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Present on Dais are Prof. Dr. Jagdish Singh, Vice President of ITPI; Shri R. L. Mopalwar, IAS, Managing Director, Maharashtra State Road Development Corporation and Chief Guest; Prof. Dr. D. S. Meshram, President, ITPI; Prof. Dr. P. M. Padole, Director, Visvesvaraya National Institute of Technology (VNIT), Nagpur, and Guest of Honour; Prof. Dr. Vijay Kapse, Chairman ITPI, MRC, Nagpur; and Shri Pradeep Kapoor, Secretary General, ITPI

WEST ZONE CONFERENCE: IMPACT OF SAMRUDDHI MAHAMARG ON NAGPUR AND SURROUNDING REGION

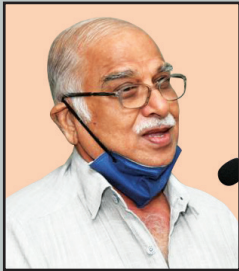
Maharashtra Regional Chapter, Nagpur organized the West Zone Conference, on 27 November 2021 at ITPI, MRC, Building, Nagpur, on the theme "Impact of Samruddhi Mahamarg on Nagpur and Surrounding Region".

Prof. Dr. Vijay Kapse, Chairman ITPI, MRC, Nagpur, welcoming Shri R. L. Mopalwar, IAS, Managing Director, Maharashtra State Road Development Corporation and Chief Guest of the Conference; and Prof. Dr. D. S. Meshram, President, ITPI; and Shri Pradeep Kapoor, Secretary General, ITPI; and all the Council Members, described multiple and varied activities organized by ITPI, MRC Nagpur including their continuing program of lecture series, workshops, best thesis award competition, etc. He also explained the collaborative work being done with other professional bodies like IIA and INTACH, etc.

Dr. Vijay Kapse also highlighted that Prof. Dr. D. S. Meshram has contributed a lot to town planning profession and town planning education. In fact in planning fraternity there are a few outstanding leaders and iconic personalities who have made significant contributions to the advancement of the planning profession both in industry and academics and Prof. Dr. D. S. Meshram is one them. Therefore, Maharashtra Regional Chapter, Nagpur on the occasion of West Zone Conference decided to honour Prof. Dr. D. S. Meshram, President, ITPI, New Delhi with the Life Time Achievement Award in recognition of his indefatigable efforts in the realm of town planning for outstanding vision, dedication, commitment, visionary guidance and exemplary leadership. Prof. Dr. Kapse requested the senior most professional Prof. R. G. Bhambhani, to read Scroll of honour being presented to Dr. Meshram.



Institute of Town
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Prof. R. G. Bhambhani,
Former Chairman
MRC (N), reading
Scroll of honour being
awarded to Prof. Dr. D.
S. Meshram, President,
ITPI



Prof. R. G. Bhambhani, Former Chairman MRC (N), presenting the Scroll of honour to Prof. Dr. D. S. Meshram, President, ITPI

Shri R. G. Bhambhani mentioned that Prof. Dr. D.S. Meshram, acquired his Ph.D. at the age of 72 from Mysore University where he was also appointed Professor on a prestigious Chair - Dev Raj Urs. He worked in the capacities of architect and planner in the defence services; Chief Planner in Town and Country Planning Organization (TCPO), Ministry of Urban Development, Government of India, and Advisor (Urban Development) to Uttarakhand Government. The UDPFI guidelines were prepared by the ITPI for the Ministry of Urban Affairs under his technical guidance. Dr. Meshram's efforts helped in establishing various ITPI Regional Chapters and Centres throughout the country. Besides, he was responsible for starting Bachelor of Planning program and also Integrated Planning Program leading to M. Plan. He was unanimously elected as President of ITPI for the 19 time. Dr. Meshram edited many books, one of which is 'National Conference of ITPI: Conclusions and Recommendations over the Sixty Years'. He is at present President of the ITPI and Vice President of Commonwealth Association of Planners. Dr. Meshram's contributions to the ITPI are unfathomable. The ITPI constituted the National Best Thesis Award in his name for Undergraduate Planning Students and also bestowed upon him the award of "President Emeritus, ITPI". Shri Ramesh Bamhani, Past Chairman, ITPI, MRC, Nagpur, and batchmate of Dr. Meshram, after reading the Scroll

of honour presented the Lifetime Achievement Award to Dr. D.S. Meshram.

After giving away the lifetime achievement award, Dr. Sarika Bahadure, Conference Coordinator and Treasurer, ITPI, MRC, Nagpur narrated the significance of understanding the impact of transport network in the overall development of the region. She highlighted that Mumbai - Nagpur is the fastest expressway covering 701 km distance and has 8 lanes. It will enhance economic opportunities through agro-based industries and generate non-farm-based employment, resulting in decreasing inequality and poverty within the state of Maharashtra. The robust infrastructure being provided will be based on the principles of sustainable development, which will help check migration to large towns and cities.

Shri Radheshym L. Mopalwar, IAS Vice Chairman and Managing Director of Maharashtra State Road Development Cooperation, and Chief Guest of the Conference discussed the importance of infrastructure development specifically highways which is an indicator of growth and overall progress of the country. He also supported his discussion with comparative statistics of length of highways and expressways in the country besides the growth in Gross Domestic Product (GDP) by quoting examples from China, South Korea, and Malaysia. Besides, he described the journey of

the expressways in India for the last 3 decades, and also shared the success story of Hinjewadi, which grew as a growth center on Mumbai-Pune expressway. He further emphasized that this highway is responsible for developing entire eastern region specifically development on the either side of the highway. In fact Mumbai - Pune expressway has changed the face of the region, and also underlined that Samruddhi Mahamarg will also make similar impact on the region by creating development prospects, employment opportunities and socio-economic upliftment of the region and of the state by capturing land values. The Maharashtra Samruddhi Mahamarg will attract huge investments and will boost the development of industries, which will further enhance not only the overall development of Nagpur but nearby towns in the next two decades. Nagpur is the zero mile of India and will become fulcrum of development once it gets connected to Wardha, Gadchiroli, Gondia, Butibor, Pulgaon, Bhandara, Chandrapur, Gondia and Ramtek. In fact the potentials crated by this Mahamarg needs to be harnesssed further for creating employment opportunities and providing scope of expansion of major corridors such as Delhi - Mumbai, Mumbai - Kolkata, highways are passing through Nagpur town. The project will not only create direct employment but will also create huge indirect employment because it will promote industries and tourism. Nagpur will act as logistic

hub and will also provide opportunities for the establishment of ware houses and cold storage, etc., as Nagpur has great potential to sustain such activities. All proposed new towns will be integrated through this Mahamarg, which will specifically get developed on the inter-change points.

