparent policy.	15%
Reporting quality and degree of transparency	5	Excellent level of detail, complemented by additional information.	15%
<b>Part II</b>	<b>4 (overall)</b>		<b>30% (overall)</b>
General information on the entity	5	Excellent alignment with relevant UN SDG.	45%
Alignment and impact of usual business activities	N/A	Not applicable	0%
<b>ESG profile of entity</b>	<b>5</b>		<b>55%</b>
<b>Final score</b>	<b>GR5</b>	<b>Issuer with total alignment with GBS. Certain achievement of goals if nothing extraordinary emerges. Very large positive impact on the environment.</b>	

Germany is in the top 5 countries with respect to electric vehicles utilisation. It is also second in terms of municipal waste recycling for 2019, according to OECD's circular. The country is also in the top 10 with respect to renewable energy sources usage. Seeking to further develop the sustainability of its economy, in 2020 Germany has presented a Green Bond Framework (GBF) that outlines the plans for future development.

The Federal government has taken a new approach to financing its expenditures, the so-called "twin bond". Essentially this means that any new Green Bonds (Green German Federal Security) will be issued alongside a traditional bond with identical characteristics such as coupon payments, term to maturity and interest payment dates; the main difference being the smaller outstanding amount of the "green bond" as well as later issuance date. This approach has the main goal of giving market participants higher certainty for the quality of the investment. What is more, Germany plans to establish a "green" yield curve, similar to its position as the market benchmark for regular bonds.

Furthermore, Germany has committed itself to several causes such as the Paris Climate Agreement, UN's 17 Sustainable Development Goals, to achieving near climate-neutrality by

2050. The Green Bond issuance is the next step for Germany in the sustainable economy direction. This leads to the main characteristic of Germany’s GBF – it outlines a holistic approach towards the transition to sustainability, meaning that the GBF is a very general plan on how the country is going to achieve this transition in the years to come.

As a side note, Germany’s GBF is prepared with the intention of full alignment with both ICMA’s Green Bond Principles and the proposed EU Green Bond Standards.

### Green Bond Framework Analysis

#### ➤ Use of proceeds

Germany places itself as one of the leaders in Europe as far as sustainability orientation is concerned. This means that its actions have an impact not only on its own impact, but on the rest of the continent as well. Further investments in “green” technologies can spark a wave of innovation across all Europe. As a result, the scope of proceeds usage, described in the GBF, is very broad. The broadest classification of eligible green expenditures is the following: tangible assets (infrastructure, buildings, landscapes, and forests) and intangible assets (talent development, research and development). The federal government, however, will not finance projects that already benefit from Green Bond financing from another public issuer. The GBF also lists sectors and activities that are automatically ineligible for financing under the Green Bond issuance, such as gambling, defence, tobacco, alcohol, fossil fuel related and so on.

Germany’s GBF has been designed from the ground up to comply not only with ICMA’s GBP, but also with EU’s GBS. This means that all proposed sectors and activities are aligned with the said Principles and Standards. Apart from the main categories, the GBF proposes another classification using the so-called “green sectors”. The GBF goes one step further by mapping all these sectors with the EU’s six environmental objectives, as well as to the UN’s SDG.

Two of the “green sectors” are defined rather broadly, namely “international cooperation” and “research, innovation, and awareness raising”. As a result, they can be mapped to all EU objectives. The rest, however, are more precisely defined and are mapped to the specific EU Environmental objectives, which demonstrates the full alignment with the EU Taxonomy, as well alignment with GBP.

The GBF presents a summary table of the green sectors, respective expenditures and reporting approach:

**Table 2:**

<b>Green Sector</b>	<b>Description, key examples, and indicative impact indicators</b>
<b>Transport</b>	<p>Objective: improve and promote clean and more environmentally friendly transportation systems</p> <p>Examples of eligible expenditures:</p> <ul style="list-style-type: none"> <li>• Grants for the maintenance or development of Federal rail infrastructures for freight and passenger transportation</li> <li>• Grants favoring the modal shift to climate-friendly modes of transport (e.g., reduction of rail route pricing, support programs for inland waterways)</li> <li>• Support for the development of electric mobility, including the installation of infrastructure for electric vehicle charging and hydrogen refueling</li> <li>• Investment in bicycle roads/paths/networks and for the promotion of bicycle traffic</li> <li>• Grants for the financing and purchase of “zero-emissions vehicles”</li> <li>• Support for recycling of materials esp. batteries</li> </ul> <p>Indicative impact reporting: greenhouse gas emissions avoided (when possible), length of electrified railroad-km, length</p>

