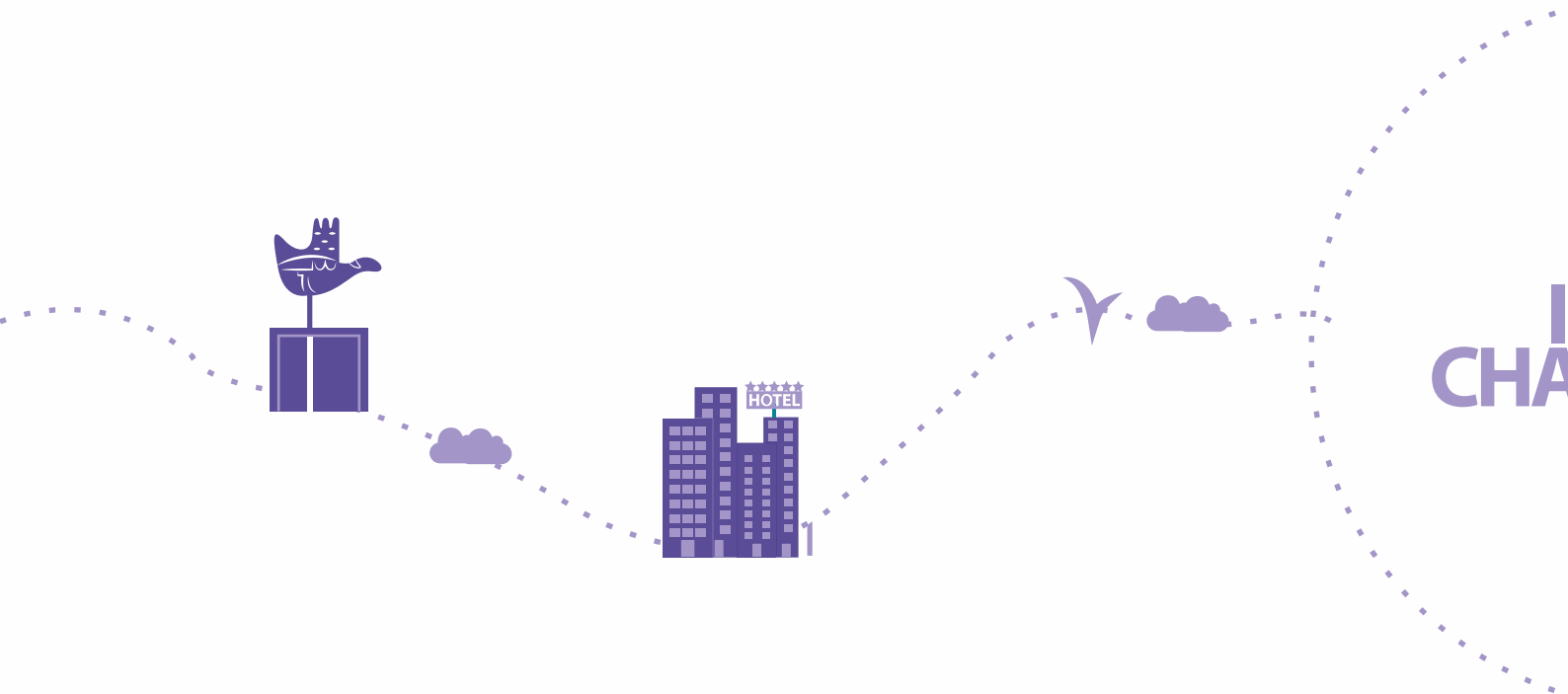




VISION

FOR FUTURE READY CHANDIGARH

2030 & BEYOND



CHA

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ACKNOWLEDGEMENTS

The Visioning Workshop wouldn't have been possible without the support of Hon'ble Administrator, UT - Chandigarh and Governor of Punjab, **Sh. Banwarilal Purohit**. He has been a mentor and guide for all those who were involved in conceptualizing and organizing this visioning workshop.

The Chandigarh Vision Document – 2030 has materialized under the able guidance of Adviser to the Administrator, UT Administration **Sh. Dharam Pal (IAS)**. His inputs have translated into key action points in this Vision document. We would also like to extend our gratitude to **Ms. Nadia Rasheed**, Deputy Resident Representative, UNDP for gracing the occasion and sharing her thoughts on the subject during the workshop.

We are extremely thankful to **Mr. J.M. Balamurugan (IAS)**, Principal Secretary to Hon'ble Administrator, UT - Chandigarh, **Dr. Vijay Namdeorao Zade (IAS)**, Finance Secretary, UT Administration for their consistent support, encouragement and necessary guidance at various stages of finalizing the workshop modalities. Special thanks are due to all the Administrative Secretaries of Chandigarh Administration – **Mr. Nitin Yadav (IAS)**, **Ms. Anindita Mitra (IAS)**, **Mr. Yashpal Garg (IAS)**, **Mr. Debendra Dalai (IFS)**, **Ms. Nitika Pawar (IAS)**, **Ms. Hargunjit Kaur (IAS)**, **Mr. Mandip Singh Brar (IAS)** and **Ms. Palika Arora (PCS)**, for sharing their valuable inputs during the workshop and while finalizing the Vision Document – 2030. We would also like to appreciate **Mr. Sorabh Arora (PCS)**, and **Mr. Ashwani Dogra**, Finance & Planning Officer, UT Administration, for their efforts to make the Visioning Workshop a grand success.

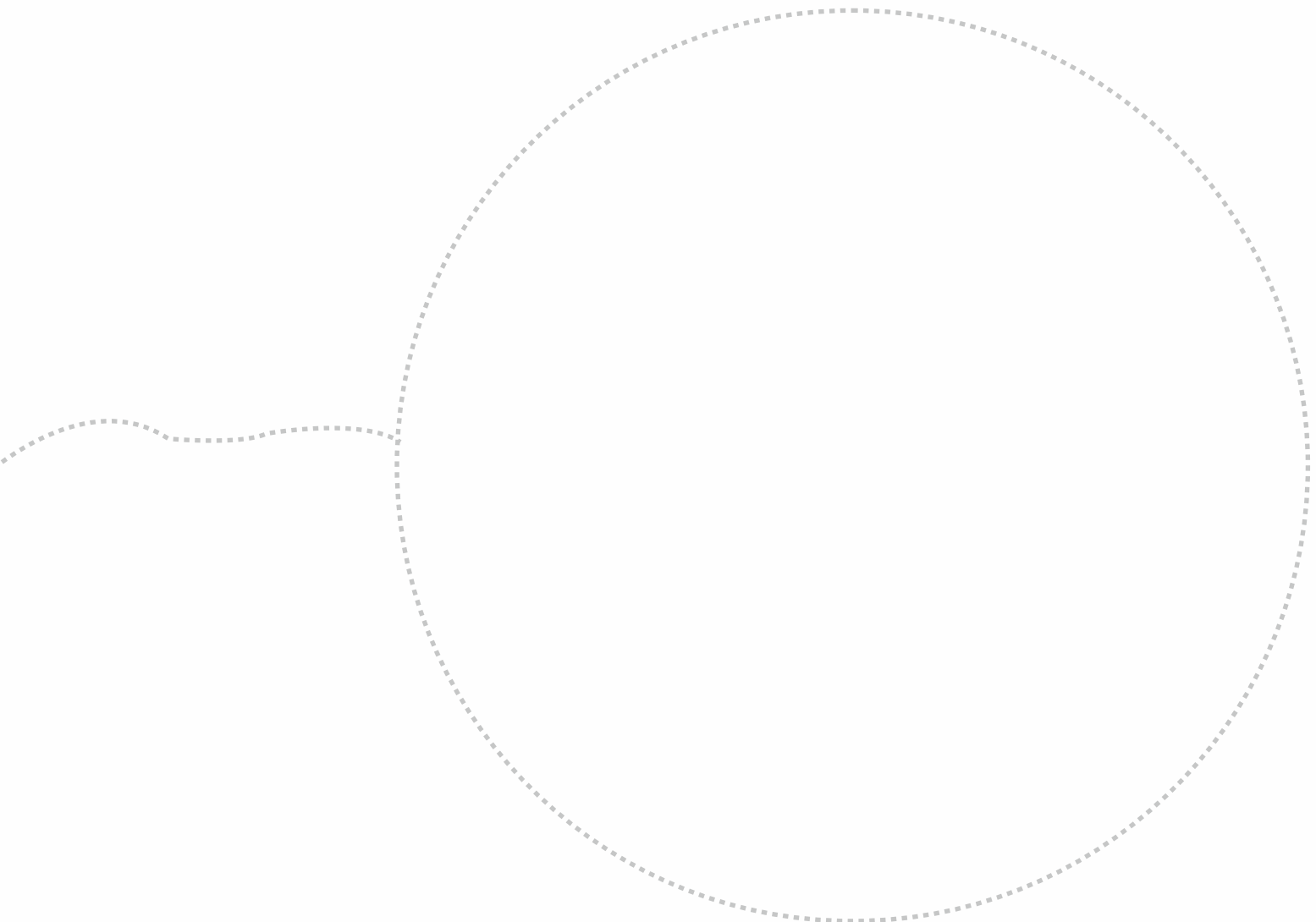
We extend our heartfelt gratitude to all the esteemed dignitaries and thematic experts who shared their valuable wisdom and inputs during the thematic discussions. The same have been incorporated in the Vision Document – 2030. Our special thanks to **Mr. Suresh Kumar (IAS)**, **Mr. Arun Maira** (Former member of Planning Commission of India) and **Dr. B.N. Goswami** (Indian art critic, art historian, and awardee of the Padma Shri-1998 and the Padma Bhushan-2008) for their eminent contributions while designing and execution of the Visioning Workshop.

This Visioning report is prepared by the UNDP team under the technical guidance of **Mr. Vikas Verma**, Regional Head- North, UNDP. **Ms. Nandita Mathur**, Resource Mobilization and Partnership Lead, UNDP; **Ms. Anupriya Singh**, Programme Associate, UNDP, **Dr. Pooja**, Communications Lead, UNDP, and **Mr. Rohit Singla**, Consultant, UNDP, as part of the team have extensively worked on this visioning document and given it the current shape.

We wish to specially thank the i3CR Research Agency that helped us capture citizen feedback and comments while finalizing the Vision Statements and Vision Document - 2030.

The support of the Chandigarh Administration and entire UNDP North Region team is duly acknowledged for their contribution in preparation of this report. We are also thankful to **Dr. Shukrant Jagotra**, Consultant, Planning & Evaluation Organization, Chandigarh Administration, for his efforts in coordinating and streamlining all activities.

We are extremely confident that this report would go a long way in helping the Chandigarh Administration in their effort of making Chandigarh a 'future-ready city'.



**VISION FOR
CHANDIGARH**

**FUTURE READY CHANDIGARH
2030 & BEYOND**

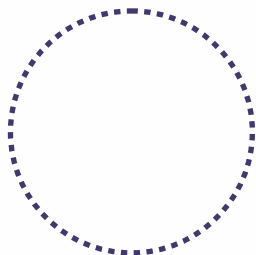
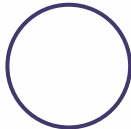
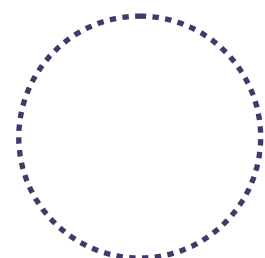
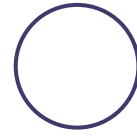


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Sh. Banwarilal Purohit

Hon'ble Governor of Punjab &
Administrator of Chandigarh



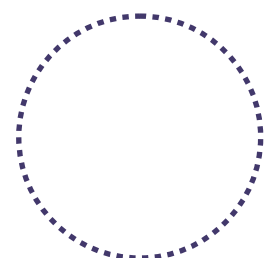
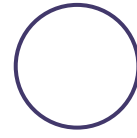
Growing climate change and sustainability concerns have brought a worldwide paradigm shift in urban management approach. Urbanization is a growing and global trend resulting in rapid rise in urban population, and Chandigarh is no exception. The city was originally designed for a population of about five Lakh. Now it has reached over twelve lakhs. It requires immediate and multi-pronged measures in building resilient infrastructure & services for sustainable development.

I am glad that the 'Future Ready Chandigarh Vision' has been prepared keeping in view sustainable development in all thematic areas i.e., Urban Infrastructure, Environment, Climate Action & Eco Tourism, Education, Skill Development, Employment & Economic Ability, Health, Nutrition & Well Being and Social Protection & Safety.

I am happy to note that the Vision has taken into account the historical edict of Chandigarh, and has been prepared on three key principles - Tricity Mutual Interest, Leave No one Behind, and Sustainable Development at the core of all interventions. I am specially delighted to see that general public in large numbers have been consulted and they have given their opinion and direction to the final Vision articulated for the City Beautiful. It provides clear pathways for Future Ready Chandigarh and I along with Chandigarh Administration are committed to see that this gets translated into concrete action on ground with active participation from all sections of the society.

I congratulate the Chandigarh Administration, Governing Council, United Nations Development Programme (UNDP) and all the Experts for providing valuable inputs in making this visioning document, and extend my support in bringing this vision into reality.

Banwarilal Purohit



Sh. Dharam Pal, IAS

Adviser to the Administrator
Chandigarh Administration



Chandigarh is an aspirational city for many in the country and Chandigarh Administration is committed to take new initiatives in its endeavour to make Chandigarh the best city in the world. We are all aware of the fast-changing threats our world is facing in terms of pandemics, sudden climate change and environment related disasters. As a result, its impact on the livelihoods, poverty, education, and health is a challenge for all urban planners and residents.

Chandigarh has been the “City Beautiful”, but we are faced with a question of how we make this as a “City Forever Beautiful”. I am happy to see that in partnership with UNDP the Visioning workshop which was held on October 25th and 26th, 2021 has helped deliver a compelling new vision for Chandigarh for 2030 and beyond till 2047.

The detailed vision document has been prepared for 'Future Ready Chandigarh 2030' which clearly articulates that Chandigarh will be “City Forever Beautiful” because it is a “City that Cares” in every facet of urban living.

The document also covers vision statements as well as clear action points under all five thematic areas i.e., Urban Infrastructure, Environment, Climate Action & Eco Tourism, Education, Skill Development, Employment & Economic Ability, Health, Nutrition & Well Being and Social Protection & Safety.

