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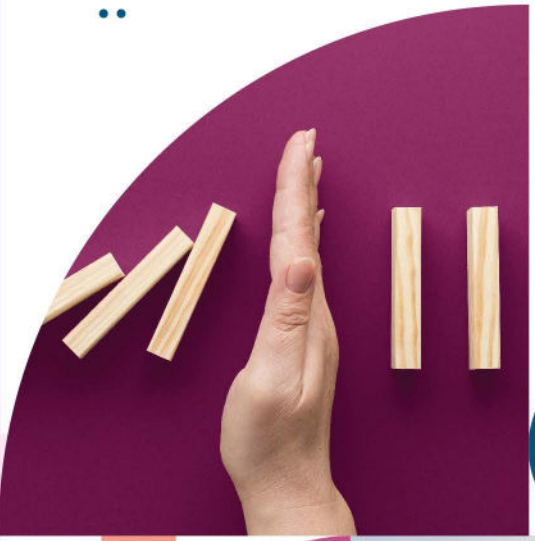
DEVELOPMENT COOPERATION IN THE INDO-PACIFIC

COUNTRY REPORT: PHILIPPINES



BRIEF
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About India-U.S. Triangular Development Partnership (TriDeP)

The Asia Foundation is a non-profit international development organization committed to improving lives across a dynamic and developing Asia. With support from USAID/India, the Foundation is implementing the India-U.S. Triangular Development Partnership (TriDeP) in support of U.S. and India's mutual aims in the Indo-Pacific and beyond. TriDeP will establish partnerships with government, civil society, business corporations, think tanks, and academic institutions to advance India's development cooperation footprint in three sectors: Disaster Risk Reduction (DRR), Climate Smart Agriculture (CSA), and Renewable Energy (RE). TriDeP seeks to identify countries in the Indo-Pacific region, beyond the immediate neighborhood of India, where there is a potential demand for partnership with India, and to prioritize its activities based on such identification. TriDeP believes that such identification needs also to be informed by the other development cooperation initiatives in the Indo-Pacific to enable synergies among development cooperation partners as well as complementarities to maximize resource utilization. This will enable TriDeP to focus on sectors and countries where gaps need to be filled, avoiding duplication of effort already underway or planned through other initiatives.

To develop an effective and efficient roadmap for such development cooperation in this context, the Foundation has engaged the Bureau of Research on Industry and Economic Fundamentals (BRIEF) to undertake a mapping exercise of the complementarity of Indian development cooperation with other similar initiatives in selected countries in the Indo-Pacific.

Disclaimer

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the 'India-U.S. Triangular Development Partnership (TriDeP)' program at The Asia Foundation. The opinions expressed here are solely of the authors and do not necessarily reflect the views of USAID or the United States Government, and The Asia Foundation.

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CONTENTS

List of abbreviations and acronyms

- ACPC- Agriculture Credit Policy Council
- ADB- Asian Development Bank
- AgriHub- Agri Innovation Hub
- BPRP- Bicol Power Restoration Project
- CCA- Climate Change Adaptation
- CCC- Philippines's Climate Change Commission
- CDP- Comprehensive Development Plan
- CDRI- Coalition for Disaster Resilient Infrastructure
- CEA- Central Electricity Authority
- CEEW- Council on Energy, Environment and Water
- CLUP- Comprehensive Land Use Plans
- CSA- Climate Smart Agriculture
- CSIR- Council of Scientific and Industrial Research Labs
- CSTEP- Centre for Study of Science, Technology and Policy
- DA- Department of Agriculture
- DAC- Development Assistance Committee
- DANR- Department of Agriculture and Natural Resources
- DAR- Department of Agricultural Reforms
- DENR- Philippine Department of Environment and Natural Resources
- DFAT - Department of Foreign Affairs and Trade
- DoF- Department of Finance
- DOST- Department of Science and Technology
- DRCSC- Development Research Communication and Service Centre
- DRM- Disaster Risk Management
- DRR- Disaster Risk Reduction
- DSWD- Department of Social Welfare and Development, Philippines
- EESL- Energy Efficiency Services Limited
- FOIP- Free and Open Indo-Pacific
- FSI- Forest Survey of India
- GDP-Gross Domestic Product
- GEF- Global Environment Facility
- GHG- Greenhouse Gas
- GSIS- Government Service Insurance System
- ICAR- Indian Council for Agricultural Research
- ICCR- Indian Council for Cultural Relations
- ICRISAT- International Crops Research Institute for the Semi-Arid Tropics
- ICWA- Indian Council of World Affairs
- IDA- International Development Association
- IDP- Internally Displaced Persons
- IISc- Indian Institute of Science
- IIT- Indian Institute of Technology
- IMD- Indian Meteorological Department
- INCOIS- Indian National Centre for Oceanic Information Systems
- IREDA- Indian Renewable Energy Development Agency Limited
- ISRO- Indian Space Research Organisation
- ITEC- Indian Technical and Economic Cooperation
- JBIC- Japan Bank for International Cooperation
- LBSNAA- Lal Bahadur Shastri National Academy of Administration
- M&E- Monitoring and Evaluation
- MANAGE- National Institute of Agricultural Extension Management
- MGB- Mines and Geoscience Bureau
- MNRE- Ministry of New and Renewable Energy
- MoU- Memorandum of Understanding
- MRD- Ministry of Rural Development
- MSME- Ministry of Micro, Small and Medium Enterprises
- MW- MegaWatt
- NCMRWF- The National Centre for Medium Range Weather Forecasting
- NDRF- National Disaster Response Force
- NDRRMC- National Disaster Risk Reduction and Management Council
- NEA- National Electrification Agency
- NEDA- National Economic and Development Authority
- NGO- Non-Governmental Organisations
- NICRA- National Innovation in Climate

Resilient Agriculture

- NIDM- National Institute of Disaster Management
- NIRD&PR- National Institute of Rural Development & Panchayati Raj
- NISE- National institute of Solar Energy
- NIT- National Institute of Technology
- NIWE- National Institute of Wind Energy
- NPC- National Power Corporation
- NRSC- National Remote Sensing Centre
- New and Renewable Energy
- NSDC- National Skill Development Corporation
- ODA- Official Development Assistance
- PAGASA- The Philippines Atmospheric, Geophysical and Astronomical Services Administration
- PCIC- The Philippines Crop Insurance Corporation
- PhilRice- Philippines Rice Research Institute
- PHIVOLCS- Philippines Institute of Volcanology and Seismology
- PIRA- Philippines Insurance and Reinsurance Association
- PNRELSP- Palawan New and Renewable Energy and Livelihood Support Project
- POSOCO- Power System Operation Corporation
- QIP- Quick Impact Project
- RE- Renewable Energy
- RMB- Renminbi
- ROI- Return on Investment
- SAARC- South Asian Association for Regional Cooperation
- SCGJ- Skill Council for Green Jobs
- SDGs- Sustainable Development Goals
- SDMC- SAARC Disaster Management Centre
- SHODH- Scheme of Developing High quality Research
- SPS- Sector Program Support
- SSS-NIBE- Sardar Swaran Singh National Institute of Bio-Energy
- TA- Technical Assistance
- TERI- The Energy and Resources Institute
- TSRD- Tagore Society for Rural Development
- U.S.- United States
- USAID- United States Agency for International Development
- U.S.D. - United States Dollar
- UNDP- United Nations Development Program

Scope and Methodology

This report assesses the current status of development cooperation for the Philippines in the identified sectors of Disaster Risk Reduction (DRR), Climate Smart Agriculture (CSA) and Renewable Energy (RE), and sets a background for India for an effective and efficient roadmap for development cooperation through relevant case studies and demand-supply mapping.

