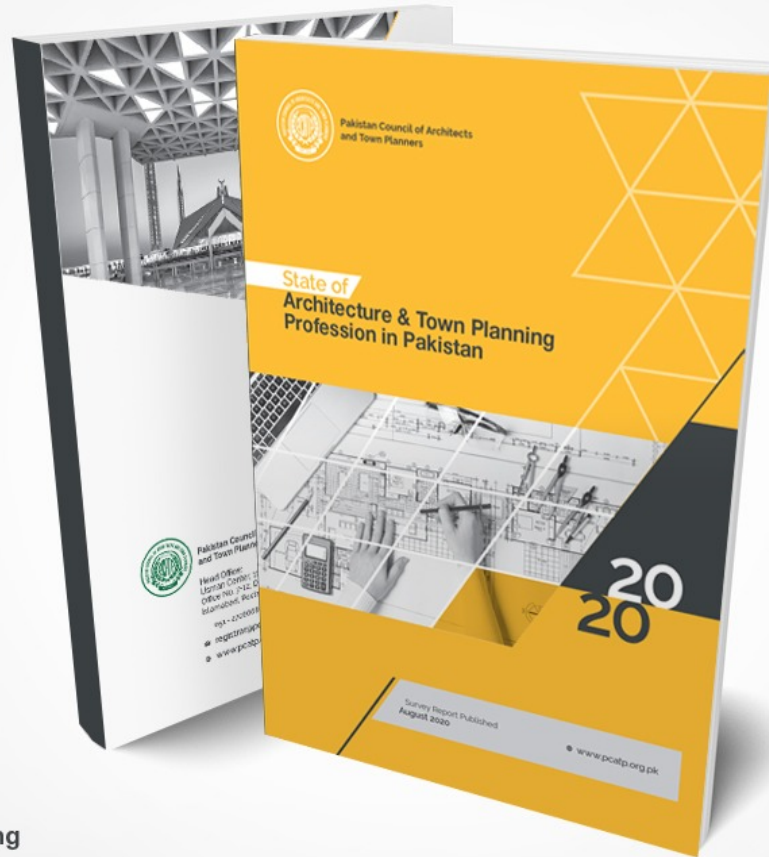




CPD- SEASON TWO

# “THE CAPACITY GAP”

State of  
Architecture & Town Planning  
Profession in Pakistan  
2020

KALIM A. SIDDIQUI



A collage of architectural images. It includes various blueprints and technical drawings, a hand holding a pen over a drawing, and a modern building interior with large windows. A large, stylized number '2' is prominently displayed in the bottom right corner, indicating the second part of a series.

## INTRODUCTION

Pakistan Council of Architects and Town Planners (PCATP) organized a survey of the professions in the third quarter of 2019 to map the scenario of the Architecture and Town Planning profession in Pakistan.

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The purpose of this survey is to reveal critical issues being faced by the architects and town planners, who are providing their services for the betterment of built environment in Pakistan. The report has further highlighted the state of Architectural and Town planning profession in Pakistan when compared with the findings of a similar survey of the built environment professions in Commonwealth member countries undertaken by the Commonwealth Association of Architects (CAA) in 2019-2020.

*Following are some key Findings of the survey of profession ;*

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- 01- Critical lack of capacity among built environment professions
- 02- Critical lack of educational capacity
- 03- Weakness in built environment policy
- 04- Development of effective Health and Safety standards
- 05- The use of Sustainable Design Considerations
- 06- Awareness of regulation with regards to Near Zero Energy Standards
- 07- Identifying Regulation with regards to energy efficiency design
- 08- New Urban Agenda of government for achieving the goals of “Naya Pakistan”
- 09- Awareness of Paris Agreement on Climate Change
- 10- Responses on the challenges facing the built environment