I would like to extend my gratitude to all members of Governing Council, Administrative Secretaries, National and International Experts, Ms. Nadia Rasheed, Deputy Resident Representative, UNDP, Mr. Vikas Verma, Regional Head - North, UNDP and his team for giving valuable inputs and compiling this vision document.

The Administration is committed to implement this Vision for the city of Chandigarh.

Dharam Pal, IAS

**VISION FOR
CHANDIGARH**

**FUTURE READY CHANDIGARH
2030 & BEYOND**

EXECUTIVE SUMMARY

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States, provides a blueprint for peace and prosperity for people and the planet, now and into the future. Particularly, the Sustainable Development Goal (SDG) 11 seeks to make cities more sustainable, resilient, inclusive, and safe. The SDG index allows States and UTs to design strategic and long-term policy and programme frameworks and initiatives, and monitor their progress as well as their efficacy.

Chandigarh has been one of the best performing UTs in the country on the SDG Index and is doing well overall but the key question arises – “Is this enough?”. As our cities grow, we must build upon our strengths to create vibrant hubs of enterprise and innovation. To achieve the same, a city needs to 'Institutionalize its Vision' to streamline its efforts towards an equitable, inclusive, sustainable future. A vision is a shared and desirable expectation of a plausible future, that helps us understand how a city might evolve and look in the future. This is not a response to historic trends or a rebranding exercise; instead seeks to present politically and economically viable ambitions and opportunities which can deliver a smart and sustainable future for everyone.

The idea of the VISIONING Workshop on 'Chandigarh for 2030 and beyond', was first discussed between UNDP and Mr. Dharam Pal, IAS, Adviser to the Administrator, Chandigarh Administration, which was followed by multiple rounds of meetings with the then Hon'ble Administrator, UT Chandigarh, Sh. V. P. Singh Badnore, the Standing Committees of Governing Council of Chandigarh Administration, Principal Secretary to the Governor, Punjab, all Administrative Secretaries of the UT to decide that a visioning exercise for the UT will be carried out as a workshop covering five thematic areas i.e.

1. Urban Infrastructure & Planning; Transport & Mobility
2. Environment, Climate Action & Eco Tourism
3. Education, Skill Development (including Sports), Employment, Economic Ability
4. Health, Nutrition & Well Being
5. Social Protection & Safety

The theme of the visioning workshop was Future Ready Chandigarh 2030.

The workshop was held at Hotel Mount View, Chandigarh on 25th and 26th October 2021, in presence of Hon'ble Governor of Punjab and Administrator, UT Chandigarh - Shri Banwarilal Purohit, Adviser to the Administrator, Chandigarh Administration - Shri Dharam Pal, IAS, Deputy Resident Representative, UNDP – Ms. Nadia Rasheed, Mayor, Chandigarh – Shri Ravikant Sharma and all Administrative Secretaries of UT Chandigarh. National and International thematic experts joined the workshop and discussions took place on challenges, potential solutions for future readiness and case studies from around the world.

This document comprises details on the genesis of the vision statements, their significance, and subsequent consequences. Each statement is followed by key actionable elements both short term and long term. Another important part of the document is the Citizen Feedback & Engagement survey conducted with the primary objective of understanding citizen's perspective about Chandigarh and evaluation of the 5 key vision themes defined in the workshop.

**VISION FOR
CHANDIGARH**

**FUTURE READY CHANDIGARH
2030 & BEYOND**

INTRODUCTION

Chandigarh is the iconic city of India designed by Le Corbusier. It is Union Territory and shared capital of two states – Punjab and Haryana. It is a very well planned city where each sector is self-sufficient with a mix of land uses. Chandigarh along with Mohali and Panchkula as satellite towns make a major regional centre of Northern India.

Statistically, where we stand today:

SDG Urban Index – 2021-22. The city is doing very well and is in the top tier in this index. With 72.36 score, the city ranks 3rd out of 56 cities.

Swachh Survekshan (Cleanliness Survey) – 2021. With 4277 score out of 6000, the City ranks 16th out of 48 cities (million+ population) and overall 66th rank.

Ease of Living Index – 2020. With 54.40 score, the City ranks 29th out of 49 cities (million+ population).

Municipal Performance Index – 2020. With 47.71 score, the City ranks 23 out of 51 cities (million+ population).

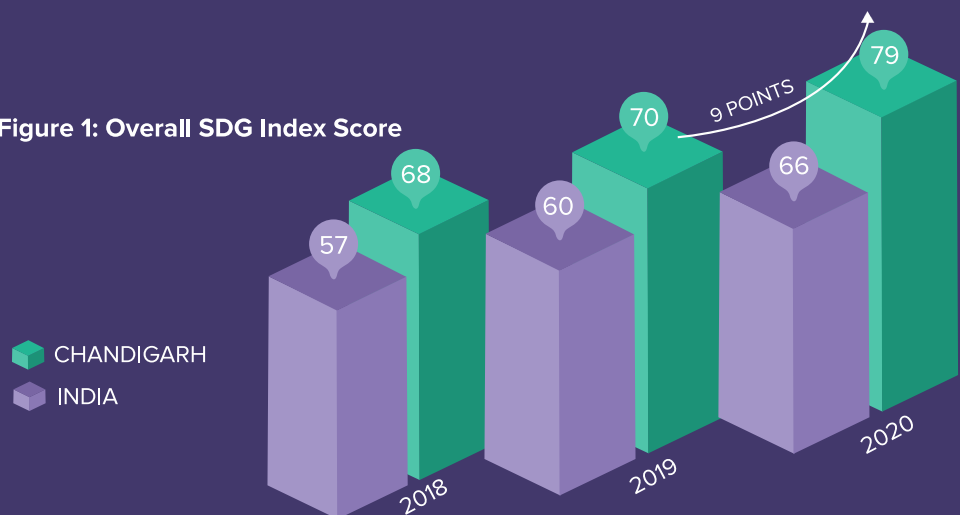
Climate Smart Cities Assessment. The City is rated Three Star - implying that the City has initiated climate action planning or have established institutional mechanisms to enable planning.

Data-Smart Cities Assessment. Readiness of cities for data driven governance. With 53 score, the City is ranked at 19th position out of 42 certified cities.

As mentioned earlier the Sustainable Development Goal (SDG) 11 seeks to make cities more sustainable, resilient, inclusive, and safe. The SDG index allows States and UTs to design strategic and long-term policy and programme frameworks and initiatives and monitor their progress and their efficacy. Chandigarh has been one of the best performing UTs in the country. It has been a forerunner as per SDG Index 2020 as elaborated below:

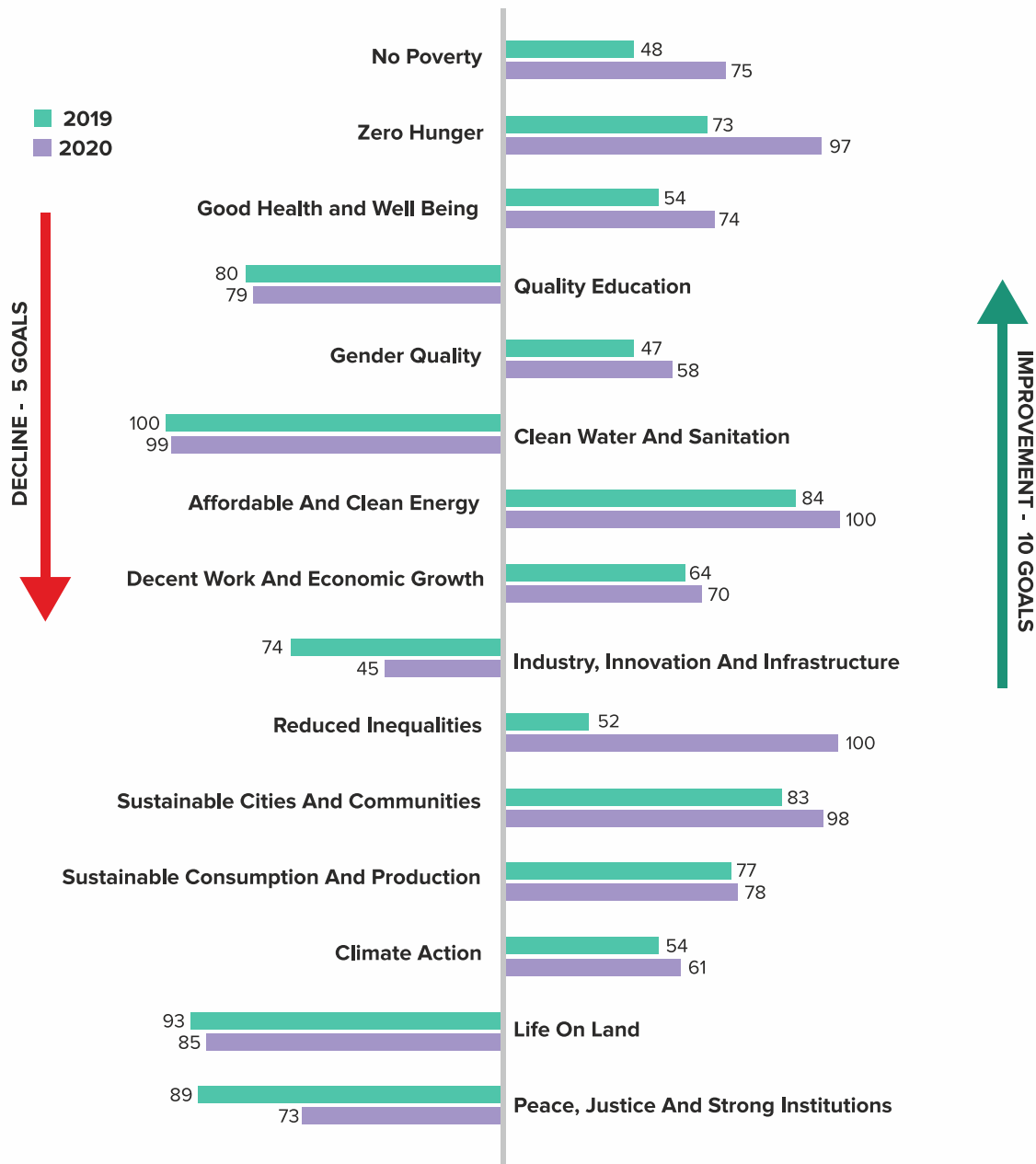
Where we stand today
(Multiple Index Performances)

Figure 1: Overall SDG Index Score



It is evident that Chandigarh has been doing well across majority of 17 goals. However, there are 5 goals wherein the composite score needs attention viz. SDG 9 – Industry, Innovation and Infrastructure, SDG 15 – Life on Land and SDG 16 – Peace, Justice and Institutions, SDG 4 – Quality Education and SDG 6 – Clean Water and Sanitation. This performance score helps us chart a path for further action and deliberation.

Figure 2: Unpacking Chandigarh's SDG Performance



Chandigarh is doing well overall but there are specific areas of concern which point towards unbalanced and unsustainable development in the long run. Having said that, the key question arises – “Is this enough?”. With the recent pandemic playing havoc it seems like an opportune time for Chandigarh Administration, citizens and other key stakeholders to devise an institutional vision for the UT of Chandigarh. Covid has already pointed out the unsustainable living practices which we need to change and adopt a NEW NORMAL.

As our cities grow, we must build upon our strengths to create vibrant hubs of enterprise and innovation. To achieve the same, a city needs to 'Institutionalize its Vision' to streamline its efforts towards an equitable, inclusive, sustainable future. A vision is a shared and desirable expectation of a plausible future, that helps us understand how a city might evolve and look in the future. It enables us to proactively deal with key challenges, in incremental steps, to achieve what may at first seem like ambitious long-term objectives and substantial change. This will not be a response to historic trends or a rebranding exercise; instead seek to present politically and economically viable ambitions and opportunities which can deliver a smart and sustainable future for everyone.

Genesis of Visioning Workshop

Visioning is a participatory tool that brings citizens and stakeholders together and is used to assist a group of stakeholders in developing a shared vision.

The idea of the VISIONING Workshop on 'Chandigarh for 2030 and beyond', was first discussed between UNDP and Mr. Dharam Pal, IAS, Advisor to the Administrator, Chandigarh Administration, in a meeting with him on 24 Aug 2021. This was followed by next meeting with the then Hon'ble Administrator, UT Chandigarh, Sh. V. P. Singh Badnore, on 25 Aug 2021. It was suggested that the Standing Committees of Governing Council of Chandigarh Administration should be consulted for deciding the thematic groups for visioning workshop.

Subsequent discussions with Mr. J. M. Balamurugan, IAS, Principal Secretary to the Governor, Punjab on 23 September and 1 October, as well as with all Administrative Secretaries of the UT on 11 October 2021, under the Chairmanship of Adviser to the Administrator, Chandigarh Administration, it was decided that a visioning exercise for the UT will be carried out as a workshop under the ambit of below mentioned thematic areas:

- | | | | | |
|---|---|---|--|--|
| <p>1.
Urban
Infrastructure &
Planning;
Transport & Mobility</p> | <p>2.
Environment,
Climate Action
& Eco Tourism</p> | <p>3.
Education,
Skill Development
(including Sports),
Employment,
Economic Ability</p> | <p>4.
Health,
Nutrition &
Well Being</p> | <p>5.
Social
Protection
& Safety</p> |
|---|---|---|--|--|

“This led to finalizing and organizing a **Visioning Workshop** in presence of thematic stalwarts, international and domestic experts to understand what has worked in India and abroad with context of Future ready cities. It was planned as a platform for learning the best practices and deliberating on a way forward.”



Visioning Workshop

Workshop Objective 1

Deriving a Vision for Chandigarh the City Beautiful for 2030 and Beyond – **5 Clear Vision Statements**

Workshop Objective 2

Conduct thematic discussions and from these arrive at **clear Action Points**

The theme of the visioning workshop was Future Ready Chandigarh 2030.

The objective of this workshop was two pronged:

- Deriving a Vision for Chandigarh the City Beautiful for 2030 and Beyond – 5 Clear Vision Statements
- Conduct thematic discussions and from these arrive at clear Action Points

The workshop was held at Hotel Mount View, Chandigarh on 25th and 26th October 2021. The workshop brought all key stakeholders on the same platform to discuss and brainstorm on how Chandigarh - city beautiful should become a leader in livability, sustainability, equality and innovation – a Future Ready Chandigarh 2030.