Prof. Dr. P. M. Padole, Director, Visvesvaraya National Institute of Technology (VNIT), Nagpur, and Guest of Honour, congratulated Dr. Meshram, an alumnus of VNIT, Nagpur, and a stimulus for the planning profession for the lifetime achievement award. He shared VNIT's contribution in traffic management, traffic engineering, besides planning and design through its various departments. He was also happy to note that Samruddhi Mahamarg would be using local resources and local manpower, which would generate huge employment opportunities in the region. The dream project - Samruddhi Mahamarg expressway will cater to the region taking care of the sustainability aspects. He emphasized the importance of adopting a local knowledge system and manpower for development activities. Prof. Dr. Padole in order to have strong bond between VNIT and ITPI, proposed to sign a MoU with the ITPI, Delhi.

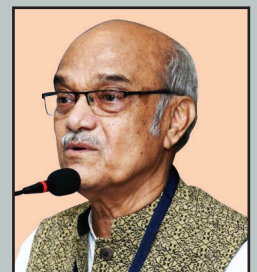
Prof. Dr. Meshram, in his address underlined that even though the provision of transport corridors like Metro and Highways made in the first Master Plan



Shri R. L. Mopalwar, IAS, Managing Director, Maharashtra State Road Development Corporation and Chief Guest, addressing the delegates



Prof. Dr. P. M. Padole, Director, Visvesvaraya National Institute of Technology (VNIT), Nagpur, and Guest of Honour, addressing the delegates



Prof. Dr. D. S. Meshram, President, ITPI, addressing the delegates



Shri R. L. Mopalwar, IAS, Managing Director, Maharashtra State Road Development Corporation and Chief Guest inaugurating the Exhibition organized on the occasion of West Zone Conference



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Prof. Dr. Jagdish Singh,
Vice President of
ITPI, addressing the
delegates



Prof. Dr. Vijay Kapse,
Chairman ITPI, MRC,
Nagpur, delivering the
welcome address

for Delhi in the 1960s and also in the National Capital Region Plan, implementation of such proposals could not take off due to bureaucratic approach. By the time the need of such proposal was realised, the cost increased many folds. On the issue of Town Planning Schemes (TPS), he mentioned that even though the concept of Town Planning Schemes was initiated in Maharashtra, the results were not encouraging because of present planning process and legal hassles, while the same was very much successful in Gujarat. Dr. Meshram quoted the examples of successful expressways in India and emphasized to take lessons from these examples, besides adoption of TPES schemes model being implemented in Gujarat.

Prof. Dr. Jagdish Singh, Vice President, ITPI, New Delhi mentioned that the vision of the ITPI is to promote dynamic, inclusive and integrated town and country planning practice, education, research and institutional mechanisms for vibrant, sustainable and resilient spatio-economic development of towns, cities and regions, and accordingly the ITPI is making efforts to realize this vision.

Shri Pradeep Kapoor, Secretary-General, ITPI, New Delhi, gave in brief the achievement of ITPI, specifically its contribution towards the planning profession and education, besides highlighted the role of ITPI in Commonwealth Association of Planners. He congratulated MRC, Nagpur for providing a platform for organizing West Zone Conference.

The inaugural session was followed by the inauguration of an Exhibition by the Chief Guest Shri Radheshym L. Mopalwar, IAS. The exhibits included award winning work of planning students: Smart City work - challenges; TULIP, Town Planning Scheme; Nagpur Metropolitan Region Development Authority (NMRDA); Samruddhi Mahamarg; and MOUDA Development Plan.

Technical Session was chaired jointly by Shri. A. R. Patharkar, Former President of ITPI, New Delhi and Shri. K. S. Akode, Former President of ITPI, New Delhi. In this session, two key speakers Shri. N. K. Patel and Prof. Dr. Manoranjan Parida made presentations in person and two speakers Prof. Dr. Sewa Ram and Dr. Prafulla Parlewar joined online. Dr. Akshay Patil, Head, Department of Architecture and Planning, Visvesvaraya National Institute of Technology (VNIT), Nagpur and Shri Parag Date, Past Chairman, ITPI, MRC, Nagpur were the Rapporteur of the technical session.

Technical Session focused on three sub-themes namely Land Pooling and Town Planning Schemes; Expressway- Safety, Design and Intelligent Management; and Socio-economic Prosperity Corridor.

Shri N. K. Patel, Immediate Past President ITPI, New Delhi in his talk on land pooling stated that in 1915, the Bombay Town Planning Act introduced the concept of Town Planning Scheme, which was revised in 1954. It caters to both physical and financial planning aspects. The 1976 Gujarat Town



Audience to the West Zone Conference



Prof. Dr. Vijay Kapse, Chairman ITPI, MRC, Nagpur presenting memento to Shri R. L. Mopalwar, IAS, Managing Director, Maharashtra State Road Development Corporation and Chief Guest of the Conference.

Planning and Urban Development Act also focused on land pooling and land re-adjustment to provide planned infrastructure prior to any development happening at a neighbourhood level with an introduction of public participation. The Act provides for the allotment of reservations of land for roads, open spaces, gardens, recreation grounds, schools, markets, greenbelts, transport facilities, and public purposes, etc. The proposed land bifurcations include up to 10 percent for housing for socially and economically weaker section, up to 15 percent for roads, up to 5 percent each for parks, playgrounds, and other open spaces, and up to 5 percent for social infrastructure. Gujarat TPS in Ahmedabad has been used for more than 95 percent of urban development with great success, Shri N. K. Patel, said.

Prof. Dr. Manoranjan Parida, Deputy Director, IIT, Roorkee, delivered a talk on Socio-economic Impact of Samruddhi Mahamarg on Nagpur and Surrounding Region and mentioned that the high-volume transport corridors are one of the key tools to encourage sustainable economic development and enhance the standard of living as well as human well-being in the region. The development of transport infrastructure corridor not only improves mobility but also supports economic growth, improves the average income of people and per capita GDP, poverty alleviation, and equitable distribution of resources and opportunities. Dr. Parida further added that the research on socio-economic impact studies of high volume expressways and highways

has documented strong positive impacts of highway development, thus the Samruddhi Expressway will also open up the avenues of development for the Nagpur Region and other districts connected by this expressway.

