ACUPCB-SPAV

AMRUT Centre of Urban Planning for Capacity Building at SPA Vijayawada

Atal Mission for Rejuvenation and Urban Transformation

Ministry of Housing and Urban Affairs
Govt. of India

School of Planning and Architecture Vijayawada
Ministry of Education, Govt. of India

About

AMRUT Centre of Urban Planning for Capacity Building (ACUPCB-SPAV)

The AMRUT Division of Ministry of Housing and Urban Affairs (MoHUA, Government of India) has recognised SPA Vijayawada as one of the few centres in the country, that shall undertake top-notch, cutting-edge research, projects, and training in the field of urban planning and climate sensitive development.

SPA Vijayawada (Under Ministry of Education, Government of India) has set up of the "AMRUT Centre of Urban Planning for Capacity Building" at SPA Vijayawada (ACUPCB-SPAV). The ACUPCB-SPAV is a hallmark of SPAV's capability, resources and potential in leading the path of research and advocacy in the domain of Urban Planning in India.

The Centre has initiated cutting edge research and skill development in the field of Urban Planning and Settlement Design. It has already initiated several research projects, advocacy, and trainings programmes in close coordination with urban local bodies and think tanks in India and is in the process of expanding its outreach in data driven applications and solutions for urban planning and climate sensitive design.

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Messages

Smt. D. Thara IAS

Addl. Secretary
MoHUA, Govt of India

"The idea of bringing the academic fraternity close to the on-ground practitioners and planning professionals cannot get a better shape of reality, other than with the novel initiative to start the 06 AMRUT Centres of Urban Planning for Capacity Building in our country. SPA Vijayawada is one of these few Centres that has been established to serve as a beacon of change in bringing applied research on ground. The vast volumes of innovative research going on in our academic institutions, if channelised towards the contemporary needs and issues of our cities, can bring out affordable, replicable and sustainable strategies ready to be implemented in by our ULBs and UDAs. The working professionals in the domain of urban development and planning can join hands with the academia to understand about the latest techniques evolving in the planning research domain, and get upskilled in a manner that is beneficial to their daily working outputs.

This small yet largely significant step of establishing the ACUPCB-SPAV in the journey of SPA Vijayawada can be a turning point in its path to being one of the most grassroots driven, evidence based and scientifically inherent institutions in the field of Planning. ACUPCB-SPAV with a theme of working closely in the domain of Climate Sensitive Urban Development holds the potential of leveraging the best in the region."

Smt. Isha Kalia IAS

Joint Secretary, MoHUA, Govt of India

"AMRUT 2.0 is catalysing the transformation of Indian cities at a rapid pace by focusing on creation of sustainable infrastructure, improved service delivery, and resilient urban systems. In order to integrate the strengths of academia, practice and industry , SPA Vijayawada has been rightfully identified as one of the designated AMRUT Centres of Urban Planning for Capacity Building and it is playing a vital role in this journey. Through research, training, and advocacy, the ACUPCB-SPAV strives to contribute valuable application-oriented solutions for ULBs in the domain of climate sensitive urban development."

Prof. Dr. Ramesh Srikonda

Director
SPA Vijayawada

"The ACUPCB-SPAV is deeply dedicated to advancing sustainable, inclusive, and climate sensitive urban development. We have started providing a platform for high-quality application oriented research, professional capacity building, and policy level advocacy to local governments and stakeholder. Our initiatives are designed to equip ULBs, planners and institutions with innovative tools and evidence-based on-site strategies. Together, we aspire to foster vibrant, livable, and future-ready urban communities."

Prof. Dr. Ayon Kumar Tarafdar

Head, ACUPCB–SPAV

"ACUPCB-SPAV is committed to explore climate sensitive planning models that solve contemporary urban challenges. Our motto remains to be driven towards delivering high end planning strategies, that are evidence driven, computational, and human centric.

Our research, capacity building and advocacy activities are designed to make a difference right from the grassroots to think tanks."