The workshop was conducted in presence of Hon'ble Governor of Punjab and Administrator, UT Chandigarh - Shri Banwarilal Purohit, Adviser to the Administrator, Chandigarh Administration - Shri Dharam Pal, IAS, Deputy Resident Representative, UNDP – Ms. Nadia Rasheed, Mayor, Chandigarh – Shri Ravikant Sharma and all Administrative Secretaries of UT Chandigarh. National and International subject matter experts joined the workshop and discussions took place on challenges, potential solutions for future readiness and case studies from around the world.



Experts such as Mr. Arun Maira (Former member of Planning Commission of India and former Chairman of Boston Consulting Group, India) and Mr. B.N. Goswamy (Indian art critic, art historian, former vice chairman of the Sarabhai Foundation of Ahmedabad, and awardee of the Padma Shri-1998 and the Padma Bhushan-2008) also attended the workshop and shared their valuable inputs.

The workshop aimed to answer the following critical questions

- 1. Can Chandigarh become carbon neutral by 2030? This is extremely important to mitigate the effects climate change on environment.**
- 2. Can Chandigarh become regional hub for education, health, commerce, service, IT, manufacturing of microchips, smaller equipments, etc.?**
- 3. How should public transport system be made future ready for Chandigarh and surrounding areas?**
- 4. What should be our policy towards private vehicles? Should we register only Electrical Vehicles (EVs) in Chandigarh?**
- 5. How should we deal with large scale unauthorised construction in villages located in Chandigarh? What planning approached should be taken for rural areas?**

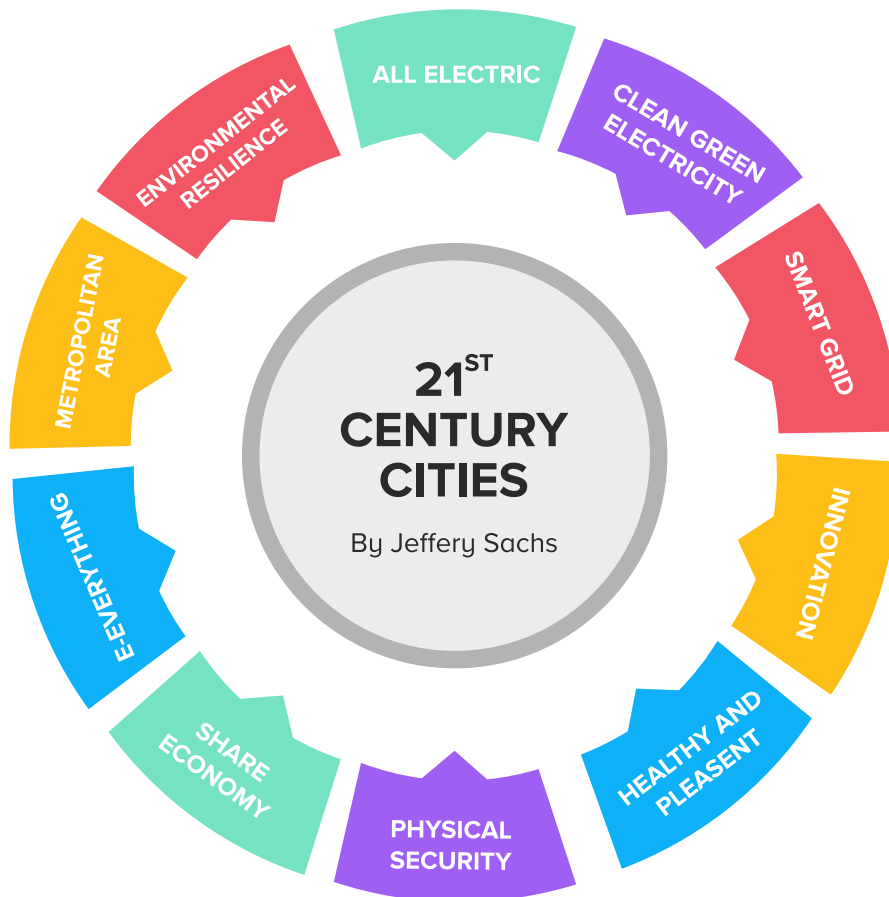
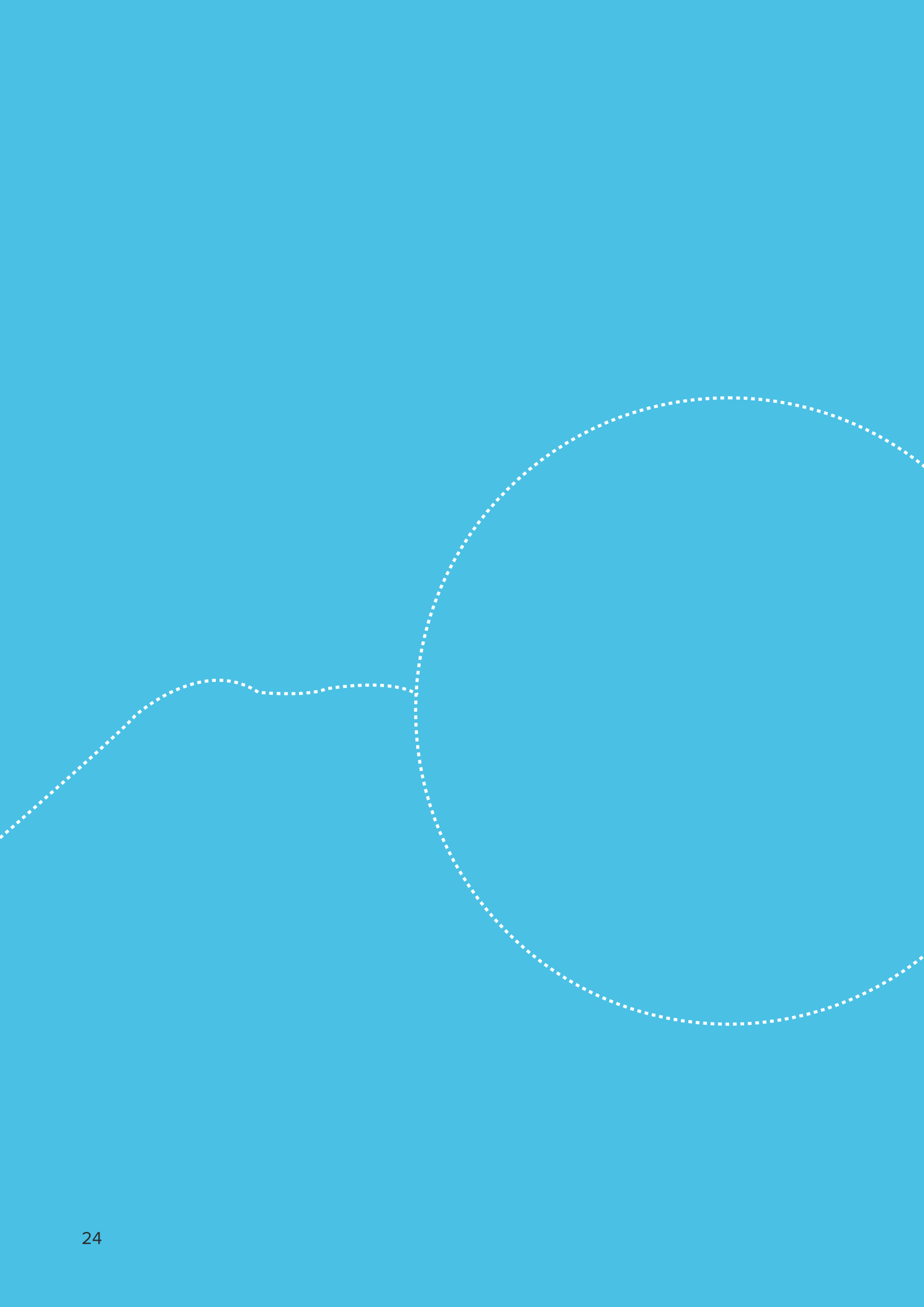


Figure 3: 21st Century Cities Model - Jeffrey Sachs

Jeffrey Sachs proposes a 10-point agenda that cities should follow to catalyze sustainable development, and outlines some of the pros and cons of advancements in science and technology that will support these proposed steps.

- Go all-electric. Operate off of power grids that are run on wind power, solar power, hydroelectric power, and in some places, nuclear energy ("clean, green electricity").
- Use smart grids to connect devices and electric-powered vehicles and appliances in a highly efficient way.
- Be innovative, specifically by remaking technologies in line with cutting-edge information systems and by generating new jobs through the development of industries based on the smart, all-electrical, and renewable approaches to energy and infrastructure.
- Support healthful and pleasant city life by reducing pollution, reducing the prevalence of the sedentary lifestyle, and more. Support more physical security, e.g. by eliminating or preventing the development of pockets of high poverty and instability. Support the growth of the "share economy," as facilitated through information technology.
- Support an "e-Everything" approach by making smart systems work not only by connecting devices, but also by connecting people and processes (such as e-commerce, e-governance, etc.). Make financial bases, infrastructure, and other urban frameworks more inclusive of entire metropolitan areas, beyond the legal boundaries of a particular administrative unit.

This model served as a corner stone for all thematic discussions and proved beneficial in drafting Chandigarh thematic vision statements.



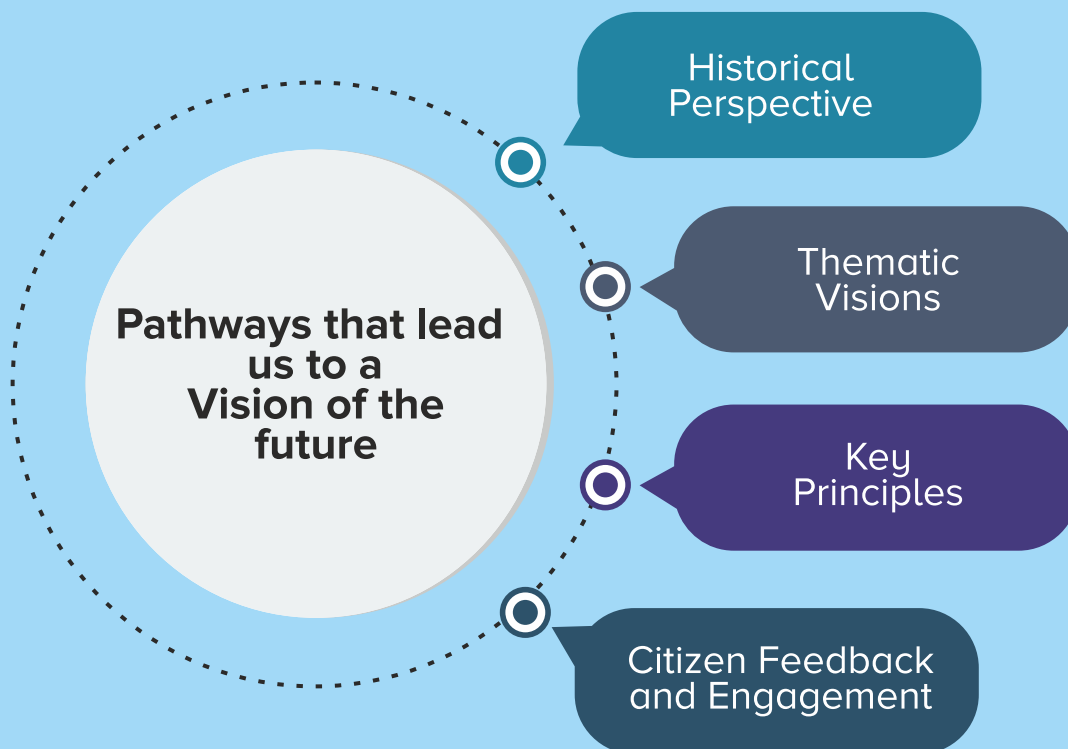
**PATHWAYS
FOR CHANDIGARH
VISION**

Chandigarh is the best-planned city in India, with architecture which is world-renowned. It is often said that serenity and a urban hustle bustle are two diametrically opposite concepts, which however, get belied in the 'City Beautiful'. Chandigarh is a rare epitome of modernization co-existing with tranquility. India's first planned city is a rich, prosperous, spic and span, green city rightly called “THE CITY BEAUTIFUL”.

But with time, urban spaces are grappling with complex, modern-day challenges that deserve unique customized solutions. Chandigarh has been the city beautiful for the longest time, but how do we ensure that it stays Chandigarh – City 'Forever' Beautiful.

It is possible only if we define and quantify this beauty which surely isn't an easy task but, a step in this direction can go a long way in not only restoring but also preserving this heritage. Chandigarh has the potential to become the 21ST CENTURY CITY of the world where everyone comes to learn. One needs to explore the possibilities and solutions towards making Chandigarh more than just beautiful – a city that is eco-friendly, prosperous, employable, disaster resilient, gender inclusive, equitable, innovative and self-reliant.

Before we arrive at the consolidated vision, we need to keep in view the following contemplations as derived from the workshop discussions and deliberations.



Historical Perspective

Chandigarh is the only planned city in India with a population of 10.55 lakh as per the year 2011 census. It is one of the fastest growing city with a population decadal growth rate of 40.30%. The construction of capital city of joint Punjab was started in the 50s. The City Chandigarh was declared a Union Territory in the year 1966 with joint capital of both the states of Punjab and Haryana. It is situated in feet of Shivalik hills. The area of Union Territory of Chandigarh is 114 sq. km. only, with 22 villages falling in the jurisdiction of Union Territory. Since the formation of Union Territory in the year 1966, all the functions such as water supply, sewerage, storm water drainage, city roads, solid waste management and fire wing etc. were looked after by respective departments of Chandigarh Administration. With the formation of Municipal Corporation Chandigarh in the year 1994 (with 20 wards) with its jurisdictional area of 79.34 sq. kms.; the functions of original works & maintenance for selected roads; water supply, sewerage, storm water drainage, solid waste management and fire wing were transferred to Municipal Corporation, Chandigarh.

The city of Chandigarh because of its unique concept is known as 'City beautiful'. It is one of the greenest city of India with its 1400 green belts /parks/ gardens. The maintenance of basic urban service is altogether different than the conventional old cities. The high-profile services provided by Chandigarh Administration & Municipal Corporation is a role model for other urban cities. Moreover, it is the regional center of three adjoining States of Punjab, Haryana and Himachal Pradesh as well as hub of political and bureaucratic activities of these States.

