Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 21-May-2021 | Report No: PIDC32083

Public Disclosure Authorized

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Lebanon	P176635		Beirut Critical Environment Recovery, Restoration and Waste Management Program (P176635)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
MIDDLE EAST AND NORTH AFRICA	Jul 05, 2021	Aug 26, 2021	Environment, Natural Resources & the Blue Economy
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	United Nations Development Program	United Nations Development Program	

Proposed Development Objective(s)

To support emergency environment control measures in Beirut City from impacts of the August 2020 explosion and support planning for longer term environmental restoration efforts

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	10.00
Total Financing	10.00
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	10.00
Lebanon Trust Fund	10.00

Environmental and Social Risk Classification	Concept Review Decision
High	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **The Port of Beirut Explosion (PoB) on August 4, 2020 devastated Beirut city, killing at least 200 people, wounding more than 6,000 and displacing around 300,000.** In addition to causing extensive damage to homes, businesses, infrastructure, and disrupting the economic activity, the explosion created multiple environmental challenges. A Rapid Damage and Needs Assessment (RDNA) was carried out immediately after the explosion, to assess its impact on the population, changes in economic flows, physical assets, infrastructure, and services delivery in Beirut. The RDNA assessed the damage and needs of 16 sectors and estimated the damages to be between US$3.8 – 4.6 billion and losses between US$2.9 – 3.5 billion. Physical damages to the environment sector were assessed between US$20 - 25 million and "Recovery & Reconstruction Needs" were estimated at US$75-100 million.

2. **The POB explosion aggravated the ongoing economic and health crises in Lebanon**. The economic crisis that began in October 2019 was triggered by a significant drop in capital inflows and a steady downfall of the national currency against the dollar. This situation forced the Government of Lebanon (GoL) to default a US$1.2 billion Eurobond redemption, marking the first time ever sovereign default. The situation worsened further due to the health crisis caused by the COVID-19 pandemic and countrywide lockdowns. The POB explosion, later in 2020 and additional to its direct humanitarian impacts, caused a further economic and environmental shock to the country. As a result of these crises, the real GDP growth of Lebanon contracted by 20.3 percent in 2020 and a further contraction of about 9.3 percent is projected for 2021. These severe economic crises forced over 45 percent of the Lebanese population below the poverty line.

3. **The high rate of poverty combined with the large concentration of Syrian refugees in the country strongly affects jobs and people's livelihood opportunities**. It is estimated that about 16.5 percent (914,648) of all registered displaced Syrians live in Lebanon[1], joined by approximately half a million more unregistered and displaced Syrians. According to UN-Habitat, in 2014, one out of every five residents in the country was a refugee and 25 percent of them live in Beirut.[2] The socio-economic situation of these refugees has been deteriorating over the years with now close to three-fourths of the population falling below the poverty line (less than US$ 4 per day per person) and over 50 percent below the extreme poverty line (less than US$3 per person per day).[3]

1 UNHCR, "Operational Portal: Syria Regional Refugee Response – Lebanon," December 31, 2019.

2 UNHABITAT and UNHCR. (2014). Housing, land & property issues in Lebanon: Implications of the Syrian refugee crisis. New York: United Nations.

3 UNHCR, WFP, UNICEF. (2019). Vulnerability Assessment of Syrian Refugees. VaSyR 2019. New York: United Nations.

4. **In an effort to address these challenges, a Reform, Recovery and Reconstruction Framework (3RF) has been developed by the World Bank Group (WBG) together with the United Nations (UN), the European Union (EU), civil society, the Government of Lebanon (GOL) and other stakeholders.** The 3RF was prepared based on 'whole of Lebanon' approach and provides a roadmap to operationalize the findings of the RDNA and other assessments and responds to the devastating explosion in the PoB. It presents a set of sequenced, specific, and targeted interventions for immediate and short term action that are structured under four strategic pillars: (a) improving governance and accountability, (b) jobs and opportunities, (c) social protection, inclusion and culture, (d) improving services and infrastructure. The design of the 3RF has gone through an intensive and highly inclusive consultative process.

5. **Building on 3RF framework, WBG, in close cooperation with UN and EU, and with support from key donors, has established the Lebanon Financing Facility (LFF) to support implementation of key priorities under the 3RF**. The objective of the LFF is to support the immediate socio-economic recovery of vulnerable people and businesses affected by the PoB explosion, build the foundation for medium-term recovery, sustainable reconstruction of the PoB and affected neighborhoods. The LFF provides an important means for mobilizing support in a transparent, inclusive, timely and well-coordinated manner, especially in a context of high uncertainty. It proposes innovative and flexible implementation modalities as it seeks to provide direct support to UN agencies, capable non-government organizations (NGOs) and civil society organizations (CSOs), as well as private sector intermediaries to implement priority activities.

