



2023-24

ANNUAL REPORT



Vasudha Foundation is a non-profit organisation set up in 2010, with the belief in the conservation of Vasudha, which in Sanskrit means the Earth, the giver of wealth and with the objective of promoting sustainable consumption of its bounties.



ABOUT THE ORGANISATION

Vasudha Foundation is one of the prominent CSO/Think Tanks with the mission to conserve Vasudha through innovative approaches that can ensure a sustainable and inclusive future for India and Mother Earth. Vasudha Foundation approach is largely data driven analysis, creation of data repositories with cross sectoral analysis, along with outreach to ensure resource conservation with the ultimate objective of conserving Mother Earth.



VISION

We believe in the conservation of Vasudha, which in Sanskrit means the Earth, the giver of wealth, with the objective of promoting sustainable consumption of its bounties.



MISSION

We promote environment-friendly, socially just and sustainable models of energy by focusing on renewable energy and energy efficient technologies as well as lifestyle solutions.

AREAS OF WORK



Access to Clean Energy and Creation of Livelihoods through Clean Energy Applications

Vasudha Foundation is engaged in ensuring access to clean, sustainable, affordable, 24x7 energy for all and works in collaboration with various agencies to develop models and pilots for rural energy access with an aim to address livelihood enhancement and income creation in rural areas.

Renewable Energy and Power Sector – Energy Transition

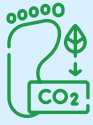


Vasudha's Energy Transition team is primarily focused on assisting India's clean energy transition by developing data repositories and conducting data-driven analysis to ensure that all stakeholders are on board with the country's clean energy transition. The team also assesses potential or possible barriers to scaling up clean energy solutions and reforming India's power sector, as well as proposes potential solutions to address the perceived barriers, through its in-depth analysis.

The energy transition team has also focused on highlighting cross-sectoral issues that have an impact on India's power sector, particularly those related to water, land, environment, and air quality.

The organisation has already built a large data repository that is housed in an exclusive website that allows easy access to data and analysis without any paywalls, which will aid in attracting a wide range of stakeholders to participate and actively engage in India's clean energy transition.

Low Carbon Pathways and Climate Policy



The Climate team engages actively with policymakers, researchers and others stakeholders at the state and national level with robust qualitative and quantitative research and analysis to ensure mainstreaming climate concerns and sustainable development goals into development planning. The climate team works with the energy transition team to develop cross-sectoral and sector specific solutions to mainstream climate and sustainable development goals.

Sustainable Transport Solutions



The sustainable transport solutions team sits with the climate and energy transition team and is engaged in promoting the policies of the Government of India to scale up electric mobility, public transportation and non-motorised transportation across the length and breadth of India. The team is currently engaged in mapping barriers towards achieving the set target of 30% electric mobility by 2030 to ensure the target achievement.

Climate Finance



The climate finance team works on the premise that finances are key to energy transition and this requires a combination of domestic financing as well as international financing. The Climate finance team is also tracking domestic financial flows and investments into clean energy solutions in India.

Climate Resilience



The work primarily engages with communities, particularly the farming communities in key states in promoting low water use cropping in India. The team also works with communities in minimising crop burning through alternate solutions of using crop waste.

Global Partnerships (Cross-cutting)



Global Partnerships, as a cross-cutting project, entails proactively engaging with various global platforms on climate and clean energy solutions. Vasudha Foundation is a member of the IRENA Coalition of Action, The Climate Action Network, and various other Civil Society platforms such as Civil 20, BRICS 20, and others as part of its Global Partnerships. Vasudha Foundation is also a UNFCCC, World Bank, Asia Infrastructure Investment Bank, and New Development Bank accredited observer.

The team is also showcasing India's actions in combating climate change and the leadership role it is playing in renewable energy scale-up as part of its global engagement. The global engagement also keeps track of UNFCCC climate negotiations as well as international financial flows.



MESSAGE FROM THE CEO

The Financial Year 2023-24 was yet another eventful year for Vasudha Foundation, both in terms of the growth of the Organisation as well as in terms of the quantum of new projects and the felt impacts of our work.

The year 2023-24, saw Vasudha Foundation expanding its partnerships particularly at the State Level with formal partnerships with the Governments of Tamil Nadu, Gujarat and Madhya Pradesh. Specifically, the partnerships entered for a wide range of technical, research and policy formulation support with the Department of Environment, Forests and Climate Change, Government of Tamil Nadu and the Tamil Nadu Green Climate Company, The Department of Urban Development and Housing Department and The Environment Planning and Coordination Organisation of the Government of Madhya Pradesh and the Gujarat Energy Development Agency and the Department of Climate Change, Government of Gujarat. These partnerships flagged off a number of new and first of its kind projects for Vasudha Foundation and specifically in partnerships with State Governments.

Further, our partnership with NITI Aayog has expanded to new dimensions, including our engagement in developing robust pathways to meet India's Net Zero ambition, that was announced by the Honourable Prime Minister of India in November 2021 at Glasgow.

Some of the notable achievements on the Programme front achieved in the year 2023-24 and adding a number of new feathers to our cap.

- The Launch of the India Climate and Energy Dashboard on the 20th July 2023, a one of its kind dashboard developed in partnership with NITI Aayog, that showcases comprehensive historic and near real time data from the entire energy value chain along with data from the climate and key economic indicators to present a holistic picture of India's ambitious Clean Energy journey across the years.
- The launch of the UP Solar Cities Portal, in coordination with the Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA), marks a significant step towards accelerating solar adoption in the state. This one-stop digital platform is designed to empower residents of Uttar Pradesh's designated solar cities, starting with Ghaziabad and Agra, by providing comprehensive and user-friendly access to information on solar rooftop installations. This portal enables homeowners to identify their individual houses, assess the solar potential of their rooftops, and gain insights into financial implications, expected power generation over 25 years (accounting for localized losses), and overall benefits.
- The Completion of one of its kind and easy to comprehend guide to enable 58,000 Gram Panchayats across the state of Uttar Pradesh to develop Climate Smart Gram Panchayat Action Plans for all its 58,000 Gram Panchayats and in line with the vision and mission of the Honourable Prime Minister of India and the Honourable Chief Minister of Uttar Pradesh in making Gram Panchayats Climate Smart and embark on a Sustainable Development Pathway. The Guide, which has been christened as "Standard Operating Procedure" was formally submitted to the Government of Uttar Pradesh for their approval.
- The Start of yet another important work on facilitating the development of Net Zero pathways in partnership with NITI Aayog.
- The Start of our work in making Districts and Cities of Tamil Nadu Climate Smart
- The flagging off the work in developing a brand new Electric Mobility Policy for the Government of Madhya Pradesh for the period of 2025 and beyond.

