Stimulating Sustainability

Curriculum Vitae

Proposed Position	Project Manager
Name of Expert	Dr. Ajay Pradhan
Date of Birth	01/04/1965
Nationality	Indian

Education:

Ph D, Water Resources Engineering, School of Civil Engineering, KIIT, Bhubaneswar
MS Environment & Natural Resources Planning and Management, School of Environment, Resource and Development, Asian Institute of Technology (AIT), Bangkok

Employment Record Relevant to the assignment:

Period	Position	Organization/Reference
2012 – Present	President and CEO	Cetus Consulting Solution Services Private Limited **Reference:** Mrs. Priyanka Nayak (Director) **Ph/Email:** +91 9810125407
2012 – 2015	Managing Director	Halcrow& CH2Mhill (Now Jacobs) **Reference:** Neil Reynolds, Regional MD and (Sr. Vice President) **Ph/Email:** neil.reynolds@ch2m.com
2000-2012	Founder & Managing Director	DHI Water & Environment, India Ref. Mr Asger Kej. CEO DHI International
1996 – 2000	Chief Executive	Pathfinder Consultants, a proprietary consulting firm into GIS, IT, Coastal and Water Management, and Project Management
1995 – 1996	General Manager/ Board Member	R. M. Software India Pvt Ltd., (A wholly owned subsidiary of RMS Inc., USA) **Reference:** Ajay Lavakare (Managing Director) **Ph/Email:** apl@rmsi.com
1994 – 1995	Business and Commercial Manager	Fugro bv **Reference:** B N Nayak (Director) **Ph/Email:**
1990 – 1993	Senior Scientist/Engineer: Systems Analyst Grade SD	National Informatics Centre, Planning Commission, Govt. of India **Reference:** Dr B K Gairola (DG) **Ph/Email:** bkgairola@hotmail.com
1989 – 1990	Research Consultant	Planning Commission Govt. of India **Reference:** L C Jain (Member)

Specialization:

S. NO.	Key Specialization
1	General Management, Water Resources and River Valley Projects, Irrigation Water Management, Transboundary Water Issues and Policy, Hydraulics, Water Supply & Waste Water, Water Quality, Sediment Management in Reservoirs and Morphology.
2	Project management, IT and engineering recruitment, consultancy on Water Resources Management, Hydropower Agriculture, hydrology, and training and capacity building.
3	Carried out studies for the International Hydropower Association for Potential of Run of the River and Storage Projects review and Sustainability in South Asia
4	Carried out Hydropower and Climate Sustainability with Sediment Management issues in Hydro Power Plants in Himalayan Region

Work Experience:

S. NO.	Project and Activities Performed
1.	**Position: Project Director** **Name of Assignment: Climate Change Adaptation Expert for Assisting TNUIFSL in Various Consultancy Assignments and Projects Under Tamil Nadu Sustainable Municipal Infrastructure Fund (SMIF-TN) Phase III – Funded by KfW Development Bank** **Duration: May 2025-2030** **Details of the Project:** Climate change adaptation involves adjusting to natural or human systems in response to actual or expected climatic stimuli or their effects (UNFCC). This includes a wide range of strategies designed to reduce the vulnerabilities associated with climate change impacts, such as rising temperatures and more frequent extreme weather events. Adaptation measures can be reactive (in response to effects observed) or proactive (anticipating future impacts). For a climate adaptation project focused on enhancing climate resilience in urban infrastructure and improving Urban Local Bodies (ULBs) capacity to manage associated risks, the following key steps are: 2. **Baseline Assessment and Risk Analysis:** 3. **Current Status Review:** Evaluate existing Climate Action Plans, ULB capacities, and vulnerabilities related to climate risks. 4. **Risk Identification:** Conduct a comprehensive risk assessment to identify potential climate-related threats to infrastructure and urban management. 5. Strategy and Plan Development: **Identify Priorities:** Determine which areas or sectors are most at risk and prioritize adaptation measures based on their potential impact and feasibility. 6. **Adaptation Strategies:** Develop targeted adaptation strategies and frameworks that address the specific risks and vulnerabilities identified in the baseline assessment. 7. Monitoring and Evaluation: 8. **Track Progress:** Monitor the implementation of adaptation measures to assess their