Charles-Édouard Jeanneret, known as Le Corbusier, the Swiss-French architect, designer, painter, urban planner, writer, and one of the pioneers of what is now regarded as modern architecture conceived the master plan of Chandigarh. He planned the city as analogous to human body, with a clearly defined head (the Capitol Complex, Sector 1), heart (the city Centre, Sector 17), lungs (the leisure valley, innumerable open spaces and sector greens), the intellect (the cultural and educational institutions), the circulatory system (the network of roads, the 7 Vs) and the viscera (the industrial Area). The concept of the city is based on four major functions: living, working, care of the body and spirit and circulation. Residential sectors constitute the living part whereas the Capitol Complex, City Centre, Educational Zone (Post Graduate Institute, Punjab Engineering College, Panjab University) and the Industrial Area constitute the working part. The Leisure Valley, gardens, sector greens and open courtyards etc. are for the care of body and spirit. The circulation system comprises of 7 different types of roads known as 7 Vs and later on a pathway for cyclists called V8 were added to this circulation system.



Edict of Chandigarh

**“The seed of Chandigarh
is well sown. It is for the
citizens to see that the
tree flourishes”**



This edict of Chandigarh was prescribed by Mon Le Corbusier, the planner of Chandigarh for its citizens to follow in future. The object of this edict is to enlighten the present and future citizens of Chandigarh about the basic concepts of planning of the city so that they become its guardians and save it from whims of individuals. This edict sets out the following basic ideas underlying the planning of the city.

The city of Chandigarh is planned to human scale. It puts in touch with the infinite cosmos and nature. It provides us with places and buildings for all human activities in which the citizens can live a full and harmonious life. Here the radiance of nature and heart are within our reach.

The city is composed of sectors. Vehicular traffic is completely forbidden in the green strips where tranquility shall reign and the curse of noises shall not penetrate.

Certain areas of Chandigarh are of special architectural interest where harmonized and unified composition of building is aimed at. Absolute architectural and zoning control should remain operative.

Only such industries as are powered by electricity would be permitted in the industrial areas so that atmosphere is saved from pollution.

The truthfulness of materials of constructions, concrete, bricks and stone shall be maintained in all buildings and constructed or to be constructed.

The landscaping of this city bases on careful observation of the vegetation of India. There should be no haphazard replacement so that the avenues retain their harmony and beauty.

Thematic Visions

As suggested by the thematic experts, governing council members and other participants in the workshop, following VISION Statements for all 5 thematic groups were defined:

1. Urban Infrastructure & Planning; Transport & Mobility	2. Environment, Climate Action & Eco Tourism	3. Education, Skill Development (including Sports), Employment, Economic Ability	4. Health, Nutrition & Well Being	5. Social Protection & Safety
We are a city that will transition from 'Grey to Green'	We are a city that is 'Resilient to climate change'	We are a city that promotes 'Green Economic Development'	Our Focus will be on 'Nature based lifestyles for good health and well-being'	We will be a city that 'Cares for all its inhabitants'

More details on the genesis of these statements, their significance and subsequent consequences are discussed in following sections of the report. Each statement is followed by key actionable elements and expected impact of these vision statements.

Key Principles

As we initiated discussions to reach a collective vision for Chandigarh's future readiness, few cornerstones remained. These aspects emerged as points of discussion and interest across all thematic discussions, thus guiding the collective vision. Three guiding principles while designing the vision statement for Chandigarh are as mentioned below:

Tricity Mutual Interest - Mohali and Panchkula are fast expanding satellite towns of Chandigarh. Many people commute to & from these cities needing integrated transportation plan. A large portion of water for the city is drawn from Punjab (Bhakhra Main Canal and Kajauli). Chandigarh sanitation management has dependency on these two towns belonging to two different states. The vision considers a sensitive and coordinated development to safeguard mutual interest with institutional mechanism amongst UT - Chandigarh, Punjab, Haryana and the Central Government.

Leave No One Behind - The quality of basic amenities should be same for all sections of the city irrespective of their caste, religion, gender and the location/area where they are living. There should be inclusive and equitable access to the infrastructure and services available in the City.

Sustainable Development at the core of all interventions - Increased carbon emission from fossil fuels is not only affecting people health but also resulting in rise of global temperature, and that can be catastrophic. Depleting ground water level can lead to water scarcity. Toxic gases and chemicals in high volumes of untreated waste and sewage is polluting environment as well as seeping into the soil and polluting the groundwater. A fine balance needs to be maintained between economic development and ecological conservation.

CITIZEN ENGAGEMENT AND FEEDBACK

The Visioning Workshop helped present a future vision for sustainable development of Chandigarh that citizens should be able to relate to and participate actively in achieving them.

As next steps for finalizing the Visioning Document, city dwellers from all walks of life in Chandigarh were contacted to voice their opinions and aspirations regarding the city's vision for 2030 and beyond. To capture these voices, UNDP engaged a Research Agency to carry out research and crystallize all the views, aspirations, into the Chandigarh Visioning document. The key objective of the research was to understand citizen's perspective about the City of Chandigarh and seek their feedback on key vision themes in terms of future readiness of the city

A qualitative research through 12 Focus Group Discussions (FGDs) involving 100-120 Citizens across socio-economic strata and 35-45 interactions/observations in 8-10 locations across Chandigarh was carried out. This was further being supported by quantitative interviews with minimum 600 citizens across the socio-economic strata of the city.

FGDs were conducted amongst key citizen groups (with due focus on marginalized sections of the community) and quantitative research was conducted both online and offline

Understanding Citizen's current associations

How satisfied people are with their UT

What all is important for the citizens – Health, Education, Economic Opportunity, Gender Equality, Social Justice, Clean environment, etc

Evaluating future vision themes

What is more important for the citizens and why

How well they relate to each theme

Which themes are more relevant for them personally

Which themes are more relevant for their city/ UT

Participation/ Practices / Actions

What can citizens do to achieve the visions for the UT

Who all, in their opinion can contribute / help achieve these visions for the UT

What role can people play as citizens of the UT

What can each do personally



Key Principles

- Tri-City Approach
- Sustainability Lens
- Inclusion / 'Leave no one Behind'

Thematic Visions

- We are City Beautiful – because we are a city that will transition 'from Grey to Green'.
- We are City Beautiful – because we will be a city that is “Resilient to climate change”
- We are City Beautiful – because we will be a city that 'Promotes Green Economic Development'.


- We are City Beautiful – because our focus will be on 'Nature based lifestyles for good health and well-being
- We are City Beautiful – because we will be a city that 'cares for all its inhabitants.

Historical Perspective

- Preserve the age-old heritage of Chandigarh
- No compromise on its historical identity, green spaces and key infrastructure components

Citizen Engagement and Feedback

- 82% could resonate with “City that cares”
- And 86% could resonate with “Nature based lifestyles for good health and wellbeing”



CHANDIGARH WILL BE
“**CITY FOREVER BEAUTIFUL**”
BECAUSE IT’S A
“**CITY THAT CARES**”
IN EVERY FACET OF URBAN LIVING



THEMATIC DISCUSSIONS

1. URBAN INFRASTRUCTURE & PLANNING, TRANSPORT & MOBILITY

Setting the Context

In March 1948, Govt. of Punjab in consultation with Government of India approved site for new capital for State. Architects team lead by Le Corbusier along with Pierre Jeanneret, Jane B Drew and Maxwell Fry designed this iconic city, reflecting concepts of 'modernism' movement. Le Corbusier conceived the master plan of Chandigarh as analogous to human body. Chandigarh is a very well-planned city, with a high standard of civic amenities. Chandigarh's infrastructure was originally planned for a population of five lakh, but the city has expanded rapidly over the last four decades and faces problems common to other growing cities in India, including the proliferation of slums and traffic congestions. Despite these problems, Chandigarh ranks first in India in the Human Development Index, quality of life and e-readiness.

The concept of the city is based on four major functions namely:

- Living - Residential sectors.
- Working - Capitol Complex, City Centre, Educational Zone (Post Graduate Institute, Punjab Engineering College, Panjab University) and the Industrial Area
- Care of the body - The Leisure Valley, Gardens, Sector Greens and Open Courtyards etc
- Spirit and circulation – the V8 roads

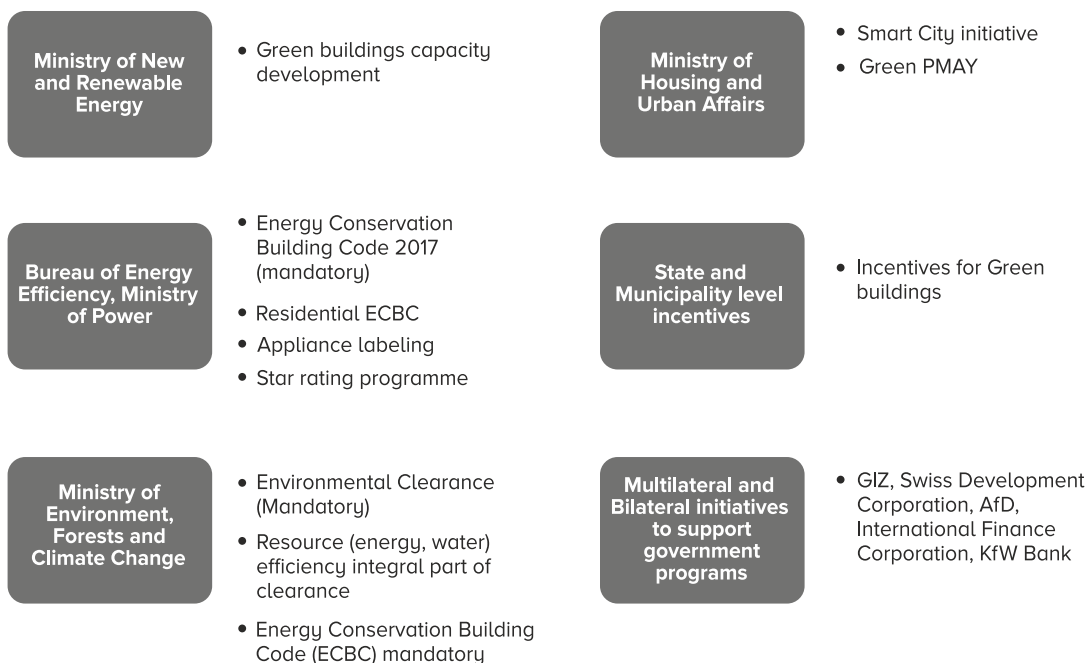
The city has piped water supply to all households - the average water supply is 227 Litres Per Capita Per Day (LPCD). This is more than Water Supply Standards (135 LPCD) as per Ministry of Housing and Urban Affairs and the quality index of water supply is very good with percentage of metering of water supply being 100%. The water supply is available for seven hours. The City draws 87 MGD water from Surface Water (Bhakhra Main Canal & Kajauli) and 25 MGD from 253 tube wells.

All households have electrical supply. The UT of Chandigarh does not have its own thermal or hydro power plants, and most of the power/energy requirement is being met from the allocation of central generating stations. Chandigarh has been declared as solar city and the current power generation from solar systems is about 48 MW.

95% of the households are covered with underground sewerage. With 6 sewerage treatment plants, the present treatment capacity is 53.85 MGD i.e. 55% of sewerage recycled into water. The city has 100% storm/rainwater drainage coverage. There are three Natural Storm Water Drains (choes).

The city has a fleet of 569 buses. The city is implementing Intelligent Traffic Management System with CCTV and video analytics that includes Adaptive Traffic Control System (ATCS) and Red-Light Violation Detection (RLVD) on 40 junctions, Over Speed Detection System (OSDS) at 7 locations with 10 systems, city surveillance with 1040 cameras at 285 locations in addition to multiple such interventions viz. Automatic number plate recognize system (20 entry exit & 40 junctions), dynamic message signs (80 Nos), own fiber network (250 KM) and public addressing system (40 junctions). automatic number plate recognize system (20 entry exit & 40 junctions), dynamic message signs (80 Nos), own fiber network (250 KM) and public addressing system (40 junctions).

MULTIPRONGED POLICY FRAMEWORK IN BUILDING SECTOR



Strengths

An Analysis – Our Strengths and Weaknesses

- Sound planning principles including ideal site orientation, use of natural gradient, natural local materials
- Promotion of Renewable Energy Sources as the city is meeting its 70% of energy requirement through Renewable Energy (hydro-power)
- Locational advantage, highly scenic background of hills, natural rivulets, forests, abundant tree cover, good connectivity
- Refined iconic architecture, international prominence of city
- Neighborhood concept enriching quality of life
- Climatically responsive architecture aware citizenry
- Well supported city, both administratively & financially
- Universally acclaimed rich 'Heritage' and 'Green City' character
- Decentralized distribution of major work centers
- Strong hierarchical network of all key functions & roads for systematic transportation

Weakness

- Steep population rise but the city is not prepared for the same
- Landlocked city with limited vacant land.
- Regional dependence on Chandigarh for social and other infrastructure by neighbouring cities & settlements.
- Even though the city has an efficient public transport system, it needs to be prepared to accommodate the rising influx with emphasis on greener systems of public transport.
- With influx of population, there has been a rise in adhoc additions to the city. Also, going forward, maintaining the open spaces as is will be a challenge.
- Peripheral Area Development to be streamlined as there is presence of urban villages/ unauthorized settlements with unregulated growth amidst and around planned sectors. City needs to focus on such settlements as part of its urban development plans..
- Solid waste management capacity to be enhanced that includes systemic collection, treatment recycling of the same.
- Provision of 24*7 water availability to all is a challenge as Chandigarh lacks 6 MGD requirement of tertiary water

- Demand supply gap of affordable housing in Chandigarh and neighboring regions.
- Transition to green buildings needs to be better paced.
- With increase in population and being catchment urban area of 3 neighbouring states, the city is witnessing rise in traffic congestion, parking chaos, moderately high pollution in winters etc.
- The demand for resources like electricity, water, Solid Waste Management (SWM) is increasing every year. Drawing water from 253 tube wells is resulting in depletion of ground water. The water supply is available for only seven hours. There is very high percentage of Non-Revenue Water (NRW) usage in the city.



Opportunities

Multiple thematic aspects were discussed during the workshop. Few areas of opportunities that emerged are listed below:

- UNESCO World Heritage status for City / Capitol Complex
- Introducing eco sensitive and environmental measures to safeguard the existing historical character and infrastructure.
- Improving safety of Non-Motorised Traffic – cyclists and pedestrians to address multiple issues related to traffic congestion.
- Enhancing employment opportunities.
- Introducing village and peripheral area development strategy for holistic development of the city.
- Public Participation by means of engagement of Resident Welfare Associations (RWAs).
- Ensuring balanced and inclusive development of city by systemic decline in disparity
- Strengthening local and regional tourism and promoting heritage, education, wellness industry.