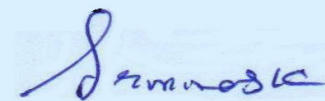
In addition to the above, Vasudha Foundation also embarked on interesting projects to push for decarbonisation of sectors that have been traditionally dependent on fossil fuels such as the Cooking Sector, the Transport Sector, the Industrial Sector and in line with the “Go Electric Campaign” of the Government of India, launched in 2021.

On the Financial front, our revenues increased by approximately 70 percent to the previous year and for the first time, we were able to breach the Rs. 10 Cr mark, with total revenues being in the region of Rs. 15 Cr.

On the Human Resources front, close to 25 new employees joined Vasudha bringing in new expertise and talent to the organisation. We also set up a full-fledged office operational in Lucknow. With the addition of our office in Lucknow, Vasudha Foundation now has offices in Bangalore, Delhi and Lucknow, with staff operating out of Ahmedabad/Gandhinagar, Chennai, Bhopal, Ayodhya and Mumbai.

With an extremely satisfying, impactful and a growth driven 2023-24 for Team Vasudha, we are now geared up to welcome the financial year 2024-25, which also seems to have all the required ingredients for yet another successful and a growth filled year.

Bangalore/New Delhi
July, 2024



Srinivas Krishnaswamy
CEO, Vasudha Foundation

ALL-STAFF RETREAT 2023, MAHABALIPURAM, TAMIL NADU

November 19 – 23, 2023

Vasudha Foundation's second all-staff retreat was held at **Mahabalipuram, Tamil Nadu**. The retreat brought together the teams from Delhi, Lucknow and Bangalore for five days of leisure and team-building activities. On Day 2, the team had an engaging interaction with **Ms. Supriya Sahu, IAS**, Additional Chief Secretary, Department of Environment, Climate Change, and Forests, Government of Tamil Nadu, and **Ms. Nirmala Raja, Chairperson of RAMCO Community Services**. On Day 3 & 4 had interesting team building sessions and exploring new opportunities, where the teams also shared their ongoing projects and exchanged ideas. We also had the opportunity to visit the mesmerising Shore temple. On Day 5, the team leads and senior management discussed the outcomes and way forward. The retreat was a great success and fostered camaraderie and collaboration among team members.



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CLEAN POWER, E-MOBILITY & EMERGING TECHNOLOGIES



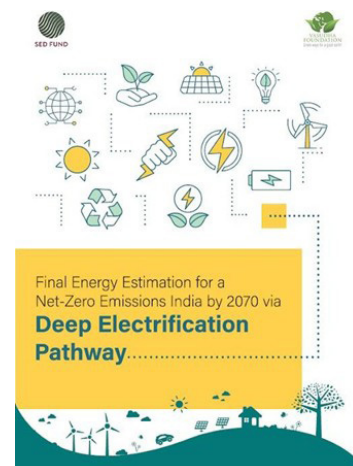
Clean Power

Deep Electrification Forum, Phase II

Final Energy Estimation for a Net-Zero Emissions India by 2070 via Deep Electrification Pathway

India's pathway to Net Zero must be led by a successful and just energy transition. To tackle the energy transition challenge, electrification emerges as a critical energy vector to foster a clean energy transition.

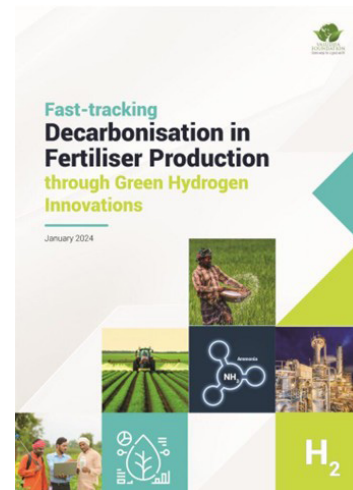
In this paper, we examine the impact of an economy-wide deep electrification strategy on the final energy requirement for India. Multiple scenarios accounting for varying levels of direct and indirect electrification have been considered. These estimates serve as a reference in charting out the Net-Zero pathway by contributing to resource planning and other critical components leading to an electrified, energy-secure, and developed India by 2070.



Fast-tracking Decarbonisation in Fertiliser Production Through Green Hydrogen Innovations

Modernised agricultural technologies and advanced chemical fertilisers play a key role in meeting the food demands of the growing population which requires nearly a 60 percent increase in overall food production from current levels.

In this report, we had examined the production pathways of the majorly produced fertilisers in India – Urea, DAP, and complex fertilisers (NPK). The report further delves into the sustainable fertiliser production routes: leading to low-carbon fertilisers and renewable fertilisers. The report also identifies possible pathways of green urea production (through green ammonia and biomass). It additionally examines case studies involving nitrogenous fertilisers that are not urea-based, exploring their potential prospects going forward.



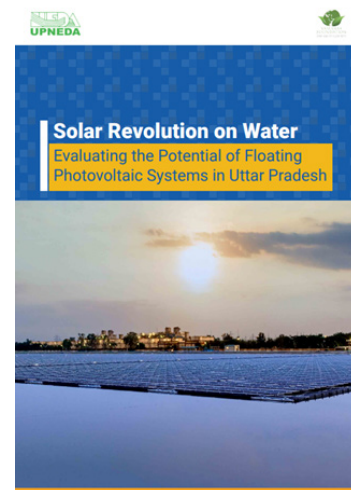
As a key achievement, KRIBHCO (Krishak Bharati Cooperative Limited), a key stakeholder and the second largest urea manufacturer at a single location in India expressed interest in building pilot projects jointly with NitroCapt, which produces cost-efficient and sustainable fertilisers.

Scaling Renewable Energy in Uttar Pradesh

Solar Revolution on Water: Evaluating the Potential of Floating Photovoltaic Systems in Uttar Pradesh

Uttar Pradesh in its revised Solar Policy 2022 had set a target to achieve 22 GW of installed solar capacity. This policy tenet coupled with limitations and challenges faced by ground-mounted solar projects related to land availability, raised the need to explore other solar typologies such as Floating Solar PVs (FPV).

