



Program Information Document (PID)

Concept Stage | Date Prepared/Updated: 22-Jun-2020 | Report No: PIDC225236

**BASIC INFORMATION****A. Basic Program Data**

Country Tunisia	Project ID P173568	Parent Project ID (if any)	Program Name Tunisia Integrated Disaster Resilience Program
Region MIDDLE EAST AND NORTH AFRICA	Estimated Appraisal Date 19-Oct-2020	Estimated Board Date 14-Dec-2020	Does this operation have an IPF component? No
Financing Instrument Program-for-Results Financing	Borrower(s) Ministry of Finance	Implementing Agency Ministry of Finance, National Institute for Meteorology, Ministry of Equipment, Housing and Land Use Planning	Practice Area (Lead) Urban, Resilience and Land

Proposed Program Development Objective(s)

To improve Tunisia's disaster risk management and financing, and enhance the protection of the targeted population and their assets from disaster and climate-related events.

COST & FINANCING**SUMMARY (USD Millions)**

Government program Cost	400.00
Total Operation Cost	160.00
Total Program Cost	160.00
Total Financing	160.00
Financing Gap	0.00

FINANCING (USD Millions)

Total World Bank Group Financing	80.00
World Bank Lending	80.00



Total Non-World Bank Group and Non-Client Government Financing	80.00
Multilateral and Bilateral Financing (Concessional)	80.00

Concept Review Decision

The review did authorize the preparation to continue

B. Introduction and Context

Country Context

1. **Despite its transition to democracy, economic transition has not kept pace.** Tunisia is a lower-middle-income country, with a population of 11.6 million and a gross domestic product (GDP) of US\$ 39.87 billion (2018). Often hailed as the only success story of the Arab Spring, the country has made great strides toward establishing the fundamentals of democracy, including the formation of the National Dialogue Quartet in 2013 and the introduction of a new constitution in 2014. Another milestone in Tunisia’s democratic trajectory were the October 2019 presidential and parliamentary elections, the second democratic transition of power since the revolution. However, problems related to insufficient job opportunities, weak governance and corruption that have plagued the Tunisian economy since the 1990s and ultimately triggered the 2011 revolution continue to be binding constraints.¹ Average GDP growth has dropped significantly since 2011, job creation has been sluggish, and unemployment rate was above 15 % in 2019.² The perceived corruption of the governing elite and its failure to implement reforms promised since 2014 were predominant themes during the 2019 electoral cycle. The outcome of the 2019 parliamentary and presidential elections led to political standstill, as parliament was unable to agree on the composition of a new government until 27 February 2020.

2. **Tunisia is highly vulnerable to natural hazards and climate change, with impacts felt across key sectors of the economy.** Tunisia is exposed to a wide range of natural hazards including floods, drought, earthquakes, landslides, forest fires and snowstorms.³ While droughts are most frequently recorded (54% - out of 2,066 disasters reported between 1957 and 2018, 1,123 were droughts), floods account for the highest number of casualties (70% - out of the 1,256 people that died during disasters between 1957 and 2018, 1,004 died during floods), the highest number of people affected⁴ (84% - out of the 676,764 people affected by disasters between 1957 and 2018, 566,068 were affected by floods), and most significant economic losses (approx. 60%).⁵ In addition, climate change acts as a threat magnifier by increasing the variability of hydrometeorological conditions, the frequency of extreme weather events and sea-level rise (SLR).⁶ The

¹ While the fiscal deficit -including grants reached 5.3% of GDP, public debt increased to 78.5% of GDP as a result of the dinar depreciation in 2019. The current account deficit widened to 11.2% of GDP in 2018; reserves and the Tunisian Dinar exchange rate remain at vulnerable levels.

² World Bank 2019. MPO. Tunisia. <http://pubdocs.worldbank.org/en/528161574194294195/EN-MPO-OCT19-Tunisia.pdf>

³ Between 2011 and 2018, Tunisia recorded more than 2,550 fires that devastated about 34,000 hectares of forests. The earthquake which caused the most severe impacts in the 20th century occurred in 1957 in the Jendouba governorate; it had a magnitude 5.6 on the Richter scale and caused the loss of 13 lives and the collapse of buildings. See MALE Opening Statement - Africa-Arab DRR Platform – October 2018.

