

Green Hydrogen Support in Developing Countries

Review CEO Endorsement and Make a recommendation

Basic project information

GEF ID

10918

Countries

Global (Chile, Morocco, Tunisia, Ukraine)

Project Name

Green Hydrogen Support in Developing Countries

Agencies

World Bank

Date received by PM

1/11/2022

Review completed by PM

3/16/2022

Program Manager

Patricia Marcos Huidobro

Focal Area

Climate Change

Project Type

MSP

CEO Approval Request

Part I ? Project Information

1. Focal area elements. Is the project aligned with the relevant GEF focal area elements as indicated in Table A and as defined by the GEF 7 Programming Directions?

Secretariat comment at CEO Endorsement Request

3/28/2022 PM:

No. Please include in Table D of the GEF Entry Portal the individual amounts per country matching the allocated amounts in the LoEs (i.e. instead of including just one row as a Global component, add 4 rows one per country).

3/24/2022 PM:

No. Please address the following comments:

- Since there will be 4 pilot countries (Chile, Morocco, Tunisia, Ukraine), please add the name of these countries in Section ?Countries? next to ?Global?

- Please fill out the sections "Executing Partner" (World Bank) and Executing Partner Type

1/27/2022 PM:

Yes.

Agency Response

WB 3/28

- As explained to the PM via email, it is not possible to do this in the portal.

WB 3/25:

- The four countries have been added and World Bank added as Executing Partner.

2. Project description summary. Is the project structure/design appropriate to achieve the expected outcomes and outputs as in Table B and described in the project document?

Secretariat comment at CEO Endorsement Request

3/16/2022 PM:

Cleared.

3/7/2022 PM:

Cleared with one additional comments. The Agency have integrated the Project Monitoring activities into existing Components 1&2. However, from the description of the activities in Table B is not clear that Component 1 is global, and that Component 2 is meant to be implemented in the 4 selected countries. Please add this clarification in the Project Outcomes, by for instance mentioned the 4 countries in which Component 2 will focus.

1/27/2022 PM:

No. The project is missing a component on Project Monitoring, Impact and Evaluation which comprises the following activities, among others: knowledge management, communication, awareness raising, monitoring and evaluation, mid-term review, terminal evaluation, etc.

Agency Response

WB 3/9/2022:

Added new text and updated Table B within the Outputs and Outcomes Columns in order to clearly reflect Global (Component 1) and Country (Component 2) aspects as suggested by GEF SEC.

WB 3/1:

No new 3rd Component for PMC was added because these activities are integrated into the existing Components 1 & 2. However, Table in Section B of the PIF was also updated to show M&E as an OUTPUT under each of the two components. In addition, M&E Activities are also described under 1.b. 8) Knowledge and 1.b. 9) M&E sections of the PIF.

These updates were made based on the 'GEF Guidelines on the Project and Program Cycle Policy' as well as team consensus to stick with 2 Components for this TA work as it is in full-alignment between ESMAP and GEF guidelines for Project M, I, & E.

3. If this is a non-grant instrument, has a reflow calendar been presented in Annex D?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

N/A.

Agency Response

4. Co-financing. Are the confirmed amounts, sources and types of co-financing adequately documented, with supporting evidence and a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized, consistent with the requirements of the Co-Financing Policy and Guidelines?

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. Please address the following comments:

- Elaborate further under Table C '*Describe how any "Investment Mobilized" was identified*', for instance by providing more information on how much co-financing each specific ESMAP program is providing, the objectives of the programs and how the funding for each program has been mobilized.

- Also, please confirm if any of the countries supported through Component 2 plans on co-financing the activities proposed under this component. If there is certainty that some country/ies or any other potential donor will contribute to the proposed activities, please add the corresponding co-financing amount.

Agency Response

WB 3/1:

The following paragraph has been added to the explanation under Table C:

The investment mobilized is identified through two ongoing World Bank ESMAP programs: 1) ESMAP Green Hydrogen Program and 2) ESMAP Industrial Decarbonization Program. Specifically, this proposed GEF-funded program activity is expected to achieve a 1-7 leverage ratio through co-financing from ESMAP's Green Hydrogen Support Program (US\$2.9 million) and the Industrial Decarbonization Program (US\$11.04 million), respectively. These programs are part of ESMAP's Accelerating Decarbonization activities, and are closely-aligned with the objectives of the targeted GEF-7 Climate Change Mitigation (CCM) Focal Area. Moreover, the ESMAP co-financing in combination with the GEF funds are also expected to support investment mobilization to attract private capital mobilization (PCM) for adopting green hydrogen technologies in the Pilot Countries under Component 2 of this activity.