Objective

The report identifies the current development partners (multilateral development banks/ countries) in the identified sectors and maps their activities. It further elaborates the recipient organizations and institutions that are involved in receiving and managing aid, along with an assessment of outcome and sustainability of donor interventions in these sectors. Further, the report identifies the gaps and new initiatives where India can participate and engage through bilateral, multilateral or triangular cooperation. It also assesses the potential expertise of India in each of the identified sectors, and charts a way forward entailing adoption of best practices and mitigation of potential challenges based on learnings from past/existing projects in the identified domains. The report intends to discuss and recommend partner countries' preferred cooperation modalities as well as identify innovative financing models that India can incorporate in its development cooperation initiatives.

Methodology

The report adopts a mixed methods design involving the assessment of relevant qualitative and quantitative information gathered from primary and secondary sources. As a part of the exercise, extensive one-on-one stakeholder interactions with academic experts, relevant representatives of multilateral development banks and donor countries, former bureaucrats and others were undertaken. Apart from multi-stakeholder engagements, the preparation of the report also involved comprehensive secondary research, including reviewing relevant reports, documents, and datasets available in the secondary domain. Further, thorough assessment of multiple implementation reports, status reports, M&E reports published by various stakeholders/donors during or post completion of relevant projects were also conducted to gather key insights into various focus areas identified for the study.

Structure

The report has been structured in a way to systematically capture the major elements regarding development cooperation in the Philippines, principal donors, key modalities, limitations, best practices as well as the potential role of India in the identified sectors among others. The overall report has been divided into five chapters, which entail the following:

Chapter 1 prepares a background and provides a glimpse of the economic environment in the Philippines to define the context. It further focuses on the local systemic framework within the country for receiving and managing development cooperation.

Chapter 2 tries to analyze the current status of development cooperation in the identified sectors i.e. DRR, CSA and RE.

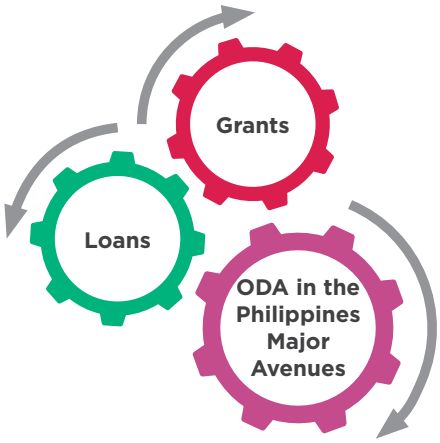
Chapter 3 identifies the cooperation modalities and tries to explain the intent and objectives of existing donors providing aid assistance to the Philippines.

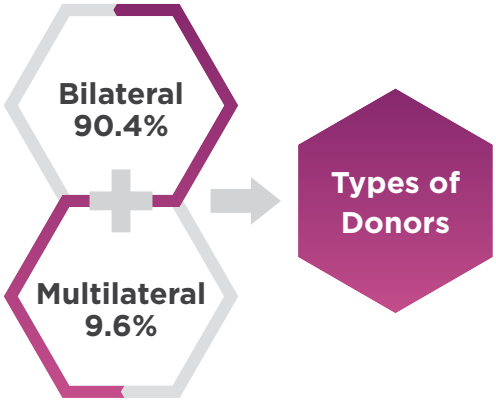
Chapter 4 includes a comprehensive analysis of the best practices and challenges for one project identified in each of the selected sectors i.e. DRR, CSA and RE. The chapter further deep dives into the sustainability measures undertaken by the respective donors for each project.

Chapter 5 discusses the scope of India's involvement as a donor, which has been assessed through detailed demand-supply mapping for the Philippines and India respectively, further identifying the relevant stakeholders for cooperation. The chapter further elaborates the innovative financing models that India can incorporate while engaging in development cooperation with the Philippines.

1 Overview of Aid and Development Cooperation to the Philippines

Figure 1- Snapshot: Official Development Assistance (ODA) to the Philippines





Top Sectors

- Bilateral aid – Infrastructure, health and population, production, education, program assistance, and humanitarian aid

Top Donors – Category-wise

- Bilateral – Japan, U.S., Australia, Germany,
- Multilateral – International Development Association (IDA) and the Asian Development Bank (ADB)

Top Donors – Intervention-wise

- Grant aid – Japan, Australia and U.S.
- Technical Cooperation – Japan, Germany and Australia

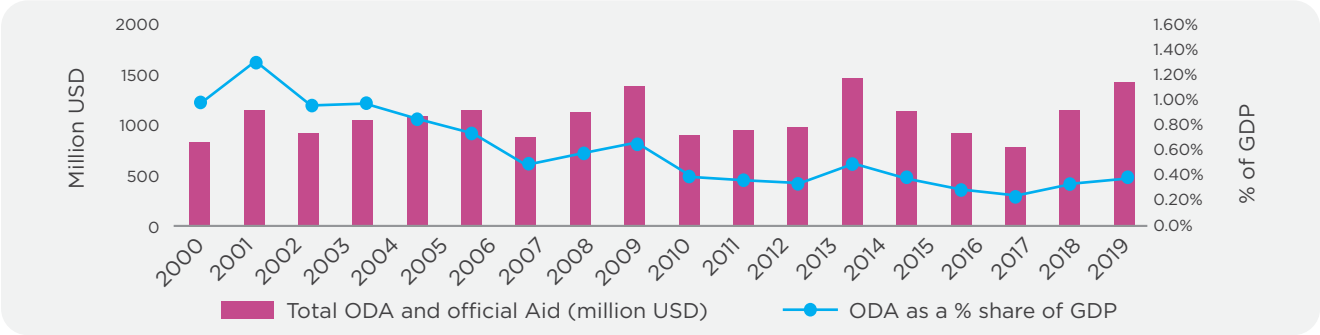
Initial Rise in ODAs: USD 879.2 Mn (2002) to USD 1511 Mn (2019)

Decline in Share of GDP: 1.04% (2002) to 0.40% (2019)