⁴ Refers to: “The number of persons who suffer indirect or secondary effects related to a disaster, such as deficiencies in public services, commerce, work, or because of isolation.”

⁵ Data combined from DesInventar and EM-DAT databases, for the period 1957-2018.

⁶ Likely impacts of SLR along the coast of Tunisia will be an increase in shoreline erosion and extended coastal inundation or permanent submersion of low-lying coastal areas (see: United Kingdom Ministry of Foreign Affairs 2018. Climate Change Profile: Tunisia, p. 4.).



country's vulnerability to climate variability and disaster impacts is tied to several factors. The economy is highly dependent on climate-sensitive agriculture, while a large share of its population and economic activity (tourism and industry) are concentrated along flood and SLR prone coastal zones.⁷ Annual rainfall has decreased 5% per decade in the Northern part of Tunisia since 1950, while heavy rainfall events have become more frequent.⁸ All models project a likely decrease in overall precipitation by 2050, with most projecting a minimum decrease of around 4% and maximum decrease varying from 7% to as much as 22%. The decrease in precipitation is accompanied by an anticipated increase in the frequency and intensity of droughts and flooding. In addition, annual maximum temperature is likely to increase by 1.9°C to 3.8°C by 2050.⁹ The combination of higher temperatures and declining rainfall is projected to reduce water resources in Tunisia by 2050.¹⁰ Finally, sea levels are projected to rise between 3 and 61 cm by 2050, depending upon local heat and salinity levels of the Mediterranean.¹¹ Due to coastal zone characteristics, between 1% and 3% of land in Tunisia will be affected by a 1-meter SLR,¹² with significant effects along the coast of Tunisia in terms of shoreline erosion and extended coastal inundation or permanent submersion of low-lying coastal areas.¹³ In addition, underlying risk drivers such as population growth (1.1% annual increase in 2018)¹⁴ and urbanization (1.6% annual increase in 2018),¹⁵ land use change and poverty all contribute to increasing the country's climate and disaster vulnerability. As climate change and disasters become increasingly pronounced, Tunisia's financial risk exposure is also growing, putting pressure on the government budget with potential adverse impacts on the country's indebtedness and fiscal balances.¹⁶

Sectoral (or multi-sectoral) and Institutional Context of the Program

3. The September 2018 flash floods in the Nabeul governorate highlighted the urgency to address disaster and climate-related risks in a more effective manner. A Rapid Needs Assessment (RNA), conducted by the Government of Tunisia (GoT) in partnership with the World Bank (WB), the United Nations and the European Union, estimated recovery needs at approximately US\$ 100 million. Most of the needs were concentrated in the transportation, agriculture and housing sectors. The Nabeul disaster raised a red flag about Tunisia's strong exposure to disasters and the growing impacts of climate change. It also shed a light on the imperative to tackle institutional, physical, financial and knowledge deficiencies for integrated disaster risk management (DRM) and financing (DRF).

4. The legislative framework for DRM in Tunisia is centered around emergency preparedness and response, the most effective phase of Tunisia's DRM cycle. The 1991 Law and its implementing decrees on "The Fight against Calamities, their Prevention and the Organization of Relief Efforts"¹⁷ establish the National Commission (NC) under the leadership of the Ministry of Interior (MI) and Regional Commissions (RCs) under the leadership of Governors. The NC

⁷ Agriculture accounts for 10 to 14 percent of the country's gross domestic product (GDP) and employs approximately 16 percent of the workforce. Tunisia's coastal region harbors 80 percent of the country's economic activity and is home to two-thirds of the country's 11.6 million people. USAID 2018. Climate Risk in Tunisia: Country Risk Profile, p.1. [climatelinks.org/sites/default/files/asset/document/Tunisia_CRP.pdf](https://www.climatelinks.org/sites/default/files/asset/document/Tunisia_CRP.pdf)

⁸ USAID. 2015. Climate Change Information Fact Sheet, TUNISIA, https://www.climatelinks.org/sites/default/files/asset/document/Tunisia%20Climate%20Info%20Fact%20Sheet_FINAL.pdf.