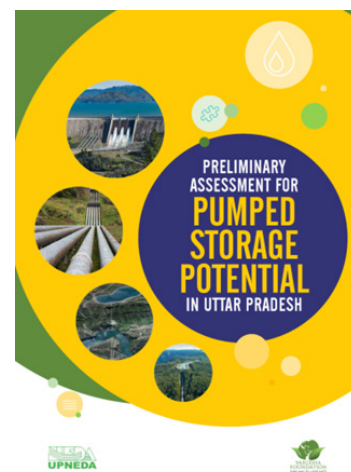
This report captures a detailed assessment of the FPV potential in Uttar Pradesh and also provides a description of the technology of FPV projects, and major cost components of a typical system. A GIS-based mapping of the water bodies with predetermined criteria that reflects suitability of sites for FPV installation was carried out. Various considerations such as proximity to the road network, and water body presence in protected areas were included to determine a realistic estimation of the FPV potential. An energy yield assessment was also conducted to analyse the merits of various FPV configurations.



Preliminary Assessment for Pumped Storage Potential in Uttar Pradesh

Pumped storage is a reliable and established energy storage technology that is essential for ensuring grid stability. India has considerable pumped storage potential, with approximately 103 GW identified by the Central Electricity Authority and it could be a great opportunity for Uttar Pradesh to tap into as the State has ambitious solar targets to achieve.

This paper identified 33 potential pumped storage sites in Uttar Pradesh, using GIS-based mapping with a combined energy storage potential lying between 186.96 GWh and 200.42 GWh. It considers two typologies: first one, linking existing reservoirs via penstocks and adding powerhouses to transform them into pumped storage facilities and the second one involves identifying suitable locations for a second reservoir to be built alongside an existing lake or reservoir. The paper also describes the status of pumped storage projects in India with a focus on the regulatory landscape and impacts of such projects.



Support Ghaziabad Municipal Corporation in Preparing Detailed Project Reports for Solar Energy Projects in the City

Vasudha Foundation supported Ghaziabad Municipal Corporation in preparing Detailed Project Reports for developing various solar energy projects in the city.

Uttar Pradesh Solar Cities Portal

According to the UP Solar Policy 2022, there is a strong emphasis on establishing solar cities. These solar cities are aimed at achieving a minimum 10 percent reduction in projected total demand for conventional energy within five years. The initiative began with the development of Ayodhya City as a model solar city and subsequently, seventeen cities are said to be transformed into solar cities.

The UP Solar Cities Portal serves as a valuable platform for residents in solar cities where its primary objective is to enable residents to assess the feasibility of installing grid-connected solar systems on their rooftops. The Portal also features a tool to estimate the rooftop solar potential in solar cities with segment-wise potential for residential, government offices, healthcare and educational institutions, industrial sites and commercial buildings.



India's Power Outlook Series

The Power Outlook Series provides an overview of the status of India's power sector and acts as a tracking tool for stakeholders. The intent is to develop a more informed understanding of the transitions in the energy sector and enhance constructive discourse amongst various stakeholders.

People-Centric Approach Key to Rapid and Effective Clean Energy Transition

Volume 09 explores the nuances behind key transitions happening in the climate and energy space from a people-centric lens. This edition covers the broad economic sectors undergoing a transition – the coal and power generation sector, the automotive sector and the transition in the battery sector. The people-centric lens offers a wide perspective to look at sustainability, inclusivity and equity aspects of transition from a sectoral, institutional and socio-economic lens.



Meeting Paris Agreement Goals on Climate Action and Accountability

Central to its narrative is the Global Stocktake at COP28, a linchpin for assessing the progress in curbing carbon emissions. This edition discerns the effectiveness of climate commitments, particularly within the G20 nations, responsible for 85 percent of global GDP and a substantial share of emissions. It sheds light on tangible actions taken in response to climate change, emphasising a collective evaluation of major economies.



Electric Mobility

Formulating and Implementing Electric Vehicle Policy in Madhya Pradesh

Collaboration with Urban Development and Housing Department, and Environmental Planning and Coordination Organization, Madhya Pradesh for Advancing Electric Mobility policy and Adoption in the State

Vasudha Foundation formally signed a Memorandum of Understanding (MoU) with the Urban Development and Housing Department, and Environmental Planning and Coordination Organization, Government of Madhya Pradesh to support in preparing the State Electric Vehicle Policy and to develop the Intra-State Bus Electrification Roadmap for two cities: Bhopal and Ujjain.

Zero Emission Truck Transition for Small-to-Medium Fleet Operators

Collaboration with Bal Roadlines Pvt. Ltd. to Jointly Create a Roadmap for Zero Emission Truck Transition for Small-to-Medium Fleet Operators

Vasudha Foundation and Bal Roadlines collaborated formally to create a roadmap for transition to Zero Emission Trucks (ZETs) for small-to-medium fleet operators. The joint initiative also aims to evaluate the socio-economic implications for truck drivers in India through the Zero Emission Truck Transition.

The strategic understanding extends beyond just a roadmap. It encompasses the following initiatives, including technical assistance and research: assisting Bal Roadlines in identifying funding opportunities for Zero Emission Truck adoption, devising novel business models to facilitate a smooth and efficient transition to Zero Emission Trucks, ensuring the process is seamless for Bal Roadlines.





CLIMATE POLICY



Scaling-up Climate Action in Gujarat

Vasudha Foundation entered into a formal partnership and signed an MoU in a strategic partnership (MoU) with Gujarat Energy Development Agency (GEDA), Government of Gujarat in March 2024. Through this strategic partnership Vasudha Foundation, will facilitate the State of Gujarat to scale-up climate action across the state at district level. Team Vasudha has commenced work for preparation the development of Greenhouse Gas (GHG) emissions Inventory and development of Decarbonisation pathways and Climate Action Plans for all the 33 districts of Gujarat. As a part of this work package, Vasudha will also develop a detailed Climate and Energy Dashboard for Gujarat to house all the above analysis and assessments. Net Zero roadmap work for this project involves extensive primary and secondary data collection while working closely with district administration and line departments. This is the first of such an initiative in any State in India. Further, the decarbonisation pathways development would also entail development of detailed potential assessment for ground mounted solar, floating solar and agri-PV for all 33 districts of Gujarat. In line with the above, the partnership with GEDA, also entails the development of a detailed climate finance framework for the state. With administrative support from GEDA, data request templates have been shared with the line departments and stakeholders consultations are being held across the state. Vasudha Foundation in collaboration with GEDA & Gujarat Ecological Commission organised a large stakeholder consultation on the 'Development of Decarbonisation Strategies in the Indian States'.