Rise in Grants: 32% of total in 2002 to 38% in 2019

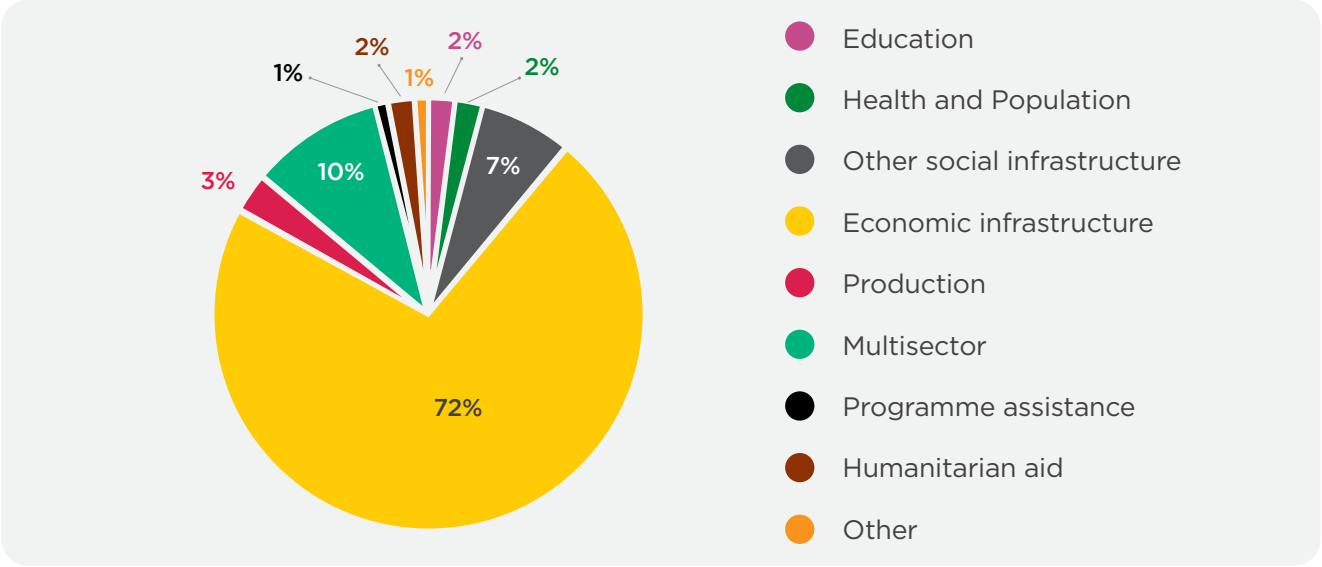
Decline in Loans in ODA: 68% of total in 2002 to 61% in 2019

Figure 2 - Total ODA and Official Aid in Philippines and share of GDP



Source: QWIDS - Query Wizard for International Development Statistics (oecd.org)

Figure 3 - Bilateral ODA by Sector for the Philippines, 2018-19 Average



Source: Workbook: OECD DAC aid at a glance by recipient

Figure 4– Focus Areas: Nature of Issues and Investments so far

Disaster Risk Reduction

- **Key Issues –** Reoccurrence of natural disasters like floods, cyclones, and typhoons. Lack of coordination among government agencies in information management and disaster risk assessment, limited funding for disaster recovery
- **Principal Donors –** ADB, World Bank (IDA), United Nations Development Program (UNDP), Department of Foreign Affairs and Trade (DFAT) , Japan
- **Broad Areas of Intervention –** Infrastructure financing, risk identification, disaster risk finance, community-based disaster risk management, priority project identification, restoration projects, and resilience.

Climate Smart Agriculture

- **Key Issues –** Temperature extremes are becoming more frequent, precipitation has increased steadily during the past six decades, limited capacity to adapt to climate change, inaccurate prediction of climate variability, limited support from the private sector, academia, and financial institutions towards CSA initiatives, lack of training interventions, lack of institutional capacity building and coordination for effective developmental measures
- **Principal Donors –** World Bank (IDA), UNDP, Climate Investments funds, Global Environment Fund Trustees
- **Broad Areas of Intervention –** Capacity enhancement for climate change, community based intervention

Renewable Energy

- **Key Issues –** Net importer of fossil fuels, high upfront and technological cost, non-competitiveness, non-viable markets untapped potential for renewable energy generation, lack of regulatory environment, Limited technical and human resources
- **Principal Donors –** Japan (Japan Bank for International Cooperation), Asian Clean Energy Fund, United States Trade and Development Agency (USTDA), Global Environment facility
- **Broad Areas of Intervention –** Renewable energy development (geothermal, wind), low carbon transport, reducing GHG emission

Source: Disaster Risk Reduction in the Philippines. Status Report. 2019. UNDRR. & BRIEF Research

1.1. Disaster Risk Reduction

Table 1 - Philippines: Aid Assistance in Disaster Risk Reduction

Donor	Area	Project	Description
UNDP and DFAT	Institutional Capacity Building	Project Climate Twin Phoenix - Resilience and Preparedness toward Inclusive Development[1]	◈ **Implementing Agency:** Local Government Units in the Philippines ◈ **Closing Year/Status:** 2019 ◈ **Modality:** Grant ◈ **Budget:** USD 9.3 million ◈ The project addressed the institutional capacity and individual competency gaps on climate/ disaster risk management of key players in priority cities and municipalities.

1. UNDP Document. https://erc.undp.org/evaluation/evaluations/detail/12374

Donor	Area	Project	Description
Japan	Project Preparation	Preparation of a program towards sustainable flood management in the Greater Metro Manila Area Project[2]	◈ **Implementing Agency:** Department of Public Works and Highways ◈ **Closing Year/ Status:** 2017 ◈ **Modality:** Loan ◈ **Budget:** USD 2.73 million ◈ The objective was to prepare priority projects, identified by the flood management master plan, that aimed to improve flood management and resilience in and around Metro Manila.
The World Bank	Capacity Building	Earthquake Reconstruction Project[3]	◈ **Implementing Agencies:** National Reconstruction Authority, National Disaster Risk Reduction and Management Authority ◈ **Closing Year/Status:** Active ◈ **Modality:** Loan ◈ **Budget:** USD 500 million ◈ The proposed project will finance reconstruction activities over a three- and one-half year period, including: (a) reconstruction investments in key infrastructure (b) financing of critical construction materials and commodities for the reconstruction effort; and (c) technical assistance.
The World Bank	Capacity Building	Bicol Power Restoration Project[4]	◈ **Implementing Agency:** Unspecified ◈ **Closing Year/Status:** 2008 ◈ **Modality:** Loan ◈ **Budget:** USD 21.6 million ◈ This project provided a loan to the National Power Corporation (NPC) for the Bicol Power Restoration Project (BPRP). The project's objective was to support the stabilization of power supply in the Bicol region by replacing or repairing critical electricity transmission infrastructure damaged by typhoons in 2006.
Asian Development Bank	Technical Assistance	Philippines: Integrated Flood Risk Management Sector Project[5]	◈ **Implementing Agency:** Department of Public Work and Highways ◈ **Closing Year/Status:** Active ◈ **Modality:** Technical Assistance ◈ **Budget:** USD 1.3 million ◈ The Integrated Flood Risk Management Sector Project (the project) will assist the government of the Republic of Philippines (the government) to reduce flood risks in six river basins.

2. World Bank Document. https://documents1.worldbank.org/curated/en/361341481919556799/pdf/1481919555493-0000A8056-ISR-Disclosable-P145237-12-16-2016-1481919547680.pdf
3. World Bank Document. https://projects.worldbank.org/en/projects-operations/project-detail/P155969
4. World bank Document. https://projects.worldbank.org/en/projects-operations/project-detail/P106262
5. ADB Document. https://www.adb.org/projects/51294-002/main

Donor	Area	Project	Description
Asian Development Bank	Capacity Building	Philippines: Disaster Reduction Improvement Program[6]	◈ **Implementing Agency:** Department of Finance, Philippines ◈ **Closing Year/Status:** Active ◈ **Modality:** Loan ◈ **Budget:** USD 500 million ◈ The proposed program will provide the government with rapid access to resources to initiate disaster response and early recovery efforts and/or to address the health and economic impacts of health-related emergencies with minimal delay.

1.2. Climate Smart Agriculture

Table 2 - Philippines: Aid Assistance in Climate Smart Agriculture

Donor	Area	Project	Description
Global Environment Facility (GEF)	Capacity Building	Philippines: Climate Change Adoption Project[7]	◈ **Implementing Agencies:** Climate Change Commission, National Irrigation Administration, Agricultural Training Institute, Bureau of Soils and Water Management, Philippine Crop Insurance Corporation, and the Department of Environment and Natural Resources, Philippine Atmospheric, Geophysical and Astronomical Services Administration, Department of Environment and Natural Resources. ◈ **Closing Year/Status:** 2016 ◈ **Modality:** Grant ◈ **Budget:** USD 4.974 million ◈ The project development objective was to develop approaches that would enable targeted communities to adapt to the potential impacts of climate variability and change.