About **SPAV**

योजना तथा वास्तुकला विद्यालय, विजयवाड़ा
School of Planning and Architecture, Vijayawada
An Institute of National Importance, Ministry of Education, Govt. of India

The School of Planning & Architecture, Vijayawada (SPAV) is an Institution of National Importance under the Ministry of Education, Govt. of India. It offers UG, PG, and doctoral programs in Planning and Architecture and is ranked among the top technical institutes in India. SPAV fosters quality research, innovation, and critical thinking in architectural and planning education. Its green-rated campus features state-of-the-art infrastructure, including modern labs, ICT-enabled learning, and recreational facilities. As on 2025, the school has 17+ years of excellence in professional education, offering courses in B.Arch. (5 years), B. Plan (4 years), and 09 specialised Master's full-time 2-years programs, and doctoral studies, thereby advancing knowledge in urban and regional development. With a strong focus on advanced computing and latest technologies, SPAV continues to lead in architectural and planning education.

https://www.spav.ac.in/

About **MoHUA**

The Ministry of Housing and Urban Affairs (MoHUA) is India's apex body for urban development, influencing policies through funding, coordination, and national programs. Established in 1952 as the Ministry of Works, Housing & Supply, it became MoHUA in 2006. The ministry supports urban projects via Centrally Sponsored Schemes and financial institutions, shaping urbanization and real estate investment. A key initiative, AMRUT, enhances urban infrastructure by ensuring tap water, sewerage, green spaces, and sustainable transport in 500 cities. Through policies and programs, MoHUA drives sustainable urban growth, improving quality of life and fostering climate resilience across India.

A key initiative of MoHUA is the AMRUT (Atal Mission for Rejuvenation and Urban Transformation), which enhances urban infrastructure by ensuring water, sewerage, green spaces, and sustainable transport in 500+ cities throughout India. Through policies and programs, MoHUA drives sustainable urban growth, improving quality of life and fostering climate resilience across India.

https://mohua.gov.in

सत्यमेव जयते
Ministry of Housing and Urban Affairs
Govt. of India

अमृत
Atal Mission for Rejuvenation and Urban Transformation

Theme

Climate Resilient Urban Planning and Design: A Focus on Coastal Vulnerability

Functions of ACUPCB-SPAV

A combination of four mandates of the ACUPCB leverages it to become not only a unique platform to empower and enable the local bodies and communities, but also serve as a one-point nodal center to provide advocacy, research innovations and advice related to urban planning and design. Four main functions / activities of the ACUPCB are:

1. 
Research Projects

2. 
Capacity Building

3. 
Spatial Data Infrastructure

4. 
Industry and Government Advocacy

ACUPCB-SPAV undertakes research projects that contribute to knowledge creation, innovative methodologies, and computational frameworks within the domain of climate sensitive urban planning. These research projects are designed to be contextually embedded within urban local bodies and benefit them.

To know more about our ongoing research projects visit - https://acupcb.spav.ac.in/projects/

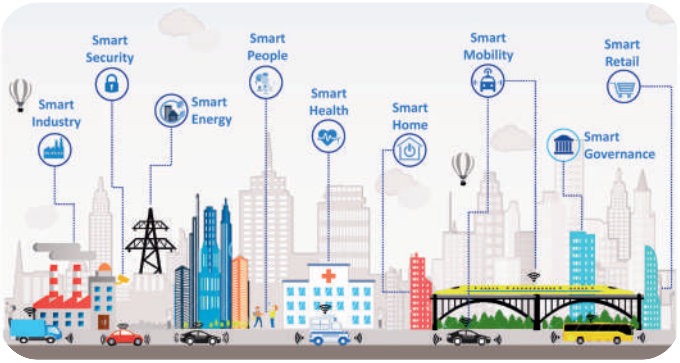
Research Projects

City–Specific Applied Research (CAR)

CAR category projects focus on macro-scale urban challenges, emphasizing solution-oriented research tailored to the needs of urban local bodies (ULBs). Two such projects are undertaken annually, each addressing a specific urban issue, challenge, or potential, culminating in scientifically validated, implementable solutions. CAR projects are executed by a core faculty team (minimum three members) and require higher financial allocations and deeper computational acumen.

Targeted Urban Research (TUR)

TUR projects focus on sub-city scale inquiries of smaller spatial extent, conducting in-depth diagnostic research to identify causal factors and implications of urban issues. The findings contribute to evidence-based strategy formulation, guiding ULBs in structural design based measures on ground, assisting in master planning, and operational strategies. Annually, three such projects are undertaken, and led by a two-member faculty team.