	effectiveness. 9. **Evaluate Outcomes:** Regularly evaluate the outcomes and impacts of adaptation strategies to ensure they are achieving the desired results and to inform future actions.
2	**Position: Team Leader and Project Manager** **Name of Assignment:** Climate Change and Disaster Management (Flood Management) for Kley River in the Ziro Valley in Arunachal – WRD, Arunachal Pradesh **Duration:** April 2025 ongoing **Details of Work Done:** • Review of all past flood events, including data, previous studies, interventions, • Review of Current Practices of instrumentations, sensor networks and other early warning systems if available in the catchment area and the river stretch of 24 kms. • Carry out topographies, River cross-section surveys of the entire stretch of the River • Field visit and identify the vulnerable, including hotspots, for a detailed survey for designing structural and hard measures. • Identify the sources of sediment supply into the river from the catchments. • Carry out hydrological studies, including different return periods for flood events. • Design River Training Measures for controlling erosion and bank protection. • Check the design basis with 2d Mathematical Modeling of the River and Catchment Area Treatment Model.
3	**Position: International Expert** **Name of Assignment:** Sisnery Water Supply Scheme, KVWSMB, Lalitpur, Nepal **Duration:** 2023-2024 **Details of Work Done:** • The Sisnery Water Supply Project intends to supply water at the southern part of the Kathmandu Valley by using the source from the downstream basin of Kulekhani Dam. The proposed project has broadly 3 systems viz. Dam and Intake, • Dam Storage with stage pumping from Sisneri Dam to Sisneri Reservoir. From Sisneri Reservoir to WTP the water flows by gravity. From WTP the clear water is pumped to Sainbu Reservoir. • Dam Reinforced Concrete Dam Height: 65 m Crest Length: 162 m • Intake structure at Sisnery Reservoir and Kogate River, and intake from the existing Kulekhani Dam • Water Conveyance Systems with two/three-stage Pumping, and • Water Treatment Systems. A dam is proposed to be constructed across the Kulekhani Khola. The proposed dam site is located at Sisnery, Makawanpur District, approximately 100 m upstream of the confluence of the 3ulekhani Khola and Bagmati Rivers. Water from Kogate and Kulekhani Khola will be stored during the monsoon period and pumped to the Sainbu reservoir after treatment for distribution throughout the year.

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4	**Position: Project Advisor** **Name of Assignment:** Rehabilitation and improving the efficiency of 354 MLD WTP at Nangloi Water Services Pvt Ltd for Delhi Jal Board, New Delhi, India **Duration:** 2021--2023 **Details of Work Done:** • Water Audit of NWS Pvt Ltd. identifying leakages, demand and supply gap • Design and Construction of 10MLD UGR for the NWS for Delhi Jal Board • Household connection from 165000 to 245000 for the operator Veolia-SWACH JV A PPP project under DJB • Improving the billing and tariff collection • Addressing the customer requirements with awareness • Reducing nonrevenue water through leakages, automation and SCADA implementation
5.	**Position: Team Leader** **Name of Assignment:** Feasibility of getting 65 MGD Mahi Waters through Shedhi Branch WTP and PMC for Ahmedabad Municipal Corporation. Duration: 2010 **Details of Work Done:** • Field Data Collection, Surveys and Mapping • Socio Economic Data • Preparation of Detailed Feasibility Report • Layout and Basic Engineering • Block Cost estimate • Environmental and land acquisition studies
6.	**Position: Project Manager** **Name of Assignment:** Consultancy Services for detailed engineering including preparation, of bid documents with PMC work for construction of a surface raw water reservoir size 210m x 210 mx5.5 m capacity 3 lakh cum for Birla Cellulosic Plant at Kharach Dist. Bharuch. **Duration:** 2008 **Details of Work Done:** • Detailed Engineering • Bid Preparation • Tendering Process and contract award • Project Management and Construction Supervision of the contractor • Quality Control Checking • Approval and bill payment •
7.	**Position: Team Leader** **Name of Assignment:** Long-term Sustainability study and Reservoir Management towards achieving Environmental, Social, Economic, and Governance ESG for Indravati Dam, Odisha, India **Duration:** 2022 **Details of Work Done:**