6. ADB Document. https://www.adb.org/projects/54022-001/main
7. Philippines Climate Change Adaptation Project. https://faspselib.denr.gov.ph/sites/default/files//Publication%20Files/PhilCCAP%20PCR2017.pdf

Donor	Area	Project	Description
Climate Investment Funds	Technical Assistance	Philippines Program for Climate Resilience: TA for the Risk Resiliency and Sustainability Program[8]	◈ **Implementing Agency:** Department of Environment and Natural Resources ◈ **Closing Year/Status:** 2019 ◈ **Modality:** Technical Assistance ◈ **Budget:** USD 0.15 million ◈ The objectives of the project was to increase the capacity of the recipient to prepare its risk resilience and sustainability program and enhance readiness for initiating its implementation.
The World Bank	Capacity Building	Mindanao Inclusive Agriculture Development Project[9]	◈ **Implementing Agency:** Department of Agriculture ◈ **Closing Year/Status:** Unspecified ◈ **Modality:** Unspecified ◈ **Budget:** USD 100 million ◈ To sustainably increase agricultural productivity, resiliency and access to markets and services of organized farmer and fisherfolk groups in selected ancestral domains and for selected value chains in Mindanao.
The World Bank	Capacity Building	Medium Scale Irrigation Project[10]	◈ **Implementing Agency:** Unspecified ◈ **Closing Year/Status:** 1990 ◈ **Modality:** Unspecified ◈ **Budget:** USD 71 million ◈ The project aimed to increase yields and cropping intensities on the islands of Mindoro and Palawan on about 37,800 ha which are currently rainfed or have only limited irrigation.

8. World Bank Document. https://projects.worldbank.org/en/projects-operations/project-detail/P157325
9. World Bank Document. https://projects.worldbank.org/en/projects-operations/project-detail/P173866
10. World Bank Document. https://projects.worldbank.org/en/projects-operations/project-detail/P004474

1.3. Renewable Energy

Table 3 - Philippines: Aid Assistance in Renewable Energy

Donor	Area	Project	Description
Global Environment Fund, Shell (Private sector), UNDP TRAC	Capacity Building	Palawan New and Renewable Energy and Livelihood Support Project[11]	◈ **Implementing Agencies:** CRREE (NGO), UNDP ◈ **Closing Year/Status:** 2003 ◈ **Modality:** Unspecified ◈ **Budget:** USD 1.55 million ◈ The project was aimed to reduce the long-term growth of GHG emissions through removing barriers to commercial utilization of renewable energy systems to substitute for the use of diesel generators in Palawan.
Global Environment Facility	Capacity Building	Low Carbon Urban Transport System in The Philippines.[12]	◈ **Implementing Agency:** UNDP ◈ **Closing Year/Status:** 2018 ◈ **Modality:** Unspecified ◈ **Budget:** USD 18.479 million ◈ The project aimed to support the necessary conditions to help development of low carbon urban transport system.
Japan Bank for International Cooperation (JBIC)	Capacity Building	20 MW Palinpinon II Geothermal Optimization Project[13]	◈ **Implementing Agency:** Unspecified ◈ **Closing Year/Status:** 2012 ◈ **Modality:** Unspecified ◈ **Budget:** USD 25 million ◈ The objective of the Nasulo Geothermal Power Project for Philippines is to help mitigate global climate change by facilitating the use of market-based mechanisms sanctioned under the Kyoto protocol through support to clean energy projects in the Philippines.

11. Palawan New and Renewable Energy and Livelihood Support Project. https://docplayer.net/9807605-Case-study-philippines-palawan-new-and-renewable-energy-and-livelihood-support-project.html
12. GEF Document. https://www.thegef.org/projects-operations/projects/5717
13. World Bank Document. https://projects.worldbank.org/en/projects-operations/project-detail/P089576

Donor	Area	Project	Description
The World Bank, Italy and USTDA	Capacity Building	Bacon Manito Geothermal Development Project[14]	◈ **Implementing Agency:** Unspecified ◈ **Closing Year/Status:** 1995 ◈ **Modality:** Loan ◈ **Budget:** USD 100 million ◈ The Bacon Manito Geothermal Power Project constituted an integrated approach to resource development, power generation and transmission
Asian Clean Energy Fund	Technical Assistance	Philippines: Rural Community-Based Renewable Energy Development in Mindanao[15]	◈ **Implementing Agency:** National Electrification Agency (NEA) ◈ **Closing Year/Status:** 2015 ◈ **Modality:** Technical Assistance ◈ **Budget:** USD 2 million ◈ The objective of the technical assistance was to develop a business model for rural community based renewable energy in Mindanao.
Asian Development Bank	Capacity Building	Philippines: 150-Megawatt Burgos Wind Farm Project[16]	◈ **Recipient:** EDC Burgos Wind Power Corporation, Energy Development Corporation ◈ **Closing Year/Status:** Active ◈ **Modality:** Loan ◈ **Budget:** USD 20 million ◈ The project involves the construction and operation of a 150 MW wind farm project in the province of Ilocos Norte, in the municipality of Burgos.

14. World Bank Document. https://projects.worldbank.org/en/projects-operations/project-detail/P004555
15. ADB Document. https://www.adb.org/sites/default/files/project-document/184475/44132-012-tcr.pdf
16. ADB Document. https://www.adb.org/projects/48325-001/main

2 Cooperation Modalities of Donor Interventions and Donor Intent

Aid assistance, ever since the inception of development practices, is given based on three major factors: (i) Humanitarian grounds, (ii) Political consideration, and (iii) Economic interest.[17]

Table 4 - Donor Intent Examples

Intent Category	Description	Examples	Projects
Development	Promotes long-term economic development and welfare within the recipient country. Can include tied aid, and projects where the donor is both the funder and the implementer.	1. Humanitarian assistance and emergency management 2. Capacity building within the recipient country to sustain social programs 3. Institution building of recipient government through elections, training, or official government buildings	◈ Earthquake Reconstruction Project (**Primary Donor** - The World Bank) ◈ Mindanao Inclusive Agriculture Development Project (**Primary Donor** - The World Bank) ◈ Bacon Manito Geothermal Development Project (**Primary Donor** - The World Bank, Italy and USTDA)
Altruistic	Seeks sustained development with long-term interventions	1. Altruistic aid is the one that seeks to enhance economic development 2. Offered with the pure objective of improving the quality of life. Altruistic aid is usually offered on soft-terms and on long-term basis	◈ Project Climate Twin Phoenix - Resilience and Preparedness toward Inclusive Development (**Primary Donor** - UNDP and AUSAID) ◈ Bicol Power Restoration Project (**Primary Donor** - The World Bank) ◈ Philippines: Disaster Reduction Improvement Program (**Primary Donor** - Asian Development Bank)

Other Categories of Intent: *Commercial, Representational, Security-military, Prestige, and Mixed.*

India can be categorized primarily under the 'Representational' category[18]. Overall, the Philippines has been a large recipient of India's development cooperation initiatives for cultural exchanges through training programs and capacity building.