⁹ USAID. 2018. Climate Risk Profile: Tunisia, <https://reliefweb.int/report/tunisia/climate-risk-profile-tunisia-fact-sheet>.

¹⁰ USAID. 2015. Climate Change Information Fact Sheet, TUNISIA.

¹¹ Ibid.

¹² Ibid.

¹³ G. Galassi and G. Spada (2014) Sea-level rise in the Mediterranean Sea by 2050: Roles of terrestrial ice melt, steric effects and glacial isostatic adjustment. *Global and Planetary Change* 123 (2014) 55-66. <https://www.sciencedirect.com/science/article/pii/S0921818114002008>.

¹⁴ World Bank, Population growth (annual %), Tunisia. <https://data.worldbank.org/indicator/SP.POP.GROW?locations=TN>.

¹⁵ World Bank, Urban population growth (annual %), Tunisia. <https://data.worldbank.org/indicator/SP.URB.GROW?locations=TN>.

¹⁶ Economic disruption in the aftermath of a disaster creates significant budget volatility, and depending on their management, negative economic impacts may persist for some time beyond the event. Governments face recovery and reconstruction expenditures as well as potential decline of revenues.

¹⁷ Law No. 91-39 of June 8, 1991; implementing decrees: No 93-942 (1993) and No 2004-2073 (2004).



and RCs, multi-sectoral bodies¹⁸ play both a preventive as well as a disaster and crisis response coordination role. The National Office of Civil Protection (ONPC), on the other hand, is the country's central actor in disaster preparedness and response.

5. **Legal and institutional fragmentation and coordination challenges are key bottlenecks hampering progress towards disaster and climate resilience.** Provisions contributing to resilience-building are scattered across regulations and policies diverse in nature and scope (e.g. sectoral regulations, 2018 Law on decentralization, Budget Laws, etc.). This translates into a fragmented and inconsistent policy and legal framework for DRM that needs to be strengthened to comprehensively address growing disaster and climate-related risks. In addition, respective roles and responsibilities between different sectors and administrative levels are not clearly defined, which leads to gaps or overlaps, and there is no formal mechanism or instance for decision-making and coordination of multisectoral efforts on DRM. As a result, risk considerations are not consistently integrated into investments and budgeting.

6. **Although risk knowledge is improving, it remains insufficient to inform development planning and investment for DRM and DRF. The lack of information-sharing policies and tools among institutions contributes to this situation.** The country has not developed any national-level risk maps or assessments yet. Risk understanding remains focused on specific geographic areas¹⁹ or hazards. Existing data on past disasters and information on exposed assets and vulnerability is not systematized to provide a comprehensive understanding of risks. With regard to information-sharing, while many technical studies or data collection initiatives are conducted by different institutions, these are rarely disseminated externally; there is no single geo-referenced platform or database consolidating disaster risk and climate change related information or allowing real-time visualization of weather data. This set of factors works against an efficient prioritization and optimal use of existing budget resources for the most critical events and beneficiaries. They also hamper the formulation of a national DRF and insurance strategy, which would provide that prioritization and anticipated financial response plan.

7. **With regards to hydrometeorological services and early warning systems, Tunisia is lagging behind compared to most other MENA countries.**²⁰ Insufficient equipment and tools for hydrometeorological monitoring and forecasting, institutional fragmentation, non-concerted approach for data collection, processing and analysis as well as inefficient Standard Operating Procedures (SOPs) for alert communication and dissemination/information, make it difficult for institutions to cope with the increasing demand for improved products and better services from a wide range of users (from decision-makers, sectoral ministries and sub-national institutions to the general public).

8. **Existing risk financing mechanisms in Tunisia are characterized by a reactive approach that tends to exacerbate the State liability in the aftermath of disasters and economic costs.** There is a lack of public and private financial instruments, including domestic contingency funds, contingent financing, and market-based risk transfer solutions (such as catastrophe risk insurance, bonds and derivatives) to inject quick liquidity in the immediate aftermath of a disaster (e.g. for emergency needs) or to provide a buffer to the long-term fiscal impact of disasters (e.g. reconstruction costs). Existing financing mechanisms are generally set without consideration of or correlation with the actual magnitude of disaster losses and could only cover a fraction of medium or high severity events. Moreover, given the scarcity of budgetary resources and under political pressure, the Tunisian Government is often forced to divert certain funds away from their initial objectives to compensate victims of disasters,²¹ introducing additional inefficiencies and delays in the

¹⁸ The National Commission includes one representative of the Prime Minister, three representatives of the Ministry of Defense, four representatives of the Ministry of the Interior, and one representative in each of the following ministries and agencies: MDCl, Agriculture, Finance, MEHAT, MALE, Public Health, Industry, Communication Technologies, INM.