Sectoral and Institutional Context

6. **The PoB explosion occurred due to the ignition of about 2,750 tons of Ammonium Nitrate (AN) at the port and is being contributed to poorly regulated and managed storage conditions.** The event is evidence for the generally unsafe storage conditions of chemicals and hazardous materials in Lebanon, which should be governed by relevant regulations on environment and hazardous substances. The RDNA further noted that large quantities of obsolete pesticides (OPs), pharmaceutical products and chemical substances were also stored in the PoB at the time of the explosion. The presence of these materials and damages to large of number of houses and other structures have led to the generation of various waste streams with estimated volumes of 320,000 tons of demolition waste, 1200 tons of hazardous waste (including asbestos material), 170 tons of electronic waste, and 500 scrapped vehicles, and four severely damaged seagoing vessels anchored at the port. In addition, some 900,000 tons of debris is expected to be generated during the reconstruction of damaged buildings.[4]

7. **The PoB explosion also caused other environmental impacts,** such as (i) significant damage to solid waste management (SWM) facilities at Karantina and Borj Hammound, (ii) impacts on the marine ecosystem near the explosion site; (iii) loss of green cover/vegetation in the city of Beirut; and (iv) possible increase in dust levels (suspended particulate matter, SPM) that could contain asbestos particles.

8. **Particularly the presence of hazardous waste materials poses direct and immediate threats to the population of Beirut and the environment**. The waste materials present in the PoB are poorly controlled and thus relatively accessible to the public. This is demonstrated by the ongoing disposal of domestic and other waste in the area. The near absence of containment and lack of control measures are major concerns of public health and need

4 UNDP. October 2020. Demolition Waste Assessment Outside the Port of Beirut.

urgent action as identified in the RDNA. Lack of containment is also likely cause for site contamination and an additional challenge for port restoration planning.

9. **The institutional responsibility to address these impacts and overall environment management in Lebanon rests with the Ministry of Environment (MoE).** However, significant weaknesses exist both in terms of technical capacity and with the overall regulatory framework in the country. While there are regulations for handling, storage, and management of hazardous waste (Decree No. 5606 of 2019) and health care waste management (Decree No. 13389 of 2004), the capacity of MoE to enforce and monitor implementation of these regulations is weak. In addition, there are no specific regulations for the management of chemical substances and stockpiles in Lebanon, which is regarded as an important factor for the disaster at PoB.

10. **Infrastructure for the treatment and disposal of hazardous and chemical waste is absent in Lebanon, which is critical for the management of waste generated due to the explosion.** While the country has limited capacity for the collection and temporary storage of hazardous waste, there are no facilities for their treatment or final disposal. As a consequence, hazardous materials including electronic waste is mixed with municipal solid waste and disposed in the existing municipal solid waste facilities. Development of adequate facilities is essential for the management of hazardous waste generated due to PoB explosion, as well as for the overall needs of Lebanon. In case of healthcare waste, infectious waste is adequately treated at dedicated treatment facilities and segregated cytotoxic waste is being shipped abroad under the Basel Convention requirements on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1992)[5]. However, there is a need for additional capacity to meet the growing quantities of health care waste in the country, to improve segregation of waste at source, and to establish a treatment facility for cytotoxic waste.

11. **As for hazardous waste, regulations also exist for the management of municipal solid waste in Lebanon. However, further strengthening of the regulatory framework, technical and financial resources are required to improve municipal solid waste management.** These measures would be also critical for the management and disposal of large quantity of debris generated from the PoB explosion. While there is a 'Law for Integrated Solid Waste Management (ISWM) No. 80/2018' and sorting at source decree 5605 of 2019, additional legislation, as well as human and financial resources are required to effectively implement the ISWM Law. Currently, separate private operators are engaged in waste collection, transportation, recycling, and disposal of solid waste in Beirut. In terms of infrastructure, waste is first handled at the sorting facility in Karantina (capacity 1900 tons/day), followed by the treatment of the organic fraction at a biological treatment facility (capacity 450 tons/day) in Saidahe inert fraction of the waste is disposed in two sanitary landfills in Costa Brava and Jdeideh. Both these landfills are rapidly reaching their full capacity. This inadequate capacity of the two landfills and the damage to the Karantina sorting facility, need to be considered in determining viable options for the disposal of debris generated from the explosion.