Prof. Dr. Sewa Ram, Head, Department of Transport Planning, SPA, New Delhi made presentation (online) on the expressway design, safety, and development particularly in Maharashtra and mentioned that expressways create future development potentials and network connectivity and accessibility which further lead to development of secondary networks. Expressway also brings *gati*, but it is also important to keep the crash record to a low value and need an intelligent management system with comprehensive coverage of incident and accident management. Since the user pays for the desired services, it is important to meet their expectations in terms of acceptable standards of the time, tolling mechanism, and the needs of local users. Dr. Sewa Ram further explained good examples of benchmarking expressways across the globe.

Prof. Dr. Prafulla Parlewar, Department of Urban Planning, SPA, New Delhi made presentation on the 'Artificial Intelligence (AI) infused GIS in Urban and Transport Management (online). Globally, innovative technologies are found to be effective in planning, design, and management of the expressway. AI-infused GIS provides an innovative model to analyse and plan to manage the impact of



Shri Pradeep Kapoor,
Secretary-General,
ITPI, addressing the
delegates



Shri N.K. Patel,
Immediate Past
President ITPI, making
presentation on Land
Pooling



**Prof. Dr. Manoranjan
Parida, Deputy Director,
IIT, Roorkee making
presentation on Socio-
economic Impact of
Samruddhi Mahamarg
on Nagpur and
Surrounding Region**



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West Zone Conference is in Progress

the expressway on urban settlements. AI-infused GIS can provide many possibilities for undertaking the management of various activities of projects similar to Samruddhi Mahamarg. Dr. Prafulla further illustrated a model project on GIS-based locational intelligence of Nagpur city completed a few years before. The key part of this model is real-time intelligence to route the data in the geofence environment with a mobile-friendly interface. While concluding his talk Dr. Parlewar mentioned that the urban areas along the expressway can also be planned and managed with similar innovative models of AI-infused GIS.

In his valedictory addresses Prof. Dr. D. S. Meshram, President, ITPI, mentioned that Samruddhi Mahamarg having 701 km length connecting Nagpur - Mumbai, super communication Greenfield expressway will reinforce the economic and socio-occupational fortune of the Maharashtra. This expressway will enable the large population, easy and smooth access to major centres in Maharashtra and provide not only self-employment but also increase employment opportunities in businesses and trade, education, healthcare and other necessary services and will connect 10 districts, 26 *talukas*, and 392 villages, beside 13 other districts. The expressway will have the speed of 150 kilometres with 8 lanes (four in each direction) and cover Mumbai - Nagpur in 8 hours; and Mumbai- Aurangabad in 4 hours. It will have service road on both sides and also comprise over 50 flyovers, 24 plus interchanges, 5 plus tunnels, 400 plus vehicular and 300 plus pedestrians under passes, besides new towns along the route will be developed as growth centres. In addition, the proposal also includes of the development of 19 Krushi Samruddhi Nagars, which will provide increased access to land owners to market their produce in the *mandies*. It is also claimed that after completion of project, people expecting to migrate to large cities can find employment near to their home towns. The land required for the project will be pooled by landowners whereby they will voluntarily participate by giving their land and get back a plot in development area along with other benefits.

Dr. Meshram, also lamented that all these are the opportunities which will be created if the project is implemented in the manner, it has been conceived because for every action there is a reaction, but whether this reaction will be positive or negative

needs to be assessed as the project may even have the side effects. Therefore, it is important to carry out the SWOT analysis, and hoped that concerned authorities must have taken these aspects into consideration - the strengths, weaknesses, opportunities and trade-offs or threats, because along with opportunities there will also be challenges. On the issue of network of development of industrial hubs and economics hubs, Dr. Meshram, suggested to cater for the service population, which otherwise creates incidence of slums and unauthorized development. As there is a proposal to develop 9 new towns and industrial hubs, proactive planning to curb unplanned and haphazard development should be carried out in new towns.

On the aspect of connecting 10 districts, 26 *talukas* and 399 villages, he observed that such a project of high magnitude will impact not only these districts and *talukas* but also the adjoining districts and settlements. Therefore, there is a need to prepare District Development Plans focusing on spatial aspects in conformity with 74th Constitution Amendment Act.

As far as Land Pooling and Town Planning Schemes is concerned, he said that even though this concept started in Maharashtra, but is not very much successful in Maharashtra at the same time it is quite successful in Gujarat. Therefore, the improvement done by Gujarat in Land Pooling or Town Planning Schemes needs to be taken into consideration as an alternative to land acquisition. While concluding his address Dr. Meshram mentioned that the Samruddhi Mahamarg project will definitely provide opportunities and bring prosperity in the region provided it is implemented in the spirit it has been conceived.

In the Valedictory Session, Prof. Dr. Vijay Kapse, Chairman, ITPI, MRC, Nagpur requested Prof. Dr. D. S. Meshram to award the Best Thesis to students comprising Visvesvaraya National Institute of Technology, Nagpur, and College of Engineering, Pune. Prof. Pankaj Bahadure, former Secretary, ITPI, MRC, Nagpur, announced the Prize winners of the Best Thesis Award and Prof. Dr. D. S. Meshram awarded prizes to Ms. Shreya Sable and Ms. Sachi Dongaonkar. Shri Jagdish Rajurkar, Secretary ITPI, MRC, Nagpur, proposed the vote of thanks.