Enhancing Localisation of Climate Action in Uttar Pradesh

Vasudha Foundation has a strategic partnership with the Department of Environment, Forest and Climate Change (DoEFCC), Government of Uttar Pradesh to support DoEFCC on a wide-range of sub-national climate action.

As part of this work package, Climate Action Plans are being developed for the districts of Chitrakoot and Gautam Buddha Nagar, and for Ayodhya City. Further, Climate Smart Action Plans are also being prepared for 43 Gram Panchayats that were selected from 43 vulnerable districts of UP. These tailored action plans for the sub-national entities will reduce emissions, build resilience, leverage local resources, and engage communities for effective climate action.



Stakeholder consultation in Chitrakoot



PRA Activities in Ayar, Varanasi and Bhujpura, Kasganj

Additionally, a guiding framework 'Standard Operating Procedure' has been developed to enable 58,000 Gram Panchayats across the state of Uttar Pradesh to develop Climate Smart Gram Panchayat Action Plans for all its 58,000 Gram Panchayats and in line with the vision and mission of

the Honourable Prime Minister of India. The SOP was formally submitted to the Government of Uttar Pradesh for their approval.

Extensive data collection through stakeholder consultations at district, city and Gram Panchayat levels:

- Gram Panchayats: 150+ consultations with Community, Gram Pradhans and Panchayat Secretaries to address data gaps and understand priorities.
- District: Stakeholder consultation in Chitrakoot was chaired by Secretary DoEFCC, District Collector, Divisional Commissioner and was attended by representatives of various line departments (held on 28th October, 2023). Additional meetings were held with line departments in NOIDA and Greater NOIDA development authorities.
- Ayodhya: Several one-on-one meetings and large consultation were held with key line departments and other stakeholders in Ayodhya. Perception survey and field visits were conducted for ground truthing.



Stakeholder consultation with the key line departments in Ayodhya

Further, Vasudha Foundation also provided technical support to the DoEFCC, Government of Uttar Pradesh as well as to the Economic Advisor to the Honourable Chief Minister of Uttar Pradesh in a wide range of activities, like developing frameworks, giving inputs on policy documents, knowledge material for events/workshops and other knowledge products.



Uttar Pradesh National Climate Conclave 2024

Enabling a Carbon Neutral Future for Kerala

Vasudha Foundation has an existing partnership with the Directorate of Environment & Climate Change (DoECC), Government of Kerala, to develop a carbon neutral pathway and a detailed Greenhouse Gas (GHG) inventory and a Dashboard for the state of Kerala.

The draft GHG Inventory and the Dashboard wireframe was developed and presented for review. Vasudha team held regular meetings with line departments and relevant stakeholders to overcome data gaps and to refine the draft estimates. Further, a workshop on Development of Decarbonisation Strategies and Pathways towards 'Carbon-Neutral Kerala by 2050' by Energy Management Centre and Vasudha Foundation was held on 9th February, 2024.



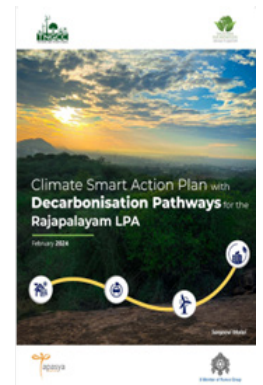
Advancing Sub-national Climate Action in Tamil Nadu

Vasudha Foundation is the technical go-to organization to advance sub-national climate action and decarbonisation for the Tamil Nadu Climate Mission (TNCCM) and Tamil Nadu Green Climate Company (TNGCC). Vasudha Foundation has signed an MoU with the TNGCC in November 2023 to develop district and city level climate action plans and decarbonisation pathways for Tamil Nadu.

As a part of this, Team Vasudha has conducted several field visits and meetings in Nilgiris, Virudhunagar, Ramanathapuram, and Coimbatore. Team Vasudha has finalised the Climate Smart Action Plan with Decarbonisation Pathways draft for the Rajapalayam town. This has been presented to various government stakeholders including the Governing Council Members of TNGCC.



Stakeholder Consultation, Chennai

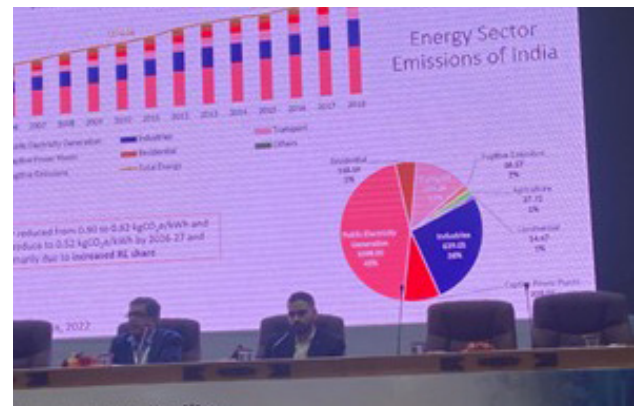


Contribution to Climate Resilient City Action Plans of Jammu and Srinagar Cities

Vasudha Foundation in collaboration with UNDP and Taru Leading Edge supported the Union Territory of Jammu and Kashmir towards development of the Climate Resilient City Action Plans for the cities of Jammu and Srinagar. As a part of this work, Team Vasudha developed the baseline emissions inventory for the cities of Jammu and Srinagar and provided sectoral mitigation measures for these city plans. These plans were launched by the Government of Jammu & Kashmir in May 2023.

Contribution to G20: Leading C20 Sub-Group on 'Net Zero Emissions Management'

As a run-up to the 2023 G20 Meeting held in India, Vasudha Foundation participated and organised several roundtable discussions/ workshops/ dialogues in aspects related to climate action, net-zero pathways development and related topics.



Short Lived Climate Pollutants (SLCP)

Vasudha Foundation in partnership with The Energy Research institute and the Environment Management and Policy Research Institute, Government of Karnataka embarked on a project titled 'Achieving Net Zero with Development and other Co-benefits, primarily aiming to explore possible ways and means to reduce Short Lived Climate Pollutants without impacting development or livelihoods of communities, but rather help to enhance livelihood options. Multiple stakeholder consultations have been conducted, in addition to detailed research on possible solutions to reduce the emissions from Short Lived Climate Pollutants without compromising on livelihoods.