	of newly built railway-km, length of newly built bicycle lanes, final reports about and descriptions of projects
<b>International cooperation</b>	<p>Objective: assist emerging market and developing countries in their transition towards a more environmentally friendly economy and support international cooperation in that field (i.e., mitigation of and adaptation to climate change, transition towards more renewable energies, protection of habitats and biodiversity, sustainable use of natural resources and energy, including developing renewable energy generation facilities and sustainable agriculture)</p> <p>Examples of eligible expenditures:</p> <ul style="list-style-type: none"> <li>• Expenditure for development projects, especially in the framework of bilateral technical and financial cooperation, when such projects are earmarked for environmentally or climate-related topics</li> <li>• Expenditure for climate and environmentally-related topics, provided through contributions to international funds, such as the Green Climate Fund, Global Environment Facility, Adaptation Fund, multilateral institutions and international organizations</li> <li>• Bi- and multilateral partnerships to support the energy transition and enhance renewable energy usage/projects including cross-border co-operation projects with other EU Member States</li> </ul> <p>Indicative impact reporting: greenhouse gas emissions avoided (when possible), adaptation and capacity building indicators, specific reports about the environmental efficiency of the German international cooperation (see section 4.5) and the mobilization of private capital, listing of main initiatives and projects and presentation of key examples, and/ or a description of mandates of financed multilateral institutions as well as international organizations and funds</p>
<b>Research, innovation and awareness raising</b>	<p>Objective: support and facilitate knowledge and innovation about climate and environmental matters</p> <p>Examples of eligible expenditures:</p> <ul style="list-style-type: none"> <li>• All expenditure enabling research for all renewable energies and energy storage (e.g., “green” hydrogen), energy efficiency, power grid and renewable energy integration, energy transition</li> <li>• All expenditures enabling research related to climate change, biodiversity, nature protection and the environment</li> <li>• All expenditures enabling research on coasts, oceans and polar areas</li> <li>• Grants to local initiatives on environmental protection</li> <li>• Grants assisting the development of protected areas</li> <li>• Grants to associations active in environmental protection</li> </ul> <p>Indicative impact reporting: standard research indicators, such as, when possible, total funding or number of funded projects, number of researchers, listing of main initiatives or presentation of key examples</p>
<b>Energy and industry</b>	<p>Objective: accelerating the transition towards an economy that largely runs on renewable energies and towards a more environmentally efficient use of energy and other resources</p> <p>Example of eligible expenditures:</p> <ul style="list-style-type: none"> <li>• Applied research and innovation in renewable energies and energy efficiency</li> <li>• Measures to increase sustainable heating and cooling, heat usage, heat insulation and waste heat usage (industry and private sectors)</li> <li>• Measures to enhance the energy transition, e.g., renewable energy generation and integration in power grids, smart grids, citizen dialogue, development of power grids</li> <li>• Increase energy efficiency in buildings except the expenses associated to KfW Green Bonds</li> <li>• Expenses to increase the usage of hydrogen in industrial productions incl. sustainable hydrogen production and storage</li> </ul>

	<ul style="list-style-type: none"> <li>• Expenses to develop more energy efficient industry processes and production, incl. green IT</li> </ul> <p>Indicative impact reporting: greenhouse gas emissions avoided (when possible), specific reports about the climate and environmental efficiency of the subsidies</p>
<b>Agriculture, forestry, natural landscapes and biodiversity</b>	<p>Objective: promotion of climate-resilient forests and natural landscapes, and development of organic and environmentally friendly farming practices</p> <p>Example of eligible expenditures:</p> <p>Most of these expenditure items are in the Joint Task for the Improvement of Agricultural Structures and Coastal Protection and in biodiversity promotion programs</p> <ul style="list-style-type: none"> <li>• Grants to promote low-carbon farming and encourage climate-friendly and organic practices</li> <li>• Grants to promote farming practices increasing land carbon storage capabilities</li> <li>• Funds (to both private and public) bodies to adapt forests to the consequences of climate change and to avoid greenhouse gas emissions, as well as to safeguard and increase the carbon storage of forests and use of wood products</li> <li>• Grants for the management of extreme weather events and floods in natural landscapes and coastal areas</li> <li>• Grants for research on climate change adaptation in farming areas and forests</li> <li>• Funds to promote the implementation of the German National Strategy for Biological Diversity</li> </ul> <p>Indicative impact reporting: specific reports about the climate and environmental efficiency of the GAK</p>

Germany scores 5 out of 5 (from 1 – poor, to 5 – excellent) in this section, mainly due to its broad coverage of the environmental objectives and the selection of projects that can be beneficial on a general level to the environment and society.

### ➤ Project evaluation and selection

The process for expenditure evaluation and selection has been split between two independent parties – the Core Green Bond Team (CGBT) and the Inter-ministerial working group (IMWG). The IMWG comprises a number of federal ministries, all having a relation to the designated uses of proceeds. The IMWG combines the expertise of the separate ministries in order to conduct the validation of the project selection, done by the CGBT, while the CGBT also assists with the operational tasks related to the project selection and the overall Green Bond issuance. The CGBT is also tasked with the annual (or more often, if necessary) review of the selected eligible expenditures. The alignment and eligibility of the expenditures is assured by a joint-force operation between the CGBT and the relevant ministry with respect to the GBP and the EU taxonomy.

The process for selection spans over two years – first the eligible expenditures are selected by the CGBT and validated by the IMWG in the course of the first year, while the actual allocation of the proceeds take place during the second year. This gives both the CGBT and IMWG enough time to review eligible projects (given the complexity of the GBF) and ensure proper selection and allocation. Furthermore, if there is an increase in a given Green Bond, then a proportional amount of the proceeds will be allocated towards all eligible expenditures for the previous year.