After discussions and deliberations following recommendations emerged:

- The Expressway projects need large tracts of land, while the landowners, whose livelihood depends on their land and land produce, are reluctant to part with their lands. Therefore, it would be advisable to opt for Land Pooling and Town Planning Schemes (TPS), on the line of Gujarat model.
- Development of transport infrastructure has significant positive impacts on economic growth, employment and quality of life not only of a town but of the whole region, which ultimately acts as stimulus in reducing migration from rural to urban areas, as people can find employment near their home town. Accordingly, it is recommended that the transport corridors should focus on more sustainable socio-economic development and human well-being in the region.
- While designing the expressway, aspects like design, alignment, speed, number of lanes, medians, underpasses for wildlife and cattle crossing, flyover and interchange at major road crossings, landscaping, tunnel lighting, bridge beautification, street lighting, and signage needs to be given proper attention. Since the user pays for the services provided to them, it is important to meet their expectations and demands in terms of acceptable standards of the time, tolling mechanisms without creating hardship to local users. Accordingly, it is recommended that:
 - Good and bad examples of benchmarking expressways across the globe should be studied and appropriate solutions be adopted as a good benchmarking tool and timely evaluate its progress.
 - Artificial Intelligence (AI) infused Geographic Information System (GIS) provides innovative models for the management of the expressway, in terms of real-time traffic prediction, safety, access to information, accident information, and many others, accordingly, adoption of innovative models need to be encouraged.
- The new town or growth centres developed along the transportation corridor benefits both the developed and under-developed regions, so also the Samruddhi Mahamarg, under which 19 Krushi Samruddhi Nagars and 9 new towns have been proposed, will facilitate the development of Nagpur Region, and open up new vistas for the development of Nagpur city.
- The development of these new townships along the corridor will increase the accessibility from major district centres and arterial road networks. Therefore, it is recommended that the provision of public transport services, fast internet connectivity, power supply, schools and colleges, health care facilities, petrol pumps, hotels, and other physical and social infrastructure services should be integrated with each other in a planned manner. It is also suggested that we adopt appropriate financing model and mechanism for implementation of these proposals.
- Development plans for all the proposed 9 new towns and 19 Krushi Samruddhi Nagars across the Samruddhi Mahamarg should be prepared in advance by following pro-active approach. Otherwise there is every possibility that unplanned, haphazard development may take place on the fringe of existing towns and even on other lands earmarked for new developments.
- In the projects of such high magnitude involving large scale financial investments, the service population generally get neglected; therefore, it is recommended that Master Development Plans should adequately provide for service population.
- As the Samruddhi Mahamarg will connect 10 districts, 26 *Talukas* and 392 Villages, besides will impact 13 other districts, it will be desirable to prepare the 'District Development Plans' focusing on spatial aspects of all these districts, in advance.

MAHARASHTRA REGIONAL CHAPTER, NAGPUR - LECTURE SERIES - XII: HERITAGE PLANNING AND CONSERVATION

Under the flagship program of Lecture Series, Maharashtra Regional Chapter, Nagpur organized Lecture Series - XII on 29 January 2022 at MRC (N).

Shri L. K. Gupta, Major Journal (Retired) and Chairman, INTACH, Guest of Honour of the function gave the brief about INTACH activities and called on

the participants to re-discover our national heritage because it is distinct from the eastern world and requested to make efforts to preserve and conserve our national heritage.

Shri Ashok Mokha, Chairman, Heritage Committee, Nagpur Municipal Corporation in his presentation



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Lecture Series - XII: Heritage Planning and Conservation

mentioned that we can learn a lot from our history and then narrated tangible and intangible heritage and explained his point of view through examples from world over.

Ms. Vijaya Amujure, Director, Architecture Division, INTACH, New Delhi, in her presentation dwelt on Feroz Shah Kotla - 675 years old fort, to which there is no entry from Ring Road, due to which visitors have to enter the monument from back side. She has also commented on the construction of flyover from the side of Indira Gandhi Stadium due to which the fort is not visible from Ring Road and mentioned that heritage and planning have to go hand in hand to bring people close to appreciate the heritage. She has also touched upon the renewal proposal of IIPA complex at New Delhi being developed in the public - private mode having three high rise towers.

Ms. Vijaya then identified that for the conservation of grade - I, II, and III monuments; the three stages are most important: first being identification of the heritage monuments; second being documentation - listing of the monuments and third being management of the heritage, and clarified her point of view through various examples.

Prof. Dr. D. S. Meshram, President, ITPI, Chief Guest mentioned that issues of urban conservation are not new and are being discussed and debated for quite some time like: Should old areas be conserved and preserved or they should make room for new development? How much and what extent it is possible to freeze development in Conservation Zone? Should the cultural heritage be preserved or allowed to remain as it is and allow decaying? What impact the development taking place in the vicinity of the monuments would have on conservation area, can a balance be achieved so that new and old buildings be harmonized and blended with each other. He then mentioned that the framers of Constitution of India have provided adequate safeguards to protect our heritage. In the Article - 49 of the Constitution it is mentioned that "It shall be the obligation of the State to protect every monument or place or object of artistic or historic interest (declared under Law by Parliament) to be of National importance from spoliation, disfigurement, destruction, removal, disposal or export as the case may be". Article - 51 (f) further states that "It shall be the duty of

every citizen of India to value and preserve the rich heritage of our composite culture" and 51 (g) mentions 'to protect and improve the natural environment including forest, lakes, rivers and wild life and to have compassion for living creatures'.

He has further highlighted that Ancient Monuments Preservation Act, 1904 allowed government authority over privately owned heritage structures. Which has been further protected under the Ancient Monuments and Archaeological Sites and Remains Act, 1958, Section - 6 provides restriction of the owner's right to use the monuments for any purpose; to charge any fee for entry into or inspection of monuments; to destroy, remove, alter or deface the monument; to build on or near the site of monuments. Besides, Section - 20 gives right to government to acquire such properties i.e. principle of eminent domain. He then underlined that the first owner of the heritage buildings might have been quite rich to build such structures and monuments but the present generation may not be that rich enough and may not have the resources to maintain and repair the building and therefore proper safeguards are required to be taken to overcome such eventualities. Dr. D. S. Meshram also brought into focus another issue that under the Act up to 100 meter area around the monuments is protected while beyond it, up to 200 meter is regulated. Thus, the present generation (the owner) even though has the ancestral property are not in position to enjoy the benefit of the property in comparison, to such other properties, beyond the heritage conservation zone.

Dr. D. S. Meshram, then explained the provision of Master Plan for Delhi, 2021 and also of the Delhi Building Bye-Laws on conservation of heritage. He specifically pointed out that MPD - 2021 lays emphasis to ensure "Conservation of environment, preservation of Delhi's heritage and blending it with new and complex modern pattern of development". While concluding his address Dr. D. S. Meshram, mentioned that urban conservation should not be seen as a foot note but be seen as major aspect of urban planning and accordingly, measures should be taken to counter the known threats to our national heritage.

A vote of thanks was extended by Dr. Sarika Bahadure.