ENERGY TRANSITION



India Climate and Energy Dashboard

The India Climate and Energy Dashboard (ICED) developed by Vasudha Foundation in partnership with NITI Aayog. ICED is a user-friendly platform that aims to bring together comprehensive and time series data from 2005 onwards to provide single window access for all datasets required for climate and energy-related modelling assessments and research. It offers insightful analysis of India's energy, climate and relevant economy-related aspects and further acts as a pillar for robust decision-making enabling India's clean energy transition.

The ICED dashboard was officially launched on 20th July 2023 by Sh. Suman Bery, Vice Chairman, NITI Aayog, Sh. B.V.R. Subrahmanyam, CEO NITI Aayog, and Dr. V. K. Saraswat, Member, NITI Aayog. The launch event was attended by ~ 150 participants with over 200 online participants. The participants were primarily from various line Ministries and the Department of Govt. of India, Think Tanks, Consulting firms, Academia and Research institutes.



Launch of the ICED

Vasudha Foundation, in collaboration with NITI Aayog, has been presenting the dashboard at various workshops, events, and meetings, actively engaging with stakeholders. After the launch, the ICED dashboard was presented at the G20 Clean Energy Ministerial (CEM) in Goa. NITI Aayog has organised an event to demonstrate the ICED dashboard and its usage to the various line ministries/departments. Apart from outreach at the central level, ICED has been presented at various state-level workshops and events in Tamil Nadu, Gujarat, Kerala, Chhattisgarh and Odisha. Also, presented to our industry partners such as Ramco Group, NTPC etc.

Furthermore, use cases from the ICED dashboard have been highlighted to illustrate sub-national energy transition efforts at international forums, including C20, COP28, and discussions with German government departments like BMZ and BMWK.



Energy Ministerial (CEM) in Goa

ICED stands as a testament to India's commitment to embrace a greener future. At the Vasudha Foundation, we hope it becomes an indispensable platform-driving informed decisions and spearheading India's decarbonisation efforts.

Tracking Energy Transition in South Asia through the Energy Transition Platform (ETP)

The Energy Transition Platform (ETP) South Asia aims to create a platform of energy practitioners across the countries of South Asia with the overall objective of putting the respective countries on an Energy Transition Pathway through mutual civil society cooperation and collaboration. Over the course of 8 cycles (2018-2024) the platform has focused on creating a database to track energy transition occurring in the South Asian region covering the countries of Afghanistan, Bangladesh, Bhuta, India, Maldives, Pakistan, Nepal and Sri Lanka. The data points covered through this exercise are installed capacity & power generation (fossil fuels & renewable energy), energy access, GHG emissions and per capita consumption. Additionally, the platform also tracks climate finance flows (from GCF & GEF), AQI of major cities, and electric vehicle penetration.

The annual all-partners meeting was held 17-18th July, 2023 in Colombo, Sri Lanka. The objective of the meeting was to recap the activities and progress from previous year and plan for the upcoming year. The subsequent discussions focused on the measures to strengthen the already existing database, future projects and improving outreach of the platform. Further, a soft launch was held for ETP Launch Webinar in October 2023 where country partners provided an overview of the energy transition in their respective countries



Knowledge Generation and Sharing For Equitable and Inclusive Energy Transition in India

The project has been initiated to mainstream the discourse on equitable and inclusive clean energy transitions in India. We are tracking and compiling the trends and developments in the energy transition space across sectors like power, transport, MSMEs, land-use etc. with a focus on the socio-economic aspects. As part of this, we are engaging in valuable discussions and capturing diverse viewpoints from relevant stakeholders to document and disseminate.

To start with, we are working with CSR stakeholders and leaders to capture their perspectives on the energy transition. Additionally, we are exploring ways to integrate and expand energy transition related activities within CSR initiatives. As part of this project, two briefing papers and a compilation of CSR case studies are being developed.



LOW CARBON PATHWAYS AND MODELLING



Energy Sector Overview, Demand Patterns, and Future Outlook - At National Level

India Energy Overview

Regular Monthly briefs on India's Energy Overview, which cover the information on primary energy mix, electricity capacity expansion, state-wise renewable capacity, and generation trends were released.

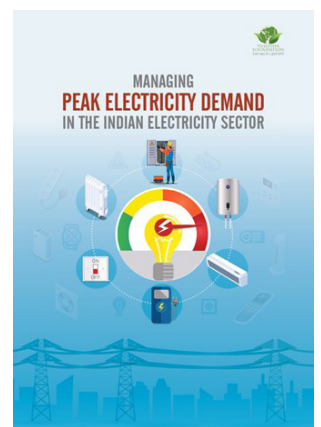
These briefs also highlight thermal generation challenges, market dynamics, electricity demand patterns, fuel statistics, and energy prices. Additionally, these briefs track electric mobility progress and recent policy interventions to accelerate renewable adoption in India.



Managing Peak Electricity Demand in the Indian Electricity Sector

In recent years, the Peak Electricity Demand in India is increasing at a rate higher than that of the total electricity consumption. Over the past decade, India's Peak Electricity Demand has risen from 128 GW in 2011 to 216 GW in 2022, exhibiting an average growth rate of 5 percent (5.4 percent till 2019). The peak demand has further grown faster than electricity consumption growth in few Indian regions, leading to intraday variations in peak demand occurrence.

In the above backdrop, Vasudha Foundation launched a report on 'Managing Peak Electricity Demand in the Indian Electricity Sector' that delves into the role of peak demand change over the years and challenges lying ahead to mitigate the further rise of peak demand. By examining various evidence and data, it draws valuable insights into the patterns, trends and factors that influence peak demand. Utilisation of old thermal assets, planning for resource adequacy, demand shifting and behavioural change are proposed among recommendations to enable the States to meet their peak electricity demand.

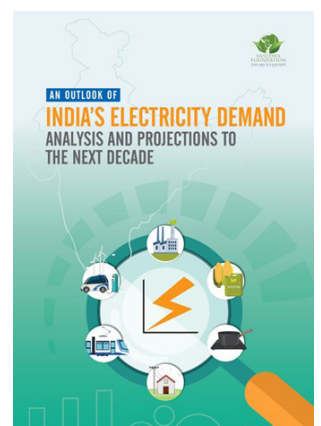


An Outlook of India's Electricity Demand Analysis and Projections to the Next Decade

India's per capita electricity consumption is almost one tenth of the developing countries and a fifth of EMDE countries. The varied margin indicates that India is likely to experience electricity growth in the years to come.