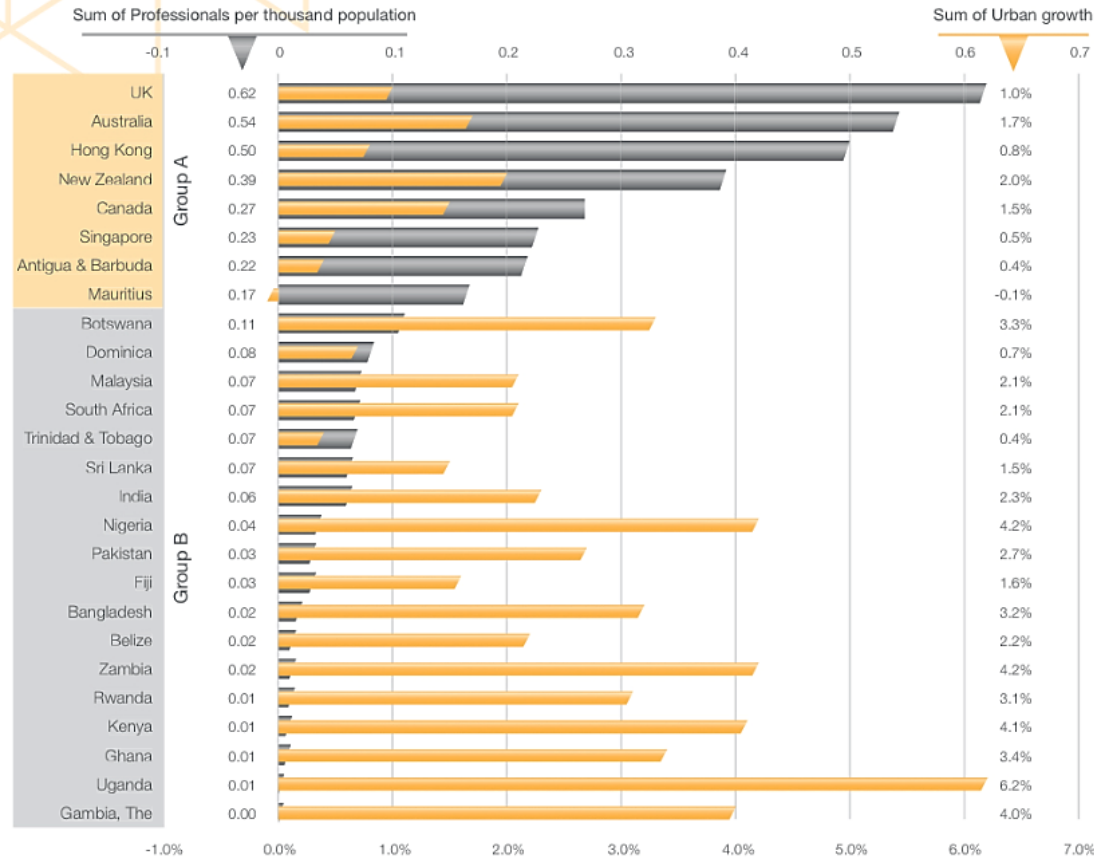


## KEY FINDINGS

## Critical lack of capacity among built environment professions

- The ratio of architects per thousand head of population in Pakistan is 0.03.
- The ratio of planners per thousand head of population in Pakistan 0.007.
- The average population in developed countries of Commonwealth which are member of Organization for Economic Co-operation and Development (OECD), i.e. Australia, Canada, New Zealand and the United Kingdom, is 0.455 for Architects and 0.215 for Town Planners. Whereas, the average population of architects in Pakistan is 0.03 and for Town planners is 0.007. However, the average of urban growth in developed OECD countries is 1.55%, while for Pakistan it is currently 2.7%.

Figure 1, Ratio of Architects per thousand population with rates of urban growth



## Reflection of Poor Professional & Institutional Capacity on the State of Urban Pakistan

List of Commonwealth countries projected to more than double their urban population by 2050.

**Pakistan: The Fastest Urbanizing Country in the Region!**

- Although the number of professionals is only an indicative measure of gauging the capacity, there is no particular factor to determine the number of built environment professionals required in any country.
- The UN habitat predicted an increase in world's urban population by 2.5 billion, by the year 2050. Majority of the countries who will experience this increase will be from among the developing countries including Pakistan.
- The CAA report 2020, highlights the cumulative impact of continuous high rates of urban growth, being witnessed in Pakistan whose urban population is projected to increase 207% by 2050, adding additional urban dwellers.
- The above figure clearly indicate a critical lack of capacity in Pakistan which is rapidly urbanizing. Unless this issue is effectively addressed, it is likely we will continue to experience an increasing number of unplanned or poorly planned settlements with correspondingly serious concerns in terms of social, economic and environmental well-being.