Although the German GBF does not provide specific details as to what the selection criteria and methodology are, we are of the opinion that the process for selection is robust enough as to ensure enough time and expertise for proper expenditure selection that is aligned with the stated GBF intentions, the GBP, and the EU Taxonomy. This gives Germany a score of 4 out

of 5, with the score having the potential for an increase, provided the GBF is extended by a more detailed methodology for projects selection (possibly given by the respective ministries).

➤ **Proceeds management**

The German Finance Agency is tasked with the management of issuance proceeds. The proceeds will be managed according to the principles of the German Federal Government's treasury policies. The allocation of the respective amounts to eligible expenditures will be tracked by the CGBT.

In case of a Green Bond issue increase, the additional proceeds will immediately be allocated to the eligible expenditures. For the sake of clarity, however, the increase will be treated as a new issue for the purposes of proceeds management and reporting.

Our opinion is that the process for proceeds management is clear and secure enough with respect to proceeds tracking and allocation, giving Germany a score of 5 out of 5.

➤ **Reporting quality and degree of transparency**

The Federal government has committed to providing transparent allocation and impact reporting. The reporting frequency will be annual with respect to allocation. A full allocation report will be issued once and will be valid for all Green Bond issues (unless there are material changes) and will cover all issues from the previous year.

The impact reporting process will be more flexible, according to the given issuance. This means that an impact report can be issued between one- and three-years following a given issuance and, in any case, there will be at least one impact report during the lifetime of a given Green Bond. A given impact report may be valid for a period of several years, given the specifics of the Green Bond, which will be indicated in the report itself. If necessary, impact reports will be updated.

The impact report will consist of appropriate metrics and KPI that cover a broad spectrum of important aspects such as greenhouse gas avoided, in general, and more specific metrics and KPI such as length of newly built railway, area utilized for organic farming and so on. The GBF describes a commitment to producing impact reports that are specific to the use-case, rather than using standardized metrics, which has the potential to provide more valuable information to investors. When possible, methodologies and data used for the purpose of impact reporting will be published.

Our view is that the reporting process, suggested by the GBF, is transparent and detailed enough, so that both the allocation and full impact of the used proceeds can be evaluated by investors and other market participants. This gives Germany a score of 5 out of 5.

➤ **ESG profile and other considerations**

By taking part in universally recognized agreements such as the Paris Climate Agreements, UN's Sustainable Development Goals, European Green Deal, etc., Germany demonstrates a serious commitment to constantly improving social welfare, minimizing adverse environmental impact, and aiding developing countries in the quest for carbon-neutral economy. Its GBF shows a broad coverage of most applicable UN SDGs, which are summarized in the table below:

Table 3:

Green Sector	Objectives and Expenditure Examples	European Environmental Objectives <sup>29</sup>	UN SDGs
Transport	<p><b>Improve and promote clean transportation systems and reduce vehicles carbon intensity / emissions</b></p> <p><i>Expenditures related to:</i> e.g., federal railways, electric mobility, bicycle paths</p>	<p>Climate change mitigation</p> <p>Climate change adaptation</p> <p>Pollution prevention and Control</p>	
International cooperation	<p><b>Assist emerging market and developing countries in their transition towards a more environmentally sustainable economy</b></p> <p><i>Expenditures related to:</i> e.g., bilateral technical and financial cooperation, initiatives, multilateral funds, investments to protect the climate and biodiversity</p>	All EU objectives	
Research, innovation, and awareness raising	<p><b>Support and facilitate knowledge and innovation about climate and environmental matters</b></p> <p><i>Expenditures related to:</i> e.g., research in renewable energies, renewable raw materials, on climate change adaptation, mitigation as well as environmental protection</p>	All EU objectives	
Energy and industry	<p><b>Accelerating the transition towards an economy that largely runs on renewable energies and towards a more efficient general use of energy</b></p> <p><i>Expenditures related to:</i> e.g., energy research, promotion of renewable energies, energy efficiency incentive programme</p>	Climate change mitigation	
Agriculture, forestry, natural landscapes and biodiversity	<p><b>Promotion of forests and natural landscapes, and the development of organic and environmentally friendly farming practices</b></p> <p><i>Expenditures related to:</i> e.g., flood protection systems, projects promoting environmentally friendly land management, coastal protection</p>	<p>Biodiversity</p> <p>Water and marine resources</p> <p>Climate change mitigation</p> <p>Climate change adaptation</p>	

This gives us reason to rate Germany 5 out of 5 with respect to supplemental factors that we examine when forming our opinion.

**General Conclusion:** BCRA considers that the Green Bond Framework of the Federal Republic of Germany is in full alignment with the internationally recognised Green Bond Principles as well as with proposed EU Green Bond Standards. The issuer achieves a final Green Score of 5 out of 5.

**\* Please note:** This document is prepared for methodology development purposes, thus, this second-party opinion is unsolicited as neither the green bond issuer, nor a related third party has participated in the evaluation process. BCRA uses only publicly available information from reliable sources but cannot guarantee their accuracy, adequacy, or completeness.