- Additional co-financing may materialize during project implementation and will be reported at MTR and TE stages.

5. GEF resource availability. Is the proposed GEF financing in Table D (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. Please address the following comments:

- The Tunisia's Letter of Endorsement does not include the GEF funding amount. Please amend accordingly and submit an updated letter.

- The budget provided does not meet the GEF Guidelines for PMC. Kindly note that PMC can only cover the expenses for the Project Coordinator and the Administrative

Coordinator. All other technical staff time shall be charged to the different components. If any of the technical staff is conducting also coordination activities, then the ToR with both the technical and coordination activities shall be provided.

Agency Response

WB 3/1:

- We have uploaded Tunisia's LoE. We apologize for this omission. Please note that Tunisia has provided two letters: the LoE and a separate letter of support for Bank execution (previously submitted)

- As discussed and agreed with the GEF Secretariat and supported in writing by the OFPs of Chile, Morocco, Tunisia, and Ukraine, the project will be executed by the World Bank. The OFP letters of support describe the execution services to be provided by World Bank staff, namely: drafting of consultants' ToR, procurement of consultants, supervision of consultants, and dissemination activities. The GEF Guidelines on the Project and Program Cycle Policy (Annex 8, p. 53) indicate that these activities are eligible for funding by the GEF portion of the PMC and that the salaries and fees for GEF Agency staff and consultants can be funded by the PMC when they are approved by the GEF Secretariat to carry out executing functions on an exceptional basis. We have added a note in the budget to reflect the execution activities to be covered by the PMC that will be carried out by World Bank staff working with each of the four countries.

STAR allocation?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

N/A.

Agency Response

Focal Area allocation?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

N/A.

Agency Response

LDCF under the principle of equitable access?

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
SCCF (Adaptation or Tech Transfer)?

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
Focal Area Set Aside?

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

Yes.

Agency Response
Impact Program Incentive?

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
6. Project Preparation Grant. If PPG is requested in Table E.1, has its advanced programming and utilized been accounted for in Annex C of the document?

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response

7. Non-Grant Instrument. If this an NGI, are the expected reflows indicated in Annex D?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

N/A.

Agency Response

8. Core Indicators. Are the targeted core indicators in Table E calculated using the methodology in the prescribed guidelines? (GEF/C.54/Infxxx)

Secretariat comment at CEO Endorsement Request

3/16/2022 PM:

Cleared.

3/7/2022 PM:

No. Please address the following comments to help further clarify how the GHG calculations have been derived:

- Why the project assumes it is displacing diesel? In the pilots, if these are displacing electricity from the grid, then it would be more accurate to use the CO2 emission factor of the grid. Please clarify.

- We understand the project is generating direct and indirect CO2 emissions. The first derived from the 4 pilots (i.e. 5.1 MtCO2) and the latest from the expected policy interventions (i.e. 3.4 MtCO2e after applying a GEF 1 casualty factor to the figure 17 MtCO2e). Please clarify if this is correct. If so, the total CO2 emission reductions from this project shall be 8.5 MtCO2e.

- Please explain why the proposal use the following emission factor, and it source: 0.8×10^{-6} MtCO2/MW.

1/27/2022 PM:

No. We understand the GHG emissions mitigated by the project is based on early assumptions and estimations. However, we would appreciate further elaboration on the level of confidence that the four investment pilots will be actually implemented. To be in the conservative side, and avoid a situation where the project ends up overestimating GHG reductions, we would like to suggest that a casualty/conservative factor is added to

the estimations (this could be for instance assuming that only X% of the investment project will be actually implemented). In addition, there are no investment activities as part of these proposal (only technical assistance), so any GHG emissions coming from potential future investments should be indirect emissions reductions.

Agency Response

WB 3/10/2022:

- We have revised the GHG calculations to use the average grid emissions factor of the four target countries (Chile, Morocco, Tunisia, Ukraine - sources cited in PIF), which is $0.475 * 10^{-6}$ MtCO₂/MWh.

- This GEF-financed project will not generate any direct GHG emissions as we do not expect that the projected four green hydrogen investments will be implemented during the supervised implementation period of the project (until Dec 2023). The project is claiming indirect emissions only. We use the expected future direct emissions as a basis for calculating the indirect emissions, and hence the inclusion of the reference to direct emissions.