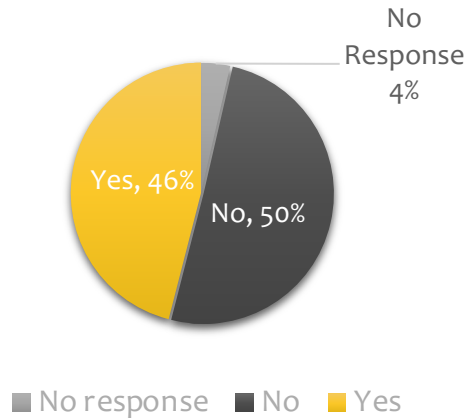
| Country          | Projected urban population |                | Projected urban population growth 2020-2050 |             |
|------------------|----------------------------|----------------|---------------------------------------------|-------------|
|                  | 2020                       | 2050           | '000                                        | as %        |
| Uganda           | 11,775                     | 46,664         | 34,889                                      | 396%        |
| Malawi           | 3,535                      | 13,360         | 9,825                                       | 378%        |
| Tanzania         | 22,113                     | 76,542         | 54,429                                      | 346%        |
| Mozambique       | 11,978                     | 37,473         | 25,494                                      | 313%        |
| Zambia           | 8,336                      | 25,577         | 17,240                                      | 307%        |
| Kenya            | 14,975                     | 44,185         | 29,210                                      | 295%        |
| Papua New Guinea | 1,168                      | 3,326          | 2,157                                       | 285%        |
| Rwanda           | 2,281                      | 6,483          | 4,202                                       | 284%        |
| Nigeria          | 107,113                    | 287,130        | 180,018                                     | 268%        |
| Gambia           | 1,435                      | 3,523          | 2,088                                       | 245%        |
| Cameroon         | 14,942                     | 36,415         | 21,474                                      | 244%        |
| Solomon Islands  | 160                        | 385            | 226                                         | 241%        |
| Sierra Leone     | 3,454                      | 7,725          | 4,271                                       | 224%        |
| Namibia          | 1,403                      | 3,116          | 1,713                                       | 222%        |
| Lesotho          | 674                        | 1,485          | 811                                         | 220%        |
| Vanuatu          | 75                         | 163            | 88                                          | 217%        |
| Ghana            | 17,626                     | 37,518         | 19,893                                      | 213%        |
| <b>Pakistan</b>  | <b>77,438</b>              | <b>160,228</b> | <b>82,790</b>                               | <b>207%</b> |
| Eswatini         | 348                        | 703            | 355                                         | 202%        |

## CRITICAL LACK OF EDUCATIONAL CAPACITY

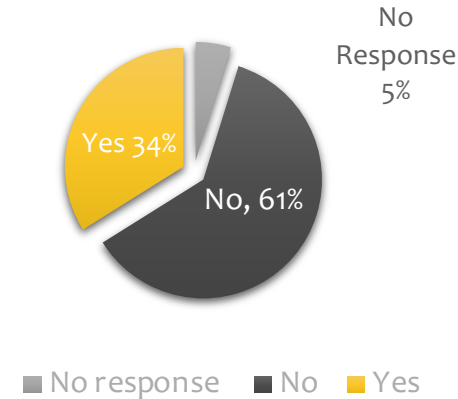
*Lack of educational and institutional capacity to grow the two professions*

Proportion of respondents on mandatory Continuing Professional Development (CPD)

### Architects, Mandatory CPD?



### Planners, Mandatory CPD?



As far as the training of undergraduates is concerned, greater efforts are needed. This will ensure that existing members of the profession are equipped with appropriate up-to-date knowledge to deal with the challenges being faced in a rapidly changing world. Figure above illustrates the fact that the provision of mandatory Continuing Professional Development (CPD) remains a challenge for many respondents owing to lack of its understanding and institutional capacity to implement the system.