Vasudha Foundation launched 'An Outlook of India's Electricity Demand: Analysis and Projections to the Next Decade' that provides an extensive analysis of electricity demand projections for both national and subnational level over the next decade, informing power system planning and ensuring affordable and reliable power to all. Insights from the report including that of the electricity demand rising two-fold by 2030 are envisaged to serve as valuable resources for policymakers, industry stakeholders and planners.

Apart from the above work and publications, Vasudha Foundation, in collaboration with the Indian Institute of Management (IIM) Calcutta, have also contributed to the book The Role of Coal in a Sustainable Energy Mix for India, which provides insights into the steps and challenges of India's energy transition and addresses key questions on pathways to renewable energy integration.



Sub-national Decarbonisation Activities and Engagements

Development of Carbon Neutral Plan for Kerala

Vasudha Foundation, in collaboration with the Department of Environment and Climate Change, Government of Kerala, is conducting a study to propose sectoral policy interventions for transitioning to a low-carbon economy and achieving carbon neutrality by 2050. As part of this effort, a workshop was held to gather stakeholder inputs on the challenges and opportunities in the state.



Decarbonisation Plan for Rajapalayam local Planning area

Tamil Nadu leads in carbon mitigation through various initiatives, including the Tamil Nadu Green Climate Company (TNGCC), which advances renewable energy, sustainable infrastructure, and climate resilience. TNGCC adopts both state-level and district-level decarbonisation strategies, with Rajapalayam becoming the first town to aim for carbon neutrality by 2041.

In light of this initiative, Vasudha Foundation, in collaboration with TNGCC, is working on developing a decarbonisation strategy for the Rajapalayam Local Planning Area (LPA). Various site visits and discussions with textile association, policy makers, district authorities, farmers etc were carried out to gather inputs to develop a robust and inclusive decarbonisation pathway of the LPA. Rajapalayam is a sprawling textile hub with spinning mills across the town.



Site visits and discussions with key stakeholders to gather inputs for Decarbonising Rajapalayam LPA

Workshops & Stakeholders' Engagements on Development of Decarbonisation Strategies at Regional and State Level

A series of workshops were organised on 'Development of Decarbonisation Strategies in Indian States'. These were intended to bring together a pool of stakeholders and sector experts working at the state level to discuss possible low-carbon pathways in the Indian states, and strengthen collaboration between economy-wide stakeholders, including but not limited to, State-level nodal agencies, System operators, distribution utilities, policy institutions, and academia. Through discussions, the role of data availability, challenges, and scope of collaboration across various state departments were identified.

Vasudha Foundation organised four workshops on the theme of 'Development of Decarbonisation Strategies in Indian States.' These workshops were held in Bhubaneswar (Odisha), Delhi, Gandhinagar (Gujarat), and Chennai (Tamil Nadu).

The workshops/conferences helped in gathering stakeholder perspectives and inputs on the possible pathways that states could embark on towards achieving Net Zero emissions. Additionally, stakeholders discussed the opportunities, challenges, and potential solutions that states could implement in their journey towards Net Zero. The events were well attended by a wide spectrum of stakeholder groups.

Two primers, one of the emissions profile, State-wise policy developments and other green initiatives towards decarbonisation in Southern States and the other in Western States were launched to support the discussions, and can be used by State and non-State actors alike for gaining an understanding of the decarbonisation efforts at subnational level.



EVENTS

Pune Convening of the Deep Electrification Forum – Transport Sector Deep Dive

According to the NDC and net zero by 2070, deep electrification is increasingly seen as a priority area to achieve sustainable economic growth. Electrifying transport end use has been further supported by the Government of India's 'Go Electric' and 'Mission LiFE' campaigns, highlighting India's unwavering commitment to a low-carbon future.

The transport sector deep dive will address the urgent need to reduce greenhouse gas emissions in the aviation, shipping, and road transport sectors, which play a critical role in global transportation and trade. It will focus on the challenges and opportunities associated with abating emissions of these sectors and highlight innovative solutions and best practices for achieving net-zero emissions.



May 1, 2023

Regional Convening of the Deep Electrification Forum, Chennai, India

The regional convening was organised by Vasudha Foundation with support from SED Fund on April 18, 2023, in Chennai with an objective to deep dive into two sub-sectors – road transport and cooking through deep electrification pathways.

The desired outcome of this regional Forum convening was to build the discourse around the challenges, local aspects and prospects prevailing in India's electric vehicle and electric cooking ecosystem. Especially focusing on innovative and bottom-up approaches to electrifying India's end-uses.



May 2, 2023

Regional Convening of the Deep Electrification Forum, Pune, India

The regional convening was organised by Vasudha Foundation with support from SED Fund on May 19, 2023, in Pune with an objective to deep dive into the emission reduction of transport sub-sectors (aviation, marine & road) through deep electrification pathways.

The desired outcome of this regional Forum convening was to build the discourse around the challenges, local aspects and prospects prevailing in India's transport sectors. Especially focusing on innovative approaches to electrifying India's end-uses.



May 26, 2023

Regional Convening of the Deep Electrification Forum, Lucknow, India

The regional convening was organised by Vasudha Foundation with support from SED Fund on May 30, 2023, in Lucknow with an objective to deep dive into the emission reduction of the cooking sector in India.

The desired outcome of this regional Forum convening was to build the discourse around the challenges, local aspects and prospects prevailing in India's electric cooking ecosystem. Especially focusing on innovative and bottom-up approaches to electrifying India's end-uses.



June 7, 2023

Launch of the India Climate and Energy Dashboard

With an aim to advance India's twin goals of digitalization and decarbonization, we launched the India Climate and Energy Dashboard (ICED) in July 2023, in partnership with Niti Aayog. The ICED was launched in the august presence of Niti Aayog's senior leadership including Suman Bery, Vice Chairman (Niti Aayog), BVR Subrahmanyam, CEO (Niti Aayog), Dr. VK Saraswat, Member (NITI Aayog) recorded video messages by Tarun Kapoor, Advisor to the PM and Amitabh Kant, G20 Sherpa and Srinivas Krishnaswamy, CEO (Vasudha Foundation). The event saw great participation from a variety of stakeholders including energy line ministries, philanthropic funders, financiers, industry, academia etc.