- Please note that we have also removed the entry under core indicator 6.4 in Table F as we do not expect the green hydrogen investments to be implemented during the supervised implementation period of the GEF-financed project (until Dec 2023).

WB 3/1:

We have updated the estimated GHG emissions reduction. Rather than applying a causality factor to the probability that the green hydrogen investment projects will materialize, we have applied a level 1 GEF causality factor to the overall target of 17 MtCO_{2e}, which reduces the anticipated emissions reductions attributable to the GEF-financed activities to 3.4 MtCO_{2e}. This is a conservative estimate, which takes into account that other exogenous factors and financing may contribute to the overall target.

9. Project taxonomy. Is the project properly tagged with the appropriate keywords as in Table G?

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. Under Level 3 "Climate Change Mitigation" you have tagged the project as an "Enabling Activity". Please remove this tag since this is referring to activities with reporting requirements under the United Nations Conventions, such as National Communications, Biennial Reports, etc.

Agency Response

WB 3/1:

Change was made in GEF Portal.

Part II ? Project Justification

1. Project Description. Is there sufficient elaboration on how the global environmental/adaptation problems, including the root causes and barriers, are going to be addressed?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes.

Agency Response

2. Project Description. Is there an elaboration on how the baseline scenario or any associated baseline projects were derived?

Secretariat comment at CEO Endorsement Request

3/16/2022 PM:

Cleared.

3/7/2022 PM:

No. The World Bank's LAC Energy team in Chile has already received US\$350,000 in technical assistance (TA) funding from the Spanish Fund for Latin America and the

Caribbean (SFLAC) over the past 2 years to address issues related to the adoption and development of the country's green hydrogen objectives. Please clarify the added value of the GEF financing for Chile and how that would be additional to what is already on the ground.

1/27/2022 PM:

No. From the proposal description it is not clear what the baseline scenario is. Please make this clear in the proposal. From the information provided in the proposal, it seems that "the baseline scenario could be that there a number of on-going projects led mainly by the private sector but the public sector, despite several national green hydrogen strategies, is lagging behind and further support is needed to help governments put in place the framework required for the private sector developers to to kick off the green hydrogen market, and avoid a situation where the markets move forward faster than the regulatory framework", but please clarify since this is not coming up easily while reading this section.

Agency Response

WB 3/9/2022:

New text was added to the PIF to explain how the SFLAC funding has been utilized in Chile and demonstrate the additionality of the proposed GEF funding.

WB 3/1:

We have added further information related to the global baseline and created a new subsection to outline country-specific baselines for the four participating countries in the PIF (Word) document.

3. Project Description. Is there an elaboration on the proposed alternative scenario as described in PIF/PFD sound and adequate? Is there more clarity on the expected outcomes and components of the project and a description on the project is aiming to achieve them?

Secretariat comment at CEO Endorsement Request

3/16/2022 PM:

Cleared.

3/7/2022 PM:

Cleared, with suggestions. Please consider the following suggestions:

- While understand that it is difficult for countries to commit to policy adoption beforehand, we are wondering whether Component 2 could be further strengthened by rephrasing it by "development and adoption of" instead of "identification of" policies at least for one or two countries. The end target shall focus policy drafts submitted to the competent authorities for approval/adoption.
- The proposal mentions "**Green hydrogen reports** on green hydrogen applications; potential innovative business models to enable large-scale green hydrogen production in developing countries; technical guides on safety and project design; frameworks for economic valuation and social development including gender mainstreaming benefits; among others". We are wondering whether a "Green hydrogen toolkit" would work better than "reports".

1/27/2022 PM:

No. Please address the following comments:

- In the component write-up, we are missing a connection between the activities proposed and the 4 investment pilots mentioned in the GHG calculation. We understand that Component 2 will primarily focus on the 4 countries for which the Agency has provided a Letter of Endorsement. Please clarify this and elaborate further on the expected activities in each country and how they could inform the development of a potential pilot.
- Elaborate further on the fact that the project is expected to share country experiences through Component 1, and thus be replicated in other countries through a potential future larger program on green hydrogen investment in developing countries.
- Finally, as mentioned earlier, add a third component on Project Monitoring, Impact and Evaluation.

Agency Response

WB 3/9/2022:

Added "development and adoption of" into the existing paragraph text including the word "Toolkit" as suggested.

WB 3/1:

We added new paragraph shown below to the beginning of the PIF Section 1.a) Item 3. Furthermore, in order to provide better clarity on the introduction to each of the project Components, separate paragraphs were also added under each Component heading as shown below.