Challenges

Challenges that were identified in this space are as following:

- Chandigarh as a city has been dealing with a steady influx of population over the years, leading to accelerated demand for affordable housing, well-connected transport systems, basic services, as well as jobs (particularly for the urban poor who live in informal settlements. This is resulting in unprecedented stress on the city's infrastructure.
- Protecting, retaining, enhancing UT's Administrative character and facilitating capital functions for which it was originally designed, whilst not compromising the needs of its citizens from all walks of life
- Infrastructure and transport related challenges call for collaborative efforts amongst Chandigarh and other neighboring states as these can't be addressed in isolation.
- Rural - urban divide is increasing, further adding to disparities in living conditions of marginalized sections of the community.
- Synergizing development of critical infrastructure - solid waste management / water supply /transport/ drainage etc., while considering ecological footprint & climate change reality
- Ensuring housing for all while maintaining a low to medium housing density profile

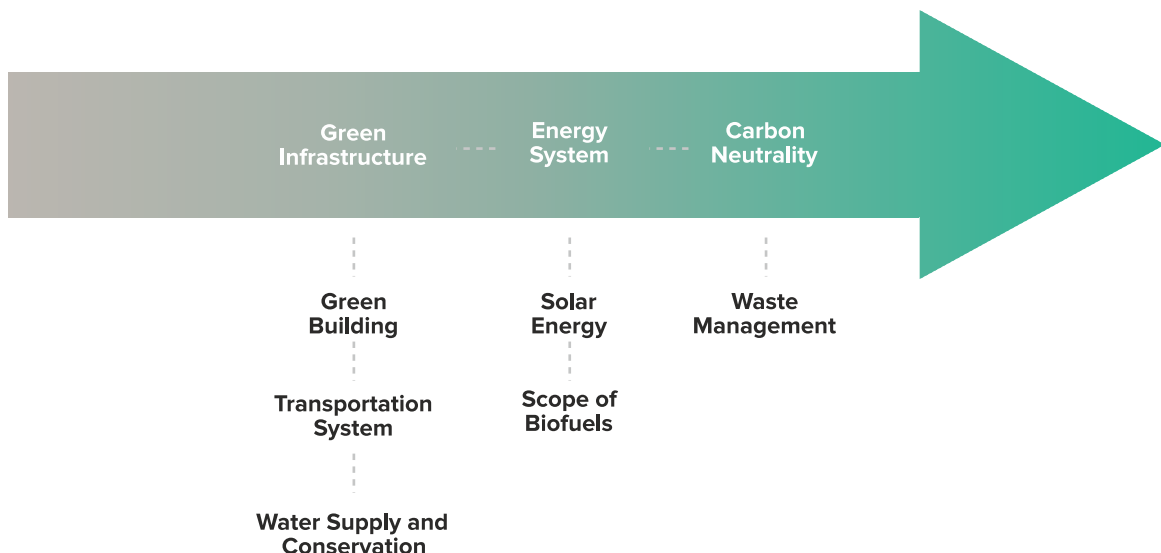
“THEMATIC VISION

We are City Beautiful – because we are a city that will transition 'from Grey to Green'. ”

To become a city that will shift from “grey” to “green”, smart & connected infrastructure will be augmented with efficient governance, digital systems, and tech based solutions will be leveraged to maximize economic, environmental and social benefits for improved quality of life of the citizens.

In a nutshell, UT Administration to focus on the following plan of action:

Analyzing the opportunities and challenges, the following areas have been identified. These are the areas starting work on which will pave way to achieving the vision statement.



**Smart & Energy
efficient Green
Buildings**

I. GREEN INFRASTRUCTURE

1. Transition to Green Buildings to be accelerated. Switching to certified green buildings should be expedited. Each building should be audited for energy efficiency, savings etc. Incentives may be considered in the shape of reduced property tax, higher FAR etc. for green buildings.

In terms of cost analysis for green buildings cost of going green is relative and cannot be accurately quantified.

Further, most professionals simply state that green buildings have an added cost of 15% - 30% (compared to a conventional building)* and that the payback period is usually 3 - 5 years.

2. Minimizing the non-renewable virgin material footprint of housing – soil, sand, stone (including limestone for cement), aggregates, metals. On the same lines, ensuring sustainable sourcing of the renewable material used in housing – timber, water, etc. and minimizing building energy requirement – embodied energy in materials and fossil energy for operation and use of buildings
3. Closing the material-energy loops through post life management of the building
4. Maximizing the job creation potential of housing production, and the local economy benefits from the production and servicing of the same.

**Sustainable
Transport systems**

1. Devising a plan to replace public transport buses should be phase wise replaced with electric buses in a phase-wise manner.
2. Developing an integrated transport plan with Mohali and Panchkula to be developed wherein, it should be stressed that these cities should also phase out diesel operated local buses and auto-rickshaws.
3. Facilitating modal shift to electrified public transport through enabling private operators to provide app based flexible commuter services at different comfort levels.
4. The city already has very good Non-Motorized Transport (NMT) infrastructure in terms of cycle tracks, which can be expanded to cover all remaining areas. Further, bicycle/pedestrian tracks shaded by solar panels/green creepers can be created.
5. Using the incentive approach for the promotion of EVs, which in turn can limit the petrol/diesel/CNG vehicles per households.

* As per a study, the analysis shows that the construction cost of green industrial manufacturing building is about 28% higher than that of a conventional building. However, operation, maintenance and end of life cycle costs are in the range of 35 to 41%, 26 to 30% and 6 to 18% respectively lower than that of conventional building. The study found that the life cycle cost of green building is 24 to 28% less compared to conventional building.

6. Adapting Hydrogen as Fuel in Future- A lot of technological developments are in progress for Hydrogen as an alternative fuel. Research labs and industries are working toward clean, economical, and safe hydrogen production and distribution for widespread use in fuel cell electric vehicles (FCEVs). FCEVs are powered by hydrogen and are more efficient than conventional internal combustion engine vehicles and only emit water vapour and warm air. This may be considered once this technology is fully developed, and vehicles/buses are made available.



**24x7 Access
to piped
potable water
to all households**

1. Chandigarh as a city has been able to ensure access to water to all its residents and this has helped in improving health, hygiene while saving time and gainfully using the time thus saved for other opportunities. Aiming for 24*7 piped water supply to all areas and all residents would be the next step in this context.
2. As per National Compilation on Dynamic Groundwater Resources Report (2017), Chandigarh is in Semi Critical Category. Drawing water from tube wells should be phased out to stop further depletion of ground water. Water should be sourced from surface water and other methods such as rainwater harvesting.
3. The city has negligible rainwater harvesting facilities. The City has well laid out drainage system; tapping and channelizing it into recharge trenches can not only tackle the ground water decline but also solve the water logging on roads. The City should tap and harvest 70% of the rain that goes into water drains.
4. Reduce Non-Revenue Water (NRW) to 10-15% by plugging leakages, proper operations & maintenance and checking illegal connections (implying that there should be regular checks and reporting).
5. Underground Sewerage should cover all households and businesses.

The treated effluent should meet basic quality parameters so that toxic chemicals, pollutants are fully removed.



**Green
Building**

II. PROMOTION OF GREEN BUILDINGS

1. Retrofitting existing buildings with energy efficient lighting, space conditioning, double glazed UPVC windows, reflective painting/tiling of roofs, and water harvesting
2. Promoting passive solar architectural design for reducing energy consumption in all new buildings, public, institutional and commercial
3. Net metering of power consumption and solar feed-in tariff to promote installation of rooftop solar PVs.
4. Utilization of Construction and Demolition (C&D) waste for future construction thus reducing demand for primary topsoil for bricks production.

III. CARBON NEUTRALITY 2030

The city should become carbon neutral by 2030. It would require identifying, tracking, and benchmarking greenhouse gas emissions across all sectors and portfolios. It would need taking tough decisions, reforms and investment in renewable energy, energy efficiency or other clean, low-carbon technologies.



**Efficient
Management of
Municipal Solid
and Liquid
Wastes**

On one hand, it will be a good idea to borrow ideas from advanced cities/States such as Leeds's (UK) on-road waste management technique, San Francisco's (USA) recycling and composting strategy for all businesses and residences, Upcycle Vancouver Project's (Canada) material meet-ups scheme or Curitiba's (Brazil) Green Exchange Programme that actively engages with its citizens.

But on the other hand, though managing waste properly is essential for building sustainable and livable cities, it remains a challenge for many developing countries and cities including Chandigarh. A detailed and integrated action plan needs to be developed that focuses on Infrastructure (capital investments to build or upgrade waste sorting and treatment facilities, close dumps, construct or refurbish landfills, and provide bins, dumpsters, trucks, and transfer stations), legal structures and institutions, financial sustainability through the design of taxes and fee structures, citizen engagement and public participation (designing incentives and awareness systems), social inclusion and promotion of projects that promote environmentally sound waste disposal needs to be put in place.

What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050 captures the latest trends in waste management and can be a guiding tool in this regard,

1. Annual Waste Audit Report of commercial, institutional and public buildings, and mandated reduction in waste generated to 50% of current levels. A waste audit is a physical analysis of waste composition to provide a detailed understanding of problems, identify potential opportunities, and give a detailed analysis of waste composition. Some cities that have conducted such audits are Hoi An, Vietnam* and City of Philadelphia, USA**.

In India, Comptroller and Auditor General of India is an important agency that is supporting states on performance audit of Solid Waste Management in Urban Local Bodies. CAG has developed such reports for Karnataka and Goa.

2. Mandating 100% solid waste segregation at source in all residential, public,

* The waste generation in Hoi An City has increased significantly as much as its economic growth. In order to contribute towards the development of an environmental and ecological city, Hoi An has made efforts to classify and minimize solid waste over the years. This report by IUCN provides information and data on the current situation, characteristics, and composition of solid waste and recycling systems, aiming to create the basis for future projects and management activities. (https://www.iucn.org/sites/dev/files/content/documents/2021/oct_6msw_audit_in_ha_summary_report_en.pdf)

** The City of Philadelphia is working toward its ambitious goal of becoming a Zero Waste and litter-free city — with zero waste entering landfills and no more than 10% going to incinerators — by 2035. In 2017, the Zero Waste & Litter Cabinet (Cabinet) launched the Municipal Building Waste Audit Program to benchmark waste management practices at City-owned facilities, uncover issues and gaps in the City's internal waste management operations, and provide municipal departments with tools, resources, and support to help them minimize waste at their facilities. (<https://www.phila.gov/media/2021031155935/ZWI-Municipal-Waste-Audit-Report-012720.pdf>)

institutional and commercial buildings and door-to-door garbage collection by the Municipal Corporation.

3. All wet waste to be composted within each sector and used in landscaping.
4. Establishing common waste-water treatment facilities for industrial clusters and ensuring disposal of hazardous waste (including biomedical and pharmaceutical waste) in secure facilities.
5. Retrofitting sewage treatment facilities to collect bio-gas for power generation for industrial use, and recovery of sewage sludge for forestry purposes.
6. Energy from bio-fuels such as methane from solid waste management and sewerage treatment plants should be generated to its maximum capacity. Methane otherwise is harmful green house gas and its presence in the atmosphere affects the earth's temperature and climate system.



Future Course of Action

Works Already Initiated

- Draft EV Policy has been drafted and is in process of being implemented on ground. The draft EV policy incentivizes citizens for switching to Electric Vehicles
- Expansion of the public transport system is being planned with modern, comfortable buses, and adoption of a route rationalization plan to minimize aggregate passenger-kilometers travelled in the city for the emerging patterns of demand.
- ITS Intelligent Public Transportation Systems being implemented in the city.
- Solar power systems are mandated to be installed at all Government & commercial buildings, education institutes, hospitals, hotels.
- Residential houses are being incentivized to install solar power. The scheme is to be extended to all areas and types of residential housing in coming months.

Short Term Actions

- Pace of transitioning to green buildings needs to be accelerated. Chandigarh already has a green building policy in place - the same needs to be updated with due focus on certification and retrofitting.

- Covering/shading the dedicated bicycle/pedestrian tracks with solar panels.
- Reducing non revenue water (NRW) supply to 10-15%
- Transitioning to green housing systems – focus on solar energy and rainwater harvesting (awareness and adaptation).
- Awareness on waste management, segregation and collection to be further enhanced
- Annual Waste Audit Report of commercial, institutional and public buildings, and mandated reduction in waste generated to 50% of current levels
- The mandate of 100% solid waste segregation at source in all residential, public, institutional and commercial buildings and door-to-door garbage collection by the Municipal Corporation, should be strongly implemented.

Long Term Actions

- Retrofitting of all government buildings to Green Buildings.
- 100% transition to EV in terms of Public Transport.
- Developing an integrated transport plan with Mohali and Panchkula.
- Establishing common waste-water treatment facilities for industrial clusters and ensuring disposal of hazardous waste (including biomedical and pharmaceutical waste) in secure facilities.
- Harvesting 70% of the rain that goes into water drains.
- Retrofitting sewage treatment facilities to collect bio-gas for power generation for industrial use and recovery of sewage sludge for forestry purposes.
- Promoting passive solar architectural design for reducing energy consumption in all new buildings – institutional and commercial
- Energy from bio-fuels such as methane from Solid Waste Management and Sewerage Treatment Plants should be generated to its maximum capacity.

2. ENVIRONMENT, TOURISM & HERITAGE PRESERVATION

Today, humankind is faced with multiple challenges of sustainability and climate change. It has become imperative for the international community, national governments, state governments, cities, and civil society, indeed every household and individual to adopt environmentally and socially responsible ways of doing and being. Only if we all resolve to mitigate Green House Gases (GHG) emissions, abate pollution, conserve water, reduce and recycle waste, and re-use material goods, will the life-support systems of planet earth be secured, and our children and grandchildren be able to lead healthy, safe, and stress-free lives.

Setting the Context Where we are?

