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# DEVELOPMENT COOPERATION IN THE INDO-PACIFIC

COUNTRY REPORT: VIETNAM



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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 can also 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.*

### Suggested citation

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## List of abbreviations and acronyms

- ◆ ADB- Asian Development Bank
- ◆ AUD- Australian Dollar
- ◆ AusAid- Australian Aid
- ◆ BCL- Buyer's Credit Loan
- ◆ CCFSC - Central Committee for Flood Storm Control
- ◆ CCNDPC- Central Committee for Natural Disaster Prevention and Control
- ◆ CEA- Central Electricity Authority
- ◆ CEEW- Council on Energy, Environment and Water
- ◆ CLRRI- Cuu Long Delta Rice Research Institute
- ◆ CLUES- Climate Change Affecting Land Use in the Mekong Delta: Adaptation of Rice-based Cropping Systems
- ◆ CNY- Chinese Yuan Renminbi
- ◆ CSA- Climate Smart Agriculture
- ◆ CSIR- Council of Scientific and Industrial Research Labs
- ◆ CSTEP- Centre for Study of Science, Technology and policy
- ◆ DEC- Disaster risk reduction, environment, and climate change adaptation and mitigation
- ◆ DMC- Disaster Management Centre
- ◆ DRCSC- Development Research Communication and Service Centre
- ◆ DRR- Disaster Risk Reduction
- ◆ EESL- Energy Efficiency Services Limited
- ◆ ERAV- The Electricity Regulatory Authority of Vietnam
- ◆ EUR- Euro
- ◆ EU-JULE- EU Justice and Legal Empowerment Program
- ◆ EU- European Union
- ◆ EVN- Vietnam Electricity
- ◆ FOIP- Free and Open Indo-Pacific
- ◆ GCL- Government Concessional Loan
- ◆ GDP-Gross Domestic Product
- ◆ GoV- Government of Vietnam
- ◆ HUST- Hanoi University of Science and Technology
- ◆ ICAR- Indian Council for Agricultural Research
- ◆ ICMP- Integrated Coastal Management Program
- ◆ ICRISAT- International Crops Research Institute for the Semi-Arid Tropics
- ◆ IDA- International Development Association
- ◆ IISCs- Indian Institute of Science
- ◆ IIT- Indian Institute of Technology
- ◆ IMD- Indian Meteorological Department
- ◆ INCHAM- Indian Business Chamber
- ◆ INCOIS- Indian National Centre for Oceanic Information Systems
- ◆ IoL- Inventory of Losses
- ◆ IREDA- Indian Renewable Energy Development Agency Limited
- ◆ ISRO- Indian Space Research Organisation
- ◆ ITEC- Indian Technical and Economic Cooperation
- ◆ IUU- Illegal, Unreported and Unregulated Fishing
- ◆ LLP- Limited Liability Partnership
- ◆ L&T- Larsen & Toubro
- ◆ LOC- Lines of Credit
- ◆ LTD.- Limited
- ◆ MABC- Market Assisted Backcrossing
- ◆ MANAGE- National Institute of Agricultural Extension Management
- ◆ MARD- Ministry of Agriculture and Rural Development
- ◆ M&E- Monitoring and Evaluation
- ◆ MEA- Ministry of External Affairs
- ◆ MNRE- Ministry of New and Renewable Energy
- ◆ MOIT- Ministry of Industry and Trade
- ◆ MoNRE- Ministry of Natural Resources and the Environment
- ◆ MoU- Memorandum of Understanding
- ◆ MRD- Ministry of Rural Development
- ◆ MW- Megawatt
- ◆ NCMRWF- The National Centre for Medium Range Weather Forecasting
- ◆ NDRF- National Disaster Response Force

- ◆ 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
- ◆ NRSC- National Remote Sensing Centre
- ◆ NSDC- National Skill Development Corporation
- ◆ ODA- Official Development Assistance
- ◆ OECD-Organisation for Economic Control and Development
- ◆ PBC- Preferential Buyer's Credit
- ◆ POSOCO- Power System Operation Corporation
- ◆ PVS- Participatory Variety Selection
- ◆ QIP- Quick Impact Project
- ◆ QTLs- Quantitative trait loci
- ◆ RE- Renewable Energy
- ◆ RMB- Renminbi
- ◆ ROI- Return on Investment
- ◆ SCGJ- Skill Council for Green Jobs
- ◆ SDGs- Sustainable Development Goals
- ◆ SDMC- SAARC Disaster Management Centre
- ◆ SSIFS- Sushma Swaraj Institute of Foreign Service
- ◆ SSS-NIBE- Sardar Swaran Singh National Institute of Bio-Energy
- ◆ TERI- The Energy and Resources Institute
- ◆ TSRD- Tagore Society for Rural Development
- ◆ UNDP- United Nations Development Program
- ◆ UNICEF- United Nations Children's Fund
- ◆ USAID- U.S. Agency for International Development
- ◆ UN- United Nations
- ◆ U.S.- United States
- ◆ USD- United States Dollar
- ◆ V-LEEP- Vietnam Low Emission Energy Program
- ◆ VND- Vietnamese Dong
- ◆ WTO- World Trade Organization
- ◆ Quad- Quadrilateral Security Dialogue

## Scope and Methodology

This report assesses the current status of development cooperation for Vietnam 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, datasets, etc. available in the secondary domain. Further, thorough assessment of multiple implementation reports, status reports, Monitoring and Evaluation and (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 Vietnam, 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 Vietnam 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.



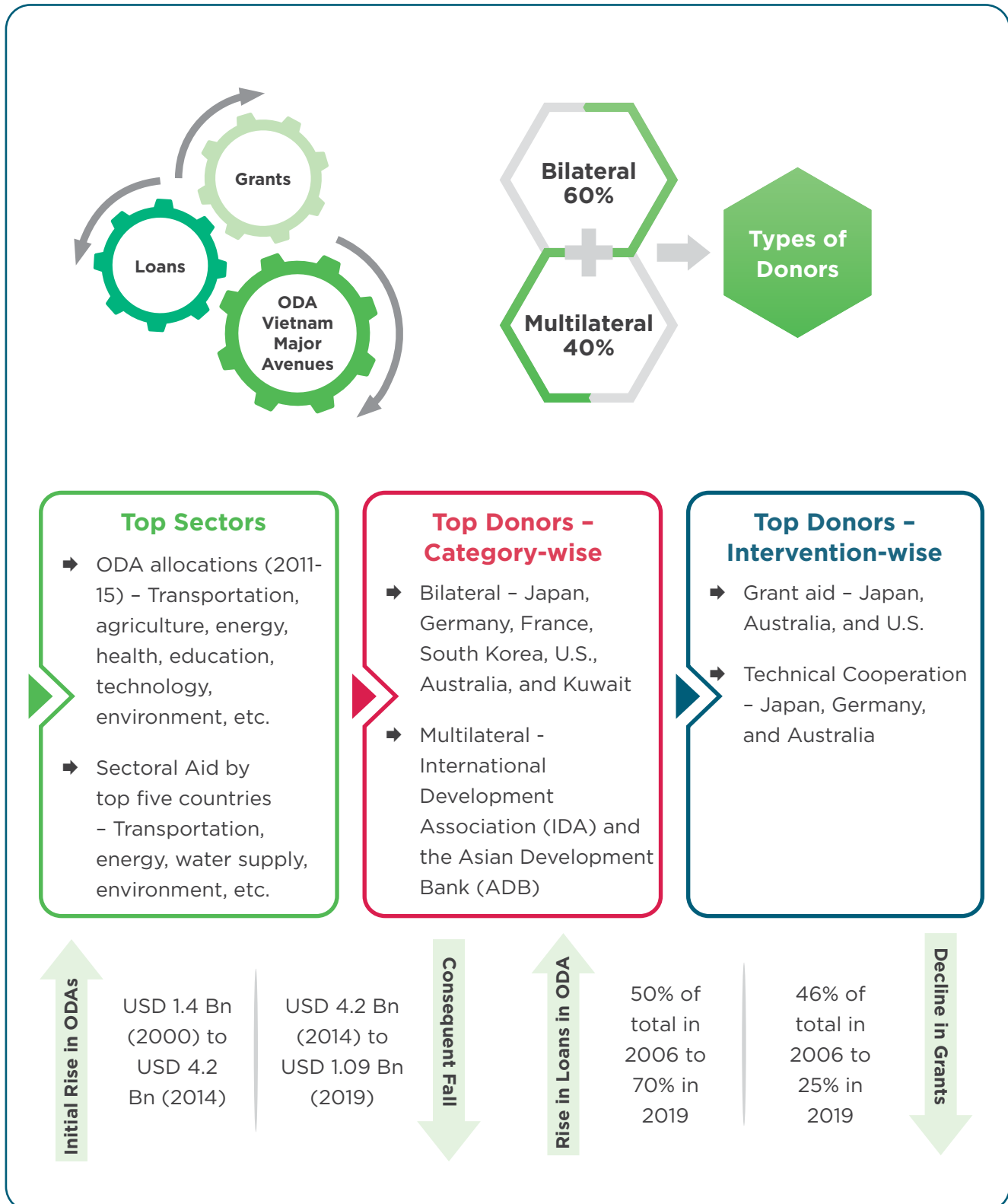
**Chapter 3** identifies the cooperation modalities and tries to explain the intent and objectives of existing donors providing aid assistance to Vietnam.