This GEF-funded 'Green Hydrogen Support in Developing Countries' program/project will be structured under Two dedicated Technical Assistance (TA) via Component 1, targeting Global Knowledge TA work, and Component 2, targeting Country TA(s) work in 4 countries. Specifically, Component 1 will aim to conduct upstream exploratory analysis by establishing a high-level Global Green Hydrogen Development Facility (Green H2 Facility) that can serve as a global platform to facilitate global knowledge exchange and best practices between public-private sector stakeholders. Furthermore, this Green H2 Facility will create awareness of different hydrogen technology applications across sectors combining policy solutions available to developing countries through global industry experts. Additionally, Component 2 will aim to develop national-level green hydrogen policies, strategies, roadmaps, including technical solutions across the 4 pilot countries in Chile, Morocco, Tunisia, and Ukraine to fast-track support for investment mobilization and implementation of first-of-a-kind projects and establish much needed baselines. Both components will inform countries on how best to adopt green hydrogen solutions through bi- and multi-lateral events hosted through the Green H2 Facility.

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Component 1: Global Knowledge Technical Assistance (TA)

Component 1 will target Global Knowledge TA work through the establishment of a high-level Green Hydrogen Development Facility (Green Hydrogen Facility) that will serve as a global platform to disseminate best practices and facilitate global knowledge exchange to raise awareness between public and private sector stakeholders on different green hydrogen policy solutions including its production, technology application, and uses within key sectors.

Component 2: Country Technical Assistance (TA)

Component 2 will focus on providing country-specific technical assistance (TA) support in four (4) countries, namely, Chile, Morocco, Tunisia, and Ukraine by targeting the development/operationalization of emerging green hydrogen opportunities through first-of-a-kind projects in order to fast-track public-private investment mobilization for green hydrogen project development? see section above under Part II: 2) Baseline scenarios and associated baseline projects. In addition, the 4 countries under Component 2 have already set ambitious national goals for green hydrogen development. For details on each country's national strategy for green hydrogen adoption, see the attached 'Annex:

Consistency of National Priorities? to promote adoption of green hydrogen across Chile, Morocco, Tunisia, and the Ukraine. Lastly, the PIF application section below on ?2. *Stakeholders?* also provides additional information to support Component 2. In general, Activities under Component 2 will include:

4. Project Description. Is there an elaboration on how the project is aligned with focal area/impact program strategies?

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. Please remove the following paragraphs, which are not accurate since the proposals is contributing primarily to entry point 1.4. as stated at the beginning of the proposal:

- The objective to promote innovation and technology transfer for sustainable energy breakthroughs has four entry points:

1. De-centralized renewable power with energy storage; Renewable energy costs have declined dramatically and are continuing to fall, significantly reducing the price gap between hydrogen from electrolysis and hydrogen derived from fossil fuels. Moreover, variable renewable energy (VRE) sources alone cannot provide firm energy solutions, which are necessary to guarantee that demand can be met at all times. Hydrogen storage could therefore emerge as a widely deployable solution to contribute to mitigating renewable seasonal variability and to maximizing renewable use in a national energy system.
2. Electric drive technologies and electric mobility; The transition to electric mobility has helped develop enabling technologies that hydrogen and fuel cells are using to provide solutions for long-range zero-emission applications such as: trucks, trains, maritime shipping, buses, commercial vehicles, and perhaps even aviation. With the use of electric drivetrain architecture and supportive air quality requirements established by policy makers and regulators, hydrogen and fuel cells soon could be well placed to reach the scale needed to significantly drive down systems costs and mitigate the heavy pollution common in many cities in developing countries
3. Accelerating energy efficiency adoption;
4. Cleantech innovation

- The proposal will be focusing on the first, second and fourth technology innovation entry points, including also industrial decarbonization and agricultural applications, which can have a significant positive impact in the decarbonization of developing country economies.
- Energy-related carbon emissions are the major driver of climate change, and the transformation of energy systems is a key requirement to achieving the Paris Agreement and the SDGs. In addition, emissions from the transport sector are growing rapidly and countries need practical solutions to also curb or lower transport-related emissions. The rapid cost decline in renewable energy technologies, in combination with the development of electrolyzers that are cheaper, more efficient and have longer commercial lifetimes, increases the potential for green hydrogen to be cost competitive with fossil sources in certain geographies and applications, including energy and transport.
- The four entry points in the selected climate change focal area address areas of disruption in the energy sector where new technologies and policies, such as those associated with the adoption of green hydrogen-based solutions, can create tremendous opportunities to transform the sector.

