

CCBJ 2023 Business Achievement Awards

Climate Change Business Journal is proud to announce the winners of the annual CCBJ Business Achievement Awards for outstanding business performance and achievements in the climate change industry.

Congratulations to the 2023 winners and thanks to all companies that submitted nominations. An official awards banquet and ceremony will be held on April 3, 2024, from 7-9pm. at Environmental Business International Inc.'s 22th Annual Environmental Industry Summit.

Environmental Industry Summit XXII runs April 2-4, 2024 at Coronado Island Marriott in San Diego, Calif. This national two-day learning event is the flagship meeting in EBI's Summit Series and provides ample networking opportunities for environmental industry executives and analysts. EBI's Summit Series offers a opportunity to gain perspective on today's environmental climate change industries from experts, executives and peers. Regional events in Texas, Seattle, Washington DC and Boston are planned for 2024.

Awards Process: In October-December 2023, CCBJ solicited industry, government, non-profits and the broader climate change community via e-mail, social media, its website, industry events and word-of-mouth for nominations for the 2023 CCBJ Business Achievement Awards. Nominations were accepted in 200-word essays in either specific or unspecified categories. Final awards were determined by a committee of CCBJ staff and contributing editors.

Executive Review & CCBJ Awards for 2023

<i>Annual winners of the Climate Change Business Journal Business Achievement Awards for 2023 are listed and profiled to recognize outstanding performance, innovations or accomplishments in 2023. Climate change industry leaders demonstrate innovation and resilience as market factors and policy inaction make business challenging for pioneers that advances climate change solutions and their businesses in 2023</i>	<i>1-10</i>
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2023 CCBJ Business Achievement Award Winners

Climate Change Business Journal® presents its annual CCBJ Business Achievement Awards for outstanding business performance in 2023. Congratulations to the winners, and thanks to all the companies that submitted nominations.

Disclaimer: Company audits were not conducted to verify information or claims submitted with nominations.

ADVANCING BEST PRACTICES

Climate Change Adaptation & Resilience

TRC for evaluating operational risks related to climate change and developing climate adaptation strategies for The Massachusetts Executive Office of Labor and Workforce Development (LWD). The project aimed to ensure continuation of LWD's services throughout the increased likelihood of severe weather due to climate change. This work was two-pronged, evaluating and reducing priority risks to: (1) LWD facilities and (2) LWD's day-to-day operations. TRC developed groundbreaking methodologies to assess potential risks across all departments and streamlined the engagement process to critical milestones and interviews. TRC assessed and prioritized adaptation strategies that reduce the immediate and consequential risks from both climate change risk assessments. TRC developed a Climate Adaptation Strategy Roadmap and Implementation Tracker that provides detailed strategy worksheets as blueprints for implementation as living documents that can be adjusted in real time to reflect any limitations, barriers or opportunities that arise during the implementation process. Moving forward, LWD is establishing a process that integrates the roadmap into agency activities and monitors progress.

ADVANCING BEST PRACTICES

Climate Change Adaptation & Resilience

EA Engineering, Science, and Technology, Inc., PBC for being at the forefront of developing and implementing nature-based solutions (NbS)—features that mimic the characteristics of natural features but are created by human design, engineering, and construction to increase resilience while also providing economic, environmental, and social benefits. EA maintains cooperative R&D agreements with the National Oceanic and Atmospheric Administration National Ocean Service and U.S. Army Engineer Research and Development Center Environmental Laboratory/Engineering With Nature (EWN) program. These agreements allow EA's team to engage with government researchers focused on coastal and climate resilience. Project work spans all coastal geographies of the United States and supports a wide variety of organizations and communities. EA has worked with non-profit, local, state, and federal partners to assess the impacts of climate change on coastal systems and develop NbS to improve resiliency, including assessing available data, modeling vulnerabilities, and providing solutions for areas of concern. The firm is pioneering innovative applications of natural and nature-based resilience strategies in cold regions, incorporating traditional ecological knowledge through extensive outreach and partnering with indigenous communities.