**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 Vietnam 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 Vietnam.

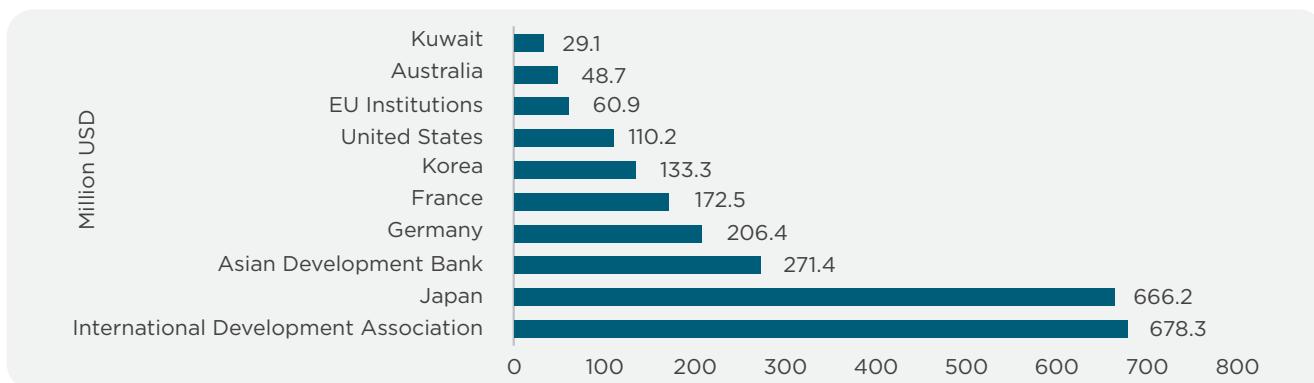
# Overview of Aid and Development Cooperation to Vietnam

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



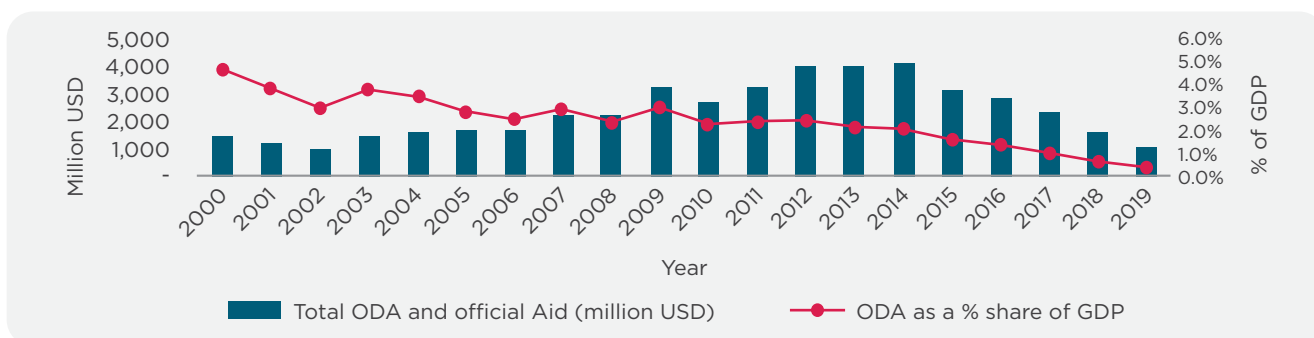


**Figure 2 - Top 10 donors of Gross ODA for Vietnam, 2018-2019 (USD million)**



Source: OECD Database

**Figure 3 - Total ODA and Official Aid in Vietnam and Share of GDP**



Source: World Bank Database

**Figure 4 - Focus Areas: Nature of Issues and Investments so Far**



**Disaster Risk Reduction**

- ◆ **Key Issues** - Droughts, storms, flooding; impact of disasters is projected to increase with climate change, limited technical assistance, poor governance and regulatory systems, limited infrastructure of early warning systems<sup>1</sup>.
- ◆ **Principal Donors** - Australia, U.S., Japan, EU, The World Bank, Asian Development Bank.
- ◆ **Broad Areas of Intervention** - Infrastructure financing, improving health systems/construction and renovation of health centres, wastewater treatment, flood damage prevention, climate-smart planning/climate resilience of land and water management practices, water efficiency improvement.

1. Disaster Risk Reduction in Vietnam: Status Report. UNDRR. 2020. <https://reliefweb.int/report/viet-nam/disaster-risk-reduction-viet-nam-status-report-2020>



### Climate Smart Agriculture

- ◆ **Key Issues** - Environmental degradation, climate change, drought, saltwater intrusion, Governance, Regulatory and policy issues, financial constraints, limited institutional capacity and technical skills<sup>2</sup>.
- ◆ **Principal Donors** - Australia, U.S., Japan, New Zealand
- ◆ **Broad Areas of Intervention** - Reduction of deforestation and forest degradation, restoration of degraded landscapes, biodiversity conservation, strengthening vulnerable communities, investments in coastal management, protection/restoration of forests/deltas, development of potential crops.



### Renewable Energy

- ◆ **Key Issues** - Untapped potential for renewable energy production, declining coal resources, lack of capital/human resources/clarity in fuel prices affecting investments in the energy sector, lack of capital, low tariffs and high investment costs, lack of qualified human resources, underdeveloped supporting industries, weak grid capacity, un-bankable power purchasing agreement terms, complex regulatory framework<sup>3</sup>.
- ◆ **Principal Donors** - Australia, U.S., Japan, Asian Development Bank
- ◆ **Broad Areas of Intervention** - Establishment/operational assistance with respect to climate innovation centres, low emission programs, hydropower plant expansion, development of solar power.

