Case Studies: Issuing a Sustainable Bond

14 May 2024

Bhutan
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Case study: The Philippines Sustainability Bond

BOND FACTS AND FIGURES

» Issuer: Republic of the Philippines
» Framework publishing date: November 2021
» Volume: USD 1 billion
» Tenor: 25-year
» Coupon: 4.2%
» External review: SPO – Vigeo Eiris
» 3 issuances under the framework are listed on Luxembourg Stock Exchange and displayed on Luxembourg Green Exchange: 29/03/2022, 13/10/2022 and 17/01/2023
AmBisyon Natin 2040 represents the collective long-term vision and aspirations of the Filipino people for themselves and for the country in the next 25 years. It describes the kind of life that people want to live, and how the country will be by 2040.
USE OF PROCEEDS CASE STUDIES

The Philippines sustainability bond: Use of proceeds

ELIGIBLE GREEN EXPENDITURES

» CLEAN TRANSPORTATION

» CLIMATE CHANGE ADAPTATION

» ENVIRONMENTALLY SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES AND LAND USE

» RENEWABLE ENERGY

Philippines Sustainability Bond Framework
The Philippines sustainability bond: Use of proceeds

**ELIGIBLE SOCIAL EXPENDITURES**

» **ACCESS TO ESSENTIAL SERVICES – EDUCATION, HEALTH CARE**
- Target Beneficiaries: General population including people from low-income families (indigents) and/or from disadvantaged backgrounds; people with disabilities; the unemployed

» **AFFORDABLE BASIC INFRASTRUCTURE**
- Target Beneficiaries: Rural Areas, Underserved and Unconnected Populations, Barangays (smallest administrative division/villages)

» **FOOD SECURITY**
- Target Beneficiaries: General Population, including farmers and disadvantaged populations

» **EMPLOYMENT GENERATION AND SOCIO-ECONOMIC ADVANCEMENT AND EMPOWERMENT**
- Target Beneficiaries: Informal Sector Workers, Poor, Vulnerable and Marginalized Workers, Eligible beneficiaries of the DILP programme

» **SOCIOECONOMIC ADVANCEMENT AND EMPOWERMENT**
- Target Beneficiaries: Vulnerable groups as identified under the 4Ps program, including Chronic poor households with children aged 0-14 living in poor areas, indigent and marginalized families, itinerant, homeless street families, families in need of special protection, elderly and persons with disabilities

» **AFFORDABLE HOUSING**
- Target Beneficiaries: low-income families (including minimum wage earners), homeless and underprivileged, families residing in informal settlements and danger zones

» **COVID-19 EXPENDITURE**
- Target Beneficiaries: General population including healthcare workers in public/government-ran healthcare facilities, displaced workers, including Oversees Filipino Workers (OFWs), in industries/formal sectors affected by COVID-19, such as MSMEs, tourism, etc, healthcare workers (for priority vaccination), senior citizens (for priority vaccination), persons with comorbidities (for priority vaccination), vulnerable groups, households living in poverty, homeless street families, itinerant indigenous peoples, marginalized, disabled
USE OF PROCEEDS CASE STUDIES

The Philippines sustainability bond: Projects selection & evaluation

PROCESS COORDINATED BY STATE TREASURY SUPPORTED BY RELEVANT MINISTRIES

» Dedicated Interagency Technical Working Group on Sustainable Finance under the Development Budget Coordination Committee.

» Senior representatives from the Department of Finance (DOF), Bureau of the Treasury (BTr), National Economic Development Authority (NEDA) and Department of Budget and Management (DBM) aided by sectoral experts from industries and academia.

» Projects can come from other national government agencies (NGAs) whose budgets include programs, activities, and projects (PAPs) which may be considered as Eligible Expenditures:

• Department of Health
• Department of Education
• Department of Energy
• Department of Labor and Employment
• Department of Transportation

• Department of Agriculture / Department of Agrarian Reform
• Department of Social Welfare and Development
• Department of Public Works and Highways
• Department of Environment and Natural Resources

Philippines Sustainability Bond Framework
The Philippines sustainability bond: management of proceeds

Department of Finance (DOF) and the Bureau of the treasury (BTr) are responsible for the allocation of proceeds to eligible projects.

They are also responsible for the monitoring of the allocation as part of their internal process.