Agency Response

WB 3/1:

Based on GEF SEC Comment, focused only on 1.4. Cleantech Innovation as the entry point. Deleted all other Entry Point sections shown above for 1.a) Item 4, within the PIF Application.

5. Project Description. Is the incremental reasoning, contribution from the baseline, and co-financing clearly elaborated?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes.

Agency Response

6. Project Description. Is there a better elaboration on the project's expected contribution to global environmental benefits or adaptation benefits?

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

Yes, with suggestions. Please also briefly mention in a paragraph other potential benefits such a reliable power systems, reduce dependence on importing fossil fuels, creation of green jobs, etc.

Agency Response

WB 3/1:

We have incorporated these suggestions into Section 1.a) Item 6, within the PIF Application.

7. Project Description. Is there a better elaboration to show that the project is innovative and sustainable including the potential for scaling up?

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

Yes, with suggestions. Please confirm and clarify that Component 1 will help make the project scalable through the dissemination workshops and events with other countries not included under Component 2 of the proposal.

Agency Response

WB 3/1:

It is correct that Component 1 intends to disseminate knowledge widely, beyond the limited number of countries included in Component 2. We have addressed this comment through edits to the narrative in Section 1.a) Item 3 within the PIF Application.

8. Project Map and Coordinates. Is there an accurate and confirmed geo-referenced information where the project intervention will take place?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes.

Agency Response

9. Child Project. If this is a child project, an adequate reflection of how it contributes to the overall program impact?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

N/A.

Agency Response

10. Stakeholders. Does the project include detailed report on stakeholders engaged during the design phase? Is there an adequate stakeholder engagement plan or equivalent documentation for the implementation phase, with information on Stakeholders who will be engaged, the means of engagement, and dissemination of information?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes.

Agency Response

11. Gender equality and women's empowerment. Has the gender analysis been completed? Did the gender analysis identify any gender differences, gaps or opportunities linked to project/program objectives and activities? If so, does the project/program include gender-responsive activities, gender-sensitive indicators and expected results?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes.

Agency Response

12. Private sector engagement. If there is a private sector engagement, is there an elaboration of its role as a financier and/or as a stakeholder?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes.

Agency Response

13. Risk. Has the project elaborated on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved? Were there proposed measures that address these risks at the time of project implementation?

Secretariat comment at CEO Endorsement Request

3/28/2022 PM:

Cleared.

3/24/2022 PM:

No. Please elaborate further on and complete the risk assessment below on the current situation in Ukraine. For instance explain what would happen if the situation gets worse in Ukraine and what the project would do in response (deal with personnel security, divert activities to other countries, etc.).

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. Please address the following comments:

- The risk table is missing some important risks such as legal and regulatory, engagement of the public sector, sustainability risks, macroeconomic, coordination (the

variety of the actors/agencies interested could create an inadequate coordination between stakeholders), etc.

- Elaborate further on the Covid-19 risks but also on it opportunities.

Ensure clear articulation of risks that COVID-19 may pose on any aspect of the project, including: availability of technical expertise and capacity and changes in timelines, stakeholder engagement process, enabling environment, financing/co-financing, and future risks of similar crises

Ensure clear articulation of how the proposed project will help in reducing the risk of emerging infectious diseases in the future, while increasing the resilience of the ecologic and socio-economy systems, including Innovation in climate change mitigation and resilience, and engagement with the private sector.

Agency Response

WB 3/25:

The Ukraine risk assessment has been revised (see section 5 of the project document). Project activities will not commence in Ukraine until the situation on the ground is stabilized. This activity remains highly relevant to Ukraine. However, should the government decide that it is not an immediate priority, the World Bank will consider revising the pilot countries through a major amendment to include another country or countries.

WB 3/1:

We have expanded the Risk Matrix Table to include additional risks as shown below.