ETP Partners Meeting 2023

An all-partners meeting was held 17-18th July, 2023 in Colombo, Sri Lanka. The objective of the meeting was to recap the activities and progress from previous year and plan for the upcoming year. The meeting began with a presentation by Vasudha Foundation on progress of the platform. The subsequent discussions focused on the measures to strengthen the already existing database, future projects and improving outreach of the platform.

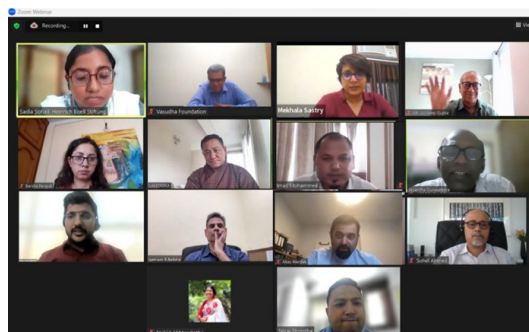


July 17-18, 2023

ETP Launch Webinar

The Energy Transition Platform South Asia was recently launched on the 12th of October (11 AM-1PM IST). The webinar began with a short presentation of the platform and its features. The partner organization representing the countries- Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka provided an overview of the energy scenario of the respective countries. This was followed by Opening Remarks from two eminent speakers Mr Edwin Koekkoek, Team Leader in Green Inclusive Development, Delegation of the European Union to Bangladesh and Mr. Joydeep Gupta, Editor, The Third Pole.

Mr Koekkoek shared his insights on the energy transition scenario for the South Asian region and highlighted the associated barriers & enablers, and how countries of this region can collaborate effectively to scale-up energy transition. Mr. Gupta, also provided insights on the importance of a platform like ETP and having a more robust data representation to include the coverage of renewable energy, solar irrigation, etc could aid in accelerating energy transition of the region. This was followed by a moderated discussion where partner countries provided their views on the trajectory of energy transition, and opportunities & challenges to energy transition arising due to domestic & global situations.



October 12, 2023

Stakeholder Workshop on 'Development of Decarbonisation Strategies in the Indian States'

Vasudha Foundation in collaboration with the Gujarat Energy Development Agency (GEDA) and The Gujarat Ecology Commission (GEC) successfully organised a workshop on 'Development of Decarbonisation Strategies in the Indian States' on Friday, 29th September 2023, at Hotel Taj Vivanta, Gandhinagar, Gujarat.



October 26, 2023

Stakeholder Consultation for the Development of Chitrakoot District Climate Action Plan

Vasudha Foundation and Department of Environment, Forests and Climate Change, Government of Uttar Pradesh hosted a Stakeholder Consultation for the development of Chitrakoot District Climate Action Plan, on 28th October, 2023 at Hotel Bindiram, Chitrakoot. The workshop was organized as a part of the initiative to develop District Climate Action Plans for two districts in the state. The objective of the consultation was to seek views and perspectives from various stakeholders to develop a detailed District Climate Action Plan for Chitrakoot.



November 2, 2023

Development of Decarbonisation Strategies in the Indian States

Vasudha Foundation organized a series of four workshops on 'Development of Decarbonisation Strategies in Indian States' across Bhubaneswar (Odisha), Delhi, Gandhinagar (Gujarat), and Chennai (Tamil Nadu). These workshops brought together key participants from the Government of India, industries, academia, civil society, and think tanks. The sessions were structured into three parts—an inaugural session followed by two technical discussions.



Odisha



New Delhi



Tamil Nadu



February 8, 2024

Strategies for Decarbonising the textile sector in India

Vasudha Foundation organised a stakeholder consultation in Surat in partnership with the Gujarat textile proc South Gujarat Textile Processors Association (SGTPA) for brainstorming on "Strategies for Decarbonising the textile sector in India".



March 29, 2024



OTHER ENGAGEMENTS

Convening on Scaling up the Renewable Energy Worldwide, Seoul, South Korea

The SFOC (Solution for Our Climate) group hosted a gathering in Seoul, South Korea from April 25th to 27th, 2023, with the aim of crafting a Seoul document to accelerate the deployment of renewable energy worldwide. Diverse think tanks and civil society organizations (CSOs) from around the world participated in this event, engaging in discussions about the advancement of green energy adoption both at the country and global levels. Mr. Raghav Pachouri, Senior Manager at Vasudha Foundation, was also among the attendees, contributing to the dialogue and sharing insights into India's ongoing efforts and future strategies for decarbonizing the nation's energy systems.

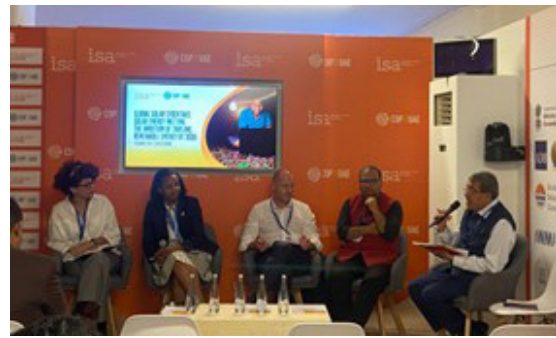


April 25-27, 2023

Vasudha Foundation at COP28, Dubai, United Arab Emirates

Vasudha Foundation actively participated during the UNFCCC COP28 at Dubai (November, 2023). Team Vasudha attended meetings and convenings as well as organised a COP28 side event on 'Localising Climate Action through Innovative Solutions and Community Participation' in collaboration with fellow CSOs. CEO of Vasudha was also invited as a speaker/panelist/moderator in various sessions during the COP. Additionally, team Vasudha also set up a stall in the exhibition area of the Blue Zone to showcase its initiatives towards scaling up climate action and renewable energy.

Further, team Vasudha actively engaged to explore partnership and identify synergies by organising bilateral meetings with government stakeholders (senior representatives of both National and Sub-national governments), International networks, MDBs, CSOs and others. The key themes focused in interactions/ meetings were: Climate Finance, Innovative Climate Solutions including Technology, People Centric Transition, Regional Solutions, Enhancing Climate Cooperation specially South-South Cooperation to name a few.