## 1.1. Disaster Risk Reduction

**Table 1 - Vietnam: Aid Assistance in Disaster Risk Reduction**

Donor	Area	Project	Description
Australia, Asian Development Bank, Government of Republic of Korea	Capacity Building	Cao Lanh Bridge <sup>4</sup>	<ul style="list-style-type: none"> <li>◆ <b>Recipient:</b> Ministry of Transport, Government of Vietnam</li> <li>◆ <b>Closing Year/Status:</b> 2018</li> <li>◆ <b>Modality:</b> Loan and Technical Assistance</li> <li>◆ <b>Budget:</b> AUD USD 160 million (AUD USD 26 million in Technical Assistance)</li> <li>◆ Australia co-financed the civil works for the Cao Lanh Bridge, as well as 25 kilometres of interconnecting roads between 2011 and 2018.</li> </ul>

2. Nghia, Tran Dai. Climate smart agriculture (CSA): Towards selecting suitable measures in response to climate change in Vietnam. Food and Agriculture Organisation of the United States. 2016. <http://www.fao.org/3/bo988e/bo988e.pdf>

3. Das, Koushan. Renewables in Vietnam: Current Opportunities Future Outlook. Vietnam Briefing. 2020. <https://www.vietnam-briefing.com/news/vietnams-push-for-renewable-energy.html/>

4. Cao Lanh Bridge Fact Sheet. Government of Australia. <https://www.dfat.gov.au/about-us/publications/Pages/vietnam-cao-lanh-bridge-fact-sheet>

Donor	Area	Project	Description
U.S.	Capacity Building	USAID Local Health System Sustainability Project <sup>5</sup>	<ul style="list-style-type: none"> <li>◆ <b>Implementing Agency:</b> ABT Associates Inc.</li> <li>◆ <b>Closing Year/ Status:</b> Active</li> <li>◆ <b>Modality:</b> Technical Assistance</li> <li>◆ <b>Budget:</b> USD 13.9 million</li> <li>◆ This program is a flagship initiative to strengthen the integrated health system in Vietnam.</li> </ul>
Japan	Capacity Building	Hai Phong City Environment Improvement Project (II) <sup>6</sup>	<ul style="list-style-type: none"> <li>◆ <b>Recipient:</b> Ministry of Finance</li> <li>◆ <b>Closing Year/Status:</b> 2013</li> <li>◆ <b>Modality:</b> Loan</li> <li>◆ <b>Budget:</b> 21,306 million yen</li> <li>◆ Project for capacity building of the operation of wastewater treatment plant and flood damage prevention measures in Hai Phong City.</li> </ul>
UNDP & UNICEF	Capacity Building	EU Justice and Legal Empowerment Program (EU-JULE)	<ul style="list-style-type: none"> <li>◆ <b>Implementing Agency:</b> United Nations (UN) agencies and Oxfam</li> <li>◆ <b>Closing Year/ Status:</b> Active</li> <li>◆ <b>Modality:</b> Loan</li> <li>◆ <b>Budget:</b> EUR 7,400,000</li> <li>◆ Construction and renovation of 395 health centres in the most disadvantaged communities of the poorest districts in 36 provinces of Vietnam.</li> </ul>
World Bank	Capacity Building	Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project (2018 - 2022) <sup>7</sup>	<ul style="list-style-type: none"> <li>◆ <b>Recipient:</b> Government of Vietnam</li> <li>◆ <b>Closing Year/Status:</b> Active</li> <li>◆ <b>Modality:</b> Loan</li> <li>◆ <b>Budget:</b> USD 387 million</li> <li>◆ The project aims to enhance tools for climate-smart planning and improve climate resilience of land and water management practices in selected provinces of the Mekong delta in Vietnam.</li> </ul>

5. USAID. <https://lhssproject.org/countries/vietnam>

6. JICA Document. [https://www.jica.go.jp/english/our\\_work/evaluation/oda\\_loan/economic\\_cooperation/c8h0vm000001rdjt-att/viet0331\\_01.pdf](https://www.jica.go.jp/english/our_work/evaluation/oda_loan/economic_cooperation/c8h0vm000001rdjt-att/viet0331_01.pdf)

7. World bank Document. <https://documents1.worldbank.org/curated/en/175071526268613415/pdf/GEF-Mekong-Delta-Climate-Project-Paper-April25-04242018.pdf>

Donor	Area	Project	Description
Asian Development Bank	Capacity Building	Water Efficiency Improvement in Drought-Affected Provinces Project <sup>8</sup>	<ul style="list-style-type: none"> <li>◇ <b>Recipient:</b> Government of Vietnam</li> <li>◇ <b>Closing Year/Status:</b> Active</li> <li>◇ <b>Modality:</b> Grant and Loan</li> <li>◇ <b>Budget:</b> Grant from ATF- Netherlands - USD 750,000</li> <li>◇ <b>Grant from Climate Change Fund:</b> USD 300,000</li> <li>◇ <b>Loan via Concessional Ordinary Capital Resource Lending:</b> USD 100 million</li> <li>◇ Water Efficiency Improvement in Drought-Affected Provinces Project integrates climate-resilient agricultural practices through a transformational shift in irrigation modernization.</li> </ul>

## 1.2. Climate Smart Agriculture

**Table 2 - Vietnam: Aid Assistance in Climate Smart Agriculture**

Donor	Area	Project	Description
USAID	Capacity Building	USAID Green Annamites Project 2016-2020 <sup>9</sup>	<ul style="list-style-type: none"> <li>◇ <b>Implementing Agency:</b> ECODIT</li> <li>◇ <b>Closing Year/ Status:</b> 2020</li> <li>◇ <b>Modality:</b> Loan</li> <li>◇ <b>Budget:</b> USD 24 million</li> <li>◇ This program focused on reducing deforestation and forest degradation and restore degraded landscapes, strengthen Biodiversity Conservation, and increasing resilience for vulnerable communities.</li> </ul>
Australian Department of Foreign Affairs and Trade (DFAT), German Federal Ministry for Economic Cooperation and Development (BMZ)	Capacity Building	Integrated Coastal Management Program (ICMP) (2011-2018) <sup>10</sup>	<ul style="list-style-type: none"> <li>◇ <b>Recipient:</b> Ministry of Agriculture and Rural Development</li> <li>◇ <b>Closing Year/Status:</b> 2018</li> <li>◇ <b>Modality:</b> Technical Assistance</li> <li>◇ <b>Budget:</b> EUR 23.57 million</li> <li>◇ The Mekong Delta is the third-largest industrial region of Vietnam; an investment of AUD 16.6 million has been made in the ICMP to support the GoV to use strengthened planning, technical, and financial capacities to foster climate-resilient development of the Mekong Delta.</li> </ul>

8. ADB Document. <https://www.adb.org/projects/49404-002/main>

9. USAID. [https://pdf.usaid.gov/pdf\\_docs/PA00WRQV.pdf](https://pdf.usaid.gov/pdf_docs/PA00WRQV.pdf)

10. GIZ. 2018. [https://www.giz.de/en/downloads/ICMP\\_Final%20Report\\_English.pdf](https://www.giz.de/en/downloads/ICMP_Final%20Report_English.pdf)