<p>Reluctancy to implement individual green hydrogen projects due to environmental, social, and sustainability concerns and risks.</p>	<p>Low</p>	<p>The project will ensure that all analysis on green hydrogen production and commercial applications include an assessment on how to sustainably procure energy and water to projects, including leveraging innovative technologies such as wastewater treatment or desalination. It will also include consultations with relevant stakeholders to secure their participation and buy-in into the long-term environmental, social, and sustainability benefits of adopting green hydrogen technologies.</p>
<p>Covid-19 traveling restrictions result in limited stakeholder engagements.</p>	<p>Low</p>	<p>The project will secure the participation of public and private stakeholders by maintaining constant communications with relevant governmental institutions, private developers and/or members of the civil society through remote means of communication and when possible, executing face-to-face stakeholder engagements through workshops, event, webinars etc.</p>

<p>Macroeconomic risks related to Covid-19 resulting in shortages of specialized skills and jobs needed to develop green hydrogen projects.</p>	<p>Low</p>	<p>The project will coordinate the work between international and local experts to secure the delivery of in-depth analysis as well as actively leveraging the Global Green Hydrogen Facility (Component 1) as an effective platform to ensure the participation of key stakeholders including knowledge/skills transfer of critical expertise/knowledge to develop green hydrogen markets and unlock pilot projects. The proposed analytical work will also identify opportunities to create jobs and develop skills in developing countries ? exploring how to maximize the involvement of local players in the GH value-chain in a competitive manner while ensuring that women benefit from the new opportunities that arise.</p>
<p>Change in government priorities and capacities of government entities due to a possible re-instatement of COVID-19</p>	<p>Medium</p>	<p>COVID-19 related delays in project implementation will be mitigated by continuous monitoring of a potential outbreak in selected countries and aligning project timelines and resources accordingly. Operational teams and government counterparts are now used to work remotely and adequately equipped for that.</p>

COVID-19 Opportunities	Medium	In addition to COVID-19 Risks, the project will also create opportunities in terms of not only building-back better (BBB) and establish next generation Green Hydrogen Infrastructure frameworks but also create Green Jobs across the Enabling Environment as a result of developing new policies, regulatory, and financial structures to facilitate first-of-a-kind Green Hydrogen projects.
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Ukraine Implementation Risks	Medium	<p>The on-going conflict in Ukraine could create difficulties to interact with relevant counterparts and conduct consultations. However, it must be noted that despite the extreme conditions in Ukraine, most of the critical organizations and government offices keep working remotely from their homes as much as they can. As such, development of a Green Hydrogen infrastructure framework could become an important driver for the economic recovery of the country as well as a proactive step to put in place structures for increased energy security including the creation of potential green jobs. Thus, the WB team considers this critical TA work should still proceed to guide implementation of reforms and future investments to facilitate the development of Green Hydrogen projects in Ukraine.</p> <p>Furthermore, as a mitigation measure against this risk, the technical studies planned under this TA activity can be conducted by international experts through interactions with local counterparts/stakeholders and conducted remotely with information exchanges via email communications and phone conversations including using on-line platforms/zoom to conduct events.</p>
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14. Coordination. Is the institutional arrangement for project implementation fully described? Is there an elaboration on possible coordination with relevant GEF-financed projects and other bilateral/multilateral initiatives in the project area?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes, with suggestions. Please add a diagram including different stakeholders and these will interact under Component 1 of the project. Also, clarify how the interaction with the 4 selected countries will occur.

Agency Response

WB 3/1:

Given that the Pilot Country Initiatives will vary in their timelines and how they plan to launch their respective green hydrogen initiatives, it is too soon to define different stakeholder engagements/workshops etc. Therefore, no diagram is presented in the PIF Application at this time. However, the Section on "2. Stakeholders" of the PIF Application clearly outlines details on the various institutional arrangements with country-specific agencies that the WB team will engage. As the Project implementation progresses and there is better clarity in the stakeholder/institutional engagements through the direct implementation of the 4 country activities (Component 2), a diagram could be presented during the mid-term review.

15. Consistency with national priorities. Has the project described the consistency of the project with identified national strategies and plans or reports and assessments under the relevant conventions?

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. This section shall be further elaborated for each of the 4 participating countries. Also, please clarify whether the following sentence is applicable to this project. Otherwise, please remove: *"In addition, the project activities will contribute to Biennial Update Reports (BUR) under UNFCCC, which highlights information on mitigation actions as well as support received for mitigation efforts".*

Agency Response

WB 3/1:

Please refer to the document "ANNEX: Consistency with National Priorities" that outlines the ambitious green hydrogen adoption strategies for the 4 pilot countries as well as the Section on "2. Stakeholders" within the PIF. Deleted/removed sentence on BUR under UNFCCC.

16. Knowledge management. Is the proposed "Knowledge Management Approach" for the project adequately elaborated with a timeline and a set of deliverables?