EXPERT TALK ON 'TOWARDS CLIMATE ACTION: PLANNING FOR MITIGATING URBAN HEAT ISLAND EFFECT USING LOCAL CLIMATE ZONES', HARYANA REGIONAL CHAPTER

Expert Talk

22nd January 2022

2:00 PM

Limited Seats on Google Meet

by



Dr. ANURAG BAGDE

Assistant Professor at
Environmental Planning
Department, SPA, Bhopal

CHIEF GUEST



PROF. DR. D. S. MESHAM

President, ITPI

GUEST OF HONOUR



PRADEEP KAPOOR

Secretary Genral (ITPI)

COORDINATORS



SUDHIR SINGH CHAUHAN

Chairman, ITPI Haryana
Regional Chapter



VIJAY KUMAR

Secretary, ITPI HRC



VIBHORE BAKSHI

Assistant Professor,
Department of Urban and
Regional Planning, SPA-Bhopal

Action Towards Climate Change - Planning for Mitigating Urban Heat Island Effect using Local Climate Zones

The physical and geometrical properties of urban regions are responsible for influencing canopy layer air temperature leading to urban heat island effect (UHI). Local climate zone (LCZ) land cover classification scheme has been widely adopted to examine UHI and inter urban heat island (IUHI) in developed nations. In tropical cities with heterogeneous mix of urban surface cover, several factors play a role in influencing UHI which pose the question— which built properties have a higher influence on UHI? How to tackle these? What actions are necessary?

This expert lecture deals with these aspects and discusses how to evaluate UHI response in tropical city using LCZ and city specific built parameters. The lecture paves a way forward to climate action through exploratory research helpful in identifying mitigation strategies for a complex built environment. It would enable planners, designers, and policy makers to approach urban climate interventions with sound, scientific and sustainable approach.



Organised by
HARYANA REGIONAL CHAPTER
INSTITUTE OF TOWN PLANNERS, INDIA

Haryana Regional Chapter (HRC, ITPI) organized an expert talk on the theme 'Towards Climate Action: Planning for Mitigating Urban Heat Island Effect using Local Climate Zones' on 22 January 2022.

Shri Sudhir Singh Chauhan, Chairman, Haryana Regional Chapter welcoming, Chief Guest, Prof. Dr. D. S. Meshram, President, ITPI; Key Speaker and participants highlighted that the physical and geometrical properties of urban regions are responsible for influencing canopy layer air temperature leading to urban heat Island effect (UHI). Local Climate Zone (LCZ) land cover classification scheme has been widely adopted to examine UHI and inter-urban heat island

(IUHI) in developed nations. In tropical cities with heterogeneous mix of urban surface cover, several factors play a role in influencing UHI which poses the question - which built properties have a higher influence on UHI. How to tackle these issues? What actions are necessary will be discussed by Dr. Anurag Bagde, and invited him to deliver the talk.

Dr. Anurag Bagde, Assistant Professor, Environment Planning, School of Planning and Architecture, Bhopal, in his presentation underlined that world is aiming towards net-zero emissions and reducing the global average temperature rise well below 1.5 degree Celsius. Today, more

Expert Talk on 'Action Climate Change'



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Expert Talk on 'Action Climate Change'

than half of the world's population lives in urban areas, and it is projected to reach 60 percent by the end of 2030. Cities are expanding to keep up with the pressure of rising population and reducing the demand and supply gap. As a result, more natural surfaces are converted into artificial surfaces. Along with this, as per IPCC reports, climate change extreme events are most likely to rise in the South Asian countries. One of the most noticeable effects of urbanization is urban heat island effect (UHI). UHI impacts have been documented over rising energy consumption, health issues, thermal discomfort, and rain pattern. In general, UHI represents the elevated air temperature difference observed between urban areas and its surrounding rural region. There are several factors that contribute urban heat island. These factors are related to the atmospheric and natural cycles (fixed), build environment and anthropogenic parameters (controllable).

There are five challenges that Indian cities are facing when addressing UHI issues. This includes measuring, mapping, and monitoring, reporting and prioritizing mitigation for UHI. Let's say we have 3 cities. City 'A' claims to have a UHI of 7 degree celsius; 'B' claims to have 5 degree celsius and city 'C' claims 11 degree celsius. City 'C' seems to be the most problematic. However, if we examine the reporting, city 'C' measures surface temperature of completely packed urban areas (slums with tin roof) and compare it with water body found in rural surrounding. City 'A' and 'B' reports canopy layer UHI in which rural air temperature was measured from an airport and an agricultural field respectively. Moreover, the height from ground and time at which air temperatures were measured were different. In conclusion, we cannot compare the UHIs of these cities without standard procedure. The reporting problem not only persists across the cities but also within a city wherein urban parcels used for measuring air temperature is often not discussed. Dr. Stewart and Dr. T. R. Oke identified these challenges and classified the landscape universe Local Climate Zones which were characterized by set of homogeneous physical properties. The urban form, structure and fabric and anthropogenic factors contribute to the unique identity to each class of LCZ. LCZ comprised of 17 classes based on various physical and geometric properties affecting

UHI. It is a universal and standardized scientific spatial platform for urban planners and urban climatologist to investigate report and address UHI effect at local scale. Thus, UHI reporting evolved from 'urban' and 'rural' terms to 'LCZ class in urban areas' versus 'LCZ class in rural region'.

Whereas cities of developed countries easily adopted the classification, cities of developing nations having heterogeneous built configuration found many challenges to adopt the classification. Case study of Nagpur city demonstrates how to address these challenges. UHI investigations in Nagpur city, uses LCZ sub-classification technique to address heterogeneity issues and conducts canopy layer UHI investigation with mobile and station surveys. Comparing different LCZs, the study finds UHI for Nagpur city at 11 pm ranges up to 4.2°C during winter and 4.12°C during summer. The study further resolves the intra-UHI ranking and prioritize mitigation solution through statistical analysis and computational simulations. It proves that one method fits all approach for tackling UHI doesn't work, and LCZ investigations is utmost necessary. Such study should be replicated to other cities for assessing and monitoring UHI. The five challenges could therefore be dealt with a balanced 5C approach. This approach includes Construction of LCZ map for the city; Carryout standardized UHI measurement regimes; Counteract data noise; establish Critical local climate zones and key UHI parameters to focus mitigation and provide effective strategies to Control/mitigate rising UHI. Cities are centres for climate actions. It is high time for urban planners and decision makers to progress towards climate actions by adopting scientific and sound approach.