	• Analyzing all operational data on energy production, irrigation potential created and utilized, fishery, climate changes, etc • Baseline data analysis, modeling of rainfall-runoff analysis, and sedimentation analysis • Social and Economic Impact to the region • Food and Energy Security of the region, state and India • Long-term sustainability including addressing the food-water-energy nexus • Flood Moderation Downstream • Inter-basin water transfer to address drought and demand management
8.	**Position: Project Manager/Team Leader** **Name of Assignment:** Techno-Economic Feasibility Study of a Riverine Port and Inland Navigation in River Mahanadi- ArcelorMittal & Nippon Steel Ltd, India **Duration:** 2021 **Details of Work Done:** • Bathymetry, Current, and Tide data analysis of the estuary along with the hydrology of Mahanadi River from upstream flow regime at Naraj Barrage including high flood study • Hydrodynamic modelling and River Morphology study of the estuary • Preparation of techno economic feasibility of riverine port • Environmental and Social Assessments • Geotechnical Data Analysis including Design Basis for Jetty
9.	**Position:** Project Manager **Name of Assignment:** Detailed Survey, Measurements, Data Collection of water supply sources, quality, pressure, flow measurements of Water Works Network of Port Blair City, Andaman Nicobar Islands of India Duration: 2010-2012 **Details of Work Done:** • Data Collection, measurements and analysis • Identifying leakages, pilferages, etc and pipes rusting and pressures,e tc • Replacing some old pipes • Redesigning the water supply network based on hydraulic modeling • Managing Intermittent water supply with good pressure and required delivery for each household • Preparing a Master Plan for the 2030 population with new source identifications and cost estimates. • Developing mechanism for billing and collection systems •
10.	**Position:** Team Leader and Project Manager **Name of the Assignment:** Design and Supervision including SCADA implementation of two 8 MLD and 6 MLD Plant in Chowdwar and Padmapur, towns of Odisha, India Duration: 2017-19 • Data Collection analysis, and water quality data analysis for the design of two Water Supply schemes of Chowdwar and Padmapur towns of Odisha with sources from rivers.

	• The design was vetted by the Central Design Office and good for-construction drawings were prepared for the contractors • Supervising the construction work • Implementing SCADA and complete operation • Developing operating manuals • Developing WQ lab
11.	**Position:** Project Manager **Name of Assignment:** Preparation of DPR Watershed Planning of Rajasthan **(PDCOR, Rajasthan) for Sustainable Water Supply** **Duration:** 2018-2019 **Details of Work Done:** • Providing the compiled data set along with GIS maps for watershed planning • Providing a comprehensive report on the watershed projects including design review of check dams and related structures. • To provide the key inputs for the efficient and quality outputs during the execution phase of the watershed projects under MJSA-IV
12.	**Position:** Team Leader **Name of Assignment:** Making Hydropower Resilient to Climate Change and Disasters in South Asia (World Bank) **Duration** 2015-2016 **Details of Work Done:** • Survey on Resilience in the hydropower sector in selected organizations in South Asia • Organization of workshop on Making Hydropower Resilient to Climate Change and Disasters. • The substantial investments of the World Bank in South Asia merits special attention to the impacts of climate change on infrastructure development. The availability of infrastructure investment decision making procedures accounting for the uncertainties associated with climate change will aid development decision making; procedures that can be replicated in other parts of the world once refined for South Asia.
13.	**Position:** Project Manager **Name of Assignment:** Sustainable Integrated Water Resources Management Plan and a Detailed Project Report for Alternative Water Supply in the Manesar - Bawal Investment Region (MBIR); India **Duration:** 2013-2016 **Details of Work Done:** Overview the preparation of a sustainable integrated water resources management plan and a detailed project report for alternative water source in the region. The project will require review of all previous studies undertaken, a situation analysis and field studies program for data collection, establishing framework and evaluation criteria for developing the plan, preparation of the detailed project report using system level simulation, developing an operating model based on a decision support system and handholding the client in implementing the same.
14.	**Position:** Project Director & Team Leader **Name of Assignment:** Water Availability of Upper Mahanadi Basin; India for Power Project