12. **Environmental governance in Lebanon, and specifically in the city of Beirut, need to be strengthened to avoid recurrence of environmental disasters.** Despite significant environmental challenges, environmental governance has not been given the priority it needs, and measures to strengthen the legal and institutional frameworks have remained very limited in Lebanon. Measures are also critical to enhance monitoring and enforcement of

[5] Lebanon/ Ratified Basel Convention through Law 387 of 1994

environmental regulations, and engage stakeholder groups, both civil society and the private sector, to adequate respond to the overwhelming environmental challenges facing the country.

Relationship to CPF

13. **The proposed project addresses key constraints to the development agenda outlined in the Lebanon Country Partnership Framework (CPF) FY17-FY22**; notably, governance and institutional challenges, infrastructure deficiencies, environmental degradation, data availability, conflict, security, and fragility, and gender inequality. The project directly supports Focus Area 1 (Expand Access to and Quality of Services); specifically, objectives to reduce industrial, hazardous, and wastewater pollution, and to improve the capacity of central and local governments to provide basic services to communities hosting Syrian refugees and stimulate economic development at the local level. Additionally, the project is aligned with the CPF's cross-cutting theme of governance; particularly, as it seeks to inform and stimulate debate around policy choices and reform options and building institutional capacity, improving data availability to contribute to evidence-based policy making, and mainstreaming citizen engagement.

14. **The project is also aligned with the priorities identified under "Focus Area 1. Socioeconomic and business recovery" of the 3RF to respond to immediate needs identified under both the Port Sector and the Environment sector of the 3RF**. The interventions identified by the project are considered as emergency, lifesaving, and no-regret measures, which reduce and if possible, take away environment, health, and safety risks for Lebanese citizens, especially those living in the area affected by the explosion. The proposed interventions will also contribute planning for future support to "Focus Area 2. Preparing for reform and reconstruction" of the 3RF and for the adoption of the principles of "**Build back better, greener, and smarter"**.

C. Proposed Development Objective(s)

To support emergency environment control measures in Beirut City from impacts of the August 2020 explosion and support planning for longer term environmental restoration efforts

Key Results (From PCN)

- Selected priority waste materials in the Port of Beirut area properly managed with control measures (site securing, containment measures, disposal, or treatment)
- Demolition waste from the Port of Beirut area safely contained, disposed, or recycled
- Enable stakeholders' engagement in prioritization, selection and implementation of control measures for the environmental restoration of Port of Beirut area.
- Planning support for greening Beirut's environmental reconstruction agenda provided

D. Concept Description

15. The environmental interventions proposed by the project are urgent measures aimed to control most urgent public health and environment impacts that resulted from the PoB explosion, particularly dealing with the poorly managed hazardous waste, chemicals and other waste materials that are now present on the site. The proposed interventions are based on the needs identified under the RDNA and 'Construction and Demolition Waste

Management Plan' prepared by the European Union (EU)[6] and 'Demolition Waste Assessment' carried out by United Nations Development Program (UNDP)[7]. Selected activities will be prioritized by impact, maximizing public health and environmental risk reductions, considering the limited means available for the project. The selection of project interventions will also be informed by the on-going waste categories assessment of the Recygroup (supported by French Government) and other ongoing research, and will closely consider and be designed in parallel with environmental restoration activities that could be financed and implemented by and through donors active in Lebanon.

16. Given the limited budget, the project aims to safely control and contain waste materials and chemicals. To maximize impacts, making best use of the limited funds, the selected interventions are closely aligned with other (international) initiatives to secure the risks in the Port area. The Project will also create a vehicle and mechanisms that may be used for possible future emergency cleanup operations. Overall, the project activities are clustered under four components.

Component 1. Securing the Port and management of debris, asbestos-contaminated materials and hazardous waste generated due to PoB explosion (US$8 million)

Sub-component 1.1. Securing the Port and implementing critical waste management interventions inside the Port. (US$4.5 million)

17. Building on the critical activities identified in the Waste Management Plan (WMP) for the Port developed by the EU and current reconstruction preparation activities in the port by other donors, this sub-component will (i) support the Technical Committee overseeing the implementation of the WMP and strengthening the role of concerned institutions in the management of wastes within the Port; (ii) secure the explosion site at the port by implementing necessary site containment and management measures to address risks, such as fire risks from the grains in the damaged silos and other mixed waste under fermentation; (iii) in-situ containment and protection of various affected zones, including access control and confinement measures, safe storage and isolation of asbestos material and scattered/leaked hazardous materials; and (iv) conduct additional technical feasibility studies as well as testing and monitoring as needed to assess the level of contamination in the port, design remediation measures and develop implementation strategies[8].