Donor	Area	Project	Description
USAID	Capacity Building	Vietnam Forests and Deltas Program 2012-2021 <sup>11</sup>	<ul style="list-style-type: none"> <li>◆ <b>Implementing Agency:</b> WINROCK International</li> <li>◆ <b>Closing Year/ Status:</b> 2021</li> <li>◆ <b>Modality:</b> Technical Assistance</li> <li>◆ <b>Budget:</b> USD 31 million</li> <li>◆ Program supported Vietnam's transition to more resilient and sustainable development.</li> </ul>
New Zealand Aid Program	Capacity Building	Development and commercialisation of high-value dragon fruit <sup>12</sup>	<ul style="list-style-type: none"> <li>◆ <b>Implementing Agency:</b> New Zealand Plant and Food Research Ltd, Sub-Institute for Agricultural Engineering and Post-Harvest Technology</li> <li>◆ <b>Closing Year/ Status:</b> Unspecified</li> <li>◆ <b>Modality:</b> Technical Assistance</li> <li>◆ <b>Budget:</b> USD 5.6 million</li> <li>◆ This initiative contributed to sustainable economic growth through the development and commercialisation of high-value dragon fruit that meets market requirements.</li> </ul>

### 1.3. Renewable Energy

**Table 3 - Vietnam: Aid Assistance in Renewable Energy**

Donor	Area	Project	Description
The World Bank	Capacity Building	Vietnam Climate Innovation Centre (2016-2020) <sup>13</sup>	<ul style="list-style-type: none"> <li>◆ <b>Recipient:</b> Ministry of Science and Technology</li> <li>◆ <b>Closing Year/Status:</b> 2020</li> <li>◆ <b>Modality:</b> Loans and Grants</li> <li>◆ <b>Budget:</b> USD 5.18 million</li> <li>◆ Establishing and assisting Vietnam in operating the Climate Innovation Centre; the Centre is part of a global network of innovation centres, which shares knowledge and data, creates international business-to-business linkages, and facilitates trade across regions.</li> </ul>

11. SNV. <https://snv.org/project/vietnam-forests-and-deltas-programme>

12. New Zealand helps Vietnam add value to its dragon fruit. VietnamNews. 2019. <https://vietnamnews.vn/economy/520948/new-zealand-helps-viet-nam-add-value-to-its-dragon-fruit.html>

13. World Bank Document. <https://projects.worldbank.org/en/projects-operations/project-detail/P155260>

Donor	Area	Project	Description
USAID	Technology Transfer	Vietnam Low Emission Energy Program 2015-2020 V-LEEP 1 and V-LEEP 2 (2021-2025) <sup>14</sup>	<ul style="list-style-type: none"> <li>◆ <b>Implementing Agency:</b> Deloitte Consulting Limited Liability Partnership (LLP)</li> <li>◆ <b>Closing Year/ Status:</b> 2025</li> <li>◆ <b>Modality:</b> Grants</li> <li>◆ <b>Budget:</b> USD 36.25 million</li> <li>◆ V-LEEP helps the Government of Vietnam to develop and implement a framework that supports the achievement of Vietnam’s renewable energy targets.</li> </ul>
The World Bank	Capacity Building & Technology Transfer	Vietnam Solar Transition Accelerator1 Project (2021 - 2025) <sup>15</sup>	<ul style="list-style-type: none"> <li>◆ <b>Recipient:</b> Ministry of Industry and Trade (MOIT)</li> <li>◆ <b>Closing Year/Status:</b> 2025</li> <li>◆ <b>Modality:</b> Grants</li> <li>◆ <b>Budget:</b> USD 1.5 million</li> <li>◆ The objective is to support the GoV in piloting the implementation of a sustainable solar competitive bidding program to mobilize private investments.</li> </ul>

14. USAID Document. [https://www.usaid.gov/sites/default/files/documents/FS\\_VLEEP-II\\_Oct2020\\_Eng.pdf](https://www.usaid.gov/sites/default/files/documents/FS_VLEEP-II_Oct2020_Eng.pdf)

15. World Bank Document. <https://projects.worldbank.org/en/projects-operations/project-detail/P172974>

# 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.<sup>16</sup>

**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.	<ol style="list-style-type: none"> <li>1. Humanitarian assistance and emergency management</li> <li>2. Capacity building within the recipient country to sustain social programs</li> <li>3. Institution building of recipient government through elections, training, or official government buildings</li> </ol>	<ul style="list-style-type: none"> <li>◆ Cao-Lanh Bridge (<b>Primary Donor</b> - Australia, Asian Development Bank, Government of Republic of Korea)</li> <li>◆ Vietnam Forests and Deltas Program (Primary Donor - USAID)</li> <li>◆ USAID Green Annamites Project (<b>Primary Donor</b> - USAID)</li> <li>◆ Climate Change affecting Land Use in the Mekong Delta: Adaptation of Rice-based Cropping Systems (<b>Primary Donor</b> - ACIAR (Australian Center for International Agricultural Research))</li> </ul>
Altruistic	Seeks sustained development with long-term interventions	<ol style="list-style-type: none"> <li>1. Altruistic aid is the one that seeks to enhance economic development</li> <li>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</li> </ol>	<ul style="list-style-type: none"> <li>◆ Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project (<b>Primary Donor</b> - The World Bank)</li> <li>◆ Renewable Energy Development Program (<b>Primary Donor</b> - The World bank)</li> </ul>

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

16. International Development Cooperation. 2013. <https://openknowledge.worldbank.org/bitstream/handle/10986/13228/763150ESWOP12800Box374367B00PUBLIC0.pdf?sequence=1&isAllowed=y>

## Table 5- India as a donor in Vietnam

### Indian Technical and Economic Cooperation (ITECs)

- ◆ Regular training activities are held under Indian Technical and Economic Cooperation (ITEC) programme; regular yoga, dance and music classes are held at the Indian Cultural Centre in Hanoi.<sup>17</sup>
- ◆ At the recent Joint Commission meeting, India also reiterated its development and capacity assistance for Vietnam through quick impact projects (QIP), Indian Technical and Economic Cooperation (ITEC) and e-ITEC initiatives, Ph.D. fellowships and proposals in the area of water resource management in Vietnam's Mekong Delta region, Sustainable Development Goals (SDGs), and digital connectivity.<sup>18</sup>

### Quick Impact Projects (QIPs)

- ◆ The MEA in its press release stated that India has already approved 12 QIPs for implementation in Vietnam: seven in water resource management in Vietnam's Mekong Delta Region and five linked to construction of educational infrastructure in Vietnam. Research and training are also important in the bilateral agenda and this has translated to a couple of MoUs between the Sushma Swaraj Institute of Foreign Service (SSIFS), New Delhi and Diplomatic Academy of Vietnam, Hanoi, and the National Maritime Foundation, New Delhi and Scientific Research Institute of Sea and Islands, Hanoi.<sup>19</sup>

### Defense

- ◆ Defense ties between India and Vietnam are also gathering traction. India earlier gave Vietnam a USD 100 million line of credit for the procurement of 12 high-speed patrol boats. An Indian private sector firm, Larsen & Toubro (L&T) is developing the boats.<sup>20</sup>
- ◆ India has also given Vietnam another USD 500 million line of credit for buying defense equipment from India. Discussions are on currently to identify the systems that Vietnam may be interested in buying from India. According to defense sources quoted in the media, Hanoi is interested in India's Akash surface-to-air systems and Dhruv advanced light helicopters.<sup>21</sup>

17. India-Vietnam Relations. Ministry of External Affairs. 2017. [https://www.mea.gov.in/Portal/ForeignRelation/Bilateral\\_Relations\\_Website\\_\\_Sept\\_17\\_.pdf](https://www.mea.gov.in/Portal/ForeignRelation/Bilateral_Relations_Website__Sept_17_.pdf)