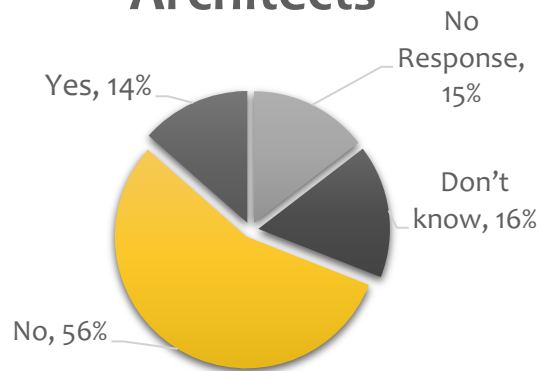
## Weakness in Built Environment Policy

### *Weakness in Built Environment policy in terms of standards, implementation and enforcement*

Respondents were invited to comment on their understanding and fitness for purpose of various instruments of Built Environment policy including planning legislation, building codes, health and safety standards etc. Responses indicated a perceived weakness in a number of areas, both in terms of standards, implementation and enforcement.

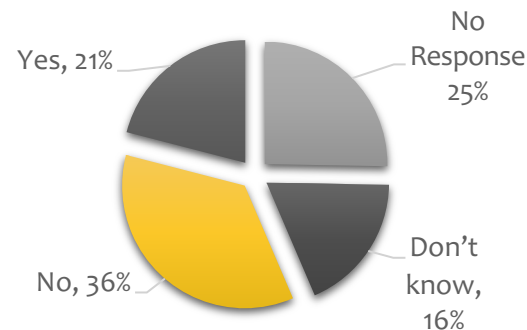
The challenges, as analyzed from this survey refers to the lack of knowledge about Building Codes which lead towards inefficient constructions. The respondents claimed to follow the Building Codes, but only a few of them actually understood or identified them effectively.

## Architects



■ No response ■ Don't Know ■ No ■ Yes

## Town planners



■ No response ■ Don't Know ■ No ■ Yes

The effective use of health & safety standards in buildings is insufficient. According to the responses about half of the respondents were aware of these standards, whereas only 40% claims to witness its practice.

A large number of respondents were aware of the sustainable design consideration, while less than half were implementing them in practice. This depicts the lack of sustainable practice by not understanding the subject of sustainability in its true sense.

This survey depicted a large group of professionals who had limited understanding of energy efficiency design consideration. It can be determined that the professionals were way behind in energy efficient built environments and understanding of the importance of minimizing carbon footprint using standard measures. Data from the International Energy Agency indicated that there seems to be no energy code in Pakistan for residential buildings and only a voluntary code for non-residential buildings.

## Identifying the awareness of Paris Agreement on Climate Change

Pakistan's vulnerability to adverse impacts of climate change is well established. However, despite Pakistan's diminutive contribution to global Green House Gas (GHG) emissions, it is among the top ten most climate affected countries of the world as indicated by Global Climate Risk Index developed by German watch. Pakistan has already started suffering with ever-increasing frequency and ferocity of climate induced catastrophes. Studies and assessments undertaken by the National Disaster Manager Authority (NDMA) show that extreme climate events have resulted in colossal economic losses to the country.

**Pakistan has lost 9,989 lives and has suffered economic losses worth \$3.8 billion from 1998 to 2018.**

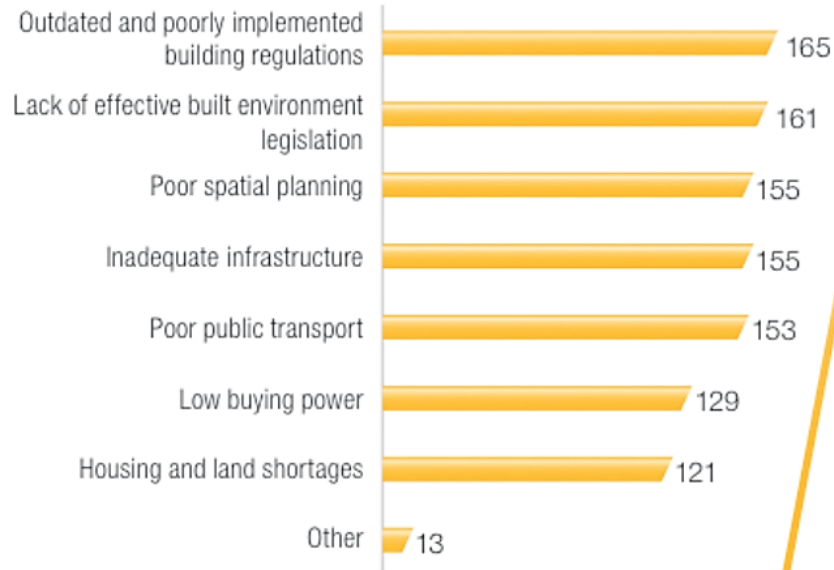
- Severe drought in 2001 causing loss of 10% of crop output.
- Earthquake in 2005 destroyed over 600,000 housing units causing investment of Rs. 110 billion in rehabilitation and reconstruction work.
- Mega floods in 2010 inundated 1/5th of Pakistan's land and affected around 21 million people, almost 5 million acres of crop area, over 2000 deaths and loss of 320,000 livestock, with total estimated damage of \$9 billion.