To know more about our ongoing research projects visit - https://acupcb.spav.ac.in/projects/

Research Projects

CAR_24_01:

Development of Low Emission Zone (LEZ) in Old Core City Areas. A Case of Vijayawada City

Principle Investigator : Dr.Naina Gupta

This research project aims to establish a Low Emission Zone (LEZ) in Vijayawada's old core to reduce vehicular pollution and support clean air initiatives. It involves identifying high-emission hotspots, restricting polluting vehicles, and promoting active mobility. Using computational tools that deal with transport planning, air pollution and GIS, the research study will define LEZ boundaries, operational criteria, and a phased implementation strategy with stakeholder engagement.

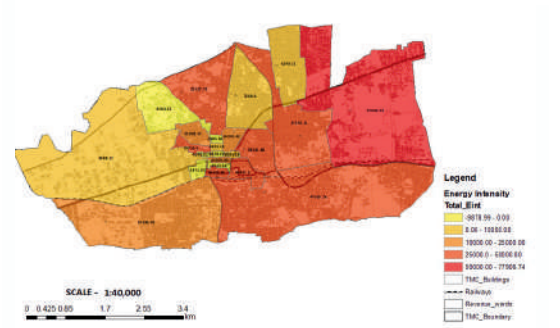
Outcome: A LEZ framework for Indian cities.

CAR_24_02:

Energy Efficiency Considerations in the Zonal Regulations of a City, A Study of Tirupati

Principle Investigator : Dr. Janmejoy Gupta

This research project integrates energy efficiency into Tirupati's Zonal Development Control Regulations (DCRs) to mitigate Urban Heat Island (UHI) effects and optimize energy use. Using QGIS, ENVIMET, SPSS, and R, it analyses energy consumption, quantifies anthropogenic heat, and evaluates green space distribution. Key recommendations include cool roofing, green building codes, and passive design strategies.



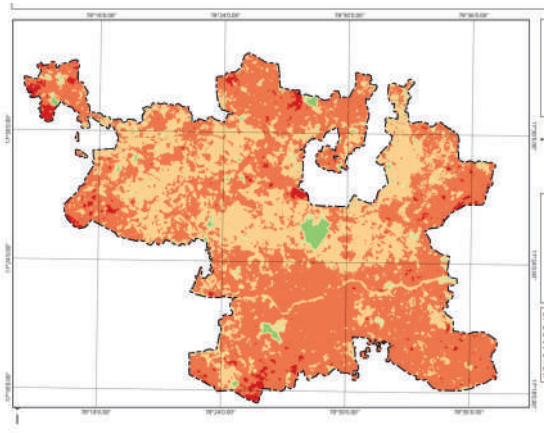
Outcome: Modified DCRs for sustainable urban development.

TUR_24_01:

Canopy Layer UHI Mitigation Strategies for Hotspots of Hyderabad Using Local Climate Zones (LCZs) Approach

Principle Investigator : Dr. Faiz Ahmed C

The project aims to mitigate Canopy Layer Urban Heat Islands (UHI) in Hyderabad using the Local Climate Zones (LCZs) approach. By mapping UHI hotspots with GIS-based NDVI, NDWI, NDBI, and LST indices for 2004 and 2024, it models temperature variations using ENVI-met, Climate Studio, and Urban Weather Generator (UWG).



Outcome: Urban cooling strategies to mitigate heat stress

Outcome: Adaptive traffic signal and synchronization for efficient mobility

TUR_24_02:

Operational Plan for VIP Vehicular Movement in Vijayawada

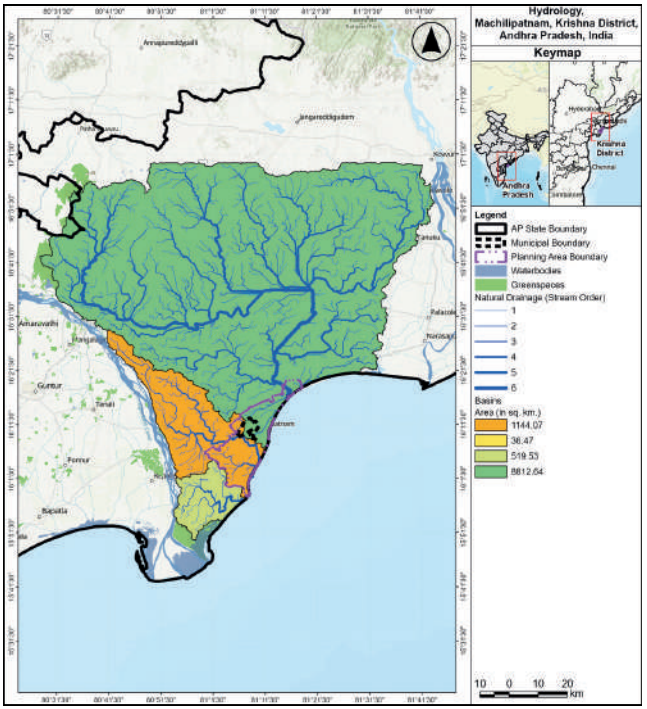
Principle Investigator : Dr. Naina Gupta

This project develops a short-term traffic management plan for VIP movement in Vijayawada, ensuring smooth transit between Gannavaram Airport, Amravati and key offices while minimizing disruptions to daily commuters. Using SUMO for traffic simulation and analysis.. The plan optimizes routes, signal phasing, and road closures in coordination with law enforcement.

To know more about our ongoing research projects visit - https://acupcb.spav.ac.in/projects/

TUR_24_03: Urban Blue-Green Infrastructure (BGI) Toolkit for Enhanced Resilience Towards Urban Flooding: The Case of Machilipatnam

Principle Investigator : Dr. Shanmuga Priya G



This project develops a Blue-Green Infrastructure (BGI) Toolkit to enhance flood resilience in Machilipatnam, Andhra Pradesh. Climate change and urbanization have increased flood risks, necessitating nature-based solutions like urban forests, retention ponds, bio-swales, and permeable surfaces. The toolkit equips urban local bodies (ULBs) with strategies for stormwater management, offering conceptual plans, best practices, and pilot projects. Given Machilipatnam's low-lying geography and cyclone exposure, the study ensures context-specific BGI implementation. The toolkit will guide policymakers and planners in integrating BGI into urban planning, reducing flood vulnerability, improving environmental quality, and fostering sustainable urban development.

Outcome: A BGI implementation guide for coastal cities.

Both research streams (CAR and TUR) operate on a need-based approach, aligning with the requirements of local and national authorities. Additionally, the Centre extends its research beyond core urban areas, incorporating peri-urban contexts into its analytical frameworks.

ACUPCB-SPAV focuses on capacity building for experts, organizations, and stakeholders in settlement planning and design. It offers diverse training programs for engineers, architects, bureaucrats, and development specialists, ranging from basic to advanced levels.

Training modules cover core topics at regular intervals and customized programs based on specific organizational needs. These programs aim to enhance the skills of professionals and mid-career urbanists, while remaining accessible to all knowledge seekers.

Typology of Capacity Building Products offered:
·Executive Development Programmes (EDPs) (1-4 Days)
·Capacity Building and Skill Enhancement Programs (5-7 days)
·Experiential Programmes of Urban Planning (14 days)

A total of five training programmes have been successfully conducted, benefitting over 140 professionals. In addition, several new training programmes are planned for the upcoming times.

For details of the training, please visit:
https://acupcb.spav.ac.in/capacity-building/

www.acupcb.spav.ac.in

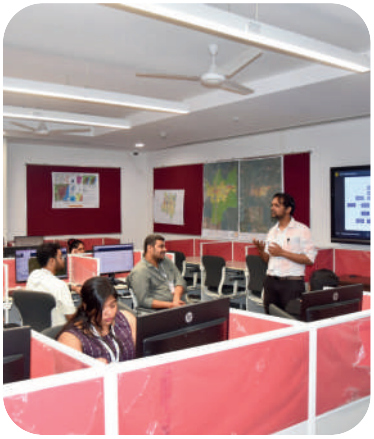
ACUPCB-SPAV

Capacity Building

CBP – Capacity Building Programme

ACUPCB-SPAV has conducted three specialized training programs to enhance climate resilience and sustainable urban planning:

01 CBP_24_01: Climate Actions for Local Area Planning: Combating Heat Extremes



Aligned with SDGs 11 & 13, the program trained urban stakeholders in climate-sensitive planning, heat adaptation, and green infrastructure, building skills to mitigate heat islands and enhance biodiversity.