18. 17th India-Vietnam Joint Commission Meeting. MEA. 2020. [https://www.mea.gov.in/press-releases.htm?dtl/32912/17th\\_IndiaVietnam\\_Joint\\_Commission\\_Meeting](https://www.mea.gov.in/press-releases.htm?dtl/32912/17th_IndiaVietnam_Joint_Commission_Meeting)

19. Rajagopalan Rajeswari. India-Vietnam Relations: Strong and getting stronger. ORF. 2020. <https://www.orfonline.org/research/india-vietnam-relations-strong-and-getting-stronger/>

20. Ibid.

21. Ibid.



**Table 6- Lines of Credit: Government of India to Government of Vietnam**

S. No.	Purpose	Year of Approval	Date of Signing of LOC (by the Recipient with EXIM Bank)	Amount of Credit (USD Million)
1	<ul style="list-style-type: none"> <li>◇ General purpose</li> <li>◇ Contracts approved include export of textile machinery, equipment and services for hydro power projects</li> </ul>	2003-04	August 12, 2004	27.00
2	◇ NAM Chien Hydropower Project (200 MW) at Son La Province	2006-07	January 8, 2008	45.00
3	◇ Two projects	2007-08	July 11, 2013	19.50
4	◇ Purchase of equipment/supplies	2014-15	September 15, 2014	100.00
<b>Total</b>				<b>191.50</b>

Source: Export-Import Bank of India (EXIM Bank)

## 2.1. Chinese Interventions in Vietnam

**Figure 5 - China as a donor in Vietnam**

### China's role as a donor in Vietnam

1. China continues to be welcomed as a source of foreign investment in Vietnam. It also permitted the use of the Chinese currency, the yuan, as a form of payment in provinces on China's border.<sup>22</sup>
2. Bilateral aid from China has significantly increased since the last decade. Most of the Chinese loans to Vietnam are in the form of low-interest loans specifically targeted towards infrastructure development. For example, China provided concessional loans worth USD 2.18 billion in the span of 2011-2015.<sup>23</sup>
3. Vietnam and China agreed to form a task force for infrastructure and financial cooperation during Party Chief Nguyen Phu Trong's visit to Beijing in April 2015.<sup>24</sup>
4. The Lancang-Mekong cooperation has been fruitful, however China has not provided sufficient data to the partner countries to prepare for the environmental impacts.<sup>25</sup>
5. In August 2016, Quang Ninh province reportedly cancelled its plan to receive funds from China to

22. Vietnam allows payment by Yuan in China's border areas. Outlook. 2018. <https://www.outlookindia.com/website/story/vietnam-allows-payment-by-yuan-in-china-border-areas/315778/Big%20B%20has%20posted%20on%20his%20blog%20that%20over%20850%20farmers%20from%20Uttar%20Pradesh%20have%20been%20identified%20and%20their%20loans%20will%20be%20managed>

23. Aid and Development. Open Development Vietnam. 2018. <https://vietnam.opendevlopmentmekong.net/topics/aid-and-development/>

24. Vietnam, China agrees to strengthen bilateral ties, military cooperation. 2019. [http://english.www.gov.cn/statecouncil/weifenghe/202104/26/content\\_WS6086a02bc6d0df57f98d897c.html](http://english.www.gov.cn/statecouncil/weifenghe/202104/26/content_WS6086a02bc6d0df57f98d897c.html)

build the highway from Van Don to Mong Cai.<sup>27</sup> Instead, it looked for domestic investors to help fund the project.

7. Lately Vietnam has also expressed concerns over exorbitant interest rates charged by China for its loans.<sup>28</sup>
8. Furthermore, certain projects relying on Chinese ODA, contractors, and equipment are encountering delays, poor quality, and rising investment capital costs. The Cat Linh-Ha Dong skytrain project in Hanoi is the most well-known example, with four extensions to the original date and a cost overrun of USD 316 million to USD 868 million.<sup>29</sup>

**Table 7- A glimpse of China’s Development Cooperation in Vietnam**

Project	Sector	Description
China Eximbank provides supplemental RMB 300 million government concessional loan for Hanoi-Dong Dang, Hanoi-Thai Nguyen, and Hanoi-Lao Cai Railway Signal Modernization Project	Transport and Storage	<ul style="list-style-type: none"> <li>◆ <b>Span:</b> 2011-2013</li> <li>◆ <b>Budget:</b> 300,000,000 Chinese Yuan</li> <li>◆ <b>Modality:</b> Loan</li> <li>◆ <b>Funding Agencies:</b> Export-Import bank of China</li> <li>◆ In 2003, Vietnamese Deputy Minister of Planning and Investment and the Chinese Ambassador to Vietnam signed a preferential loan framework agreement regarding the Hanoi-Dong Dang, Hanoi-Thai Nguyen, and Hanoi-Lao Cai Railway Signal Modernization Project. Then, on October 31, 2005, China Eximbank and the Vietnam Ministry of Finance signed an RMB 530 million concessional loan agreement for this railway project</li> </ul>

25. Mekong River Commission calls for improved hydropower data sharing. The Diplomat. 2021. <https://thediplomat.com/2021/07/mekong-river-commission-calls-for-improved-hydropower-data-sharing/>

26. Hai, Thanh Do. Vietnam and China: Identical bedfellows, strange dreamers. Taylor and Francis online. 2021. <https://www.tandfonline.com/doi/full/10.1080/24761028.2021.1932018>

27. Hai, Thanh Do. Vietnam and China: Identical bedfellows, strange dreamers. Taylor and Francis online. 2021. <https://www.tandfonline.com/doi/full/10.1080/24761028.2021.1932018>

28. Vietnamese growing concerns with Chinese loans. The economic times. 2018. <https://economictimes.indiatimes.com/news/international/world-news/vietnams-growing-concern-with-chinese-loans/articleshow/66862840.cms?from=mdr>

Project	Sector	Description
<p>Zhongxing Telecommunication Equipment Corporation (ZTE) donates equipment worth USD 1 million to Hanoi University of Technology</p>	<p>Communications</p>	<ul style="list-style-type: none"> <li>◆ <b>Span:</b> 2011</li> <li>◆ <b>Status:</b> Completed</li> <li>◆ <b>Budget:</b> USD 1 million</li> <li>◆ <b>Modality:</b> Grant</li> <li>◆ <b>Funding Agencies:</b> ZTE corporation</li> <li>◆ On March 22, 2011, ZTE Telecommunications Corporation officially handed over equipment worth USD 1 million to a new laboratory at the Hanoi University of Science and Technology (HUST). The donation included independent intellectual property rights of high-end routers, broadband multi-service gateways, core routing switches, and other data communications equipment. The completion of the laboratory will enhance research and training capacity Hanoi University of Technology in the field of data communication.</li> </ul>
<p>Chinese embassy donates office equipment to Vietnam Ministry of Education</p>	<p>Government and Civil Society</p>	<ul style="list-style-type: none"> <li>◆ <b>Span:</b> 2011</li> <li>◆ <b>Status:</b> Completed</li> <li>◆ <b>Budget:</b> VND 192,500,000</li> <li>◆ <b>Modality:</b> Grant</li> <li>◆ <b>Funding Agencies:</b> Chinese Embassy</li> <li>◆ On 24 January 2011, Chinese ambassador to Vietnam, Sun Guoxiang, donates 10 sets of office equipment worth VND 192.5 million to the Vietnamese Ministry of Education and Training. During the meeting, Ambassador Sun Guoxiang indicates positive progress in exchanges and cooperation in the field of education. The Vietnamese Ministry thanked the Chinese Embassy for donating the equipment and stressed that the Vietnamese Party and government are very concerned about the development of education and attach great importance to exchanges and cooperation with China.</li> </ul>