17. Strange, Austin. Mengfan Cheng. Brooke Russell. Siddhartha Ghose and Bradley Parks. 2017.
18. Based on stakeholder discussions

Table 5 - India's Role in the Philippines

Humanitarian Aid
◈ Government of India sent an Indian Air Force flight with relief material for the victims of super typhoon Haiyan, which struck the Philippines in November 2013.[19]
◈ Following the tragic loss of life, livelihood and property as a result of typhoon Pablo/Bopha, which struck southern Philippines in December 2012, the Government of India provided disaster relief assistance of USD 200,000 to the Philippines Government and USD 100,000 as disaster relief assistance following the October 2013 earthquake in Bohol.[20]
◈ India announced an immediate relief assistance of USD 500,000 in July 2017 for the relief and rehabilitation efforts underway in the city of Marawi which had come under siege on May 23, 2017 after armed terrorists belonging to the Maute group owing allegiance to ISIS took over the city.[21]
Indian Technical and Economic Cooperation (ITEC) Programme
◈ During 2018-19, Philippines utilized as many as 90 civilian training slots under ITEC and Colombo Plan. Similarly, about 35 slots are allotted for defence personnel out of which the majority were utilized.[22]
◈ More than a thousand Filipinos till date have benefited from training and exposure to ITEC programs covering a wide range of technical courses such as rural development, agriculture, renewable energy, small-scale industries, banking, finance and management, quality control and marketing, planning and public administration, textiles, parliamentary studies and legislative practices, computer software, water resources management, and defence.[23]
Memorandum of Understanding (MoU)
◈ India and the Philippines signed 5 MoUs in 2018 i.e. MoU on Defence Industry and Logistics Cooperation, MoU between Indian Council of World Affairs (ICWA) and FSI, MoU on Cooperation on Agriculture, MoU on MSME and MoU between ICCR and University of Philippines for setting up a Chair of India studies.[24]
Grants and Other Financial Assistance
◈ In 2018, Mahaveer Philippines Foundation Inc (MPFI), an NGO dealing with artificial prosthetics (Jaipur foot) was granted USD 200,000 for upgradation of its equipment as well as free distribution to 250 Filipino beneficiaries.

19. Ministry of External Affairs. Bilateral Brief India-Philippines. 2019. http://www.mea.gov.in/Portal/ForeignRelation/Bilateral_Brief_India-Philippines_2019.pdf
20. Ibid.
21. Ibid.
22. Ministry of External Affairs. Bilateral Brief India-Philippines. 2019. http://www.mea.gov.in/Portal/ForeignRelation/Bilateral_Brief_India-Philippines_2019.pdf
23. Ibid.
24. Ibid.

2.1. Chinese Interventions in the Philippines

Figure 5 - China as a donor in the Philippines

China as a donor in the Philippines

1. Two projects under the government's 'Build Build Build' program have obtained funding from China: the Chico River Dam irrigation project and the Kaliwa Dam project.
2. China's intent is based on geopolitical and power bases. It has recently opposed a Philippines-led push for a review of its 70-year-old defense treaty with the United States.
3. China provided relief assistance to the Philippines after typhoon Haiyan in 2013.[25]
4. China has provided training to the Philippines officials on infrastructure projects to build their capacity for effective implementation of its Build Build Build Program.[26]
5. To speed up the customs clearance process for goods and combat smuggling, China has donated container inspection equipment to the Philippines.[27]
6. China has also invested in the planning and investment of urban infrastructure in the Philippines such as urban roads to ease traffic flow.[28]

Table 6 - A glimpse of China's Development Cooperation in the Philippines

Project	Sector	Description
Chinese Government provides RMB 20 million grant for Marawi City Restoration Project	Emergency Response	◈ **Span:** 2017 ◈ **Budget:** USD 3 million ◈ **Modality:** Grant ◈ **Implementing Agency:** Unspecified ◈ In 2017, the Chinese government donated 20 million RMB, or USD 3 million, worth of heavy machinery to the Philippines for the rehabilitation of Marawi City. The 47 pieces of heavy equipment donated include eight excavators, eight-wheel loaders, five compactors, five track-type tractors, five bulldozers, eight dump trucks, and eight cement mixers. The Philippine government said that the heavy equipment will be used for the construction of shelters for internally displaced persons (IDPs) of Marawi. On October 24, 2017, the handover ceremony of the equipment was held at the Philippine Department of Public Works and Highways (DPWH) headquarters.

25. China White Paper. 2021. http://english.www.gov.cn/archive/whitepaper/202101/10/content_WS5ffa6bbbc6d0f72576943922.html
26. Ibid.
27. Ibid.
28. Ibid.

Project	Sector	Description
China donated RMB 1M to Philippines for avian flu response and prevention activities in 2017	Emergency Response	◈ **Span:** 2017 ◈ **Budget:** RMB 1milion ◈ **Modality:** Grant ◈ **Implementing Agency:** Government of Philippines ◈ In 2017, the Chinese Embassy in the Philippines' Pampanga Province donated RMB 1 million, or 7.7 million pesos, in relief checks to the Pampanga Province Government's anti-avian influenza campaign. Pampanga Gov. Lilia Pineda said the money would be used to buy a mobile laboratory for testing avian influenza strains, as well as improving regulatory and monitoring capacities. This donation was an emergency response to the avian influenza outbreak that had severely impacted the Philippines in August 2017.
China signs MoU to provide 3000 units of solar-powered street light and home solar power systems	Energy	◈ **Span:** In pipeline ◈ **Budget:** Unspecified ◈ **Modality:** Grant ◈ **Implementing Agency:** Government of Philippines ◈ In 2017, the Philippine Environment Secretary signed a Memorandum of Understanding (MoU) with the National Development and Reform Commission of China. The MoU is for a grant to provide 3,000 solar-powered street lights and home solar power systems in the provinces of Antique and Palawan. The MoU specifies that the Philippine Department of Environment and Natural Resources (DENR) will 'oversee the delivery of 2,117 units of solar-powered street lights and 769 units of household solar power systems to the beneficiaries. Of the 2,117 units of street lights, 1,562 will be distributed to Antique, while 555 units will be distributed to El Nido.'

Chinese Government grants PHP 35 million to anti-disaster efforts in the Philippines after Typhoon Lawin in 2016	Emergency Response	◈ **Span:** 2017 ◈ **Budget:** USD 1 million ◈ **Modality:** Grant ◈ **Implementing Agency:** Department of Social Welfare and Development (DSWD, Philippines) ◈ The donation had been committed to by the Chinese Government in 2016. The Chinese Government also donated PHP 50 million to the government of the Philippines as disaster relief for farmers and fishermen in regions affected by the Typhoon, and the Red Cross Society of China also provided humanitarian aid worth USD 100,000 to the Philippines. The total Chinese aid provided for these three projects is around 90 million pesos, according to the Chinese Embassy.

Source: AidData. https://www.aiddata.org/data/aiddatas-global-chinese-development-finance-dataset-version-2-0

3 Key Challenges and Best Practices: Sectoral Case Studies

The depiction below provides a glimpse of the best practices and challenges identified in the case studies of donor interventions in the domains of Disaster Risk Reduction (DRR), Climate Smart Agriculture (CSA) and Renewable Energy (RE).