### **Pakistan: Cost of Environmental Degradation**

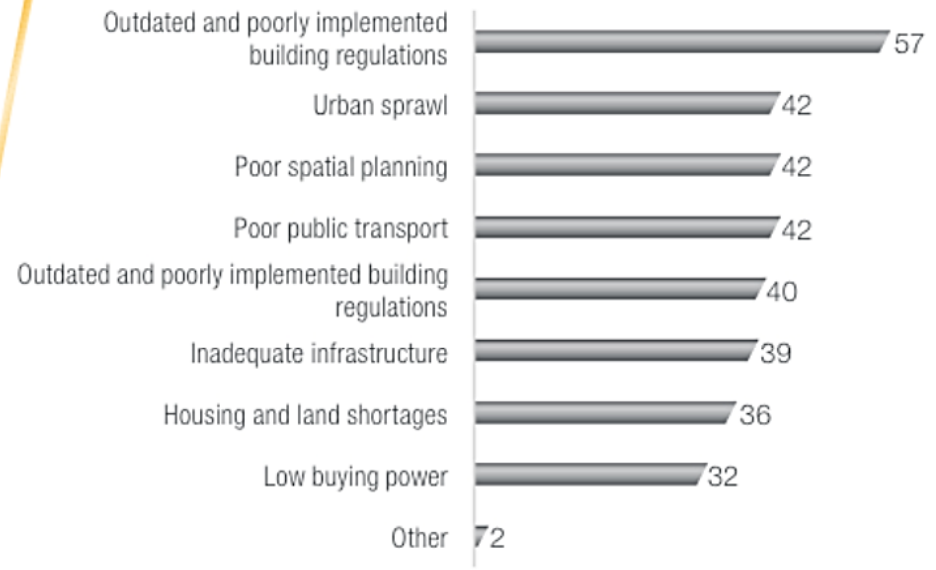
The average estimated cost of environmental and natural resources damage was about 365 billion rupees per year in Pakistan by year 2006. This amounts to a loss of one billion rupees per day.

## Responses on the challenges facing the Built Environment

### Architects

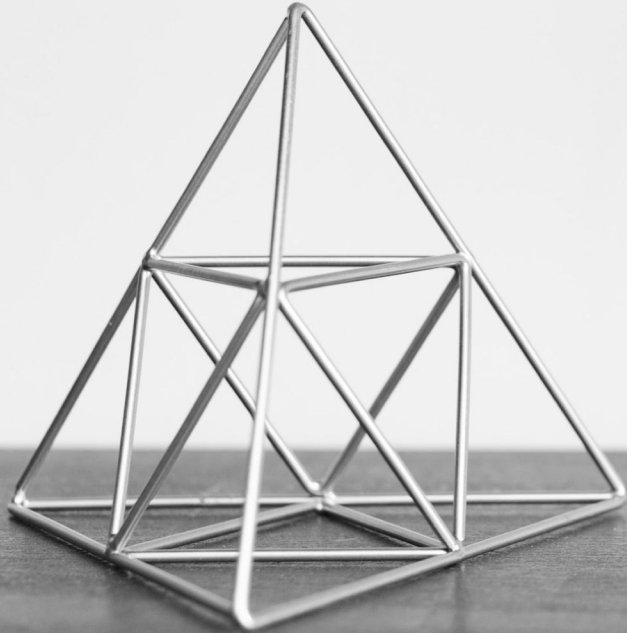


### Town Planners



Outdated and poorly implemented building regulations, lack of effective built environment legislations, poor spatial planning and unchecked urban sprawl represents the primary challenges with respect to designing quality built environments. Absence of spatial policy at national, provincial, divisional, district and local tehsil level has resulted in unchecked and unregulated urban and rural sprawl which is playing havoc with lives and wellbeing of the people and their living standards.