Sub-component 1.2. Safe management and disposal of mixed debris outside the Port of Beirut. (US$2 million)

18. This sub-component builds upon the initial work being done at the Bakalian site to sort, recycle (glass and plastic), crush and safely store non-recyclable debris generated by the explosion outside the Port of Beirut. Specific activities will include supporting operational management at the site, and transport and disposal (non-recyclable and contaminated part) of up to 150,000 tons of debris at a quarry site (to be identified and designed to dispose debris that is contaminated with asbestos).

Sub-component 1.3. Priority waste management interventions of hazardous waste resulting from the explosion outside the Port. (US$1.5 million)

[6] EU. October 2020. Beirut Explosion: Construction and Demolition (C&D) Waste Management Plan
[7] UNDP. October 2020. Demolition Waste Assessment Outside the Port of Beirut.
[8] Additional studies/assessments, if needed, to identify (i) actual quantity and composition of each type of waste; (ii) levels of contamination of the soil, marine environment and other environmental aspects; (iii) Level of remediation needed for the potential future use of the site'; (iv) Relevant technologies for remediation/ decontamination, and (v) Cost and timelines needed for the remediation of the affected sites.

19. This sub-component will develop viable approaches to manage hazardous waste generated from the explosion, such as asbestos (including asbestos mixed with construction and demolition waste) and asbestos waste at the Karm El Zeytoun site in Achrafieh area. This is envisaged to be done through specialized NGOs and/or private sector operators as appropriate and will require a comprehensive capacity and qualifications assessment to inform the design of implementation arrangements that include required competences and means for management of these materials in line with international requirements. These arrangements will have to provide a solid basis to allow for sustainable management of hazardous materials and associated risks under the project.

Component 2. Priority actions contributing to policy and institutional work for greening Beirut's Reconstruction Agenda (US$1.5 million)

Sub-component 2.1. Supporting a collaborative platform for stakeholders' engagement and implementing priority actions for greening Beirut's reconstruction agenda. (US$0.5 million)

20. This sub-component aims at supporting establishment of a collaborative platform for ensuring stakeholders' engagement in the environmental agenda of Beirut with participation from citizen groups, NGOs, and academia[9], including marginalized interest groups. Relevant local authorities, including the Ministry of Environment, Port of Beirut, the Municipality of Beirut, and central government institutions will also be part of this Platform. A communication and outreach plan will be developed through appropriate stakeholders' mapping and relevant tools for building trust among the concerned entities. The stakeholders' mapping will include an assessment of female/male representation across stakeholders' groups and identify potential barriers, especially for women and women-led groups, that may undermine fair representation and active participation in defining the strategy and action plan for greening Beirut's reconstruction agenda. The collaborative platform will also strengthen coordination mechanisms among key concerned Government entities to enhance exchange of information and the decision-making process.

21. This sub-component will also support the development of strategic and sustainable activities aiming at greening the reconstruction agenda of Beirut city and Port of Beirut and which will be based on specific action plans to respond to priority issues covering (i) mitigation of Environment, Health and Safety risks; (ii) SWM action plan for Beirut city, (iii) integrating climate considerations in the reconstruction agenda[10]; and (iv) engagement plans to adequately address barriers to participation of women and men and identify actions in greening the reconstruction agenda meeting gender-differentiated needs and interests.

Sub-component 2.2. Environmental monitoring and enforcement activities for critical hazardous materials (US$1 million)

22. This sub-component will support environmental monitoring and enforcement activities for hazardous waste in Beirut based on national mandates and current practices[11]. The activity aims to closely involve mandated monitoring and enforcement agencies based on national regulations and protocols in coordination with concerned government institutions. This will also allow collecting essential information on levels of contamination (covering asbestos and other air pollutants, as well as key land and water and waste management based on on-going monitoring activities as part of the rehabilitation works.