Figure 6 - Case Studies: Key Takeaways

Area Disaster Risk Reduction	**Area** Climate Smart Agriculture	**Area** Renewable Energy
Project Project Climate Twin Phoenix - Resilience and Preparedness toward Inclusive Development	**Project** Climate Change Adaptation Project	**Project** Palawan New and Renewable Energy and Livelihood Support
Donor(s) UNDP and Australian Government	**Donor(s)** Global Environment facility (GEF)	**Donor(s)** Global Environment Facility, Shell, UNDP TRAC
Best Practices ◈ Minimizing environmental impact ◈ Managing interests of women ◈ Including technical working groups to ensure good governance ◈ Engaging retirees as experts ◈ Improving partnership and ownership	**Best Practices** ◈ Inclusion of stakeholders ◈ Incorporating local dialect to ensure better communication ◈ Analyzing potential negative impacts of the project and efforts to mitigate them ◈ Ensuring minimal negative environment impacts	**Best Practices** ◈ Local participation and training to manage the interests of local stakeholders ◈ Linking energy and environmental needs ◈ Ensuring active stakeholders' participation ◈ Ensuring sustainability community ownership

Major Challenges

- Mismatch between planned activities and actual deliverables
- Limited inclusion of officers in subproject RAPID
- Delay in project execution
- Poor coordination and response
- Miscommunication and poor relations among partners (DFAT AND UNDP) and other executing agencies
- Poor management

Major Challenges

- Cost burden
- Implementation inefficiency
- Risk to development outcome's sustainability
- Moderate supervision
- Weak financial management capacity
- Poor financial disbursement

Major Challenges

- Consultation shortcoming
- Limited initial scope in project management
- Implementation delay
- Resource management
- Decision making
- Low-cost infrastructure
- Role of private players
- Tripartite participation

Ensuring Sustainability of Climate Twin Phoenix Project

The project's financial, institutional, social, and environmental viability was secured by the following measures. i) The presence of mandatory DRR Management budgets and the prospects of preparing a Comprehensive Development Plan (CDP), which will then trigger the development of investment programs to support DRR Climate Change Adaptation (CCA) measures proposed in Comprehensive Land Use Plans, are factors that improve financial sustainability (CLUPs). ii) Some people took it upon themselves to enroll in accessible training courses (e.g.in Albay). iii) Project interventions were primarily intended to be eco-friendly. There were no interventions envisaged that would result in natural resource extraction or residue management that would jeopardize environmental sustainability.[29]

Ensuring Sustainability of Climate Change Adaptation Project

To ensure the project's long-term sustainability, it was developed in an easy-to-understand manner, with a clear description of the actions that each participating agency must do in order to achieve the goal of sustaining the project's early successes and gains. As a result, the potential for prevarication was minimized to a bare minimum in a matrix form table, and this was done purposely. The matrix qualifies the much-needed push that will drive each agency to easily track and evaluate the actions.[30]

40. Mid-term Review and Evaluation of project Climate Twin Phoenix -Resilience and preparedness towards inclusive development. UNDP. 2017. https://erc.undp.org/evaluation/evaluations/detail/9136
41. Philippines Climate Change Adaptation project. Philccap. 2017. https://faspselib.denr.gov.ph/sites/default/files//Publication%20Files/PhilCCAP%20PCR2017.pdf

Ensuring Sustainability of Palawan New and Renewable Energy and Livelihood Support Project (PNRELSP)

Risk sharing strategies for direct sale of New and Renewable Energy (NRE) systems and other commercialization options are being researched to assure the long-term sustainability of NRE-assisted investment projects for livelihood applications, which is the main emphasis of the remaining part of the PNRELSP. The study's findings will influence the delivery mechanism's methodology and implementation needs.[31]

42. Mid-Term Project Evaluation. UNDP. 2003. https://www.eartheval.org/sites/ceval/files/evaluations/343%20Palawan%20New%20and%20Renewable%20Energy%20and%20Livelihood%20Support%20Project.pdf

4 Scope of India's involvement in Development Cooperation in the Philippines: Mapping Demand & Supply

4.1. Opportunities for India

Disaster Risk Reduction

- **Monitoring and evaluation –** To ensure sustainable impact of projects/ interventions, it is imperative to develop and implement efficient monitoring mechanisms. India can assist in the creation of effective monitoring mechanisms entailing consistent assessment of progress of key interventions, assessment of interim outcomes (including alignment of the same with overall objectives, baseline findings), identification of issues (and respective stakeholders) and implementation of reform initiatives for project level as well as overall systemic developments. This would augment effectiveness of projects, ensure increased coordination among relevant agencies, facilitate better management of resources, bring down cost, mitigate the effects of unforeseen events and reduce delays in implementation.
- **Capacity building –** India can be a major partner to Philippines in implementing capacity building measures in key areas such as infrastructure augmentation/ modernization operational efficiency, technology transfer, technical assistance, staffing, training, research and development, project planning and community-based development. India has implemented successful models to enable holistic improvements at various levels (local, regional and national) in these areas, which Philippines can benefit from.
- **Human resource development –** Philippines can benefit considerably from India's experience and expertise in creating adequacies in workforce deployment, implementing effective skill development initiatives, fostering better coordination (among stakeholders, within key institutions, among government agencies and others) and optimizing awareness generation for successful interventions in the areas under focus.
- **Data collection/analysis –** In the areas under focus, the need for optimum data capturing (including complete digitization at all levels), data consistency, analysis and structured output to ensure detailed risk assessment and preparedness is evident. India has proven experience in this area and can therefore assist Philippines in improving its information management systems as well as fostering greater coordination among relevant departments.

Climate Smart Agriculture

- **Monitoring and evaluation –** To ensure sustainable impact of projects/ interventions, it is imperative to develop and implement efficient monitoring mechanisms. India can assist in the creation of effective monitoring mechanisms entailing consistent assessment of progress of key interventions, assessment of interim outcomes (including alignment of the same with overall objectives, baseline findings), identification of issues (and respective stakeholders) and implementation of reform initiatives for project level as well as overall systemic developments. This would augment effectiveness of projects, ensure increased coordination among relevant agencies, facilitate better management of resources, bring down cost, mitigate the effects of unforeseen events and reduce delays in implementation.
- **Budgetary support –** India can facilitate investments (including infusion of private capital) and effective utilization of finances from internal as well as external sources to foster holistic development in the areas under focus. It can also share its expertise in financial management i.e. planning, budget execution, accounting, auditing.
- **Capacity building –** India can be a major partner to Philippines in implementing capacity building measures in key areas such as infrastructure augmentation/modernization, operational efficiency, technology transfer, technical assistance, staffing, training, research and development, project planning, and community-based development. India has implemented successful models to enable holistic improvements at various levels (local, regional and national) in these areas, which can benefit Philippines.
- **Research capacity –** India can assist Philippines in developing necessary research capacity in the areas under focus through the development of knowledge base in relevant areas as well as facilitation of coordination and knowledge sharing among key actors (academia, subject matter experts, relevant companies/entrepreneurs).

Renewable Energy

- **Advisory –** India can provide advisory services including benchmarking and impact evaluation of various interventions/projects to Philippines in order to facilitate augmented risk assessment, planning, project execution, private participation, participation of local communities among others.
- **Capacity building –** India can be a major partner to Philippines in implementing capacity building measures in key areas such as infrastructure augmentation/modernization operational efficiency, technology transfer, technical assistance, staffing, training, research and development, project planning, and community-based development. India has implemented successful models to enable holistic improvements – at various levels (local, regional and national) – in these areas, which can benefit Philippines.
- **Private participation –** India can facilitate greater mobilization of investments from private sources to ensure greater budgetary support for key projects in the focus areas. India can also assist in generating greater private participation for technical/technological advancements, and gathering key services.

- **Regulatory reforms –** India can facilitate considerably in streamlining regulatory aspects in the focus areas. It can assist in identifying regulatory bottlenecks, procedural delays (and reasons thereof), documentation issues (including usage of hard copies), gaps in inter-departmental coordination, issues due to existing policies/policy level changes, and compliance issues and subsequently, exercising effective mitigation/reform measures to iron out such issues.