Secretariat comment at CEO Endorsement Request

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. This section shall be further elaborated by for instance including information on:

- Plans to learn from relevant projects, programs, initiatives & evaluations
- Indication of the processes to capture, access, and document information, lessons learned, best practice & expertise generated during implementation
- Knowledge outputs to be produced and shared with stakeholders
- A discussion on how knowledge and learning will contribute to overall project/program impact and sustainability
- Plans for strategic communications

Agency Response

WB 3/1:

Please see new paragraph that was added to the Knowledge Management Approach section within the PIF:

Knowledge Management (KM) Approach: Both Component 1 (Global Green Hydrogen Exploratory Facility) and Component 2 (Preparation of 4 Country GH Activities) of this activity will prioritize Knowledge Exchange, sharing of global Best Practices including Country Case Studies to facilitate the adoption of green hydrogen innovations and technology transfer. Specifically, Component 1 through the global green hydrogen platform will facilitate knowledge exchange by developing content on green hydrogen policy and technology innovations to support institutional capacity building and public-

private sector cooperation at a global scale. Component 2 will promote South-South Cooperation and Knowledge Sharing through Policy and Technical Dialogues to develop green hydrogen enabling environments focusing on creating national-level policy, legal, regulatory, and institutional landscapes conducive to fast-track the preparation and implementation of Pilot Project initiatives in Chile, Morocco, Tunisia, and Ukraine. These activities will aim to gain a deeper understanding of national green hydrogen priorities and identify key challenges and opportunities in implementing green hydrogen projects. Overall, the KM Approach will target diverse sets of stakeholders ranging from both the public and private sector, civil society organizations, NGOs, academia, including key donors under the guidance and supervision of the World Bank task team and the GEF. The knowledge and experiences derived from this project will be disseminated across WBG countries and will positively impact other countries to generate global public goods through green hydrogen technology innovations, offer multiple opportunities for lessons learned and replicability globally.

17. Monitoring and Evaluation. Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

Yes.

Agency Response

18. Benefits. Are the socioeconomic benefits at the national and local levels sufficiently described resulting from the project? Is there an elaboration on how these benefits translate in supporting the achievement of GEBs or adaptation benefits?

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

Yes.

Agency Response

**19. Annexes:
Are all the required annexes attached and adequately responded to?**

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

Yes.

Agency Response

20. Environmental and Social Safeguard (ESS):

Are environmental and social risks, impacts and management measures adequately documented at this stage and consistent with requirements set out in SD/PL/03?

Secretariat comment at CEO Endorsement Request

1/27/2022 PM:

Yes.

Agency Response

Project Results Framework

Secretariat comment at CEO Endorsement Request

3/28/2022 PM:

Cleared.

3/24/2022:

No. Please address the following comments:

- Please include the unit of measures (metric tons of CO₂e (indirect)) for Core Indicator 6 in the results framework in Annex A

- GEF Core Indicator 11 should be explicitly mentioned in the Results Framework in Annex A.

3/16/2022 PM:

Cleared.

3/7/2022 PM:

No. It is not clear how the two indicators below relates this project. Please either explain or remove.

Outcome indicator 2.3.1	Volume of WBG financing leveraged for projects that support accelerated decarbonization
Outcome indicator 2.3.2	Volume of climate financing leveraged for projects that support accelerated decarbonization

1/27/2022 PM:

Yes, with suggestions. Under the results framework please highlight which indicators are GEF Core Indicators. Also, following the components proposed, some indicators are missing such as for instance: # GH2 policies adopted, # people trained, # workshops/training conducted, # policy/technical documents produced, etc.

Agency Response

WB 3/25:

- The unit of measurement MtCO₂e is already included in Outcome indicator 1.1, column 2 of the Results Framework. We have added the word indirect.
- The indicator on direct beneficiaries has been added to the Results Framework.

WB 3/9/2022:

Annex A has been revised to reflect only the results to be achieved during the supervised implementation period of the investment (with the exception of the GHG target, which is a lifetime value).

WB 3/1:

We updated the table in ?Annex A: Project Results Framework? and referenced Core Project Indicator #6 ? GHG Emissions Mitigated. The Results Framework for this GEF-Funded Activity is directly aligned with the ESMAP Green Hydrogen Program?s Results Framework.

GEF Secretariat comments

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
Council comments

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
STAP comments

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
Convention Secretariat comments

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
Other Agencies comments

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response

CSOs comments

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
Status of PPG utilization

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
Project maps and coordinates

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

Yes.

Agency Response
Part III ? Country and Agency Endorsements

1. Country endorsements. Has the project/program been endorsed by the country's GEF Operational Focal Point and has the name and position been checked against the GEF data base?