ADVANCING BEST PRACTICES

Climate Change Adaptation & Resilience

City of Salem, Massachusetts for the Collins Cove to Willows Resilience Study. Due to coastal and precipitation-based storms, portions of this coastal city are currently facing the threat of flooding, which

caught up in this question to the point that we don't make decisions because of doubt of the models. Our preferred approach is to look at all the models and see where the alignment among the model results is located. However, this is going to continue to be a divisive split in the climate adaptation community because people have strong feelings about the topic. We are not going to solve this immediately, but it also can't stop progress. Rather, decision-makers need to decide what they are more comfortable with – a single or small group of models selected for them, or a larger group of models containing more information. There is no correct answer.

CCBJ: What was your original inspiration to get involved in this field in the first place?

Chinowsky: Working on an infrastructure project in Alaska, it was clear to see how coastal erosion was destroying infrastructure at rates that were previously unanticipated. Combined with the impacts on vulnerable populations, it became clear that we were not paying sufficient attention to the impacts of climate change. From this point forward, I made a commitment to understanding the impacts of climate change, the opportunities for adaptation, and trying to influence policy around allocating funds for proactive adaptation.

CCBJ: What's the most compelling evidence you have witnessed of climate change in your lifetime?

Chinowsky: The rise in summer temperatures. Everyone knows it gets hot in the summer, but the number of extreme days that now occurs and the relentless heat waves that occur have fundamentally changed life during the summer months. These temperatures are also occurring earlier and lasting longer. It is very difficult to argue against the fact that this change is happening globally and is changing lives, economies and how we approach the topic of livability. ⚙️

Tetra Tech Implements Forest-PLUS 2.0 in India and Expands “Van” System to Support Forest Management

Tetra Tech (Pasadena, Calif.) was founded in 1966 to provide engineering services related to waterways, harbors, and coastal areas. Today Tetra Tech is organized into two major business groups that align with the firm's core markets and the development of high-end consulting and technical solutions in water, environment, renewable energy, sustainable infrastructure, and international development. Tetra Tech's Government Services Group (GSG) provides consulting and engineering services for U.S. government clients and all activities with development agencies worldwide. The Commercial/International Group (CIG) provides consulting and engineering services worldwide for commercial and international clients, inclusive of the commercial and government sectors.

Dr. Ujjwal Pradhan is the Tetra Tech Chief of Party for the Forest-PLUS 3.0 joint program of the United States Agency for International Development (USAID) and the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India. Dr. Pradhan has more than 35 years of experience leading programs and research in Asia focusing on natural resources management and the environment. Before joining Forest-Plus 3.0, he held a succession of senior posts, including Chief of Party for Forest-PLUS 2.0, forest for water and prosperity; Chief of Party for a Millennium Challenge Corporation (MCC) project in Indonesia; Regional Director of the World Agroforestry Center (ICRAF) Southeast Asia and China Program; and Program Officer at the Ford Foundation's regional India and Indonesia offices. Dr. Pradhan holds a doctorate in development sociology from Cornell University and has authored and edited several books and articles on natural resources management and the environment.

Tetra Tech, in partnership with the U.S. Agency for International Development, received a CCBJ Business Achievement Award for Climate Change Adaptation & Resilience for implementing the Forest-PLUS 2.0 project in India. See page 4 for award details.

CCBJ: Congratulations on implementing the Forest-PLUS 2.0 project in India and for developing the new Van system to support forest management. What is causing deforestation across India, and what are some unique characteristics of Indian forest ecosystems that have to be taken into account when designing a forest management system?

Dr. Ujjwal Pradhan: Deforestation in India has many drivers, including unsustainable farming practices, illegal logging, infrastructure development, and fuelwood dependency. India lost 668,400 hectares of forests between 2015 and 2020 according to a global study report that was released in March 2023. In the past 15 years, over 300,000 hectares of forest land have been diverted across states and union territories

for infrastructure and industrial projects. One of the main drivers of deforestation in India is agricultural expansion to meet the food needs of the growing population. This increase in demand for agricultural commodities leads to the conversion of forests into farmland. Another significant cause of degradation is illegal logging, which is still rampant despite laws that prohibit the cutting of trees without permits due to high demand for timber. Large-scale mining to extract minerals like iron ore and bauxite, and coal is also a significant contributor to deforestation in India as these mines are in the forest areas, leading to the destruction of forests and loss of biodiversity. India's growing population and rapid urbanization are also having a significant negative impact as forest areas are converted into human settlements and infrastructure.