Prof. Dr. D. S. Meshram, President, ITPI and Chief Guest mentioned that urbanization brings prosperity also but with prosperity brings some challenges like increased density of population, which calls for requirement of building additional physical and social infrastructure and transportation network, due to which land surface which were covered with vegetation, permeable or pervious or porous surfaces get converted to impermeable or impervious or imporous surfaces, which tends to absorb solar radiation during sunshine and emit later in nights, resulting increase in local temperature. When we walk during sunshine, we always search for tree to get shade or when we walk

in dense areas without green cover, we experience the higher temperature. Thus, certain urban areas observing higher temperature became 'Heat Islands' compared to their rural counterpart (UHI), which creates deteriorating living environment, elevation of ground level ozone, health disorder and increase in energy consumption, as per report of TERI on 'Urban Planning Characteristics to Mitigates Climate Change, in the Context of Urban Heat Island Effects'. In the case study of Bangalore, the difference is recorded between 4 to 5 degree variation due to (i) Reduced green cover - low evaporation, and reduced shading; (ii) Reduced water bodies - reduce evaporate cooling and increases air temperature; (iii) Increased impervious surface - gather heat absorption resulting in higher global temperature' (iv) High density - increases night time temperature due to heat trapped in street canyons; (v) Reduced air velocity due to urban surface roughness, and (vi) High anthropogenic heat rejected form air conditioned buildings and traffics on road.

To explain his point, Dr. Meshram, mentioned that Prof. L.R. Vagle, use to say 'Bangalore the air-conditioned city has become city of air conditioners'. In fact air conditioners while cooling the temperature inside of the room release hot air outside in the atmosphere, which results in increasing the temperature outside. Buildings and concrete road's impermeable or imporous surfaces absorb the heat during sunshine and release the heat in the night resulting into increase in temperature. Therefore, he called on the planners' community not to destroy permeable or pervious or pours surfaces, which exist in the forms of vegetative cover. He then called on the researchers to suggest as to how much area of a plot should be kept permeable.

After open house discussions, a vote of thanks was extended by Shri Vijay Kumar, Secretary, HRC, ITPI; and Shri Vibhore Bakshi, Assistant Professor, SPA, Bhopal moderated the discussions.

WEBINAR

"INDIA @ 75: Achieving the Gender Equality Through Planning Interventions"

International Women's Day - 2022

TUESDAY
8th March 2022
19:00 hrs-20:30 hrs





Prof. Dr. D. S. Meshram
President, ITPI



Prof. Dr. Jagdish Singh
Vice President, ITPI



Pradeep Kapoor
Secretary General, ITPI

Zoom Link:
<https://tinyurl.com/bddy9t8u>



International Women's Day

Key Note Speakers



Mrs. N. Usha
Addl. Secretary, H & UD Department & Member and Chief Planner - CMDA



Ms. Reena Singh
Former Additional Advocate General, Uttar Pradesh & Advocate Supreme Court



Prof. Dr. Alka Bharat
Vice-Chairperson, ITPI Women's Forum



Ms. Usha Prasad Mahavir
Chairperson, ITPI Women's Forum



Dr. Sarika Bhadure
Secretary, ITPI Women's Forum

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Institute of Town
Planners, India



Shri Pankaj Bawa,
Chairman Punjab
Regional Chapter ITPI,
and Chief Town Planner,
Punjab, delivering the
welcome address

POSTPONEMENT OF 70TH NATIONAL TOWN AND COUNTRY PLANNERS CONFERENCE

Institute of Town Planners, India earlier announced that its 70th National Town and Country Planners Conference, is scheduled to be held at Bhopal, on the theme "Urban India at 75: Spatial Planning Initiatives" with sub-themes (i) Re-imagining the India's Urban Future, (ii) "Enhancing Urban Planning Capacity in India", and (iii) "Resiliency of Indian Cities" with Local Sub-theme on "Local Area Planning for Making Cities Resilient of Madhya Pradesh" during 14 - 16 January 2022.

However, due to spread of Covid - 19 pandemic and taking into consideration the advisories issued by concerned agencies, it has been decided by the Council, ITPI that the 70th National Town and Country Planners Conference be postponed and now to be held during 15 - 17 April 2022. The themes and venue remains the same.

Papers are invited from the members of the ITPI on the main theme and sub-themes not exceeding 3,000 words, along with hard and soft copy in MS Word to reach, the Secretary General, ITPI, New Delhi before 15th March, 2022.

MAKING CITIES AND COMMUNITIES SAFE, RESILIENT AND SUSTAINABLE; PUNJAB REGIONAL CHAPTER

On 5 March 2022, the Punjab Regional Chapter of Institute of Town Planners, India, organised a webinar on hybrid mode, on the theme "Making Cities and Communities Safe, Resilient and Sustainable". The webinar focused on Sustainable Development Goal defined by United Nations to promote sustainable development, minimising climate change, and reducing global warming.

Welcoming the participants, Mr. Pankaj Bawa, Chairman Punjab Regional Chapter ITPI, and Chief Town Planner, Punjab, called upon planners to play their role and discharge their responsibilities in effective and efficient manner to enhance quality of life and also stressed on creating enabling environment in cities taking into consideration the prevailing situations occurred due to Covid-19; rapid population growth; and rapid rural urban migration.

Prof. Dr. D. S. Meshram, President, TIPI in his address noted that today's webinar theme is focusing on three major aspects i.e. Safe City, Resilient City and Sustainable City. Talking on safe cities he referred to the National Crime Report of 3 January 2022, where it is mentioned that Kolkata is considered to be the safest city for females in India and while Delhi - the national capital of India registered more crimes against women than national average. With reference to road accidents, cites that are connected and compact are generally safer than spread-out large cities. Stockholm and Tokyo have the lowest fatality rate in the world. While sprawling

Atlanta has death rate six times higher having 9 fatalities per 100,000 residents. Creating dedicated spaces for pedestrians is desirable because more than 2.70 lakh pedestrians lose their lives each year on the world's road. It is also interesting to note that public transport carries more people and experience fewer crashes than private vehicles.

