

TC ABSTRACT

I. Basic Project Data

▪ Country/Region:	EL SALVADOR/CID - Isthmus & DR
▪ TC Name:	Action plan to implement the Governance and Public Policy Index for Disaster Risk Management.
▪ TC Number:	ES-T1267
▪ Team Leader/Members:	HORI, TSUNEKI (CSD/RND) Team Leader; SUAREZ VAZQUEZ, GINES (RND/CES) Alternate Team Leader; and CHAVEZ, ELIZABETH (CSD/RND)
▪ Taxonomy:	Client Support
▪ Date of TC Abstract:	31 Oct 2017
▪ Beneficiary:	National Government of El Salvador
▪ Executing Agency:	INTER-AMERICAN DEVELOPMENT BANK
▪ IDB funding requested:	US\$700,000.00
▪ Local counterpart funding:	US\$100,000.00
▪ Disbursement period:	24 months
▪ Types of consultants:	Firms and Individuals
▪ Prepared by Unit:	Rural Dev & Natural Disasters
▪ Unit of Disbursement Responsibility:	COUNTRY OFFICE EL SALVADOR
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Institutional capacity and rule of law

II. Objective and Justification

- 2.1 The objective of the TC is to provide technical support to the national government of El Salvador for updating the national building regulations and developing a national action plan for reducing seismic vulnerability. The expected outcome of this TC is to ensure that the structural integrity of the built environment and public safety is improved for future mass seismic events.
- 2.2 The country's vulnerability to seismic events is significant. From 1980 to 2017, the country has experienced seven major earthquakes resulting in more than 2,300 casualties and affecting 240,000 citizens. Of these, the January 2001 earthquake was the most significant. This event resulted in the mortality of 944 persons, 5,565 injured with 28,000 residences and 150,000 public buildings damaged (El Salvador Civil Protection, 2001).
- 2.3 On May 12, 2017, El Salvador experienced a strong M6.2 earthquake with the epicenter located far offshore (or 236 km from San Salvador). Although no major damage was reported public stakeholders, scientists and media have all expressed significant concern over the country's inherent vulnerability and exposure to high seismic risk. This includes annual average infrastructure damages due to earthquakes is high and equivalent to 60% of the annual average public investment budget (UN-ISDR, 2015) .
- 2.4 A recent study undertaken by the Bank indicates that one of the main reasons for high seismic risk is due to the obsolete design of the building regulations. Technical Standards for Earthquake Design in El Salvador (a complementary standard of the national building regulations) have not been updated since 1994. The government of El Salvador made some efforts to improve earthquake resistant construction design via donor supported interventions (e.g. JICA TAISHIN Projects I and II during 2003-2008 and 2009 – 2013). However, these engineering projects have not translated into

any revision of national building regulations or national seismic risk reduction action plans, largely due to the lack of scientific information such as seismic micro-zonation studies. Seismic micro-zonation studies (or surveys for the characterization of geological and geophysical conditions) are an important input to estimate the earthquake hazard intensity at local scales. El Salvador lacks a standard methodology for the conduct of seismic micro-zonation studies and minimal to no experience in implementing these studies.

- 2.5 The national government of El Salvador has requested technical assistance from the Bank to strengthen the country's technical capacity to (i) execute seismic micro-zonation studies; (ii) incorporate the result of micro-zonation studies in national building standards, and (iii) develop a national action plan for reducing seismic vulnerability.

III. Description of Activities and Outputs

- 3.1 This TC includes two components: (1) Seismic micro-zonation and (2) Updating building regulations and developing an action plan for seismic vulnerability reduction.
- 3.2 **Component I: Seismic micro-zonation.** This component will develop seismic micro-zonation studies. Activities will include: (i) developing a national standard methodology or protocol for executing seismic micro-zonation studies and its training manuals/toolkits; (ii) implementing pilot seismic micro-zonation studies in two or three areas and analyzing geological and geophysical conditions in each area as an input for updating the national construction standards. A firm consultant and individual consultants will be hired.
- 3.3 **Component II: Updating building regulations and developing an action plan for seismic vulnerability reduction.** This component will: (i) elaborate recommendations for updating the national building regulations; (ii) conduct a sector dialogue between the Bank and the government of El Salvador to officially transfer the recommendations so that the government will be in a position to update the regulations; (iii) develop a national action plan for seismic vulnerability reduction; and (iv) conduct a national technical workshop to disseminate the result of this TC.

IV. Budget

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Seismic micro-zonation	\$ 510,000.00	\$ 70,000.00	\$ 580,000.00
Updating building regulations and developing an action plan for seismic vulnerability reduction	\$ 190,000.00	\$ 30,000.00	\$ 220,000.00

V. Executing Agency and Execution Structure

- 5.1 Given the high technology of this TC and the experience that the country doesn't own, the Executing Agency for this technical cooperation will be the Bank through CSD/RND. All administrative, technical supervision, necessary internal and external coordination, responsibility for the delivery and quality of the final products will be the responsibility of CSD/RND. In this context, the Bank will hire the services of individual consultants, consulting firms and various expert consulting institutions in accordance with the policies and procedures in the Bank.
- 5.2 The Ministry of Environment and Natural Resources (MARN) through its *Dirección General del Observatorio Ambiental* will be principal counterpart for this TC. The Bank will coordinate with MARN, through daily communications from the Bank Office in El

Salvador, to ensure appropriate collaboration while implementing this TC. The Ministry of Public Works (MOP), the Central America University (UCA), and the University of El Salvador (UES) will be participate in this TC as counterparts. The MOP will lead the validation and technical review of the products especially the Technical Standards for Earthquake Design in El Salvador. The UCA will be responsible for conducting laboratory tests related to the Micro-zoning studies. of soil dynamics and testing in the large structures laboratory. MARN, MOP, UCA and UES will sign the MoU for the implementation of this TC.

VI. Project Risks and Issues

- 6.1 The coordination among IDB, MARN and other counterpart entities may present coordination problem during the execution of this TC. This is one of the reasons of why the government requested the Bank as the Executing Agency. Periodic meetings and frequent dialogues among the Bank and counterpart entities Will reduce this risk.

VII. Environmental and Social Classification

- 7.1 The ESG classification for this operation has not yet been defined.