Secretariat comment at CEO Endorsement Request
3/28/2022 PM:

No. Purely global projects do not require letters of endorsement. However, for those projects which have both a global and a country specific components, one of the following options shall be met: (i) either the sum of all the LoE equals the GEF financing requested; or (ii) each country submits a LoE for the same amount of the GEF financing. To solve this issue at this stage we either request new LoEs or reduce the

overall project amount, whichever is easier for the team. Please note the second option would mean a total reduction in the GEF funding of \$110,000 and \$10,000 in fees.

3/24/2022 PM:

No. The sum of the individual allocations from Ukraine (\$360,355), Chile (\$660,650), Morocco (\$600,591), and Tunisia (\$240,236) totals \$1,861,832 (inclusive of Agency Fees). This does not match the total GEF Financing in Portal (\$1,981,950). This can be solved by: (i) submitting new Letter of Endorsements; or (ii) including in Table D the individual amounts per country matching the allocated amounts in the LoEs. By doing so, the total amount of the GEF Project Financing will be reduced to \$1,861,832.

3/7/2022 PM:

Cleared.

1/27/2022 PM:

No. The Tunisia's Letter of Endorsement does not include the GEF funding amount. Please amend accordingly and submit an updated letter.

Agency Response

WB 3/28:

Project budget has been reduced. Total GEF funding requested is \$1,861,832, inclusive of agency fees.

WB 3/25:

This project, funded through the CC focal area global set aside, is divided into two components ? the global knowledge component (component 1) and the activities in the four countries (component 2). We sought endorsement letters only for specific country-level activities and not for the global component as the global component aims to generate and share knowledge at the global level and is not specific to any country. We understood based on GEF Program Manager guidance that endorsement letters are required for activities that are specific to a country. If this were a purely global project, then no endorsement letter would be required. The GEF project funds allocated to the

three countries total \$1.7 million, excluding Agency fee, as per the four endorsement letters. This is reflected by the \$1.55 million allocation for component 2 plus \$150K PMC, while the global component totals \$110K (\$100K for component 1 plus \$10K PMC). This adds up to the \$1.81 million total project funding request, excluding the Agency fee. No changes have been made to the budget or components, as such changes would constitute a significant change to the project that has already been technically cleared.

WB 3/1:

The Tunisia LoE has been uploaded. We apologize for this omission.

Does the termsheet in Annex F provide finalized financial terms and conditions? Does the termsheet and financial structure address concerns raised at PIF stage and that were pending to be resolved ahead of CEO endorsement? (For NGI Only)

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response

Do the Reflow Table Annex G and the Trustee Excel Sheet for reflows provide accurate reflow expectations of the project submitted? Assumptions for Reflows can be submitted to explain expected reflows. (For NGI Only)

Secretariat comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response

Did the agency Annex H provided with information to assess the Agency Capacity to generate and manage reflows? (For NGI Only)

Secretariat Comment at CEO Endorsement Request
1/27/2022 PM:

N/A.

Agency Response
GEFSEC DECISION

1. RECOMMENDATION.

Is CEO endorsement/approval recommended?

Secretariat comment at CEO Endorsement Request

3/28/2022 PM:

No. Please include in Table D of the GEF Entry Portal the individual amounts per country matching the allocated amounts in the LoEs (i.e. instead of including just one row as a Global component, add 4 rows one per country).

3/28/2022 PM:

No. Please address the following comment: Purely global projects do not require letters of endorsement. However, for those projects which have both a global and a country specific components, one of the following options shall be met: (i) either the sum of all the LoE equals the GEF financing requested; or (ii) each country submits a LoE for the same amount of the GEF financing. To solve this issue at this stage we either request new LoEs or reduce the overall project amount, whichever is easier for the team. Please note the second option would mean a total reduction in the GEF funding of \$110,000 and \$10,000 in fees.

3/16/2022 PM:

Cleared from the technical standpoint.

3/7/2022 PM:

No. Please address pending comments above from 3/7/2022.

1/27/2022 PM:

No. Please address comments above. Also, when updating the GEF Portal Entry Document, please update the "Expected Implementation Start" since the current date (2/1/2022) doesn't seem feasible anymore.

Review Dates

	1SMSP CEO Approval	Response to Secretariat comments
First Review		3/1/2022
Additional Review (as necessary)		3/11/2022
Additional Review (as necessary)		3/25/2022
Additional Review (as necessary)		3/28/2022
Additional Review (as necessary)		

CEO Recommendation

Brief reasoning for CEO Recommendations