¹⁹ In particular Medjerda River Basin and other watersheds equipped with dams for flood events.

²⁰ WB 2019, Desk Review of Hydromet Capacities of NMHSS in 11 MNA Countries.

²¹ Law 24-2019, which was approved in March 2019 in the aftermath of the Nabeul floods is a case in point. The law extends the scope of intervention of the "Guarantee Fund against financial insolvency of insurance companies" to the profit of Small and Medium Enterprises struck by



use of funds and generating high opportunity cost.²² In addition, as there are no registries and claims management systems for quick processing of compensations after the occurrence of a catastrophe, disbursements are often delayed after the disaster.²³ Finally, with an insurance penetration rate of 2%, and the lack of domestic private insurance covering catastrophic risks for households, businesses and SMEs, the insurance sector is not playing an active role in improving the financial resilience against disaster risks.

9. **Multisectoral planning and articulation of efforts for disaster recovery processes are not standard practice.** Authorities most often carry out damage and needs assessments and reconstruction works on an ad hoc and uncoordinated basis. Institutional and financial arrangements for recovery are devised ex-post. Partly as a result of funding gaps for actions that normally require multi-annual investments, implementation of recovery efforts mainly focus on the short term and are not consistently monitored. However, the recent conduct of an RNA and the development of a multiyear recovery plan after the 2018 Nabeul floods, is a promising step towards the improvement of disaster recovery processes.

Relationship to CAS/CPF

10. **The proposed operation is consistent with the WBG's Country Partnership Framework (CPF) for Tunisia for FY16–20,²⁴ that was re-validated and extended by one year through the Performance and Learning Review (2018).²⁵** The Tunisia CPF highlights the importance of improving governance as a critical condition to achieving sustainable growth and reducing poverty across the country.²⁶ Through the proposed operation, the WB will continue supporting the GoT in building its legal, institutional and financial capacity to prepare for and manage climate and disaster risks by strengthening the institutional framework for DRM. In particular, the proposed operation aims to strengthen coordination and information sharing amongst core institutions on DRM policies, strategies and investments.

Rationale for Bank Engagement and Choice of Financing Instrument

11. **Prompted by the Nabeul disaster and the findings of the Tunisia RNA, the Government requested the WB in January 2019 to provide technical and financial assistance on DRM.** Subsequently, the WB conducted a detailed DRM/DRF diagnostic, which analyzed the strengths and weaknesses of Tunisia's entire DRM cycle from risk understanding, risk prevention and preparedness to risk financing, emergency response and recovery. The findings of the DRM/DRF diagnostic provided the analytical basis for a comprehensive technical assistance program with the following pillars: i) risk understanding (through the development of a national disaster risk profile); ii) flood risk management; iii) institutional strengthening of the country's DRM framework; iv) hydrometeorological services and early warning system; v) disaster risk finance and insurance; and vi) mainstreaming DRM in the education sector (through the Global Program for Safer Schools (GPSS)).

12. **The GoT is currently designing an ambitious DRM/DRF Government program.** Amongst others, the Government program includes the development and implementation of a national DRR strategy, a national Flood Risk Management Plan and its phased implementation, a modernization program of the national hydrometeorological services, improvements to the country's early warning system, as well as the development and implementation of a national DRF and insurance strategy. The Government program is aligned with Tunisia's international commitments under the Sendai

the disaster. Each disaster creates "urgent" new programs, they are often duplications, in the affected area (mostly financed ex-post and under social, media or political pressures).

²² When a disaster strikes, funding for response and recovery comes mainly from global allotment laid down in the Finance Act, special emergency treasury accounts, budget of respective ministries, and repurposing existing funds.