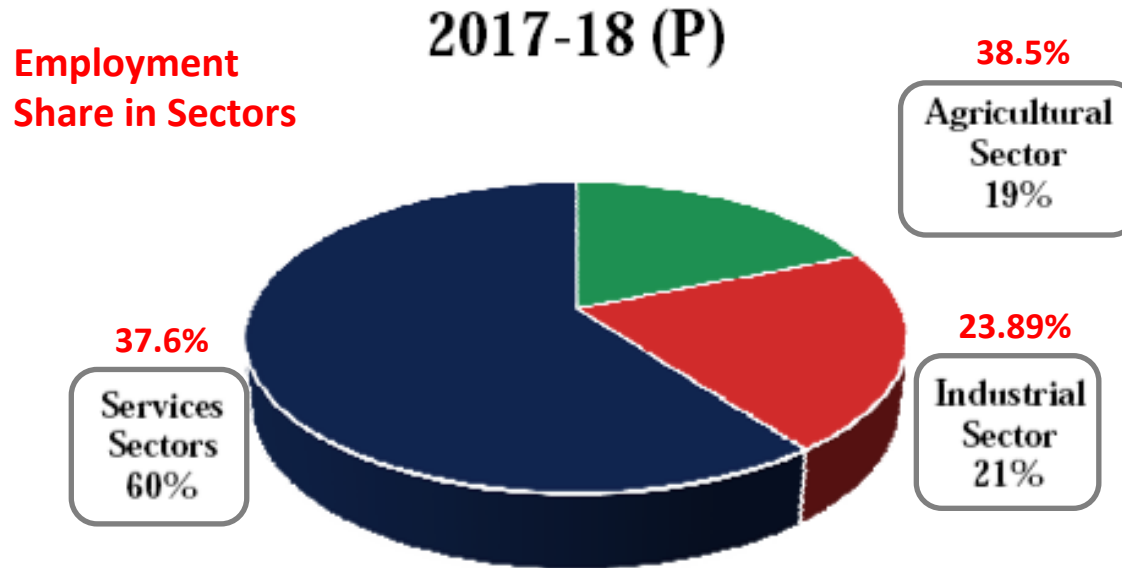


**MISSING LINKS!**

## A DEFICIENT URBAN SYSTEM: MISSING LINKS

WE FAIL TO ACKNOWLEDGE THAT WE ARE AN URBANIZING COUNTRY

WE STILL ROMANTICIZE WITH BEING AN AGRICULTURAL ECONOMY



Sectorial Share in GDP (2017-18) – Pakistan Bureau of Statistics

## **A DEFICIENT URBAN SYSTEM: MISSING LINKS**

**WE LACK AN URBAN VISION**

**WE LACK AN URBAN POLICY**

**WE LACK ADEQUATE HUMAN CAPITAL OR EVEN AN ASSESSMENT OF THAT**

**WE LACK A COMPREHENSIVE URBAN & REGIONAL PLANNING FRAMEWORK WITH COMPLIMENTING LOCAL GOVERNANCE FRAMEWORK**

**WE LACK A SYSTEM OF CITIES & VILLAGES WHERE THEY COEXIST**

## Taking an example of Lahore: (11.13 million population – 2017 census)

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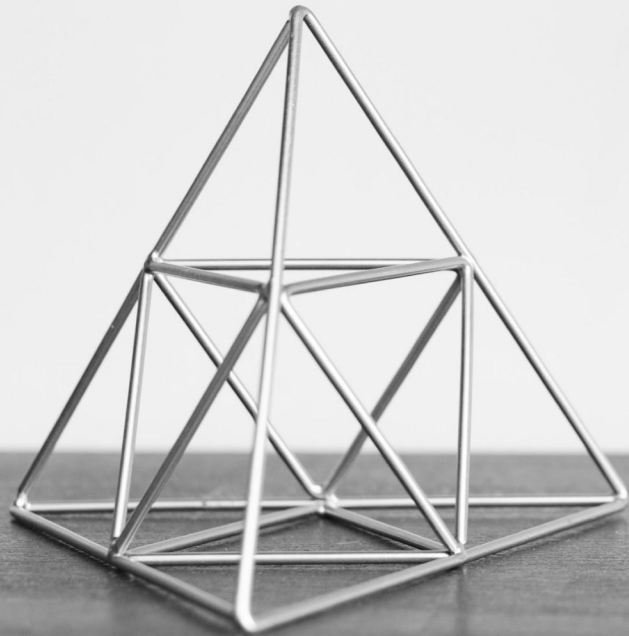
### SPATIAL PLANNING GAPS