BTr will be tracking the Eligible Projects and allocations matched to the amount equivalent to the net proceeds of the outstanding bonds issued under this Framework.

The net proceeds of any Sustainable Financing Instrument will be transferred to the government treasury reserve account.

BTr will maintain a register to record the allocation of each Sustainable Financing Instrument proceeds.

In the event proceeds raised are not immediately and fully allocated to Eligible Expenditures, the BTr will manage the unallocated proceeds in line with its cash management policies.
& IMPACT REPORTING COMMITMENTS AT FRAMEWORK LEVEL

The Allocation Report may include:
- Amount of net proceeds raised
- Balance of unallocated net proceeds
- Total amount of net proceeds allocated per Eligible Expenditure
- Details of the split between financing and refinancing

The impact report:
Where feasible, it will aim to report on the estimated environmental and social impacts arising from the implementation of the Eligible Social Projects and/or Eligible Green Projects, in coordination with the concerned implementing NGAs

ACTUAL REPORTING : PUBLICLY AVAILABLE ON THE WEBSITE OF THE BUREAU OF TREASURY (BTr)

Philippines Sustainability Bond Report
Philippines sustainability bond: External review

» Vigeo-Eiris has been commissioned to provide a Second Party Opinion to assess the alignment of the Framework with principles and standards.

» **V.E considers that the Republic of the Philippines’s Sustainable Finance Framework and Eligible Expenditures Portfolio are aligned with the four core components of Green Bond Principles 2021 (“GBP”), Social Bond Principles 2021 (“SBP”)**

**FRAMEWORK EXTERNAL REVIEW**

**SECOND PARTY OPINION**

On the sustainability of the Republic of the Philippines’s Sustainable Framework

V.E considers that the Republic of the Philippines’s Sustainable Finance Framework and Eligible Expenditures Portfolio are aligned with the four core components of Green Bond Principles 2021 (“GBP”), Social Bond Principles 2021 (“SBP”).

**COMMITMENT FOR POST ISSUANCE VERIFICATION**

» Within one year of issuance and annually thereafter until full allocation of any Green, Social and sustainability Bond, DOF intends to obtain an independent assurance review in order to confirm that the proceeds have been allocated in accordance with this Framework.

» On the basis of the information provided by the ROP and the work undertaken, it is DNV’s opinion that the bonds issued (Mar 2022 to Jan 2023) under the ROP Sustainable Financing Framework are aligned with the stated definition of green and social bonds within the Green and Social Bond Principles. Based on the External Review procedures conducted, nothing has come to our attention that causes us to believe that the issued bonds are not, in all material respects, in accordance with the International Capital Market Association (ICMA) Green Bond Principles 2021 and the ICMA Social Bond Principles 2023.
## Case study: Sri Lanka Framework

<table>
<thead>
<tr>
<th>GBP Eligible Projects</th>
<th>Eligibility Criteria</th>
<th>Environmental Objective</th>
</tr>
</thead>
</table>
| Renewable Energy (SDG 7.9.11, 13) | - Funds to finance or refinance the development, construction, management, operation and/or maintenance of renewable energy projects (including production, power generation, transmission, and parts manufacturing, storage, and distribution) specified below:  
  - Solar and Solar Thermal  
  - Wind (offshore and onshore)  
  - Hydro (power generation of 25 MW or less)  
  - Biomass (waste-derived or wood/wood pellet from certified forests)  
  - Measures supporting grid modernization  
  - Industry Conversions to Renewables (i.e. rooftop solar or certified biomass)  
  - Hydrogen (Hydrogen production: limited to green hydrogen, which has zero CO2 emission during production and combustion. Hydrogen power generation: limited to power plants fuelled by 100% green hydrogen) | - Climate change mitigation  
  - Pollution prevention and control |
# Pakistan Water & Power Development Authority - WAPDA Green Bond