²³ Compensation is mainly directed to the ultra-vulnerable (as financial aids), SMEs (covering only direct losses) and the agricultural sector. In addition, physical injury is hardly / not covered by the various compensation schemes put in place by the Tunisian Government.

²⁴ World Bank. 2018. Performance and Learning review of the CPF for the Republic of Tunisia for FY16–21.

²⁵ World Bank. 2016. Country Partnership Framework for the Republic of Tunisia FY 16-21.

²⁶ Ibid.



Framework. The proposed operation will support key pillars of the Government program.

13. **The added-value of WB lending is substantial.** It will allow Tunisia to advance towards long-term and structural institutional reforms as well as targeted DRR and climate change adaptation (CCA) investments while benefiting from the WB's global experience and technical assistance. By improving the government's processes and systems for more effective DRM, the operation will also leverage additional DRR and CCA investments down the line.

14. **While the Government initially requested financing for DRM with a Catastrophe Deferred Drawdown Option (Cat DDO), a Program-for-Results (PforR) is the most suitable financing instrument.** The task team conducted a scenario-based instrument analysis of (i) a standalone Cat DDO, (ii) a hybrid operation with a Cat DDO and a PforR; and (iii) a standalone PforR. The first scenario (Cat DDO alone) would not allow for the financing of much-needed resilience investments and represent a missed opportunity of accompanying the Tunisian Government on medium- and long-term DRM/DRF reforms. The second scenario (Cat DDO and a PforR) would reward short-term policy actions, provide rapid liquidity and support both investments and a sustainable reform agenda, but the Cat DDO would not be aligned with the Government's DRF strategy currently under development. The third scenario (PforR alone) can support short-term, foundational policy measures as well as long-term institutional reforms, coupled with targeted investments. In addition, it aligns with the Government's objective to further advance on the development of its DRF strategy before choosing a contingent financing instrument like a Cat DDO. Based on this instrument analysis, the task team in consultation with the Tunisian Government is advancing with this third scenario while keeping an open dialogue on a potential Cat DDO at a later stage.

C. Program Development Objective(s) (PDO) and PDO Level Results Indicators

Program Development Objective(s)

15. To improve Tunisia's disaster risk management and financing, and enhance the protection of the targeted population and their assets from disaster and climate-related events.

PDO Level Results Indicators

16. The key anticipated PDO-level results indicators for the PforR operation are:

- Increase in the number of people living in flood risk-prone areas who are covered by flood prevention infrastructure;
- Number of children provided with access to hazard-resilient infrastructure under the Program;
- Number of people reached by hydrometeorological services and EWS under the Program, based on approved and adopted standard protocols;
- Increase in catastrophic risk insurance coverage of population and assets against floods and earthquakes, including the poor and vulnerable.

D. Program Description

PforR Program Boundary

17. **The proposed Program-for-Results (the "Program") will directly support the Government's ongoing DRM and DRF initiatives (the "Government program"),** many of which are currently being supported through WB technical assistance. The boundaries of the proposed Program are defined in terms of: (i) the Program duration, and (ii) the Program areas and activities supported. In terms of timeframe, the Program will directly support the Government program on DRM and DRF through 2021-2026. In line with Tunisia's initial risk profile, the Program is expected to primarily



address flood risk, while partially addressing seismic risk and potentially drought risk. In terms of areas and activities supported, the Program will support the following Result Areas:

18. **Result area 1: Scaling up Disaster Risk Reduction.** This Results Area (RA) will support the GoT in its efforts to avoid negative impacts of adverse events and reduce existing risks by: (i) investing in already identified small-scale flood risk protection projects and supporting the implementation of the National Flood Risk Management Plan; (ii) the implementation of the GPSS roadmap to improve school infrastructure resilience and mainstream DRM in the education sector; and iii) support to the GoT in taking the necessary steps for the establishment of a para-seismic building code.

Result 1.1: The number of people living in flood risk-prone areas who are covered by flood prevention infrastructure is increased.