	Financing **Duration:** 2011 **Details of Work Done:** Field data collection, secondary river basin data including water field, groundwater uses and surface water requirement for Power generation both hydro and thermal power. A detailed IWRM based water balance study was undertaken including projections of water demand for the future scenario based on population, industrial, agricultural development, etc. The study revealed that there will not be enough water available for thermal power projects and not sustainable.
15.	**Position:** Project Director **Name of Assignment: IWRM and** Water Quality Modelling of Najafgarh Drain with Yamuna River for Interceptor Planning and Design **Duration:** 2008-2010. **Details of Work Done**: Filed Data collection, data analysis and Hydraulic and Hydrology modelling of Water and Waste Water from catchment drains and upstream. Carrying out Numerical modelling Simulation using MIKE 11 to generate scenario for both dry and wet weather conditions
16.	**Position:** Project Director **Name of Assignment:** HP II; World Bank **Duration:** 2008-2012 **Details of Work Done:** India Project Director for preparation and development of Decision support systems for 8 states, implementation of Real Time Decision Support System for BBMB, Real Time Flood Forecasting of Bhima Basin and Upper Krishna River in Maharashtra. Technical and Institutional coordination for new states came with HP II.
17.	**Position:** Project Manager **Name of Assignment:** Water Audit and Water Supply Augmentation for Shillong, Gangtok City under AusAid Funded Project **Duration:** 2008 **Details of Work Done:** Data collection, survey and analysis, Network Modeling. Flow and Pressure Measurements, leakage identifications, and water augmentation with new source identifications, design of water supply scheme, treatment processes, DPR including a cost estimate for the new system.
18.	**Position:** Project Coordinator **Name of Assignment:** HP I, World Bank **Duration:** 1997-2002 **Details of Work Done:** India Project Coordinator for the preparation and implementation of 8 states and 6 national agencies with creation of Surface Water Data Centre, Ground Water Data Management Centre, Capacity Building, Training and transfer of technology. Supported in creating a strong Water Resources centre at each participating state

Language Skills:

Language	Speaking	Reading	Writing
Hindi	Very Good	Very Good	Very Good
English	Very Good	Very Good	Very Good

Memberships:

- Fellow – Indian Water Resources Society
- Chairman – Water Alliance India
- Life Member – International Water Association
- Life Member – International Commission on Irrigation and Drainage
- Member Board of Governors KIIT University, Bhubaneswar
- President -Consulting Engineers Association of India
- Chairman – Institution of Water & Environment India
- Life Member, Society for Geotechnical and Allied Technology
- Life Member, Indian Society for Remote Sensing (ISRS)
- Life Member – Indian National Cartographic Association
- Life Member Indian Society of Hydraulics, India
- Chief Coordinator, SediNet, An International Sediment Management Network for Sustainable Hydro Power and River Management
- Former Board Director- IIT Delhi Research and Development Board.

Trainings Attended:

- International Certificate Training courses on GIS and Remote Sensing 1989: Norsk Data Computers, AIT Bangkok (May-July 1989)
- Training on GPS and GIS by Trimble Navigation, California, USA 1991 one month
- Micro-computer-based GIS training by System Research Institute, Pune on Themap 1991
- ISRO Vision and ISRO GIS at NRSA and Era Software Hyderabad during 1992
- Survey and Data Acquisition at Singapore 1994 by FUGRO bv
- Land Survey and positioning 1993, Survey Training Institute, Govt of India UPPAL, Hyderabad
- Training on Disaster Risk Assessment and Mapping, ADPC, AIT Bangkok, 1996
- Training on Insurance Risk Assessment System, RMS, USA 1996
- Training ERP and SAP by SAP India 1997
- Numerical 1d, 2d modelling on MIKE System at DHI, Denmark 1999 (3 months)
- 2D hydrodynamic Modelling of Flood Management and Sediment Transport in Brisbane, Australia
- Dam Break and Flood Modelling at CWC, New Delhi and DHI, Denmark during 2001-2002
- Sediment Management in Hydro Power Project by World Bank 2009 and 2014
- Reservoir Conservation Software for Sediment and Climate Change Modeling, World Bank, US during 2012
- Sediment Management revised reservoir sediment management by World Bank, Bangkok 2017
- Training on Hydropower, Climate Change and vulnerability World Bank, Kathmandu, Nepal 2010
- Hydrological Modelling of extreme Climate Scenario by NIH, Roorkee, 2014
- Hydrodynamic Modelling 2012, CWPRS, Pune
- Coastal Sediment Management and Storm Surge and Tsunami Modelling, NIOT, 2008
- Mathematical Modelling of Ground Water and Surface Water, WASER, Berlin, Germany 2009

- Training Program on Morphological Study of Rivers through Remote Sensing at IIT, Roorkee 2011
- Training Program on Oceans and Seas – Human Security, UNITAR, Hiroshima, Japan, 2007
- Training Program Tsunami and Emergency Management and Vulnerability Assessment, UNITAR, Tokyo University, Japan, 2011
- FIDIC Contract Management by World Federation of Engineers, Europe 2017
- Claim and Dispute Management by World Federation of Engineers (FIDIC) 2018

Publications:

- Agrawal V, Pradhan A, 2021; Climate Change Impact on Water Power in Himalayan Region: A case study of Chamoli District in Uttarakhand; View Point – September 2021

- Pradhan A, 2020; Fresh Water Issues in India & an Approach to Sustainable Water Management, Global Indian outlook, An international publication for foreign missions in India

- Pradhan A, 2019; Need for policy and paradigm shift in tackling the Pollution in Indo Gangetic Belt, India, View Point December 2019, A Journal of Consulting Engineers Association of India.
- Pradhan A, 2018; Blockchain and Internet of Thing (IoT)- A Path to Trust Building and Transparency in Water Resources Management, International Conference on Sustainable Water Management, World Bank, Chandigarh, India.
- Pradhan A, 2018; Technology & Innovation to Improve Water Use Efficiency towards building resilience and water security by 2030, 105th Session of Indian National Science Congress, Hyderabad/Imphal, 2018
- Pradhan A, Kumar Vijay, Rai, Raveender 2016; Role of Water Quality Modeling and Decision Support System for Managing and Monitoring Pollution in the Rivers- A Case of Yamuna River, IWE Digest 2016
- Choy Smith, Simon J, Pradhan A 2015; The Potential for Canal Automation to Improve Water Availability, Food Security and Ecology- An Australian Example, World Irrigation Forum, ICID, Chiangmai, Thailand 2016
- Stoschek O, Pradhan A 2010; Analysis of Morphodynamic Situation of the Sastri River Estuary, Maharashtra; ICHE 2010, IIT Madras
- Pradhan A, 2015' In the Name of River - Challenges to Ganga Pollution, Urban Update Sept 2015
- Jena GK, Pradhan A, 2010, Proceedings- Numerical Modeling of Tidal Circulation and Sediment Transport in Narmada River Estuary for optimisation of Dredging and Navigational Improvement, PIANC- COPEDEC, 2010

- Pradhan A, Das Bitanjay 2017; River Training Measure for an Active Morphological River in Brahmaputra Basin; International Symposium on Brahmaputra, Sept 2017
- Pradhan A 2017; Making Hydropower Resilient to Climate Change- Challenges of Hydropower in Himalayan Region, CBIP Publication, New Delhi
- Morris G, Pradhan A, Annandale G, Agrawal Y, Winkler K, Karki, P 2013, Sediment Management Strategy in Hydropower Facilities- IHA -2013, London

Contact Information: Mob.: +91-9810155246, **Email:** ajay.pradhan@c2s2.in

Declaration: I, the undersigned, certify to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged

Name of Expert: Dr. Ajay Pradhan

Date: 01/04/2026