On the aspect of resilient city, Dr. Meshram said that as per British Real Estate Development Company; Toronto, Vancouver and Calgary are 3 most resilient cities in the world because they have ability to absorb, recover and prepare for future shocks i.e. economic, environmental, social, and institutional. Cities needs to be resilient so that they can better handle natural and human made disasters, protect human life and absorb the impact of economic, environmental and social hazards. Take away from Rockefeller Foundation, where 100 cities shared their views are:

- Collaboration and coordination is essential;
- Efforts must include planning for most vulnerable population; and
- Resilience is layered in every part of a city and every department of government.

Megham Stromberge says 'we also have skills to manage changes but need to work with other disciplines and with other skill sets', quoted Dr. Meshram. With reference to sustainable cities he said that Sustainable Development Goal - 11,

titled 'Sustainable Cities and Communities' is one of the 17 Sustainable Development Goals set by United Nations General Assembly in 2015, and the highlight are:

- Cities occupy just 3 percent of the earth's land but account for 60 to 80 percent energy consumption and release 70 percent of carbon emission;
- 828 million people are estimated to live in slums and number is rising;
- The economic role of cities is significant as they generate 80 percent of the global GDP;
- In coming decades 90 percent of urban expansion will be in developing world;
- Target by 2030 among others are:
 - Ensure access for all, to adequate safe and affordable housing and basic services;
 - Improving road safety by expanding public transport especially for vulnerable, women, children, persons with disabilities and old persons;
 - Enhance inclusive and sustainable urbanization; and
 - Substantially increase number of cities and human settlements

Thus, the topic of webinar selected by the Punjab Regional Chapter is quite timely and important, Dr. Meshram, said.

Shri Pradeep Kapoor, Secretary General, ITPI, addressed the participants regarding the need of making planning process more rational, realistic, effective and focused. Drawing the attention of participants on Urban Missions launched by Government of India, like Smart Cities Mission, PMAY, Swachh Bharat mission, HRIDAY, AMRUT, he called upon planners working in the states to take active part in defining the agenda of growth and development of cities in more proactive manners. He said that policies and programs of the Government of India are now focussed on promoting planned development and planners must make best use of opportunities being made available.

During the webinar, three technical presentations were made, which went into the genesis of the urban growth and development besides defining the strategies and options to make cities sustainable, safe and resilient. The presentations were made by Prof. Chetan Vaidya, former Director, SPA Delhi;

Prof. Saswat Bandyopadhyay, CEPT Ahmedabad; and Prof. Jit Kumar Gupta, Chairman IGBC, Chandigarh.

While explaining the theme and agenda for rational and orderly growth, development and management of cities, Prof. Chetan Vaidya stressed the need for looking at cities more closely, identifying their emerging problems and suggesting solutions based on ground realities. He said cities are under enormous stress due to rapid industrialization, massive urbanization and uncontrolled migration. The problems are getting multiplied due to lack of capacity on the part of urban local bodies to effectively manage rapid growth and expansion of cities. Challenges faced by urban India are going to emerge looking at the pattern of India getting urbanized and expansion of cities. He suggested the need to make cities more self-resilient and self-contained to effectively contain the emerging challenges and problems. Quoting examples of successes and failures across the globe, Prof. Vaidya concluded that India has to find its own solutions and chalk out its own indigenous agenda by taking into consideration the emerging urban scenario.

Prof. Jit Kumar Gupta in his presentation on smart and sustainable cities defined the role and importance of cities in the context of growth, development and emerging perspective of urbanization. He stressed the need to build positivity and eliminate all negativities for making cities more sustainable and liveable. He called upon planners to explore options and strategies to make cities compact, promote green transport, and provide optimum level of open spaces, preserve environment, and ecology, focusing on green buildings, promoting good governance and opting for urban and regional planning.

In his presentation Prof. Saswat Bandyopadhyay from the Centre for Environment and Planning, CEPT, Ahmedabad, stressed the need for making cities safe and resilient. Quoting examples of cities being flooded in the county, he stressed the need for making cities safe against climate change. He showcased numerous examples and options, which could be leveraged for promoting sustainability in cities. He explained how cities are growing rapidly both in population and area. Taking the examples of Ahmedabad and Hyderabad, he said that these cities are expanding on valuable agriculture land. Uncontrolled footprints of cities



Institute of Town
Planners, India



**Dr. Varsha Dawle, making
presentation in Technical
Session**

are creating man made disasters by encroaching on eco-sensitive areas. He called for urban growth, which is more holistic and rational so that cities could be made more sustainable, liveable, productive and efficient.

Continued from Page 16

After the Inaugural function of Conference Hall of Pune Centre Building, the Technical Session on the theme 'Revisiting Development Plan Preparation and Implementation Process' was initiated for which Shri Mankar invited Dr. Varsha Dawle to make her presentation.

Dr. Varsha Dawle in her presentation highlighted that urban planning is the process in which all development activities of an urban area are planned, controlled, regulated and monitored from time to time, which is envisaged in a development plan. In India, urban planning is a state subject, and State Town and Country Planning Departments (TCPDs) are nodal agencies responsible for the preparation of Development Plans. Development Plans in Maharashtra are prepared under Maharashtra Regional and Town Planning Act (MR&TP Act), 1966, as statutory requirement by all ULBs generally for a horizon period of 20 years and are required to be reviewed after completion of the same.

However, she lamented that these plans could not control the pace of urban growth and there is sharp decline in the quality of life. The present process of preparation of the Development Plan

Concluding the webinar, Prof. Dr. Ashwani Luthra, School of Planning, GNDU Amritsar, gave a brief on the presentations made during the webinar and stressed the need for holding such seminars on a regular basis by the Punjab Regional Chapter.

is time consuming and long drawn and most of the plans are embroiled in legal and procedural hassles at planning as well as implementation stages. Development Plans are often prepared without considering financial capacity of ULBs, due to which plan implementation suffers, because proposal of Sanctioned Development Plans rarely gets translated into Annual Action Plans and Annual Budgets of ULBs. Besides in the process of preparation of Development Plan, statutory provision for wide Public Participation has not been brought into focus, before or during preparation or during implementation of Development Plan. Besides, concerned implementing agencies give least priority to implementation of Development Plan proposals, due to large horizon period. On account of these factors, implementation percentage of Development Plans is very low across all the ULBs. Considering these issues, it becomes imperative to revisit current legislative provisions regarding Development Plan preparation and implementation process.