19. The proposed operation will support already identified priority flood risk reduction investments at the local level, in collaboration with MEHAT and Local Governments (LGs). In addition, the Program will support the implementation of the National Flood Risk Management Plan. To that end, the Government is expected to first develop a national flood-risk map delineating hotspot areas; it will then rely on digital elevation models, coupled with hydrological and hydraulic modelling, to develop more detailed risk maps priority flood-prone areas. Second, it will establish a GIS-based national flood risk data sharing platform. Third, it will formally adopt the national plan. And finally, it will identify and finance the construction and/or retrofitting of small-scale flood protection investments that have been prioritized as part of the national plan.

Result 1.2: Key public-school infrastructure is built or retrofitted according to hazard resilient standards.

20. The Government will adopt and implement a national roadmap for safer schools, supported through the WB GPSS. The roadmap will include priority actions to improve the resilience of public school infrastructure to climate and disaster events. Tentative Disbursement Linked Indicators (DLIs) could include: the preparation and adoption of the roadmap, targeted disaster risk sensibilization campaigns, and/or the number of public schools in priority hazard-prone areas retrofitted or constructed according to improved construction standards.

Result 1.3: Paraseismic building code is established.

21. This result will contribute to the development of a paraseismic building code and to the promotion of earthquake resilient standards in the country. A refined seismic probabilistic risk model will be developed, and an analysis of current building standards and practices will be carried out with technical support from the WB. A paraseismic building code committee, comprising the public sector, private sector, engineering associations and research associations, will be constituted. Based on the detailed earthquake risk model and a review of earthquake building codes in countries in the region (Morocco, Algeria), the committee will prepare a technical proposal for a paraseismic building code in Tunisia. If the code is adopted, the proposed operation will also provide capacity building to support its effective implementation. Finally, the Government will conduct an assessment of earthquake resilience of critical infrastructure and select critical buildings will be retrofitted.

22. **Result area 2: Enhancing Disaster Preparedness and Early Warning Systems.** This RA will support the GoT in strengthening disaster preparedness through improvement of hydrometeorological services and EWS, as well as capacity-building for preparedness and response planning at national and sub-national levels.

Result 2.1: Number of people reached by Early Warning Systems.

23. This result will focus on the implementation of the national roadmap for the modernization of hydrometeorological services and EWS, which is being prepared under the World Bank TA program. It will contribute to further enhance the production of actionable early warning information and to effectively disseminate accurate and tailored warnings for preparedness and early response to end-users (main hydromet-dependent sectors, decentralized



authorities and people at risk). The activities under this subcomponent will be structured around three areas: (i) the production of actionable early warning products, the development of targeted services to main socio-economic sectors, and the promotion of ICTs for effective dissemination; (ii) the modernization of production and support systems, based on the needs assessment conducted under the TA (e.g. through investments in observation and telecommunication infrastructures; improved forecasting and modeling systems); and (iii) strengthening of institutional reform and coordination, introducing quality management systems (that could lead to ISO certification) and building the capacity of the main NMHS providers, namely INM, MinAgri, ONPC, MEHAT and MALE. Tentative DLIs include: an organizational reform of the INM and DGRE (Min Agri); adoption of SOPs for early warning (including alert communication and dissemination) (responsible: MinInt/ONPC, INM; increasing the user satisfaction of the *Carte de Vigilance*, *Vigicrues* and other warning products (INM/MinAgri); improving the lead time of alerts and warnings of hydrometeorological hazardous events (INM/MinAgri); optimization and standardization of networks between INM and MinAgri (national network); and an expansion of the observing network to include weather radars (INM).

Result 2.2: Sub-national and sectoral preparedness plans are endorsed and implemented.

24. It is proposed that preparedness and response plans are developed at the national-level in five priority sectors, and at the sub-national level in areas where the program makes risk prevention investments. The program will provide capacity building support to key sectors in the development of contingency and service continuity plans. Based on a first screening, potential sectors for support include: agriculture, tourism, education, transport, health and/or water and sanitation. The proposed operation will also support the development of sub-national preparedness and response plans in areas at risk and where the Program invests in flood protection and EWS.

25. **Result area 3: Strengthening Financial Protection.** This area will support the GoT in strengthening its financial protection capacity by defining, adopting and implementing a national DRF strategy combining sovereign financial instruments and fostering the development of private sector solutions. By leveraging domestic insurance markets to transfer risks away from most vulnerable businesses and populations, a more comprehensive financial response framework to address a predefined range of disaster events and losses will be possible. Both actions will rely on the development of data management systems to inform decision making.