[9] The AFD supported NGO platform "Shabake" is among the on-going initiatives to be considered for implementing this activity

[10] This will include the identification of Climate-smart investments as part of the rehabilitation of damaged buildings and businesses such as double-glazed windows, energy efficient lighting and solar water heaters

[11] Role of Environmental Prosecutors and Investigation Judges as per law 251/2014, the interim arrangement for Environmental Police (given freeze of employment) and MoE's experience of calling upon watchdogs in monitoring activities

Component 3. Management and technical assistance (US$0.5 million)

23. This component covers the management and technical assistance support that is envisaged to be provided by UNDP as intermediary agency for implementing all the components of the proposed operation. This includes covering the responsibilities of the intermediary agency to procure, monitor and ensure delivery of activities by various implementation partners / non-state stakeholders that will be engaged in activities to control or handle waste streams under the project or to provide services. Project management activities by the intermediary agency include: (i) overall project management, fiduciary and safeguards management, (ii) conducting technical, financial studies, environment and social safeguard studies, (iii) providing technical assistance and institutional strengthening measures, (iv) developing and implementing a monitoring and reporting plan to provide visibility of the results and a transparent model for the development and implementation of all activities.

Component 4. Contingency Emergency Response Component (CERC)

24. This component is a contingency component to be considered in the case of a relevant emergency event. It is unfunded.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

The project will have overall positive environmental impacts by providing urgently needed interventions to securing, restoring and decontaminating affected areas in the Port of Beirut (Component 1.1), adequately managing two waste handling facilities at Bakalian site and subsequent disposal of waste (Component 1.2), and providing safe handling and disposal for hazardous waste including ACMs from outside of the Port of Beirut including the accumulated waste at Karm Zaytoun site (Component 1.3). The institutional and policy interventions (Component 2.1) and support to strengthen the priority environmental monitoring and enforcement activities (Component 2.2) will also bring many long-term environmental benefits to the City of Beirut.

On the other hand, the project interventions will be associated with environmental risks during implementation, including: risk of generating emissions of asbestos containing dust during the handling of ACM waste, affecting neighboring areas of the Port and outside the Port and the two waste handling facilities and their surroundings; risk of improper handling of hazardous materials leaking to the environment; risk of improper disposal and securing of the disposal sites impacting soil and subsurface water at disposal sites, risks to the health and safety of the workers performing waste containment and site restoration.

The environmental risks are considered high due to the following: i) the areas surrounding areas where ACMs will be handled are densely populated and, hence, highly sensitive; ii) the consequences of dispersion of asbestos containing dust are severe; iii) there is a possibility of cumulative impacts from other rubble removing activities at the affected areas in Beirut emitting asbestos containing dust; iv) safe handling of asbestos waste requires expertise that may not be readily available in the country and is not regulated by existing laws and standards; v) decontamination of different areas inside the port may involve different hazardous materials that require expertise and equipment not readily available in the

country; vi) the potential lack of capacity of the implementing agencies in managing technical aspects of decontamination/restoration activities to be confirmed during preparation and (vii) the untested capacity of the implementing agencies in fulfilling ESF requirements in practice.

These risks will be managed through: i) ensuring environmental assessment instruments adequately identify risks and impacts (including positive impacts) and corresponding measures applying the mitigation hierarchy and perform adequate analysis of alternatives and identification of any associated activities; ii) including the needed expertise in the procurement documents for waste handling and site restoration entities; iii) ensuring implementing agencies hire staff with adequate capacity to manage the process, iv) carrying out monitoring of the process to document before and after situation.

The project activities include the safe management and disposal of 150,000 tons of mixed debris outside the Port of Beirut and policy and institutional level reforms for greening Beirut's reconstruction agenda, which mainly involves a stakeholders engagement collaborative platform for ensuring the participation of citizen groups, NGOs and academia. The project is expected to have numerous positive social impacts, including on the health and safety of Beirut and Greater Beirut residents, through the removal of hazardous wastes and by engaging in an inclusive and transparent manner CSOs, NGOs, and marginalized groups, on the reconstruction and environmental agenda of Beirut.

However, Component 1 of the project which includes the disposal of mixed debris is involved with the use of a predominantly unskilled labor force (about 50-60 laborers) hence it is important to ensure adequate labor conditions and health and safety for Project workers during such project activities and raising awareness of the health risks involved and undertaking the relevant trainings and the use of personnel protective equipment. The project will also involve the removal and transportation of mixed debris, which may cause nuisances to residents, including noise, vibration and increased level of traffic.

The scale of labor influx is expected to be moderate (about 50-60 laborers) due to the nature of activities associated with this project involving the removal of significant quantities of mixed debris amounting to approximately 150,000 tons of waste. All labor force will have adequate awareness-raising and training on occupational health and safety risks and on SEA/SH potential risks through the signing of codes of conduct prior to initiation of project activities. All labor force will also have access to a GRM. An external GRM with SEA/SH referral pathways will be widely disseminated and easily accessible to all citizens.

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APPROVAL

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