UT Administration Governing Council Environment committee also includes tourism as both are closely linked. Tourism is a key economic activity on one hand and it benefits from environmental conservation, but can also potentially hamper the conservation efforts. It is crucial to note UT Administration is implementing a number of schemes to promote tourism viz. NIDHI Scheme, SAATHI scheme and PRASHAD Scheme. There are initiatives such as celebration of Lohri Festival, Walk of Art, Rose festival, awareness camp and vaccination drives at various tourist spots, celebration of World Tourism Day and Rashtriya Ekta Diwas. There is a Bollywood facilitation cell and Chandigarh is being promoted as a brand as well. Other tourism promotion activities are listed below:

- Many initiatives have been taken to promote ecotourism in the city such as 'Nature Trails' behind Sukhna lake, Trekking in Wildlife Sanctuary, Sukhna wetland, Chandigarh Bird Park and Butterfly Park.
- A total of 13 Heritage Zones have been identified with grading from I to III, each having its own recommendations with respect to the importance and significance within the total urban landscape of the City.
- Geographic Information System (GIS) mapping of all tourist spots and adjoining utilities has been completed.
- Unified ticketing system of tourist spots on a single platform has been developed.
- Introduction of new activities, event & festivals on the basis of popularity index based on public survey & feedback has also been initiated by Chandigarh Administration.

The City of Chandigarh was conceived in the 1950s as the harbinger of modern planned cities in India and achieved global recognition for the planning and architectural concepts it embodied. However, today, the city has grown and is facing issues related to population growth along with increase in vehicular population. Since last few years, there has been a rise in ambient temperature* and urban heat island effect is being experienced in the city. But it is creditable that in terms of greening, there has been a considerable increase in percentage from 26% in 2001 to 50% in 2021. The administration has adopted numerous measures in the city for reducing carbon emissions viz.

- Reduction of pollution through vehicles (de-congestion of roads, awareness drives amongst public to use cycles, construction of cycle tracks in the city, awareness to use electric vehicles for transportation, construction of cycle stands)
- UT has also introduced mechanical street sweeping machines in the city to reduce the pollution caused by particulate matter.
*Please note Mechanized Road Sweeping (MRS) machines are certified as PM10 efficient or capable of picking up greater than or equal to 80% of PM10 particles which is stirred up from vehicular traffic on paved roadways***
- Demand for better cleanliness vis-a-vis limited availability of human workforce and high labor costs are other reasons, pushing MRS operations in developed and developing countries.
- Construction of construction & demolition waste plant for handling the waste and recycling the same to make paver blocks etc.
- 155.2 million units of energy generated from renewable sources that included government and private solar plants up to 30th Sep' 2021.
- Greening and paving activities done around the city like planting small shrubs and plants for reduction of pollution levels
- Chandigarh Smart City Limited is in process to upgrade the capacity of operational STPs. Waste to energy plant (Bio Gas) of 1.4 Mega watt capacity is in under construction at STP Diggian.
- The work of upgradation /rehabilitation of 6 STPs has been started to meet the new prescribed parameters fixed.
- Solid waste management, material recovery facilities and treatment of municipal solid waste is being made available to all sections of the population.

While the above-mentioned activities have been completed/set in place, the following programs/initiatives and schemes are being currently implemented for environment protection.

Development of State Action Plan on Climate Change (SAPCC) for Chandigarh:

1. Environment Information System development
2. Greening Chandigarh Initiative

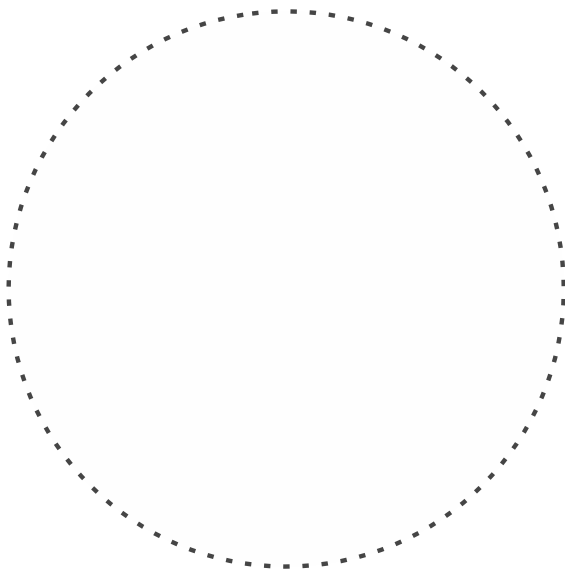
* Ambient temperature is the air temperature of any object or environment where equipment is stored. The adjective ambient means "relating to the immediate surroundings." Also sometimes referred to as the ordinary temperature or the baseline temperature, this value is important for system design and thermal analysis. "Urban heat islands" occur when cities replace natural land cover with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat.

** Indore, a city in state of Madhya Pradesh in India reported a drop in PM10 and PM2.5 by 8.3% and 5% respectively from 2018 in 2019 due to mechanized road sweeping (MRS). Indore also claimed that after using mechanical road sweepers, respirable suspended particulate matter (RSPM) level of city was reduced from 145 mg/Nm³ to 75-80 mg/Nm³.

3. National Clean Air Programme
4. Ghaggar Action Plan
5. Single use Plastic Plan
6. Model Solar City initiative
7. Development of District Environment Plan

As part of these initiatives, UT Administration is making concerted efforts on:

- Implementation of SAPCC
- Source Apportionment Studies and Emission Inventory
- Maximize coverage of PNG/LPG for domestic and commercial purpose
- Vertical Gardening
- Increase solar installed capacity from 50 MW to 75 MW
- Upgradation of STPs
- Restoration of Water Bodies



Strengths

- Existence of District Environment Plan
- Existence of 50% forest and green cover.
- Waste Management
 - 80% of the segregation of waste is being done at source.
 - Two material recovery facilities; Recycling of E-waste
 - Ban on plastic waste
 - Mechanical street sweeping machines
 - Ban on biomass and garbage burning
- Existence of ambient air quality monitoring system
- Schemes for promoting tourism such as Nidhi Scheme, Saathi Scheme, Prashad Scheme.

Weakness

- Landlock city limits the scope of extension for the city
- Due to limited land availability, no alternate landfill for site waste management is available in the city.
- Vehicular population has been increasing due to increase in traffic in the city.
- Lack of effective urban waste management and material substitution

Opportunities

Valuing ecosystem services is the first step to embed impacts on the natural environment through decision-making. A comprehensive framework for the valuation of the natural environment needs to be put in place, that offers systematic means to ensure that ecosystems and the services they provide are taken into account in policy appraisal. It builds on traditional valuation approaches by explicitly considering the environment as a whole – bringing together land, water, air, soil and biodiversity – and recognising that their linkages provide a wide variety of services and benefits that are not specific to any one part. The approach stresses that changing any one part of our environment can have consequences, both positive and negative, and often unintended for the ecosystem as a whole and explicitly calls for the value of the services provided by the natural environment to be reflected, in decision-making. Few areas of opportunities that emerged are as listed below:

- Ensuring Strong Implementation of State Action Plan on Climate Change
- Taking Measures for reducing carbon emissions through renewable energy sources, and creating a policy ecosystem for incentivizing the same.
- Taking relevant and collaborative steps towards restoration of Restoration of water bodies, mandating rainwater harvesting for all buildings, new and existing, that will further help in for recharging aquifers.
- Designing systems (and ensuring people's participation) for localized grey-water treatment facilities within residential areas in the city.
- While appraisal of development projects within the city or in peripheral areas, ensuring due process of Green Accounting is carried out i.e. economic valuation of ecological services vis-à-vis development activities; monetisation of ecological services
- Setting up of green climate funds
- Implementation of circular economy for climate resilient city
- Sukhna lake and its catchment areas in Chandigarh offer a perfect opportunity to develop terrestrial carbon sink in the city through forest conservation, management of silt inflow and other such activities.

As mentioned above, environment as a theme is also inter-linked with tourism. Few areas of work in this regard are as mentioned below:

- Heritage Furniture Museum to be consolidated with the existing Architecture Museum and the Le Corbusier Centre.

- Construction of an Air Force Heritage Centre will showcase aircrafts, simulator, aero engines and other IAF artefacts; Martyrs memorial to be constructed in the memory of freedom fighters of the country.
- Rejuvenation of Sector 17: Remodeling and redevelopment of North and South Plaza; urban park; restoration of exposed concrete façade of buildings.
- Administration to promote Chandigarh as a place of adventure sports by introducing various adventure activities at multiple locations at Chandigarh.

Challenges

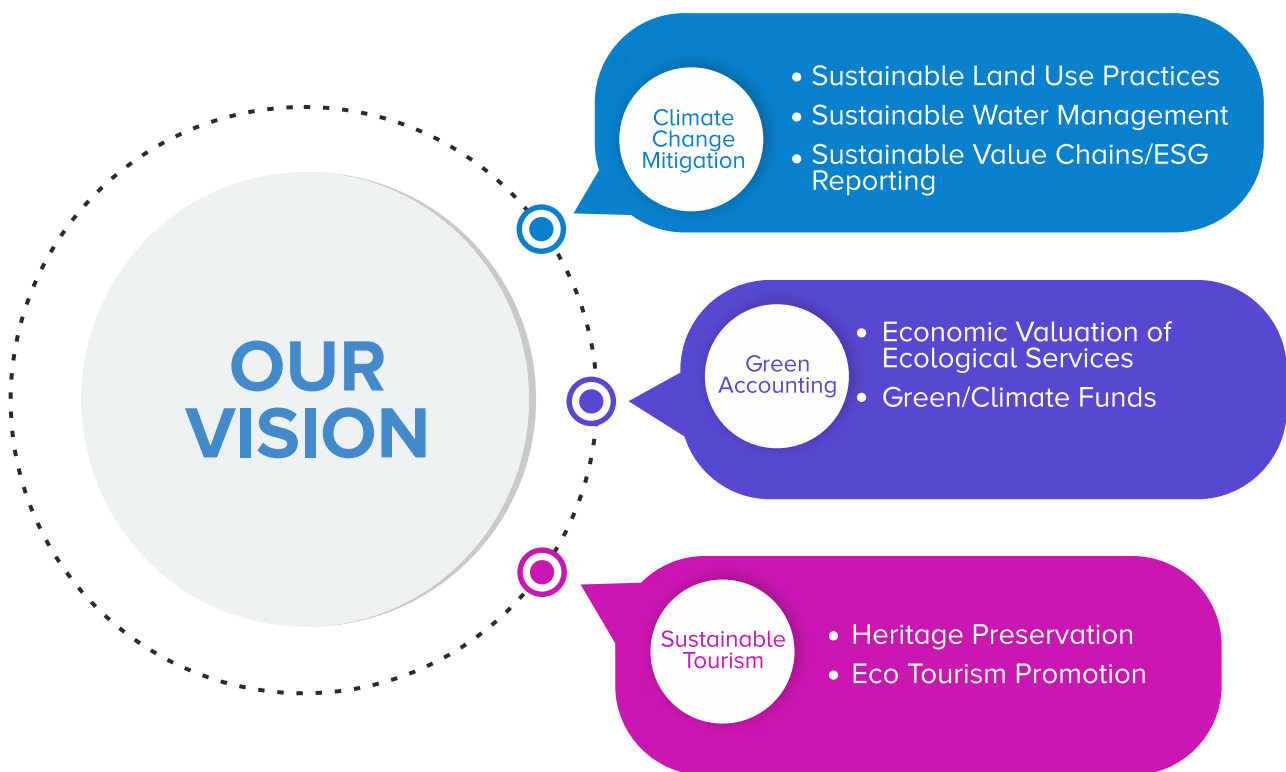
- Increase in number of vehicles, leading to environmental pollution.
- Lack of economic valuation of ecological services.
- Encroachment of forest/waste landfill areas and construction of buildings in and around reserved areas.
- Managing the new construction work, especially at the UT borders shared with the adjoining states.
- Maintaining the fine balance of development and preserving heritage.

“THEMATIC VISION

We are City Beautiful – because we will be a city that is “Resilient to climate change”. ”

To become a city that is resilient to climate change, we will shift focus on adopting all circularity principles that propose a restorative and regenerative economic system, using renewable resources, optimizing resource use and recovery, and supporting sustainable livelihoods and lifestyles. Chandigarh will be a thriving city by adopting a “sustainable plus” model that will not just generate resources for the present generation but also preserve for future generations.

Analyzing the opportunities and challenges, the following areas have been identified. These are the areas, starting work on which will pave way to achieving the vision statement.



I. CLIMATE CHANGE MITIGATION

- Chandigarh should be prepared for climate impacts in terms of loss of life and damage to infrastructure in coming years. Thus, creating climate change awareness amongst all stakeholders irrespective of the social economic backgrounds is imperative, in terms of building adaptation and resilience into public policies by the government and for citizens to be accepting and abiding by same. Engaging youth actors to create open and constructive dialogue in this space will also go a long way in achieving the set objectives. Private and public sector should include climate resilience action plans in their business plans and operations. We need to collaborate, co-invest in, and promote incentives for players across the value chain to adopt climate-friendly practices and support early demand signals for clean technologies.

need to collaborate, co-invest in, and promote incentives for players across the value chain to adopt climate-friendly practices and support early demand signals for clean technologies.

- A crucial hotspot for environmental conservation is Sukhna Lake Area. Few action points in this regard are elaborated as following :
 - a. Enrichment plantation* in the catchment area of Sukhna lake – recent studies have shown that enrichment planting in secondary forests offer a promising clean development mechanism to increase terrestrial carbon sinks;** Similarly, plantation of broad-leafed indigenous species for management of silt inflow in Sukhna lake and soil management will lead to forest conservation and increase in water levels
 - b. Wildlife migration corridors connecting the Sukhna Wildlife Sanctuary to other protected areas needs to be secured. This will require strong coordination and cooperation of the neighboring states.
 - c. Planting indigenous fruit trees in landscaped areas and Sukhna Wildlife Protected Area to attract urban fauna
- No diversion of notified forest land to non-forest use should be allowed. Also, policy formation making it mandatory that all felling in this area should require plantation - twice the number of fruit trees and indigenous species of the region; should be put in place.
- Prevention of grazing of cattle in forested and landscaped areas and impounding of all feral cattle is also important for ecosystem conservation and sustenance. Development of village common grazing grounds can address the issue
- Enhancement of linear tree plantations along city roads can also be an effective mechanism to promote urban forestry. Warje Urban Forest in Pune can be used as a role model in implementation of the Nagar Van scheme. Warje Forest Area within Pune Municipal Limit, has been developed over about 22 hectares and bears 6,500 trees as on date

*Enrichment plantation is the practice of clearing out forests to grow a single commercially valuable species

**terrestrial carbon sinks is anything, natural or otherwise, that accumulates and stores some carbon-containing chemical compound for an indefinite period and thereby removes carbon dioxide (CO₂) from the atmosphere.<https://www.ecologyandsociety.org/vol14/iss1/art31/>

and about a thousand people visit the place everyday. (Urban forestry is the art, science and technology of managing trees and forest resources in and around urban community ecosystems for physiological, sociological, economic and aesthetic benefits trees provide for society)

- Environmental, Social, and Governance (ESG) Reporting to be made mandatory for all local manufacturers and businesses. Capacity Building on the same is crucial too. Investors are increasingly applying these non financial factors as part of their analytic process to identify material risks and growth opportunities.