Conducted on : 06.02.25 – 10.02.25
Total number of participants: 28
Principle Instructor : Dr. Anurag Bagade

02 CBP_24_02: Climate Resilience Through Simulation of Urban Environments: Hands–on Training of Tools and Techniques

The program introduced ENVI-met for urban microclimate modeling and trained planners and architects in climate-responsive design through expert sessions and hands-on practice.

Conducted on : 17.02.25 – 21.02.25
Total number of participants: 23
Principle Instructor : Dr. Lilly Rose A

03 CBP_24_03: Natural Resource Management for Climate Change Mitigation and Adaptation

The training built capacity in climate strategies for sustainable resource management and resilience.

Conducted on :10.03.25 – 14.03.25
Total number of participants: 26
Principle Instructor : Dr. Nagaraju Kaja

EDP – Executive Development Programme

ACUPCB-SPAV has completed two Executive Development Programs, strengthening professional capacities in project management, resilience, and sustainable urban planning practices.

01 EDP_24_01: Project Management Techniques in Urban Planning

A three-day program on systematic urban project execution using MS Project. It covered resource optimization, risk management, and public sector efficiency, focusing on coastal resilience projects

Conducted on : 16.01.25 – 18.01.25

Total number of participants: 23

Principle Instructor : Dr. Arpan Paul Singh G

02 EDP_24_02: Coastal Resilience Planning and Management

A four-day program addressing climate risks along India's coastline. It combined hazard analysis, ecosystem conservation, and governance strategies with spatial software applications for resilience planning.

Conducted on : 22.01.25 – 25.01.25

Total number of participants: 23

Principle Instructor : Mr. Rajeev R

Upcoming Training Programmes

Date	Type	Theme	Training Code
1 Oct 2025	EDP	Traffic Management and Simulation Techniques for Transport Planning	EDP_25_01
1 Nov 2025	CBP	Disaster Risk Reduction Approaches in Planning: Flood and Heat Stress	CBP_25_01
1 Dec 2025	EDP	Application of Geospatial Techniques for Spatial Planning	EDP_25_02
1 Jan 2025	EDP	Mechanisms for Land Management Through the Lens of Land Value Capture	EDP_25_03

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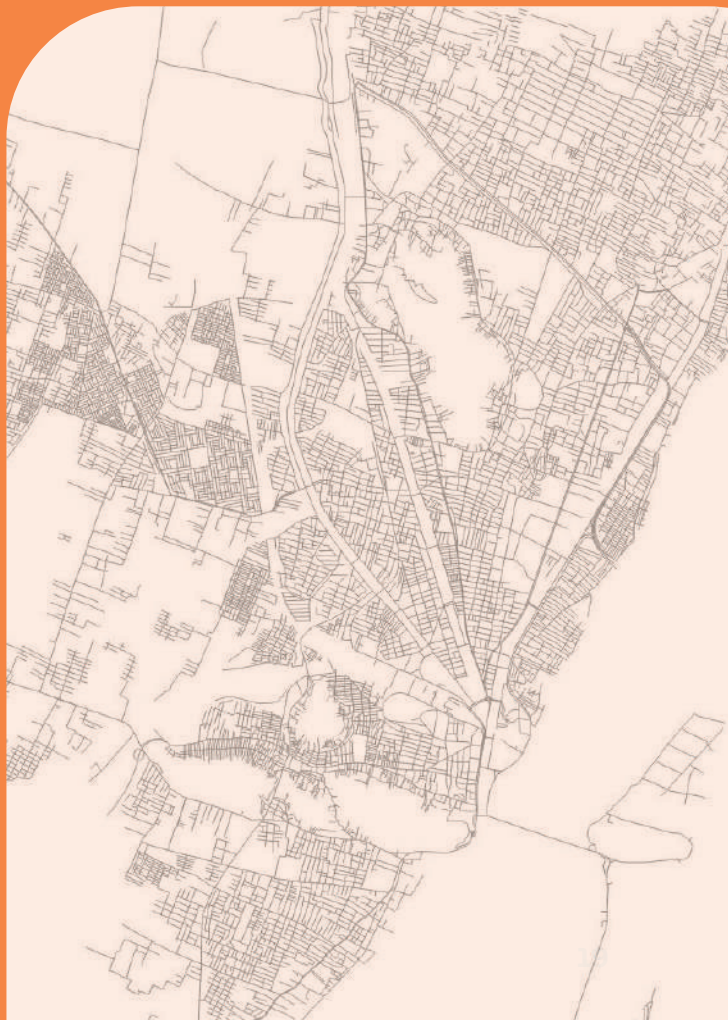