## Key characteristics

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Pakistan Water and Power Development Authority (WAPDA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISIN</td>
<td>XS2348591707</td>
</tr>
<tr>
<td>Location</td>
<td>Pakistan</td>
</tr>
<tr>
<td>Amount issued</td>
<td>500 000 000 USD (410 273 000 EUR)</td>
</tr>
<tr>
<td>Issuance date</td>
<td>04/06/2021</td>
</tr>
<tr>
<td>Maturity date</td>
<td>04/06/2031</td>
</tr>
<tr>
<td>Hydropower considerations in the use of proceeds</td>
<td>WAPDA has four major projects under construction, which will add approximately 8,870 MW of installed capacity (out of 9,359 MW of installed capacity which will be added on completion of all of WAPDA’s outstanding construction projects) and are expected to be completed during the period from 2025 to 2029, more than doubling WAPDA’s current installed capacity</td>
</tr>
</tbody>
</table>
| Links                   | Green Bond Framework 2021
WAPDA has aligned this Green Bond Framework with the Green Bond Principles |

» WAPDA is responsible for the operation, maintenance, upgrade and expansion of Hydro Power Project (HPPs), large water reservoirs and the construction of new projects for power generation and water storage in Pakistan.

» WAPDA was assigned responsibility for planning and executing projects in the following areas:

» generation, transmission and distribution of power;

» irrigation, water supply and drainage

» prevention of water logging and reclamation of saline land

» flood control

» Inland navigation.
# USE OF PROCEEDS CASE STUDIES

## WAPDA Green Bond - Pakistan

<table>
<thead>
<tr>
<th>Eligible Category (as per Issuer)</th>
<th>Eligible Categories (ICMA - Green Bond Principles)</th>
<th>Eligible Sub-categories</th>
<th>Description</th>
<th>Intended Contribution to SDGs : framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate Change Adaptation</td>
<td>Climate Change Adaptation</td>
<td></td>
<td>Flood Control and Prevention Systems projects supported by independent technical engineering, design and hydrological studies.</td>
<td>13</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>Renewable Energy</td>
<td>Electricity generation from wind power Electricity generation from hydropower</td>
<td>Hydropower or Wind Power electricity generation projects with a carbon intensity of less than 100g CO2e/KWh, subject to independent environmental and social risk monitoring and mitigation.</td>
<td>7</td>
</tr>
</tbody>
</table>

For allocations to planned or future projects with a power generation capacity greater than 25MW, internationally-recognized environmental and social risk management standards will be applied to the relevant project, (e.g. IFC Performance Standards (2012) or equivalent international financial institution standards).

Source: [Green Bond Framework March 2021](#)
## USE OF PROCEEDS CASE STUDIES

### WAPDA Dasu Hydropower plant

<table>
<thead>
<tr>
<th>Use of Proceeds Category</th>
<th>Project</th>
<th>Proceeds Allocated (million PKR)*</th>
<th>Proceeds Allocated (million EUR)**</th>
<th>GHG emissions avoided (million tonnes of CO2e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable Energy – run of river hydropower</td>
<td>Tarbela T4</td>
<td>9,761</td>
<td>47.98</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Dasu HPP</td>
<td>67,349</td>
<td>331.06</td>
<td>223</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>77,111</td>
<td>379.04</td>
<td>243</td>
</tr>
</tbody>
</table>

Source: 2022 Sustainalytics - Annual Review - Pakistan Water & Power Development Authority
Hydropower projects and Green bonds

- Hydropower plants are considered renewable energy projects so in theory they can be financed by green/sustainable bonds.
- However, Hydropower plants projects might have a potential negative environmental and social impacts. Therefore, more and more issuers are excluding big hydro power plants projects from being financed or refinanced by the green/sustainable bonds proceeds.
  - India first sovereign green bond in 2023 excluded hydropower plants larger than 25 MW.
- Climate Bonds Initiative has set eligibility criteria to consider hydropower projects under its standards:
  - A hydropower facility in operation before 2020 is eligible if it has either:
    - A power density > 5W/m²; OR
    - GHG emissions intensity < 100g CO₂e/kWh.
  - A hydropower facility commencing operation in 2020 or after is eligible if it has either:
    - A power density > 10W/m²; OR
    - GHG emissions intensity < 50g CO₂e/kWh.

- In the case of WAPDA, the external reviewer confirmed in its verification on the allocation reporting, the Hydropower criteria of Hydropower projects is aligned with the EU Taxonomy.