II SUSTAINABLE WATER MANAGEMENT

- Mandating water audit for existing commercial and public buildings and putting in place progressive targets for reducing water consumption to 50% of current levels by 2030. ‘Sustainable Water Management’ calls for an inter-departmental action plan, that will comprise clear outputs and targets, action points, best practices and solutions.
- Mandating rainwater harvesting for all buildings, new and existing, for recharging aquifers
- Sector-level treatment of grey wastewater* for landscaping, gardening, and washing cars and employing sprinkler-based systems for watering of all lawns, gardens, and landscaped areas.
- Replacement of conventional paving with permeable paving to facilitate aquifer recharge
- Ensuring 100% metered water connections

III ECONOMIC VALUATION OF ECOLOGICAL SERVICES

- Quantifying the ecological practices and interventions in numbers and monetizing them, to make citizens as well as administration appreciate the significance of any ecosystem conservation and its impact on daily living and livelihoods. For example: value of the trees in Chandigarh and their contribution to the economic system of Chandigarh. Also, this value is not limited to only Chandigarh; the positive effect such as carbon sequestration, biodiversity conservation and water harvesting, provides local and regional benefits (many cities around the globe such as, Toronto and Canberra have done activities involving tree mapping for quantifiable sequestration).
- Ecosystem services valuation and green accounting** can be carried out using UN frameworks to understand the economic contribution of these

*Waste household water (tubs, kitchen, washing area) other than toilet water

**Environmental accounting, also called green accounting, refers to modification of the System of National Accounts to incorporate the use or depletion of natural resources.

ecosystems and ecological losses due to development activities, to get the net value of development. This can help in providing incentives for good projects/activities and penalization for bad projects/activities implemented.

- In recent years, international development on financial front has been observed, viz. setting up the green climate fund with significant funding. UT of Chandigarh should also benefit from the same, considering that most of it is grant funding along with a very balanced structure. All the UN system and other multi-lateral financial systems have taken targets for investment in climate change and there is a great deal that the capital markets are mainstreaming towards green investments. It's the opportune time for Chandigarh to leverage these funds towards development of green and clean technologies.
- Adopt the landscape-based approach. Using the landscape economics approach, we are looking at not just one particular ecosystem but connectivity of all ecosystems. It is necessary to convert all interventions into a tangible value and present them to policy makers, to give them a clear and better understanding of real value of green investment in the entire system.

IV SUSTAINABLE TOURISM FOR TRANSITION TO A CLIMATE RESILIENT RESOURCE EFFICIENT CHANDIGARH

Promoting sustainable tourism for transition to a climate resilient and resource efficient Chandigarh through an effective model of implementation.

- a. Learning from Singapore model of tourism, all tourist spots to be made zero waste spots in terms of energy and water usage.
- b. Setting up unconventional energy production units at open tourist locations
- c. Using traditional knowledge to treat and re-use wastewater at these spots
- d. Ensuring segregation of waste at all tourist spots and creating no-plastic zones in these regions.
- e. Composting and nourishing native tree plantations at these locations
- f. Creating livelihoods opportunities for local residents at these locations (production of paper bags, traditional food joints – no plastic usage, art and culture promotion, etc.)



Future Course of Action

Works already initiated

- Draft EV Policy has been launched and being implemented.
- PBS (Public Bike Sharing) system is in place and UT working toward its expansion; 200 km cycle track & PBS (617 stations) work underway.

Short Term Actions

Administration

- Developing Policy on rainwater harvesting by all new and existing buildings, and implementation of policy to ensure recharging of aquifers.
- Launching a drive (with people's participation) for plantation of broad-leafed indigenous species in the catchment area of Sukhna Lake for management of silt inflow and soil management.
- Ensuring enforcement regarding transfer of notified forest land to non-forest use.
- Putting in place a mechanism to ensure water audit for existing commercial and public buildings, for reducing water consumption.
- Replacing of conventional paving with permeable paving to facilitate aquifer recharge.

Community/Individuals

- Adopting rainwater harvesting at individual and community level.
- Not allowing cattle grazing in forested and landscaped areas.
- Being aware of climate degradation consequences and thus taking preventive actions accordingly.
- Using grey wastewater for landscaping, gardening, and washing cars, use sprinkler based systems for watering of all lawns, gardens, and landscaped areas.



Long Term Actions

Administration

- Quantifying the practices and interventions and monetising them; Putting in place mechanisms for ecosystem services valuation and green accounting using frameworks such as UN for providing incentives for good actions and penalising bad actions.
- Leveraging green investment opportunities.
- Businesses to factor analysis of Environmental, Social, and Governance (ESG) in their business operations towards being socially and environmentally conscious.
- Ensuring convergence of all interventions towards a connected ecosystem.

3. EDUCATION, SKILL DEVELOPMENT (INCLUDING SPORTS), EMPLOYMENT, ECONOMIC ABILITY

Chandigarh is the capital of two states i.e. Punjab and Haryana, and also regional center and gateway to North-West Region of the country. It has a large population that is growing and hence has the potential to power and propel its future economic growth. The economy of Chandigarh is witnessing a transformation from traditional manufacturing towards a knowledge-based economy. Some emerging sectors that are expected to boost Chandigarh's economy are IT, transportation, services, communication and construction sectors. It is crucial that Chandigarh is well prepared in terms of institutional capacities and human resource requirements to be future ready in this space. Needless to say that recent pandemic has added to the challenges in employment/skilling and entrepreneurship sector.

The pre-pandemic Indian economy was one of the fastest growing in the world, but it also had one of the highest unemployment rates. As per UNDP's Future of Work (FoW) report in the COVID recovery space, the areas of concern that have emerged are: 1. Massive disruption to supply chain and loss of jobs and earnings 2. Need to maintain existing jobs while creating new ones. 3. Basic income and social protection to help recover from all manners of shock.

The UNDP report points to four issues that frame FoW Agenda relevant for Chandigarh, as it drafts its future readiness strategy.

- Equal access to digital literacy
- Future of work must be about green jobs
- Reliance on adaptive techniques; and
- Gender gap around wages and employment opportunities must close

Setting the Context Where we are?

Chandigarh Administration has been extensively working to boost economic growth and development in the region, with special focus on special measures in education sector, skill development and gainful engagement of its citizens.

In total, there are 210 schools in the city which are government and private owned. According to the U-DISE 2020-21 data there 0% dropout rates at elementary schools and 4.54% at senior secondary. It has been observed that there is 46.60% share of girls participation. 3305 Out of School Children have been brought into the fold of education through 131 Special Training Centres. There are various higher education colleges and technical institutes in the UT and it is the first state/UT in the country to achieve 100% accreditation (of education institutions) agenda of MoE. Chandigarh Administration is uplifting the infrastructure in schools and colleges by introducing science & knowledge parks, mathematical

gardens, setting up Atal Tinkering Labs, sanitary napkin vending and incineration machines in secondary schools, installing roof-top solar plants in government schools and colleges and operationalizing state of art sports complex having multipurpose halls.

Going forward, the administration has strategic plans and action items in place to improve educational levels and engine economic growth in the region:

- Development of School Management Information System along with online Teacher Transfer Policy module.
- Chandigarh Education Department has envisaged to convert all its schools into smart schools in a phase wise manner. This shall result into interactive teaching & learning environment enabling students to perform better in all subjects.

In particular, under the aegis of Chandigarh Smart City Limited, 4 government schools i.e. GMSSS - Sector-22, GMHS - Sector-35, GMSSS - Sector-35 and GMHS - Sector-43 have been converted into smart schools with state of the art amenities and digital infrastructure.

- Promotion of sports activities in schools by organizing Talent Hunt Sports Competition.
- Setting up of Employability, Entrepreneurship, and Innovation (EEI) Hub at Panjab University under RUSA. This EEI hub would be instrumental in providing job opportunities and startup avenues.
- Under 'Share Toy, Share Joy campaign', collection of toys is done from local area and put in use in classroom teaching at pre-primary level.

Regarding the service sector, it is observed that in Chandigarh, Government is the major employer in services such as civil and armed forces. Service sector has highest hiring demand for the FMCG, FMCD, power and energy, manufacturing sector, BPO/ITs and logistics. Also, there has been strong effort seen by the city to bring digital jobs here. This being said, as per reports, the unemployment rate in Chandigarh is still very high around 6.3% – higher than the national average of 4.8%*, calling for concerted and immediate efforts in this direction.

For example RGCTP i.e. Rajiv Gandhi Chandigarh Technology Park has been conceived with an idea of creating employment and it is expected that once RGCTP is completed more than 25,000 professionals would be working here. Phase I of the RGCTP has been completed, anchored by Infosys and it has been accorded SEZ status. Phase II of the RGCTP is under development and has also been accorded SEZ status by GOI. Wipro is the anchor company for Phase II, and Tech Mahindra, Bharti and eSys are the co-anchors. Once completed, the RGCTP will bring in an investment of Rs. 5000 crores**.

*<https://timesofindia.indiatimes.com/city/chandigarh/unemployment-rate-in-punjab-haryana-chd-higher-than-national-average/articleshow/84774743.cms>

**<https://chandigarh.gov.in/know-chandigarh/redefining-chandigarh>

Strengths

- 0% drop out rate at Elementary as well as Secondary level
- Chandigarh leads in Education-Related Indices
 - 1st Rank in School Education Quality Index (SEQI) by NITI Aayog
 - 1st Rank in Performance Grading Index
- Highly reputed colleges and universities
 - Panjab University (PU) secured 23rd Rank in the University category of NIRF 2021
 - Government Home Science College ranked 78th (in Top 100) - NIRF 2021
- First State/UT in the Country to achieve the 100% Accreditation (of education institutions) agenda of Ministry of Education
- Computer Labs in all government schools
- Academic, Administrative and Sports infrastructure upgraded in colleges under RUSA grant
- 8 State of Art Sports Complexes
- Chandigarh Skill Development Mission
- Two Govt. ITI's including one Women Govt. Industrial Training Institute running job oriented skill courses.
- A world-class Skill Development Centre developed by SIEMENS having State of Art Facilities to align Engineering Education with latest industry trends for better training.
- In addition, CCWDC (Chandigarh Child & Women Development Corporation) is working towards increasing women's participation in workforce:
 - CCWDC is providing financial assistance by way of providing loans to the women belonging to Economically Weaker Section of society for self-employment schemes such as setting up beauty parlour, tailoring & stitching unit, karyana shop etc.
 - The Corporation is running a Working Women Hostel, which is providing accommodation to the working women & students enrolled in professional courses in the ratio of 70:30 respectively.
 - Also, CCWDC is providing skill training under Swawlamban Scheme to the women belonging to economically weaker section of society. The training is provided under various trades like computer, cutting & tailoring, fashion designing and beauty culture etc.

Weakness

- Limited employment opportunities and government is the major employer

- Number of higher education institutes are limited when compared to the number of student influx from the adjoining 4 states.
- Issue of Skill Gap between students' curriculum and industry requirements.
- Warehousing feasibility exercise has not been attempted in the UT.
- High youth unemployment
 - Unemployment rates in Chandigarh are higher than the national average (6.3%)
 - Youth female work participation rate is 2.5 times lower than that of males
- Lack of concerted efforts to impart technical skills that are crucial for ever changing work environment
- Weak linkages and guidance from industry

Opportunities

Multiple thematic aspects were discussed during the workshop. Few areas of opportunities that emerged are listed below:

- Develop Chandigarh as a 'Hub' of some specific area(s)/ specializations/economic activities.
- Position Chandigarh in 2-3 sectors/ areas like Artificial Intelligence (especially in services sector)
- Rejuvenated efforts to bring digital jobs to the city. e.g. reinvent the scope of IT Park, attempts to set up a film city or a media hub
- Chandigarh should take advantage of current industries/service sector and create jobs in these sectors.
- Promotion of Green Jobs; identify and promote skilling in 'greening component' within conventional jobs.
- Capitalize on education knowledge framework of Chandigarh
- Creating inclusive workforce: mindset shift from job to gainful engagement, bridging the gender workforce gap and make workforce ready for future jobs through skill gap analysis and upskilling initiatives



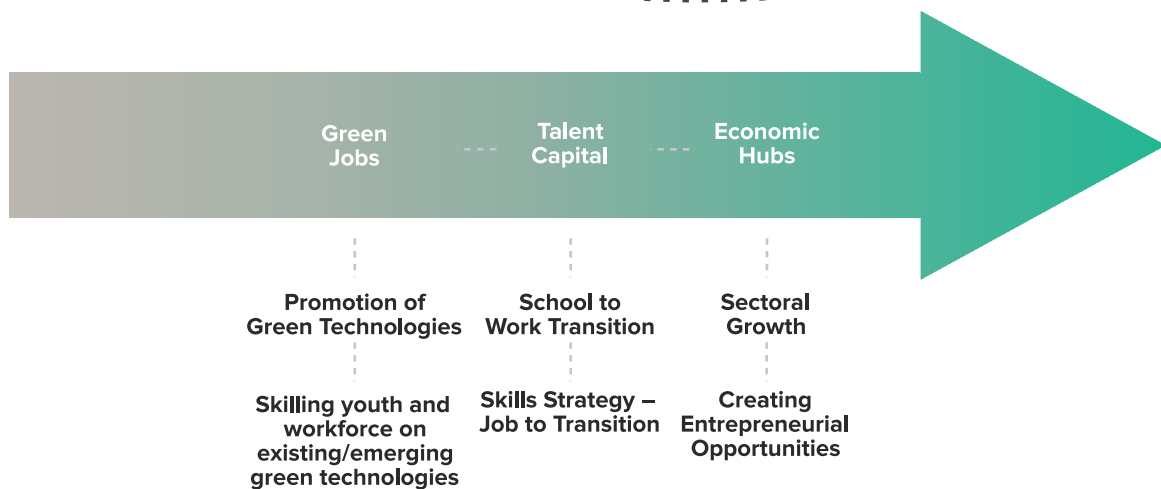
Challenges

- Economic development without compromising the heritage of the city beautiful
- Since there is limited scope of expansion, setting up manufacturing sector and industries is equally limited. Thus, focus should be on service based industries
- Despite efforts, youth unemployment stays high and therefore there are some systemic challenges that need to be addressed:
 - Female participation is very low in the work force thus rejuvenated focus on female literacy and workforce participation is required.
 - As per demographic and gender concentrations, there is only 10.8% of population that is under 6 years, thereby, Chandigarh has more retiree population. This restricts growth possibilities in the future unless more female population is included in employment sector.
 - Interventions are required for schools to work on transition of young population – it can be done by providing multiple benefits to both male and female students viz. counselling and monitoring sessions, skilling and placement programs, social entrepreneurship, etc.