Restructuring of Development Plan preparation and implementation process with the paradigm shift in planning approach is required, for



Prof. Dr. D. S. Meshram President, ITPI, Inaugurating the Conference Hall of Pune Centre of MRC (M)



Audience during Inaugural Function of Conference Hall of Pune Centre of MRC (M)

translating the proposals on ground. It is also imperative to include stakeholders' expectations while restructuring the Development Plan process. Dr. Varsha in her research, a prioritized expectations of stakeholders for Development Plan have been calculated based on Opinion Survey and its analysis with Fuzzy Analytical Hierarchy Process. It is clear from outcome of research that, Development Plan preparation and implementation, need to be addressed equally. The research also concludes that, as per stakeholders' expectations, need of identifying alternate implementation mechanisms, resource allocation, public participation in planning, financial viability of plan, public participation in implementation, consideration of local needs, obligation of implementation, flexibility in Planning Process, shorter plan period and time bound plan preparation process are the critical parameters which need to be addressed while restructuring Development Plan preparation and implementation process.

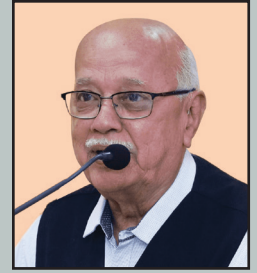
In the open house the senior members like Shri S. P. Pendharkar, Shri S. D. Landge, Shri A. R. Patharkar, Shri K. S. Akode and Prof. Dr. P. M. Rawal participated.

In his concluding remark Prof. Dr. D. S. Meshram clarified that the Development Plans are prepared in Maharashtra in conformity with MRTP Act, 1966. Therefore, the process of preparation and implementation as prescribed in the Act, needs to be followed, and cannot be deviated from. Secondly, the public participation is achieved through the elected representatives because it is not possible to reach to every citizen. However, observations

and suggestions are always invited by issuing public notifications inviting all the stakeholders. With reference to the plan period of 20 years, there are two schools of thought: one group advocates long term planning up to 100 years, while the other group advocates shorter period than 20 years, and that is why period of 20 to 25 years have been adopted. However, Urban Development Plan Formulation and Implementation Guidelines have recommended to Prepare Perspective Plan for 20 to 25 years to be divided into 5 years Development Plans co-terminus with period of ULBs, and these are to be disaggregated to Annual Plans followed by layouts or schemes. The UDPFI Guidelines also gives various methods of resource mobilization for implementation of Development Plans, Dr. Meshram mentioned.

On the issue of land acquisition for the proposals enunciated in Development Plan, he pointed that land is required to be acquired inconformity with "Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013", however, Maharashtra is pioneering state which initiated the alternative methods of Land Pooling, Town Planning Schemes, Accommodation Reservation, Transferable Development Rights (TDR), etc., as an alternative to land acquisition. Before concluding his remarks Dr. Meshram has also mentioned that the purpose of the preparation of Development Plan is not to control the space of urbanization, in fact it is a spatial plan, prescribing land users for various activities.

Vote of thanks was extended by Shri P. G. Nale, Convener of Pune Centre, MRC (M).



Shri. A.R. Patharkar,
Past President,
ITPI, addressing the
delegates



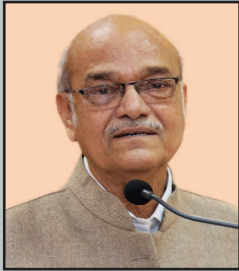
Shri Jitendra Bhople,
Council Member,
ITPI addressing the
delegates



Shri P. G. Nale,
Convener of Pune
Centre extending the
vote of thanks



Institute of Town
Planners, India



Prof. Dr. D. S. Meshram
President, ITPI, delivering
inaugural address



Shri S. B. Khodankar,
former Secretary General,
ITPI, addressing the
delegates



Shri R.M. Mankar,
Chairman, Maharashtra
Regional Chapter Building
Committee, delivering
welcome address

INAUGURATION OF CONFERENCE HALL OF PUNE CENTRE, MRC (M), AND TECHNICAL SESSION ON “REVISITING DEVELOPMENT PLAN PREPARATION AND IMPLEMENTATION PROCESS”



Present on dais are Shri Jitendra Bhople, Council Member, ITPI; Shri. A. R. Patharkar, Past President, ITPI; Prof. Dr. D. S. Meshram President, ITPI; Shri S. B. Khodankar, former Secretary General, ITPI; and Shri R. M. Mankar, Chairman, Maharashtra Regional Chapter Building Committee, during Technical Session.

Pune Centre of Maharashtra Regional Chapter (Mumbai) organized Technical Session on “Revisiting Development Plan Preparation and Implementation Process” on the occasion of Inaugural of Conference Hall at Pune Centre on 26 February, 2022.

Shri R. M. Mankar, Chairman, Maharashtra Regional Chapter Building Committee, in his address welcomed dignitaries and also put on record the untiring efforts of Shri K. S. Akode for the procurement of land and also for the construction of building, besides the generous grant released by the ITPI, headquarters. He said that the initiative of Prof. Dr. D. S. Meshram President, ITPI, Shri Pradeep Kapoor, Secretary General, ITPI and also Shri S. B. Khodankar, former Secretary General, ITPI are noteworthy. He also underlined that Dr. Meshram not only during the construction of building but also during upgradation of the Conference Hall made site visits personally and gave guidance and suggestions. Shri Sujit Rodge, Council Member, contributed in terms of design of interior of the Conference Hall, which is quite soothing, and for this he has not charged fees.

Shri R. M. Mankar then mentioned that the Maharashtra Regional Chapter, Mumbai has decided to give Lifetime Achievement Award to Prof. Dr. D. S. Meshram for his contribution not only to town and country planning profession but also in town and country planning education. He requested Shri. A. R. Patharkar, Past President, ITPI to read the Scroll of honour, and present the Life Time Achievement Award to Prof. Dr. D. S. Meshram.

Shri R. M. Mankar further mentioned that on concurrence of the ITPI, it has been also decided to dedicate the Conference Hall to Prof. Dr. D. S. Meshram for his devotion to Pan India town and country planning profession and town and country planning education and his untiring efforts for encouraging the Office Bearers of Maharashtra Regional Chapter (Mumbai) and also to Pune Centre for procurement of land and construction of buildings. It is appreciable to mention that he has given his personal attention for construction of buildings at Navi Mumbai and at Pune, as well.

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