- Unchecked, sprawling, low density development of 60-70% area.
- Inequitable land consumption, social disparities and shortage of low income housing.
- Land speculation and surplus housing for the rich.
- Employment rate at 36% and multidimensional poverty rate at 4.3% (approximately half a million people); however no areas demarcated in city's master plan as economic regions for low income population.
- Open green spaces 0.7 m<sup>2</sup> per person (2001) as opposed to WHO recommended 9 m<sup>2</sup> per person.
- Tree cutting across the city for road expansion and housing schemes development.
- Rise in ambient temperature of the built up area because of heat island effect.

- Nationally, 91% of households don't own cars but we design almost 95% of infrastructure only for cars.

Only 26% of Households in Lahore own cars and around 45.5% trips are estimated to be made on foot everyday.

However, our transportation infrastructure is only for cars and not for non-motorized or public transportation.



**Going  
Forward!**

# The Missing Link to the Deficient Urban System: Lack of Comprehensive Legal & Regulatory Framework for Urban & Regional Planning

## LEGISLATION

A Statutory Cover for  
Hierarchical  
Development Plans

## INSTITUTIONS

Well equipped planning  
institutions linked with  
highest level of decision  
making

## PROFESSIONALS

Competent, Innovative,  
Research Oriented team  
of planners &  
multidisciplinary professionals

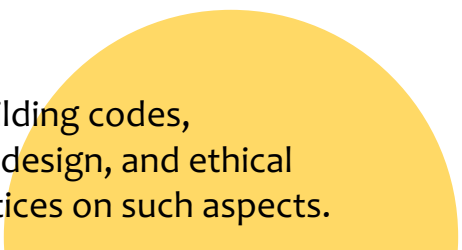
## PRODUCTS/PLANS & DEVELOPMENT REVIEW

Policies, Strategies, Plans,  
Accountability



The action plans emerging from the survey findings fall under two broad headings, namely capacity building of members, and lobbying with authorities.

### Capacity building of members

- **Enhanced knowledge**, benefits of membership of professional associations, availability and content of CPD courses, Building Codes, Health & Safety Standards, sustainable design considerations, regulations with regards to energy efficiency design, recommended schedule of fees, Paris Agreement on Climate Change etc.
  - **Enhanced awareness regarding legal requirements of the profession**, including having a license to practice, the need to undergo trainee-ship to get a license, and PCATP as the license issuing authority; the importance of professional indemnity Insurance; fulfilling minimum requirements of the CPD courses for professional practice; avoiding practices like supplanting a colleague, or use of one's name for advertising products etc.
  - **Encourage and reward**, implementation of Health & Safety standards (H&S), building codes, sustainable design considerations, regulations with regards to energy efficiency design, and ethical practices. Institution of a reward scheme for professionals involved in best practices on such aspects.
- 

**Laws and Policies,** Improvement in laws/policies (e.g. effective built environment legislation, development of H&S standards, replacing fee tenders with design competitions)

- Enactment of missing overarching legislation
- Improvements in existing subordinate legislation i.e. Land use rules, building regulations/bylaws for resilient and sustainable built environment
- Adopting of building codes as a necessary component of building regulations/bylaws so they are implemented
- Adopting of Green Building Guidelines as a Code for its compulsory implementation

**Built Environment,** Improvement in the built environment through improved spatial planning, improved public transport, implementing building regulations, including building codes, H&S standards, energy efficiency design, and improved infrastructure.

**Architectural and Town planning profession,** Recognizing the architectural and town planning profession through improved regulation, approval or changes in plans by architects & town planners only, and providing opportunities for young architects and small practices



Thank you