ACUPCB-SPAV

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Advocacy

Advocacy

ACUPCB-SPAV serves as a key liaison platform with various local governments in India by providing technical advocacy for policymaking, scheme evaluation, and benchmarking urban planning projects. Through its existing institutional network, it engages with government departments to offer expert advisory, advocacy, evaluation, and appraisal services. The centre aspires to function as a think tank, facilitating informed decision-making through deliberative and advisory exercises for public sector initiatives.

01 ADVR_25_01: Back Lane / Conservancy Lane Improvement under Smart City Mission – An Appraisal and Impact Assessment. Case studies of Jabalpur, Shivamogga and Jaipur

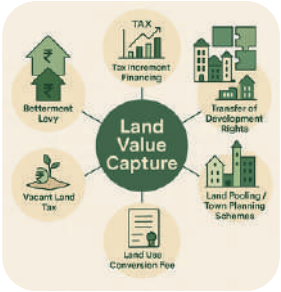
Project Lead : Dr. Ayon Kumar Tarafdar

This advocacy research project analyses the efficiency and effectiveness of Smart City Mission initiatives transforming neglected back lanes in Jabalpur, Shivamogga, and Jaipur into vibrant community spaces, delivering social, environmental, and economic benefits. The project analysed over 30 impact indicators taking opinion of citizens and experts to understand replicability and suggested sustainable operation and maintenance models.

02 ADVR_25_02: White Paper on Applicability of Land Value Capture Methods in Indian ULBs

Project Lead : Dr. Ayon Kumar Tarafdar

This advocacy research project develops a white paper in the form of a handbook and toolkit for applying Land Value Capture methods in Indian ULBs to recover and reinvest increased land values from public investments. The toolkit explores techniques like betterment levies, TDR, impact fees, and land pooling and promotes sustainable, equitable urban financing.



03 ADV_25_03: Urban Mobility Challenges and Solutions: Addressing Congestion and Public Transport

Project Lead : Dr. Bhagwat Jayeshkumar Maheshkumar

This two-volume study on Visakhapatnam and Vijayawada analyses congestion, traffic, and bus inefficiencies, proposing ITS, demand management, electrification, and ITS integration to guide planners toward sustainable urban mobility solutions.

04 Conference on Swarna Andhra 2047 & Vikisit Bharat

A one-day conference on Swarna Andhra 2047 was held on 27.03.2025 that explored Andhra Pradesh's vision for sustainable economic growth, social equity, and environmental resilience, aligning with Vikisit Bharat initiatives. The conclave brought together policy makers, bureaucrats, planners and engineers to deliberate.

For more about Advocacy Research, please visit - https://acupcb.spav.ac.in/advocacy/