Project	Sector	Description
<p>China Eximbank provides RMB 600 million government concessional loan for 1244MW Vinh Tan 2 Coal-Fired Power Plant Construction Project</p>	<p>Energy</p>	<ul style="list-style-type: none"> <li>◆ <b>Span:</b> 2010-2015</li> <li>◆ <b>Status:</b> Completed</li> <li>◆ <b>Budget:</b> CNY 600 million</li> <li>◆ <b>Modality:</b> Loan</li> <li>◆ <b>Funding Agencies:</b> Export Import Bank of China</li> <li>◆ On September 7, 2009, China Eximbank and the Vietnam Ministry of Finance signed preferential buyer's credit (PBC) loan framework agreement for the the 1244MW Vinh Tan 2 Coal-Fired Power Plant Construction Project. Then, on December 17, 2010, China Eximbank and Vietnam Electricity (EVN) – a state-owned power company – signed three loan agreements for this project:(1) RMB 600 million government concessional loan (GCL) agreement with a 17-year maturity. This loan matures in 2027 (2) USD 300 million preferential buyer's credit (PBC) agreement with a 17-year maturity. This loan matures in 2027 (3) USD 695 million buyer's credit loan (BCL) agreement with an 18-year maturity. This loan matures in 2028.</li> </ul>

**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 Cao Lanh Bridge	Project CLUES	Project RE Development Program
Donor(s) Government of Australia, ADB	Donor(s) Australian Centre of International Agricultural Research	Donor(s) Australian Aid (AusAID), The World Bank, Carbon Partnership Facility Tranche 2 and Others
<b>Best Practices</b> <ul style="list-style-type: none"> <li>◆ Staff training on pressing social/environmental issues</li> <li>◆ Development of framework for income restoration</li> <li>◆ Capacity building of women and ethnic minorities</li> <li>◆ Preparation and implementation of anti-corruption action plan</li> <li>◆ Operationalisation of a computerized project management system for monitoring and evaluation</li> <li>◆ Management of health risks</li> <li>◆ Creation of action plan to address Inventory of Losses (IoL)</li> </ul>	<b>Best Practices</b> <ul style="list-style-type: none"> <li>◆ Establishment of adequate infrastructure for project authorities to ensure effective communication, operations, and coordination between stakeholders</li> <li>◆ Appointment of experts – on climate change adaptation and mitigation measures – to ensure sustainability</li> <li>◆ Engagement of relevant stakeholders in participatory on-site training, workshops, etc.</li> <li>◆ Dissemination of findings of the project to relevant stakeholders</li> </ul>	<b>Best Practices</b> <ul style="list-style-type: none"> <li>◆ Provision of training and practical demonstration for stakeholders</li> <li>◆ Deployment of an efficient and long-term financing mechanism</li> <li>◆ Enhancement of efficiency through increased competition</li> <li>◆ Encouragement for commercial banks to proactively expand capacity</li> <li>◆ Management of interests of women/vulnerable groups</li> <li>◆ Reduction of poverty</li> <li>◆ Improvements in business environment</li> </ul>
<b>Major Challenges</b> <ul style="list-style-type: none"> <li>◆ Multiple independent donor agencies financing different components of the project</li> <li>◆ Lack of coordination</li> </ul>	<b>Major Challenges</b> <ul style="list-style-type: none"> <li>◆ Issues in crop diversification</li> <li>◆ Gender disparity</li> <li>◆ Weak institutional coordination</li> </ul>	<b>Major Challenges</b> <ul style="list-style-type: none"> <li>◆ Delays in implementation</li> <li>◆ Initial glitches in environmental protection</li> <li>◆ Delays in reimbursements</li> </ul>

### **Ensuring Sustainability of Cao Lanh Bridge<sup>30</sup>**

The Cao Lanh Bridge project is a flagship investment worth AUD 160 million, including AUD 26 million in technical assistance, and falls under Hanoi Post's economic integration pillar. The project has ensured sustainability in the following ways – During then-Prime Minister Julia Gillard's visit, she made a strong political case for incorporating DEC (Disaster risk reduction, environment, and climate change adaptation and mitigation) into the design of the Cao Lanh Bridge, which was one of the first significant infrastructure projects to do so; The Asian Development Bank (ADB), the project's coordinating development partner, funded AUD 170,000 to consultants to conduct a climate risk study. According to the analysis, increasing the bridge's design height by 0.75m would improve its resilience to 20-year flooding events, and the bridge design team duly implemented this specification; The climate change consultants advised that the associated road networks be raised by 0.6m which is twice the height of expected rise in sea levels by 2050 as predicted in the 'official' climate scenario by Ministry of Natural Resources and Environment.

### **Ensuring Sustainability for CLUES Project<sup>31</sup>**

The project used advanced scientific techniques and methodologies to develop high-yielding rice crop varieties that are able to withstand single or multiple stresses such as submergence, stagnant flooding and salinity. Beyond the CLUES project the CLRRRI (Cuu Long Delta Rice Research Institute) also conducted a study on salt leaching in the rice-shrimp system which found that applying lime, ploughing, and leaching frequencies alone or in combination increases salt leaching in the rice-shrimp farming system.

### **Ensuring Sustainability of Renewable Energy Development Program<sup>32</sup>**

The project has ensured sustainability in the following ways – The goal of the project was to create a sustainable market for renewable energy development by improving the regulatory environment, increasing government capacity, and providing a credit line to local banks for renewable energy project investment; Local banks were able to cover their risk in line with commercial best practises thanks to the innovative financing model, which included a combination of concessional investment financing and results-based climate finance from the World Bank; The government's experience will assist it in replicating this business model in other sectors and utilising climate finance to meet the country's future low-carbon development needs.

30. Jobbins, Guy. Phuong, Dang Thu. The case of Vietnam Advancing integration of disaster, environment and climate change. Refworld. <https://www.refworld.org/pdfid/53d0b9e038.pdf>

31. Dang, Phong Ngo. Wassmann, Reiner. Tri, L.Q. Hien, Nguyen Xuan. Climate change affecting land use in the MekongDelta: Adaptation of rice-based cropping systems (CLUES). Research Gate. 2016. [https://www.researchgate.net/publication/301612048\\_Climate\\_change\\_affecting\\_land\\_use\\_in\\_the\\_Mekong\\_Delta\\_Adaptation\\_of\\_rice-based\\_cropping\\_systems\\_CLUES\\_ISBN\\_978-1-925436-36-5](https://www.researchgate.net/publication/301612048_Climate_change_affecting_land_use_in_the_Mekong_Delta_Adaptation_of_rice-based_cropping_systems_CLUES_ISBN_978-1-925436-36-5)

32. Cheng, Zhuo. Tailored World Bank climate finance package mobilizes market for small hydropower in Vietnam. World Bank Blogs. 2020. <https://blogs.worldbank.org/climatechange/tailored-world-bank-climate-finance-package-mobilizes-markets-small-hydropower-vietnam>