4.2. Disaster Risk Reduction

Table 7 – Private and Public Stakeholder Mapping for Disaster Risk Reduction

Cooperation Sectors	Indian Stakeholders	Philippines Stakeholders
Technical assistance for DRR	**Government Stakeholders** • Indian Meteorological Department (IMD) • The National Centre for Medium Range Weather Forecasting (NCMRWF) • Indian National Centre for Oceanic Information Systems (INCOIS) • National Remote Sensing Centre (NRSC) • Indian Space Research Organization (ISRO) **Private Stakeholders, NGOs and Educational Institutes** • Oxfam • World Wide Fund for Nature (WWF)	• National Economic and Development Authority (NEDA) • Department of Finance (DoF), Insurance Commission • Government Service Insurance System (GSIS) • Philippines Insurance and Reinsurance Association (PIRA)
Legislative, planning and policy framework for improved governance	• National Disaster Management Authority (NDMA)	

<table>
<tr><th>Cooperation sectors</th><th>Indian Stakeholders</th><th>Philippines Stakeholders</th></tr>
<tr><td>Developing early warning systems and emergency response</td><td>• Indian Institute of Technology (IIT), Delhi
• National Disaster Response Force (NDRF)
• National Fire Service College
• National Civil Defense College</td><td rowspan="3">• Philippines Institute of Volcanology and Seismology (PHIVOLCS)
• The Philippines Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
• Mines and Geoscience Bureau (MGB)
• UP Resilience Institute
• National Disaster Risk Reduction and Management Council (NDRRMC)</td></tr>
<tr><td rowspan="2">Capacity Building</td><td>Government Stakeholders
• National Institute of Disaster Management (NIDM)
• Centre for Disaster Management at Lal Bahadur Shastri National Academy of Administration (LBSNAA)
• Centres for Disaster Management in the State Administrative Training Institutes
• SAARC Disaster Management Centre (SDMC)</td></tr>
<tr><td>Private Stakeholders, NGOs and Educational Institutes
• Development Research Communication and Service Centre (DRCSC)
• Bharat Seva Ashram Sangh
• Tagore Society for Rural Development (TSRD)</td></tr>
</table>

4.3. Climate Smart Agriculture

Table 8 - Private and Public Stakeholder Mapping for Climate Smart Agriculture

<table>
<tr><th>Cooperation Sectors</th><th>Indian Stakeholders</th><th>Philippines Stakeholders</th></tr>
<tr><td rowspan="3">Technical assistance and training</td><td>Government Stakeholders
• National Innovation in Climate Resilient Agriculture (NICRA)
• National Institute of Rural Development and Panchayati Raj (NIRD&PR)</td><td rowspan="3">• Department of Agriculture (DA)
• Department of Agrarian Reform (DAR)
• Department of Agriculture and Natural Resources (DANR)
• Department of Science and Technology (DOST)</td></tr>
<tr><td>Private Stakeholders, NGOs and Educational Institutes</td></tr>
<tr><td>• Scheme of Developing High quality Research (SHODH)
• SM Sehgal Foundation
• Global Alliance for Climate Smart Agriculture</td></tr>
</table>

Cooperation Sectors	Indian Stakeholders	Philippines Stakeholders
Capacity Building	**Government Stakeholders** • National Innovation in Climate Resilient Agriculture (NICRA) • Indian Council for Agricultural Research (ICAR) • Ministry of Rural Development (MRD) **Private Stakeholders, NGOs and Educational Institutes** • Centre for Sustainable Agriculture • Agri Innovation Hub (AgriHub) • National Institute of Agricultural Extension Management (MANAGE)	• Philippines' Climate Change Commission (CCC) • Agricultural Credit Policy Council (ACPC) • The Philippine Crop Insurance Corporation (PCIC) • National Disaster Risk Reduction and Management Council (NDRRMC) • Philippines Rice Research Institute (PhilRice)
Policy and Regulatory	**Government Stakeholders** • National Institute of Rural Development and Panchayati Raj (NIRD&PR) • Ministry of Rural Development (MRD) **Private Stakeholders, NGOs and Educational Institutes** • The Energy and Resources Institute (TERI) • Centre for Sustainable Agriculture	
Services and Business Models	• International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) • CropIn • AgHub (Agri Innovation Hub)	

4.4. Renewable Energy

Table 9 - Private and Public Stakeholder Mapping for Renewable Energy

<table>
<tr><th>Cooperation sectors</th><th>Indian Stakeholders</th><th>Philippines Stakeholders</th></tr>
<tr><td rowspan="2">Technical assistance and training</td><td>Government Stakeholders
• Ministry of New and Renewable Energy (MNRE)
• Centre for Study of Science, Technology and policy (CSTEP)
• Power System Operation Corporation (POSOCO)
• Central Electricity Authority (CEA)
• National institute of Solar Energy (NISE)</td><td rowspan="3">• Development Bank of the Philippines
• Land Bank of Philippines
• Department of Energy Philippines
• Renewable Energy Management Bureau
• Energy Regulatory Commission
• National Transmission Corporation
• Power Sector Assets and Liabilities Management Corporation
• National Renewable Energy Board</td></tr>
<tr><td>Private Stakeholders, NGOs and Educational Institutes
• The Energy and Research Institute (TERI)
• Sardar Swaran Singh National Institute of Bio-Energy (SSS-NIBE)
• National Institute of Wind Energy (NIWE)
• Energy Efficiency Services Limited (EESL)
• Council on Energy, Environment and Water (CEEW)</td></tr>
<tr><td>Capacity Building</td><td>Government Stakeholders
• Private & public sector companies, research institutes, educational institutes (IITs, IISc, Universities, NITs),
• Indian Renewable Energy Development Agency Limited (IREDA)
• National Skill Development Corporation (NSDC)
• Skill Council for Green Jobs (SCGJ)
• Indian Space Research Organisation (ISRO)</td></tr>
<tr><td>Research and Advisory</td><td>• Indian Institutes of Technology (IITs)
• Indian Institute of Science (IISc)
• National Institutes of Technology (NITs)
• Skill Council of Green Jobs (SCGJ)
• Barefoot College Tilonia
• Council of Scientific and Industrial Research (CSIR) Labs</td></tr>
</table>

4.5. Financing models and ensuring sustainability of India's assistance beyond the TriDeP cycle

Financing model forms an essential component of development cooperation. Investments made through the channels of a well designed and developed financing model can prove to be better and effective in terms of sustainability. Financing models can be of various types ranging from Debt-financing, equity financing, or financing via public sources.

Disaster Risk Reduction

India, as part of development cooperation can incorporate the following procedural steps of disaster risk financing to develop a sustainable and effective framework for disbursing aid in the recipient country.[32]

- Identifying the risk exposure (business risk, market risk, money or interest rate risk, project risk and foreign exchange risk) and the risk bearing capacity in the recipient country in order to assess the financial vulnerabilities and gaps in the economy and the institutional setup.
- Analyzing the availability, adequacy and efficiency of risk financing via various public and private stakeholders in the recipient nation and match with India's scope and limitations in providing aid in disaster risk financing.
- Devising appropriate institutional arrangements in the identified sectors where donor intervention is deemed necessary.