In India, there are 16 different types of forests, ranging from tropical evergreen forests to dry alpine scrub. This diversity poses significant challenges to develop a system that can be used across the country in different forest types to collect inventory data. Recognising this, the Van system (Van meaning forest in Hindi) was developed as a modular system that can be set up for any state/forest division by uploading the geo-spatial layers and the species list.

Indian forest ecosystems are also characterized by a heavy human dependence on forests and significant biotic influence. The Van system has forms that collect ecosystem services data, village information, and household data. Our approach includes ensuring that forms are available in local languages and include the local names of plants and animals. We continue to expand the Van system to include the unique and important characteristics of India's forest ecosystems such as biodiversity hotspots, mangrove forests, sacred groves, agroforestry systems and threatened species.

CCBJ: How recently were states in India required to develop and submit forest management plans? Do you expect your system to be deployed in more than the current six of the 28 Indian states?

Pradhan: Forest management regulations in India have been in place since the mid-1800s. However, early thinking favored the protection of commercially viable species, eliminating the less valuable and those interfering with the growth of the former—thus creating imbalanced forest ecosystems. In time, the “Preparation of Forest Working-Plans in India,” developed by W E D’Arcy, sought to help manage the comprehensive set of factors for consideration in forest management plans and transformed the process.

Today, plans are governed through the National Working Plan Code 2023 by India's Ministry of Environment, Forest, and Climate Change (MoEFCC). They require all forest divisions in the country to develop

Working Plans every 10 years. The Van system supports State Forest Departments to develop these plans through forest inventory data collection and analysis. Currently, the Van system is used in six states; in the next three years we are working to expand to at least 15 total states.

We continue to expand the Van system to include the unique and important characteristics of India's forest ecosystems such as biodiversity hotspots, mangrove forests, sacred groves, agroforestry systems and threatened species.

CCBJ: Is data all entered manually based on boots-on-the-ground data collection or does the system integrate drone or satellite data or automated functions for collecting data on an ongoing basis?

Pradhan: Van mobile app collects all data entered as primary data from the field using various field data collection forms provided in the National Working Plan Code 2023. The Van System currently has a simple structure: forms for data collection on the app and calculation of growing stock and some indices on the web portal. At present, the Van system does not integrate drone or satellite data or any automated functions.

Through the recently awarded Forest-PLUS 3.0 contract, we will identify additional functions for the Van system and expand its scope to make it a monitoring tool through regular collection of data. To achieve this, we will work closely with the MoEFCC as well as the State Forest Departments, based on their requirements, need, and the technical feasibility.

CCBJ: How is India doing in generating forest carbon credits either for a domestic program or internationally?

Pradhan: The Down To Earth report states that India has 1,451 projects registered or under various stages of consideration at different carbon registries. Carbon credits issued to Indian entities are worth 11% of India's annual greenhouse gas emissions in 2021. Indian entities have already earned about \$652 million from carbon credits used to offset emissions. The Green Credits Programme, launched by MoEFCC in October 2023, is an effort to create a market-based incentive for different kinds of environment-positive actions including water conservation and afforestation, not just for carbon emission reductions.

CCBJ: Where did you grow up, and what's the most compelling evidence of climate change that you have witnessed in your lifetime?

Pradhan: I grew up in Nepal and we often experienced weather extremes like flash flooding and landslides caused by torrential monsoon rains. The Terai and even Kathmandu Valley have been subject to more frequent floods in the last decade. Here in India, we've witnessed similar challenges, for example, increased sea level rise in Odisha over the years. In hill states such as Himanchal Pradesh, there is a higher incidence of increasing flash floods, landslides, and shifts in growing patterns such as apple trees bearing fruit only in a higher altitude than before. These changes underscore the critical importance of programs such as Forest-PLUS to operationalize commitments to improving forest management and increasing forest cover through eco-restoration, particularly in areas vulnerable to extreme climate change impacts. ⚙️