# 4

## Scope of India's involvement in Development Cooperation in Vietnam: Mapping Demand and Supply

### 4.1. Opportunities for India



#### Disaster Risk Reduction

- ◆ **Data collection/analysis** - In the areas under focus, the need for optimum data capturing (including complete digitisation 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 Vietnam in improving its information management systems.
- ◆ **Advisory** - India can provide advisory services - including benchmarking and impact evaluation of various interventions/projects - to Vietnam to facilitate augmented risk assessment, planning and project execution.
- ◆ **Capacity building** - India can be a major partner to Vietnam in implementing capacity building measures in key areas such as infrastructure augmentation/modernisation, operational efficiency, technology transfer, technical assistance, training, research and development, community-based development, etc. India has implemented successful models to enable holistic improvements in these areas, which Vietnam can benefit from.
- ◆ **Human resource development** - Vietnam 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, etc.) and optimising awareness generation for successful interventions in the areas under focus.
- ◆ **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, compliance issues, etc. and subsequently, exercising effective reform measures to iron out such issues.
- ◆ **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, measurement of interim outcomes, 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 and reduce delays in implementation.
- ◆ **Increased participation of women** - India can share its experience and assist Vietnam in augmenting the role of women in areas such as agriculture. It can also help eradicate gender disparity in training.



### Climate Smart Agriculture

- ◆ **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, compliance issues, etc. and subsequently, exercising effective reform measures to iron out such issues.
- ◆ **Private participation** - India can facilitate private participation (including private investments) in Vietnam, to foster holistic development in the areas under focus.
- ◆ **Human resource development** - Vietnam 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, etc.) and optimising awareness generation for successful interventions in the areas under focus.
- ◆ **Capacity building** - India can be a major partner to Vietnam in implementing capacity building measures in key areas such as infrastructure augmentation/modernisation, operational efficiency, technology transfer, technical assistance, training, research and development, community-based development, etc. India has implemented successful models to enable holistic improvements in these areas, which Vietnam can benefit from. For instance, in agriculture, India can assist in the development of climate resistant crop varieties, foster effective forward/backward linkages, facilitate development of irrigation systems, etc. among others.



### Renewable Energy

- ◆ **Capacity building** - India can be a major partner to Vietnam in implementing capacity building measures in key areas such as infrastructure augmentation/modernisation, operational efficiency, technology transfer, technical assistance, training, research and development, community-based development, etc. India has implemented successful models to enable holistic improvements in these areas, which Vietnam can benefit from.
- ◆ **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, compliance issues, etc. and subsequently, exercising effective reform measures to iron out such issues.
- ◆ **Human resource development** - Vietnam 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, etc.) and optimising awareness generation for successful interventions in the areas under focus.



## 4.2. Disaster Risk Reduction

**Table 8 – Private and Public Stakeholder Mapping for DRR**

Cooperation Sectors	Indian Stakeholders	Vietnamese Stakeholders
Technical assistance for DRR	<b>Government Stakeholders</b>	<ul style="list-style-type: none"> <li>• Central Committee for Natural Disaster Prevention and Control (CCNDPC)</li> <li>• Viet Nam Disaster Management Authority</li> <li>• Ministry of Agriculture</li> <li>• Rural Development (MARD) Central Committee for Flood</li> <li>• Storm Control (CCFSC)</li> <li>• Disaster Management Centre (DMC)</li> <li>• Ministry of Transport (Government of Vietnam)</li> </ul>
	<ul style="list-style-type: none"> <li>• Indian Meteorological Department (IMD)</li> <li>• The National Centre for Medium Range Weather Forecasting (NCMRWF)</li> <li>• Indian National Centre for Oceanic Information Systems (INCOIS)</li> <li>• National Remote Sensing Centre (NRSC)</li> <li>• Indian Space Research Organization (ISRO)</li> </ul>	
Technical assistance for DRR	<b>Private Stakeholders, NGOs and Educational Institutes</b>	
	<ul style="list-style-type: none"> <li>• Oxfam India</li> <li>• World Wide Fund for Nature (WWF), India</li> </ul>	
Legislative, planning and policy framework for improved governance	<ul style="list-style-type: none"> <li>• National Disaster Management Authority (NDMA)</li> </ul>	
Developing Early Warning systems and emergency response	<ul style="list-style-type: none"> <li>• IIT Delhi</li> <li>• National Disaster Response Force (NDRF)</li> <li>• National Fire Service College</li> <li>• National Civil Defense College</li> </ul>	
Capacity Building	<b>Government Stakeholders</b>	
	<ul style="list-style-type: none"> <li>• National Institute of Disaster Management (NIDM)</li> <li>• Centre for Disaster Management at Lal Bahadur Shastri National Academy of Administration (LBSNAA)</li> <li>• Centres for Disaster Management in the State Administrative Training Institutes</li> <li>• SAARC Disaster Management Centre (SDMC)</li> </ul>	
	<b>Private Stakeholders, NGOs and Educational Institutes</b>	
	<ul style="list-style-type: none"> <li>• Development Research Communication and Service Centre (DRCS)</li> <li>• Bharat Seva Ashram Sangh</li> <li>• Tagore Society for Rural Development (TSRD)</li> </ul>	

## 4.3. Climate Smart Agriculture

**Table 9 - Private and Public Stakeholder Mapping for Climate Smart Agriculture**

Cooperation Sectors	Indian Stakeholders	Vietnamese Stakeholders
Technical assistance and training	<b>Government Stakeholders</b>	
	<ul style="list-style-type: none"> <li>National Innovation in Climate Resilient Agriculture (NICRA)</li> <li>National Institute of Rural Development &amp; Panchayati Raj (NIRD&amp;PR)</li> </ul>	
	<b>Private Stakeholders, NGOs and Educational Institutes</b>	
Capacity Building	<b>Government Stakeholders</b>	<ul style="list-style-type: none"> <li>Ministry of Natural Resources and the Environment (MoNRE)</li> <li>Ministry of Agriculture and Rural Development</li> </ul>
	<ul style="list-style-type: none"> <li>National Innovation in Climate Resilient Agriculture (NICRA)</li> <li>Indian Council for Agricultural Research (ICAR)</li> <li>National Institute of Agricultural Extension Management (MANAGE)</li> </ul>	
	<b>Private Stakeholders, NGOs and Educational Institutes</b>	
Policy and Regulatory	<b>Government Stakeholders</b>	
	<ul style="list-style-type: none"> <li>National Institute of Rural Development &amp; Panchayati Raj (NIRD&amp;PR)</li> <li>Ministry of Rural Development (MRD)</li> </ul>	
	<b>Private Stakeholders, NGOs and Educational Institutes</b>	
Services and Business Models	<ul style="list-style-type: none"> <li>The Energy and Resources Institute (TERI)</li> <li>Centre for Sustainable Agriculture</li> </ul>	
	<ul style="list-style-type: none"> <li>International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)</li> <li>Agri Innovation Hub (AgriHub)</li> </ul>	