Result 3.1: A sovereign DRF strategy is implemented.

26. This result will focus on three measures: (i) adoption of National DRF Strategy. The DRF strategy will use a CAT Nat database to identify and assess contingent liabilities related to climate and disaster shocks and evaluate the funding gap to be addressed. The strategy will articulate the GOT's priorities in the short and longer term, address explicit and implicit liabilities (including emergency response and reconstruction costs) and identify most adapted financing instruments required. (ii) definition of a roadmap for the role of Sovereign Insurance, in line with the national DRF strategy; (iii) restructuring of existing financing mechanisms (allocation of minimum reserves and improvement of risk management).

Result 3.2: Catastrophic insurance market is developed.

27. It is proposed that the catastrophic insurance market is developed to reduce the disaster related contingent liability shouldered by the GoT. This result will focus on four measures:

- i. Reform of the insurance code to enhance the private sector offering of catastrophic insurance products;
- ii. Development and maintenance of a CAT NAT database for Tunisia, based on best practices from international experience and catastrophe risk insurance markets. This activity will also pave the way for the use of Big Data and Artificial Intelligence which are increasingly being employed in risk understanding and in the Insurance sector. Crowdsourcing and having access to big data will enrich the database and add key details to maps helping better understanding of exposure and vulnerability of disaster areas by providing greater granularity. The granularity of data can lead to the fine-tuning of risk classification, a better-informed pricing of insurance products and a decrease of Cat Nat premiums for some consumers;



- iii. Creation of a national claims’ registry; and
- iv. Creation of a technical working group on financial modeling and post-disaster loss estimation, involving various stakeholders and experts (spanning insurance regulator, academia, research, insurance and reinsurance markets).

28. **Result Area 4 (cross-cutting): Harnessing institutional coordination, a sound regulatory environment and knowledge for risk management.** The Program will be supporting political and technical dialogue on the way forward to improve institutional coordination, the DRM regulatory environment and risk understanding/knowledge. An initial analysis on the institutional and legal framework for DRM, presenting potential scenarios for institutional strengthening, was supported by the WB and used as a basis for multi-institutional dialogue during FY20. The WB will continue to support long-term national efforts towards a comprehensive reform of the legal, institutional and knowledge-management framework for DRM. Tentative DLIs could include: the adoption of the national DRR strategy; the development of a new DRM Law; the adoption of a multi-year costed action plan for institutional/legal strengthening; the set-up of institutional mechanisms for coordination around DRM; and/or the adoption of risk information systems.

E. Initial Environmental and Social Screening

29. **The environmental and social systems review at concept stage does not identify activities to be supported or funded by the program that could cause significant harm to the Environment or which could have significant Environmental consequences with irreversible adverse impacts on the Environment.** The program will not fund any infrastructure that will have massive impact on the environment or require important resettling (for example dams), nor will it finance large scale works such as the construction of new structures. On the contrary it will fund activities such as drainage infrastructure, canalization, retention ponds, dikes, the upgrading schools or health centers after flooding events, that will reduce the adverse impacts of natural hazards, and in particular floods.

30. **The main Environmental Risks/impacts identified at this Concept stage are linked to Occupational Health and Safety and Community Health and Safety during construction and rehabilitation works of anti-flooding infrastructures or existing schools or health centers.** Other Risks/impacts are linked to pollution prevention and management of Hazardous and non-hazardous wastes of construction activities.

31. **An Environmental and Social System Assessment (ESSA) will be carried out before appraisal to** (i) describe and confirm all the E&S Risks and Impacts of activities to be supported by the program and screen out activities with irreversible adverse impacts; (ii) assess the National E&S framework to manage these Risks/Impacts and identify the Gaps if any; (iii) assess the capacity of the implementing agency to manage these Risks/impacts; (iii) propose key measures, if any, to be taken during implementation with inputs to the Program Action Plan. The ESSA will also assess potential land needs under the Program activities and propose appropriate mitigation measures. The ESSA will be consulted with key stakeholders and disclosed in the Borrower’s and WB’s websites before appraisal.

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