ACUPCB-SPAV

A Centre that Nurtures, Innovates and Disseminates

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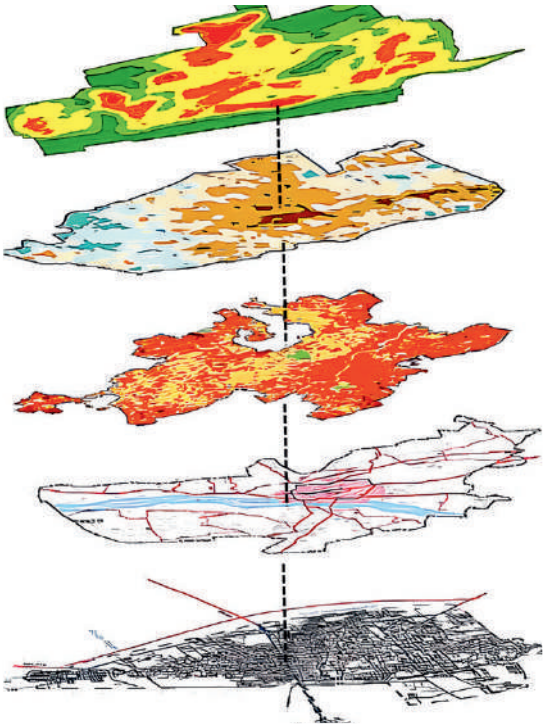
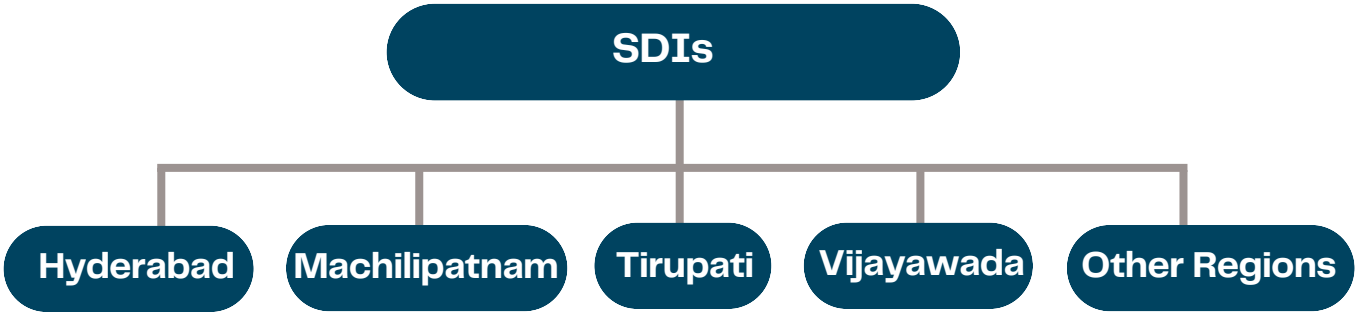
Spatial Data Infrastructure

ACUPCB-SPAV

Spatial Data Infrastructure (SDI)

The ACUPCB-SPAV's Spatial Data Infrastructure (SDI) is a digital platform providing spatial information, reports, and maps for planners and urban development officials in India. Managed by ACUPCB-SPAV, SDI grows with ongoing projects and ensures data is quality-checked, standardized, and converted into layered products for urban planning. It also integrates information from State Government departments under thematic categories, serving as a common platform for planners, students, researchers, and practitioners. Most advanced data products are open source, with continuous updates throughout the year to ensure easy access and usability.





The Team

Leadership

Prof. Dr. Ayon Kumar Tarafdar
Head, ACUPCB-SPAV
Professor of Planning

Prof. Dr. Ramesh Srikonda
Overall Direction and Supervision
Director, SPA Vijayawada

Dr. Prasanth Vardhan
Deputy Head, ACUPCB-SPAV
Assoc. Professor of Planning

Overall Coordination Committee (OCC)

Mr. Uma Maheswara Rao
Registrar, SPA Vijayawada

Dr. Adinarayanane R
Associate Prof. of Planning

Dr. Banu Chitra
Associate Prof. of Architecture
Dean Research

Technical Coordination and Screening Committee (TCSC)