Source: CBI Hydropower Criteria, Sustainalytics, EU Taxonomy, Iha.
Biodiversity focused bonds examples
The Wildlife Conservation Bond (WCB) – Rhino Bond

- Innovative approach to enabling private sector investment in global public goods
- Outcome based: measured by an increase in black rhino populations in South Africa
- Investors in the WCB will not receive coupon payments on the bond
- The Issuer will pay a Conservation Success Payment at maturity, which will be determined based on the rhino population growth rate
- Proceeds from the WCB allow South Africa to build on established and successful rhino conservation efforts at two national parks: AENP and GFRNR (strengthen ecosystem services like clean water and habitats for pollinators that serve the local citrus industry)

The Wildlife Conservation Bond (WCB) – Rhino Bond

- USD 150 million
- Issuance date: March 31, 2022
- Maturity date: March 31, 2027
- Listing: Luxembourg Stock Exchange
- Sustainable development bond under IBRD’s sustainable development bond framework (“SDBF”)

<table>
<thead>
<tr>
<th>Rhino population growth rate</th>
<th>Conservation success payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>X ≤ 0%</td>
<td>0</td>
</tr>
<tr>
<td>0% &lt; X ≤ 2%</td>
<td>36.69</td>
</tr>
<tr>
<td>2% &lt; X ≤ 4%</td>
<td>73.38</td>
</tr>
<tr>
<td>X &gt; 4%</td>
<td>91.73</td>
</tr>
</tbody>
</table>

Biodiversity Focused Bond Examples

Tiger bond for Bhutan?

Conserve endangered species
The first sovereign SLB
The world’s first country to use sovereign debt to fund its long-term climate initiatives and accelerate its energy transition

» US$2 billion sustainability-linked bond

» Demand for the bond reached more than $8 billion, or 4.1 times the original placed amount, spread across investors in Europe, Asia and the Americas

» Chile was the first country in the Americas to issue a green bond in 2019

MARCH 2022
Chile Sustainability Linked Bond

The selection of KPIs follows the environmental objectives set by Chile’s updated NDC

KPI 1: Greenhouse Gas Emission (GHG) per year, measured in MtCO2eq

KPI 2: Non-Conventional Renewable Energy (NCRE) Generation, as the percentage generated in the National Electric System, measured in megawatt hours (MWh)
Chile Sustainability Linked Bond

The mitigation target is formulated in accordance with scientific recommendations, the mitigation requirement established in the Paris Agreement’s objectives, and Chile’s updated NDC

SPT 1

a) Achieve GHG emissions of 95 MtCO2e by 2030
b) Achieve a maximum of 1,100 MtCO2e between 2020 and 2030

SPT 2

a) Achieve 50% electric generation derived from NCRE sources by 2028
b) Achieve 60% electric generation derived from NCRE sources by 2032
The SLBs will provide for financial implications, such as, but not limited to a coupon step-up or premium payment, depending on whether Chile meets or fails to meet the applicable SPT Event or SPT Events or if it fails to comply with certain reporting and verification obligations. Any such financial implications will be commensurate and meaningful relative to the original SLB’s financial characteristics.

As set forth in the relevant documentation of the specific transaction:
• Each SLB may have one or more SPT Events, each with an associated event observation date and financial implication; and
• If any KPI has two or more different event observation dates, the financial implications may be cumulative.
Chile will publish a report (SLB Report) annually containing a qualitative or quantitative explanation of the main factors behind the evolution of the KPIs, as well as (when available) the progress of the KPIs established in this SLB Framework.

Information regarding KPI 1 will be produced biennially, because the current NDC protocol limits Chile's ability to publish results annually due to the complexity of the data collection and verification.

Information regarding KPI 2 will be produced annually.
Chile Sustainability Linked Bond

Second Party Opinion

» Chile’s Sustainability-linked Bond Framework has been reviewed by Sustainalytics

» The Second Opinion confirms the alignment with ICMA’s Sustainability-linked Bond Principles (SLBP)

» Including an assessment of the relevance, robustness and reliability of selected KPIs, the rationale

» Level of ambition of the proposed SPTs, the

» Relevance and reliability of selected benchmarks

» Baselines, and the credibility of the strategy outlined to achieve them, based on scenario analysis, where relevant

Verification

» Performance of KPI 1 will be reviewed and verified as part of the NDC process performed by the team of technical experts of the United Nations Framework Convention on Climate Change

» For KPI2, the data will be reviewed and approved by Chile’s National Electrical Coordinator, a technical and independent body
Thank you!
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