November, 2023

KEY PARTNERSHIPS

Vasudha Foundation has partnered in the form of Memorandum of Understanding with the following organisations:

- Strategic Knowledge Partnership with the **Gujarat Energy Development Agency/Climate Change Department, Government of Gujarat.**
- Department of Climate Change and particularly, **Environment Planning and Coordination Organisation (EPCO)**, the nodal agency for Climate Change of the Government of Madhya Pradesh for a wide range of issues including the development of district climate action plans amongst others.
- **Department of Environment, Forests and Climate Change, Government of Tamil Nadu**, and **Tamil Nadu Green Climate Company** to develop climate smart district plans, state specific data and information dashboard on energy transition amongst others. (This MoU has not yet been signed, but in advanced stages of finalisation).
- MoU with **Bal Roadlines** to create a roadmap for **Zero Emission Truck (ZET)** transition for small fleet operators.
- MoU with **Auroville Consulting** to develop district-level GHG emission inventories and decarbonisation strategies in **Tamil Nadu.**

Vasudha Foundation is a not-for-profit NGO/Think Tank, headquartered in Delhi and having its registered office in Bangalore. The Foundation was set up in 2010 and became fully operational in 2014. Vasudha Foundation is registered with the Ministry of Home Affairs, FCRA Division, and has an FCRA Number: 094421672. The organisation also has income tax exemption status with the Income Tax Authority of India.

Vasudha Foundation primarily works in the Clean Energy and Climate Policy space. “Vasudha” in Sanskrit language means the “earth” and as its very name suggests, the organisation’s ethos is to work towards conserving Vasudha by adopting “green ways” for a clean and good earth.



FINANCIALS

Particulars	2023-24	2022-23
Source of funds	Rs. (in lakhs)	Rs. (in lakhs)
Capital fund	110	60
Donor's account	585	612
Current liabilities	27	55
Total	722	727

Application of funds	Rs. (in lakhs)	Rs. (in lakhs)
Fixed assets	56	46
Cash and bank balances	632	646
Other current assets	34	35
Total	722	727

★ There is increase in Capital fund of Vasudha which represents more stability and source of future growth.

★ Current liabilities have been reduced as compare to FY 2022-23.

★ There is addition to fixed assets for Rs. 24 lakhs. Above mentioned figures in the table are values after depreciation.

★ Current Cash and bank balances are sufficient to cover Vasudha expenditure for more than 5 months.

Particulars	2023-24	2022-23
Income	Rs. (in lakhs)	Rs. (in lakhs)
Grant and other receipts	1512	909
Interest income	15	13
Total	1527	922

Expenditure	Rs. (in lakhs)	Rs. (in lakhs)
Project expenses	1196	777
Management and administrative expenses	270	257
Amount spend out of accumulated funds from previous years	(248)	(166)
Total	1218	868

Excess of Income over Expenditure	309	54
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★ Grant and other income during the FY 2023-24 increased by more than 65% as compare to FY 2022-23.

★ There is an increase of 54% in the project related expenditure during the FY 2023-24 whereas management and administrative expenditure increased by 5%.

VASUDHA FOUNDATION
 Regd. Office: No 7/3, Third Floor, Mytri Park View, 100 Ft Ring Road, BSK 3rd Stage, Bangalore, Karnataka-560085
 Project Office: CISRS House, 14 Jangpura B, Mathura Road, New Delhi-110 014

CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNTS FOR THE YEAR 01.04.2023 TO 31.03.2024

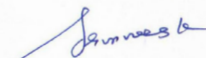
RECEIPTS	LOCAL	FCRA	Total '31-Mar-2024	PAYMENTS	LOCAL	FCRA	Total '31-Mar-2024
Opening Balances:				Project Expenses			
Cash in hand	-	1,903	1,903	Administrative salaries and benefits	7,43,825	11,99,86,227	11,99,86,227
Bank Balance				Travel, accomodation, food, local conveyance	18,054	1,50,99,745	1,58,43,570
- Indian bank	3,56,625	1,48,91,311	1,52,47,936	Office rent		4,13,116	4,31,170
- State bank of India		4,53,10,647	4,53,10,647	Printing & stationery	2,476	54,16,184	54,16,184
Fixed deposits		40,00,000	40,00,000	Professional fees	2,66,090	1,08,329	1,10,805
Interest accrued on fixed deposits		76,605	76,605	Audit and certification fees		29,26,180	31,92,270
				Bank charges		3,16,420	3,16,420
Interest received - savings	27,595	15,01,813	15,29,408	Postage & courier charges	400	1,01,490	1,01,490
Interest received - fixed deposits		-	-	Office consumables and maintenance	4,565	18,224	18,624
Grant received		14,57,77,431	14,57,77,431	Communication		10,56,403	10,60,968
Receipts from business incidental activities	16,36,400		16,36,400	Electricity expenses		2,37,187	2,37,187
				Membership fees		5,36,991	5,36,991
				Recruitment expenses		20,060	20,060
				Software subscription		4,130	4,130
				Purchase of fixed assets		48,801	48,801
				Tax deducted at source	1,63,640	28,15,424	28,15,424
				Payment of GST	52,272	26,188	1,89,828
				Closing Balances:			
				Cash in hand		1,903	1,903
				Bank Balance			
				-Indian bank	7,69,298	4,35,01,518	4,42,70,815
				-State bank Of India		71,11,530	71,11,530
				-HDFC		75,01,434	75,01,434
				Fixed deposits		42,93,056	42,93,056
				Interest accrued on fixed deposits		19,172	19,172
Total	20,20,620	21,15,59,710	21,35,80,330	Total	20,20,620	21,15,59,710	21,35,80,330

For Tinu Sood and Company
Chartered Accountant


 Tinu Sood
 Partner
 M.No. 511444, FRN 022090N
 UDIN: 24511444BKEWTH2713



For Vasudha Foundation


 Srinivas Krishnaswamy
 Trustee



Date: 30th July 2024
Place: New Delhi

OUR PARTNERS

Our achievements would not have been possible without our partners. We are thankful for their continued trust in Vasudha Foundation and look forward to achieve greater heights with them.

- Heinrich Boll Stiftung Foundation (ETP) 2023
- The Nature Conservancy
- The New Venture Fund
- International Union Against Tuberculosis and Lung Disease (The Union)
- International Sustainable Energy Foundation (ISEF)
- SED Fund
- VF USA
- American Friends of Edelgive Foundation
- The International Research & Exchange Board



Vasudha Foundation

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