Dr. Prasanth Vardhan
Assoc. Professor of Planning

Prof. Dr. Iyer Vijaylaxmi K
Professor of Architecture

Dr. Amitava Sarkar
Associate Prof. of Architecture

Progress Review & Completion Committee

Dr. Adinarayanane R
Associate Prof. of Planning

Dr. Rajakumari M
Associate Prof. of Planning
Dean Faculty Welfare

Dr. Krishna Kumar S V
Associate Prof. of Architecture

Financial Monitoring Committee

Dr. Banu Chitra
Associate Prof. of Architecture
Dean Research

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Deputy Registrar

Mr. Diwakar Naik
Assistant Registrar

Administrative Support Team

Mr. Sai Diwakar Naik S
Administrative Officer

Mr. Pavan Kumar Vishnubhatla
Financial Officer

Mr. Abhishek Arepalli
Technical Officer

Mr. Potnuru Vasu
Administrative Assistant

Ms. Kadari Vineela
Administrative Assistant

Officers

Dr. Yenisetty Pavan Teja
Senior Research Officer

Ms. Swathikka S
Junior Research Officer

Mr. Nakka Sunny
Project Officer

Ms. M V Aneesha Jayaram
Project Officer

Mr. Krupakar Potlapally
Project Officer

Ms. Greeshma S Vijay
Project Officer

Mr. Arun Prashanth C
Project Officer

Ms. Poojitha Goli
Project Intern

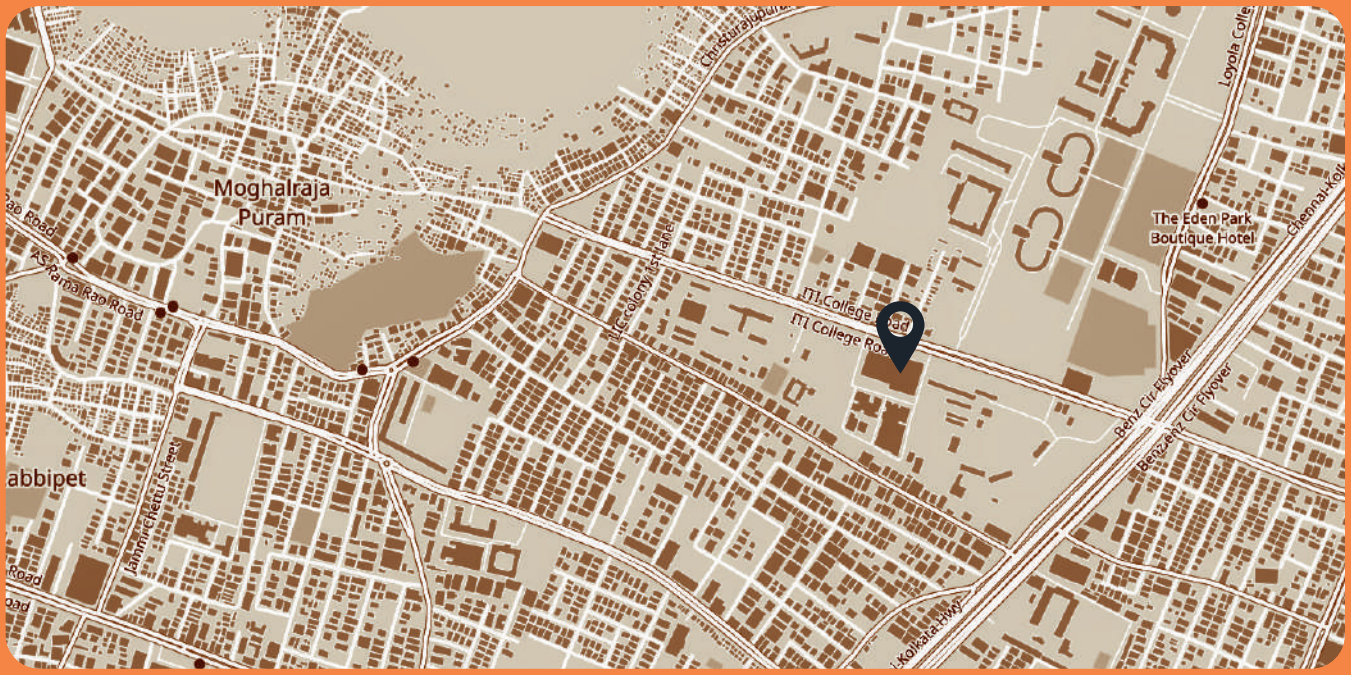
Mr. Vallabai Avanigadda
Junior Assistant (Admin and Acc)

Mr. Datla Aditya Varma
IT Analyst & Web Developer

Team of ACUPCB–SPAV

The team of ACUPCB-SPAV presented is as on Sep 2025. The team is dynamic and growing. For the latest details of team members please visit - https://acupcb.spav.ac.in/team/

Reach Us



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2025

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To know more Scan

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