## 4.4. Renewable Energy

**Table 10 - Private and Public Stakeholder Mapping for Renewable Energy**

Cooperation Sectors	Indian Stakeholders	Vietnamese Stakeholders
Technical assistance and training	<b>Government Stakeholders</b>	<ul style="list-style-type: none"> <li>• Electricity and Renewable Energy Authority</li> <li>• The Ministry of Industry and Trade (MoIT) of Vietnam General Directorate of Energy (GDE)</li> <li>• The Electricity Regulatory Authority of Vietnam (ERAV)</li> <li>• The Institute of Energy</li> <li>• The Energy Efficiency and Conservation Office</li> </ul>
	<ul style="list-style-type: none"> <li>• Ministry of New and Renewable Energy (MNRE)</li> <li>• Centre for Study of Science, Technology and policy (CSTEP)</li> <li>• Power System Operation Corporation (POSOCO)</li> <li>• Central Electricity Authority (CEA)</li> <li>• National institute of Solar Energy (NISE)</li> </ul>	
	<b>Private Stakeholders, NGOs and Educational Institutes</b>	
Capacity Building	<ul style="list-style-type: none"> <li>• The Energy and Research Institute (TERI)</li> <li>• Sardar Swaran Singh National Institute of Bio-Energy (SSS-NIBE)</li> <li>• National Institute of Wind Energy (NIWE)</li> <li>• Energy Efficiency Services Limited (EESL)</li> <li>• Council on Energy, Environment and Water (CEEW)</li> </ul>	
	<b>Government Stakeholders</b>	
Research and Advisory	<ul style="list-style-type: none"> <li>• Indian Renewable Energy Development Agency Limited (IREDA)</li> <li>• National Skill Development Corporation (NSDC)</li> <li>• Skill Council for Green Jobs (SCGJ)</li> <li>• Indian Institute of Technology</li> <li>• National institute of Technology</li> <li>• Indian Institute of Science</li> <li>• Indian Space Research Organisation (ISRO)</li> </ul>	
	<ul style="list-style-type: none"> <li>• Indian Institutes of Technology (IITs)</li> <li>• Indian Institute of Science (IISc)</li> <li>• National Institutes of Technology (NITs)</li> <li>• Skill Council of Green Jobs (SCGJ)</li> <li>• Barefoot College</li> <li>• Council of Scientific and Industrial Research (CSIR) Labs</li> </ul>	

## 4.5. Financing Models and Ensuring Sustainability of India's Assistance beyond the TriDeP cycle

Financing models form 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 model can be of various types ranging from Debt-Financing, Equity Financing, Equity Financing or Financing via public sources etc.



### 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.<sup>33</sup>

- ◆ 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 map 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.<sup>34</sup>



### 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.<sup>35</sup>

- ◆ 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.

33. 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>

34. Financing options for renewable energy and energy efficiency. Sustainable Energy Regulation and Policymaking for Africa. <http://africa-toolkit.reEEP.org/modules/Module19.pdf>

35. 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 includes 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.<sup>36</sup>



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.<sup>37</sup>

The aforementioned initiatives under TriDeP can lay the foundation for holistic improvements – in terms of information management, risk assessment, project implementation, capacity building, development of hard/soft infrastructure, regulatory improvements etc. among others – the impact of which would potentially be experienced beyond the TriDeP life cycle.

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

37. Ibid.

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

### Framework

#### Overall Advantages of Triangular Cooperation

- ◆ A bridge between South-South and North-South cooperation
- ◆ A platform for improvement of synergies between emerging donor, traditional donor and partner country
- ◆ A mechanism encouraging contributions as per comparative advantages of actants

#### U.S. (The Traditional Donor) - Priorities

- ◆ Avoidance of duplication of efforts through partnerships with developing countries
- ◆ Reduction in burden of donorship by equipping emerging donors
- ◆ Creation of cost effective development cooperation initiatives by effectively using resources and experiences of emerging countries

#### India (The Emerging Donor) - Priorities

- ◆ Creation of footprint as a donor globally
- ◆ Development cooperation for mutual benefit by leveraging strengths of all parties
- ◆ Major thrust areas - trade, investment, technology and capacity building among others
- ◆ Emphasis on mutual development and demand driven priorities

#### U.S. as a Traditional Donor

- ◆ Expertise and experience sharing with respect to climate change and energy security
- ◆ Ensuring skill development and job led growth
- ◆ Sharing advanced technological solutions
- ◆ Organising relevant tie-ups/consultations
- ◆ Providing guidance on potential bottlenecks
- ◆ Facilitating empowerment of women

#### Potential Third Parties

- ◆ Financers (ADB, The World Bank, etc.)
- ◆ Private players (including technology solution providers, investors, etc.)
- ◆ Quad partners (Japan, Australia)
- ◆ Research partners
- ◆ Academia

### India as an Emerging Donor in Vietnam

#### ◆ Disaster Risk Reduction

- ◆ Providing data management services
- ◆ Aiding preparedness through advanced technologies (warning systems, emergency communications, response systems, etc.)
- ◆ Fostering systemic improvements and capacity building

#### ◆ Climate Smart Agriculture

- ◆ Developing crop varieties tolerant to drought, heat, etc.
- ◆ Providing technologies and services
- ◆ Sharing effective business models
- ◆ Providing regulatory advisory

#### ◆ Renewable Energy

- ◆ Providing technologies/products and services
- ◆ Facilitating research/skill development
- ◆ Aiding awareness generation

### Vietnam as a Partner Country (Recipient)

#### ◆ Disaster Risk Reduction

- ◆ Further improvements in data handling and risk modelling
- ◆ Boost in risk preparedness through the use of advanced technological solutions
- ◆ Streamlined policy framework
- ◆ Increase in investments

#### ◆ Climate Smart Agriculture

- ◆ Strengthening of policies/regulations
- ◆ Increased private investments
- ◆ Enhanced knowledge on crop varieties, latest techniques, technologies, etc.
- ◆ Effective training of human resources

#### ◆ Renewable Energy

- ◆ Acquisition of latest technologies
- ◆ Streamlined regulatory aspects
- ◆ Adequately trained workforce
- ◆ Higher awareness levels

Source: ORF, OECD, 2010 Bogotá Statement, BRIEF Research

### Scope of India-U.S. and India-Vietnam Synergies

In the backdrop of strong India-U.S. and India-Vietnam relationships, there is potential for meaningful synergies between India, U.S. and Vietnam 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, awareness, etc. among others in these areas, which it can share with Vietnam 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 provide advanced data management services to Vietnam, which would ensure overall improvements in data handling and risk modelling, thereby aiding risk assessment and prioritisation of investments. India can also supply advanced technologies (warning systems, emergency communications, response systems, etc.) to improve Vietnam's overall preparedness, including areas such as hydro-meteorological modelling and risk assessment. There can be a host of other initiatives in terms of systemic improvements and capacity building, based on specific issues faced by Vietnam in the area. Further, India can also assist in streamlining regulatory issues and facilitating smooth operations of relevant agencies.

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- ii) Synergies in CSA** – India has ample experience in developing crop varieties tolerant to drought, heat, etc., which it can share with Vietnam along with latest techniques, technologies, etc. India has also successfully deployed business models such as rice nursery enterprise model, women-led informal seed production, etc., the technicalities of which can streamline agricultural operations in Vietnam. Further, adequate training can be provided to the farming community as well as human resources at various levels in relevant institutions on key technical aspects. Also, regulatory advisory may be provided to ensure synchronization of agricultural and climate change policies. India can also assist in attracting private investments into the sector.
- iii) Synergies in RE** – India can provide technologies, products and services to strengthen relevant industries, infrastructure areas (such as grid capacity), etc. It can also undertake skill development initiatives to facilitate the development of a capable workforce in the sector. India's RE generation capacity has augmented considerably on account of strong policy initiatives, reduced power tariffs, skill development as well as training and awareness programmes. Vietnam can benefit substantially from India's experience and expertise in these areas.
- 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 tryst 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, etc. 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 organisations 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 the 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 Vietnam. 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 Vietnam.<sup>38</sup>

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38. Based on stakeholder interaction



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