Some examples of financing models that India can follow include the blended finance model to attract private investors and debt financing model to ensure low risk and increased sustainability.[33]

Climate Smart Agriculture

India, as part of development cooperation can incorporate the following procedural steps for climate resilient financing in agriculture in order to develop a sustainable and effective framework for disbursing aid in the recipient country.[34]

- Designing innovative procedures to attract additional resources from public and private sources which can be channelized towards climate smart investments in agriculture.
- However, additional resources cannot prove to be effective until the weak linkages between the farmers and financial institutions in the recipient country are addressed. This can be attained through better policies and regulations to mobilize finance to farmers, capacity building of financial institutions in the recipient countries and reducing transaction costs.

32. Disaster Risk Financing: A global Survey of Practices and Challenges. OECD. 2015. https://www.oecd.org/daf/fin/insurance/OECD-Disaster-Risk-Financing-a-global-survey-of-practices-and-challenges.pdf
33. Financing options for renewable energy and energy efficiency. Sustainable Energy Regulation and Policymaking for Africa. http://africa-toolkit.reeep.org/modules/Module19.pdf
34. Making Climate Finance Work in Agriculture. World bank Group. https://documents1.worldbank.org/curated/en/986961467721999165/pdf/ACS19080-REVISED-OUO-9-Making-Climate-Finance-Work-in-Agriculture-Final-Version.pdf

- Strengthening capacities of the main stakeholders (lenders and the borrowers) through capacity building and human resource development.

Some examples of financing models that India can follow include financing via public sources, since it is the most common model while deploying climate funds and has the advantage of being able to offer more appealing terms than markets.[35]

India, as part of development cooperation in renewable energy can incorporate the following procedural steps to develop a sustainable and effective framework for disbursing aid in the recipient country.

- Identifying the risks (business risk, market risk, money or interest rate risk, project risk and foreign exchange risk) from the project and develop methods to manage them.
- Once the risk is assessed, it can be transferred and priced in the balance sheet of the respective institution/organization that is best suited to address it through contractually binding agreements.
- Post risk assessment, a thorough analysis of Return on Investment (ROI) can be undertaken to ensure the viability of the development cooperation.

Some examples of financing models that India can follow includes the market led model because it includes little or no government backing and incorporates more private players in the project.[36]

35. Financing options for renewable energy and energy efficiency. Sustainable Energy Regulation and Policymaking for Africa. http://africa-toolkit.reeep.org/modules/Module19.pdf
36. Financing options for renewable energy and energy efficiency. Sustainable Energy Regulation and Policymaking for Africa. http://africa-toolkit.reeep.org/modules/Module19.pdf

4.6. India-U.S.-Philippines Triangular Cooperation: The Way Forward

Triangular Cooperation in the Selected Areas

India as an emerging donor in the Philippines

- **Disaster Risk Reduction**
  - Aiding preparedness through policy level reforms
  - Facilitating effective implementation of early warning systems
  - Capacity building to ensure improved response to disasters
- **Climate Smart Agriculture**
  - Facilitating adequate recording and assessment of data
  - Aiding infrastructure development i.e. additional observation stations
  - Developing stress tolerant crop varieties and effective business models
- **Renewable Energy**
  - Facilitating skill development of the workforce
  - Aiding regulatory reforms
  - Providing research/advisory services

Philippines as a Partner Country (Recipient)

- **Disaster Risk Reduction**
  - Development of effective policies for disaster risk management
  - Implementation of early warning systems at all levels
  - Improved emergency response mechanisms
- **Climate Smart Agriculture**
  - Improved data management for efficient risk assessment and response
  - Development of adequate number of observation stations
  - Introduction of stress tolerant crop varieties and effective business models
- **Renewable Energy**
  - Development of a trained workforce with necessary strength
  - Improved regulatory framework
  - Strengthened knowledge base

In the backdrop of strong India-U.S. and India-Philippines' relationships, there is potential for meaningful synergies between India, U.S. and the Philippines in the three areas under focus i.e., Disaster Risk Reduction (DRR), Climate Smart Agriculture (CSA) and Renewable Energy (RE). India has prior experience in developing/implementing necessary preparedness, expertise, technological solutions, regulations, and awareness among others in these areas, which it can share with the Philippines to foster mutual development. Overall support can be gathered from the U.S., given India's experience of triangular cooperation initiatives with the U.S. in areas such as agriculture. Some of the key aspects of the potential triangular cooperation have been described below:

i) **Synergies in DRR –** India can support the Philippines in implementing collaboration and coordination among relevant government agencies administering relevant databases in use currently in information sharing/management, and thereby ensuring optimum risk assessment as well as better preparedness. It can also facilitate the generation of funds for post-disaster operations restoration of infrastructure, delivery of essential services so as to strengthen recovery efforts. It can also explore private funding sources to assist in addressing the government's fiscal constraints.

ii) **Synergies in CSA –** India can assist the Philippines in increasing the involvement of private players, non-governmental organizations, financial institutions and academic bodies which have,

till date, played a very minimal role in CSA activities so that necessary financial assistance and technical capacities may be attained. It can also foster greater institutional coordination and capacity building to streamline training initiatives. Such institutional capacity building would also entail improved information sharing, planning and implementation of interventions.

iii) **Synergies in RE –** India can facilitate the implementation of necessary reforms including the streamlining of processes related to compliance, and permissions to bring down overall time and cost metrics in the regulatory ecosystem governing renewable energy operation in the Philippines. It can also assist in capacity building in terms of workforce, and technical aspects so as to improve operations in the sector. India can also share its experience as well as assist in the effective implementation of government initiatives/programmes such as the National Renewable Energy Program (NREP) towards realizing the potential of renewable energy through augmented deployment.

iv) **Role of the U.S. –** The U.S. can provide relevant guidance in key areas such as climate change and energy security. Skill development and job-led growth have been key cogs in the machinery of development cooperation provided by the U.S. It can sufficiently bolster human resource development initiatives in all the three areas under consideration. India can considerably benefit from the technological solutions at the disposal of the U.S. in its quest to foster technological advancements in the select areas. It can also share its experience in terms of potential bottlenecks in development cooperation in the focus areas. Further, U.S. as the traditional donor, can help facilitate meaningful collaborations, tie-ups and consultations for overall technical development as well as awareness generation among key stakeholders. It can also provide necessary fillip to social aspects such as empowerment of women.

v) **Role of Third Parties –** During the course of development initiatives, external finance may be gathered from ADB, The World Bank, and others. The role of private players, including private investors would be imperative to achieve the proposed developmental goals. Experience sharing by other Quad countries i.e. Japan and Australia can also be key to achieving desired results. Finally, the role of research organizations and academic bodies would be crucial to foster sustainable growth initiatives in the selected areas.

Based on stakeholder interactions, Indian interventions can focus on technology transfer, capacity building and small pilot projects. To ensure sustainability of either of these interventions, triangulation of development cooperation (partnership with other development donors) will be crucial. According to direct interactions with stakeholders from multilateral development banks, and bilateral donor agencies, the increased geopolitical and economic interests of the Quad nations (U.S., Japan, India, and Australia) for a Free and Open Indo-Pacific (FOIP) can encourage countries like U.S., Australia and Japan to participate in development cooperation and become a reliable partner for India's development cooperation in Philippines. Also, engaging in Quad dialogue will provide an opportunity to increase India's role in the Indo-Pacific region through strengthened capacity and credible memorandum of understanding between the nations. The combined efforts of Quad as a donor in the Indo-Pacific are indeed more efficient and effective than each of the Quad nations individually partaking in foreign aid in the Philippines.[37]

37. Based on stakeholder interaction

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