“THEMATIC VISION

We are City Beautiful – because we are a city that will be 'Talent and skill hub for Green Economy'.”

To become a city that is economically self-reliant, we will shift focus on conversing, collaborating and co-creating a future. We will build a robust mechanism to develop a human capital pool that is future ready. Our vision is to create career/employment/entrepreneurship opportunities in Chandigarh by building strategic and specialized hubs in the city that not only create opportunities for the working population but also supports City's path to becoming self-reliant.



Analyzing the opportunities and challenges, the following areas have been identified. These are the areas, starting work on which will pave way to achieving the vision statement.

I. GREEN JOBS

Green growth policies with special focus on employment generation are a challenging target because employment generation is expected to reduce inequality and address the social dimension of sustainability, apart from creating a holistic development path by ensuring the trickle-down impacts of income generation. The need for such an integrated development path was first recognised by 13th Finance Commission of India in 2009. Green jobs are jobs that contribute to preserving and/or restoring the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy efficiency or services such as audit and rating of green activities.

Summarising:

- Green jobs are jobs that contribute to the technology that is green in nature. It can be said that even conventional jobs can be given the concept of 'green'.
- The Green Jobs scope covers the entire gamut of “Green Businesses”, viz. Renewable Energy, Energy Storage, Green Construction, Green Transportation, Carbon Sinks, Solid Waste Management, Water Management & E-Waste Management.

Chandigarh has a start on progressive planning given the principles it was conceived on, the architecture and culture, thus making it easier to implement various programs pertaining to climate change and other environmental factors. A typical example is when the solar renewable policy was implemented in the country, Chandigarh along with Bengaluru led the entire country's solar energy movement. The same was observed with the solar water pumping system that was started in Chandigarh, followed by Punjab, leading way for rest of the country.

So now is the time to transform Chandigarh as a climate resilient city.

- Chandigarh should continue to ensure that city's energy requirements are met through non-fossil fuel sources such as hydro-power. Further, the UT can boost efforts towards generating solar power at the household and commercial scale.
- Adoption of CNG and other fuels through biomass apart from adoption of e-vehicles.
- As far as skilling is concerned, it will be crucial for Chandigarh Administration to map the needs of this city to the skilling portfolio that the city offers.
- Further, it is not only about jobs in the green sector but the way we can add a green component in the conventional jobs as well. One example of such is when drivers are asked to switch off their engines on red light – this is an example where a conventional job is being told

to include a green component in their activity. This culture needs to be included in the schools and their curriculum i.e., starting young to inculcate the practice.



II. TALENT CAPITAL

To meet the future human resource requirements, Chandigarh needs to invest in its human resource development. We need a strategy in place to build a talent capital that is aligned to our future needs.

- Provide a diversified package of interventions corresponding to specific challenges faced by intended beneficiaries (classroom training, internship/work experience, job search assistance, counselling and life skills training, entrepreneurship training, and combine skills training with finance and/or mentoring / technical advice).
- Profile and target the specific needs and contexts of beneficiaries, with individual follow-up /counselling/ monitoring
- Skilling/ Placement Programs (may be in Public-Private Partnership mode) that link payment to positive labour-market outcomes
- Backward and forward linkages of the education with employment generation should be mapped i.e. the school education and the college/technical education may be such so as to be helpful in employment generation and entrepreneurship.

In order to create an inclusive workforce, there is an urgent need to shift from 'Job to Work'. "Job" is defined as "an activity that an individual performs in exchange for a specific fee or payment." It is also referred to as an occupation, profession, career, or trade. "Work" is defined as "a physical or mental activity that is performed in order to accomplish or produce something." It is something that an individual does in the performance of his job or of his responsibilities towards his employers or other people.

Steps of action to ensure effective transition from 'work' to job' are explained below:

- Workforce should be aligned more on creativity and encouraged to think outside of the box. However, workplaces should promote creativity differently i.e. thinking creatively about mundane tasks can give the

workforce a different perspective all together. This is often called as creativity at work.

- Embracing technology and automation for higher productivity and output (technology at work)
- Man - machine collaboration at work has become super crucial these days thus there is an increased demand for more automated workplaces. Chandigarh's IT Park is being developed as a SEZ with state of art buildings, thus making it an ideal location for similar industries
- Smart companies attracting talent not by money, but by offering employees an opportunity to have socially meaningful impact through work (purpose at work)
- Digital business will result in distribution of job to work across communities of people and across all kinds of businesses; Chandigarh should leverage this opportunity to become a more robust and inclusive work location

**Identify
Skill Gap**

Further, following strategic steps have been formulated to ensure that the population is future skills ready.

Define future workforce and understand the impact of automation

- Assess current workforce capabilities
- Understand the organizational culture
- Identify skills gaps, mismatches and role adjacencies
- Validate the case for change

**Build a
future-proof
skills strategy**

Rapidly review and refresh upskilling strategy

- Make inclusion a priority
- Improve effectiveness of learning organization & technology
- Test strategic alternatives and scale performing programmes

**Lay the
cultural
foundation**

Create a cultural shift and the right behaviors

- Inspire citizen-led innovation
- Nurture physical vitality and mental wellbeing

**Develop and
implement
upskilling**

Create and deploy programmes which harness the organization's culture, right learning experience and rapid results.

- Create buy-in and align rewards and incentives
- Design for an engaging learning experience
- Build digital understanding
- Focus on targeted personal transformation journeys

**Measure the
return on
investment
from
upskilling
programmes**

Measure Return on Learning investment

- Track Employee Engagement
- Benchmark the L&D (Learning & Development) function

While schools have always imparted basic & moral skill along with education, there is a need of infusing more technical & futuristic skills which have proven to be vital in today's era. It is not just the new-age tech skills that need to be imparted but even the soft skills learning including innovative conceptualization, decision-making, problem-solving, leadership, and managerial training that must be offered. In its recent research, the World Economic Forum projects that approximately 97 million new roles will emerge by 2025 due to newly developing dynamics between technology and the workforce. The study further points out that by 2022, 42% of core skills needed for existing jobs are expected to change. Hence, up skilling and reskilling is the only way forward to keep up with the pace of ever-evolving business world. In this context, Chandigarh can draw learnings from all across the world

- **Prioritising skills over degrees**

Australia University is boosting skills in its students by working closely with industry to develop relevant training curriculums, so that students are more employable when they graduate. To support this initiative, the university is also exploring learner analytics – allowing lecturers to keep close tabs on how students are coping with their studies and adapting curriculums accordingly in real-time.

- **Moving towards Reskilling**

At Singapore, to boost lifelong learning, continuous education and reskilling, the Ministry of Education launched two new statutory boards in 2016: Skills Future Singapore (SSG) and Workforce Singapore (WSG). The former works closely with educational institutions and training bodies to strengthen adult training infrastructure, while the latter seeks to promote development, competitiveness, inclusiveness, and employability. Singaporeans aged 25 and above are provided with SkillsFuture credits that they can use to pay for training courses and programmes of their choice, across a variety of industries.

- **A vision of lifelong learning**

In 2017, the Danish Ministry of Employment established the Disruption Council, made up of a broad group of representatives from public and

private sectors and academia. The essence of the model is to allow companies and public institutions to respond quickly to changes in the economy, while ensuring that workers who lose their jobs are taken care of through access to training and new skills allowing them to return to the labor market. The Government has also entered into a tripartite agreement with social partners, which will focus on vocational training and education.



III. ECONOMIC HUBS

Considering the people of Chandigarh, we need to realize that the next generations are unable to find employment opportunities of their liking and/or qualification in the city and thus, migrate to other parts of the country or the world. This is the reality that we need to acknowledge. Chandigarh as a city is sometimes referred to as a 'pensioners paradise'. But it is upon us to think that why should the coming generations be deprived of the work opportunities and be forced to move elsewhere in the world.

It is crucial that the ethos of the city is protected but it is also important to accept change for the betterment of the city, in a calibrated manner. One such area of work is development of Economic Hubs in the city to create employment opportunities on one hand and boosting the economic growth of UT on the other.

First step in this regard has been in terms of setting up Chandigarh's IT Park. The next steps should include the growth of other sectors such as, service and knowledge sectors, out of the existing industries in the city. We need to develop jobs by becoming a hub for particular sectors. Scope of setting up a Media Hub or AI Hub can be further explored and deliberated upon. Chandigarh administration should ensure that the skill gap is plugged in alignment with this future course of development.

Development of Special Economic Hubs is essential for providing jobs to next generations and until we address this basic need, we will not be very successful as a city in the long run.



FUTURE COURSE OF ACTION

Short Term Actions

- Explore the potential of projecting Chandigarh as an excellence center for Green Jobs
 - Promote skilling in 'greening component' within conventional jobs
 - In addition to current efforts in skilling and capacity building, due focus should be laid on Green Jobs (learning from Philippines, explore the potential of formalizing the 'Green Jobs' policy that provides specific financial incentives for green job creation, including tax deductions for skills training, research and development for green jobs, etc.)
 - Set up Green Jobs Innovations Lab to promote research and development in this area
- Support high school/under-graduate students through career counselling facilities by way of psychometric assessment – especially to students belonging to economically weaker sections of the society. This will help students choose their careers wisely and effectively. Career Counselling centers can also serve as information dissemination centers for scholarships, skilling opportunities, etc.
- To encourage Entrepreneurship Development (ED) amongst students, set up ED Cells in higher education institutions under the ambit of central ED Centre. This will be key to inspire students to become entrepreneurs through training, knowledge sharing, mentorship, financial support, etc.
- Owing to the proximity of Chandigarh to Delhi and other North-Western states, provide incentives/infrastructure to Start Ups, Incubators, etc. to set up their base in the UT
- Revisit the curriculum in terms of current and potential industry requirements for students enrolled in higher education institutions. This will be particularly crucial for students enrolled in liberal arts courses. Thus, work with industries in the region to identify potential workforce requirements such as applied skills (problem solving, communication, etc.), academic skills, IT skills (basic or advanced computer-related skills), job specific skills requiring validation or certification, industry certification, etc.

and include these as extra credit courses for students.

- A skill mapping study specific to the city of Chandigarh can go a long way in defining UT's skilling and capacity building efforts for youth. This mapping study could be particularly useful for youth engaged in informal sector in the city, thus, equipping them with the right skill set for future livelihood opportunities.
- Partner with global skills providers viz. LinkedIn, Coursera, to provide learning opportunities to interested students around emerging technological and soft skills.
- A scoping study may be conducted to identify the kind of service industry that may have potential in Chandigarh and feeding the findings into skill development/ teaching curriculum in colleges/schools accordingly.

Long Term Actions

- Develop Chandigarh as a specialized 'Hub' of some specific area(s)/ specializations/economic activity. Through a scoping study, identify the potential of multiple sectors such as media, artificial intelligence, etc. Policy decisions to position Chandigarh in 2 to 3 sectors will not only generate jobs in the region but also allow complementary industries to bloom in the region.
- Rejuvenated efforts are required to bring digital jobs to the city e.g., reinventing the scope of IT Park in terms of creating more jobs for youth (especially women). This is proposed in the context of future skills ready citizens.
- In line with Chandigarh Administration's efforts to develop Chandigarh as an 'Education Hub', create opportunities for students to pursue diversified education – inviting world class design institutes, development institutions, etc. to Chandigarh for a more holistic approach to higher education in the city.
- Creating inclusive workforce: mindset shift from job to gainful engagement, bridging the gender workforce gap and make workforce ready for future jobs through skill gap analysis and upskilling initiatives

4. Health, Nutrition and Well-Being

Setting the Context Where we are?

Chandigarh has many highly specialized hospitals – PGI, GMCH- 32, and GMSH-16 to name a few. The city has Sub Divisional Hospital, Urban Community Health Centres, 29 Health and Wellness Centres, 5 AYUSH centres and civil dispensaries. There are 11 multi and super specialty private hospitals, 19 Private Nursing Homes and over 220 private Health Practitioners/Doctors. There are 20.39 Doctors and 27.04 Nursing staff per 10,000 population. Average daily OPD and IPD is 6112 and 257 respectively. Monthly per capita Out-Of-Pocket Expenditure (OOPE) on health as a share of Monthly Per capita Consumption Expenditure (MPCE) is Rs 9.50 against India average of Rs 13.00 (SDG India Index 3.0). As per 2011 Census, Chandigarh Child Sex ratio is 880* against National average of 919.

Chandigarh is a front-runner in the health sector, amongst the UTs in the country as per the report of State Health Index. Being a major hub for health services in North India, people from adjoining States and other countries come to Chandigarh for availing health services.

The City has many ongoing programmes in line with national programs/schemes of Government of India. viz.

- Reproductive, Maternal, New-born, Child Health and Adolescents (RMNCH+A)
- Universal Immunization Programme (UIP)
- Pradhan Mantri Jan Arogya Yojana (PM-JAY)
- Revised National Tuberculosis Programme (RNTCP)
- National Vector Borne Disease Control Programme
- Saksham Anganwadi and POSHAN 2.0

*<https://pib.gov.in/newsite/printrelease.aspx?relid=103437>

- Integrated Disease Surveillance Project (IDSP)
- National Program for Control of Blindness (NPCB)
- Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH)
- National Iodine Deficiency Disease Control Program (NIDDCP)
- National Programme For Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS)
- National Leprosy Eradication Programme (NLEP)

Immunization focused activities

- Har Ghar Dastak “2.0” COVID19 vaccination program has already been going on in UT Chandigarh since 01.06.2022 as per direction of MOHFW & the campaign will continue till 31.07.2022.
- Taare Zameen Par - Night Vigil Program during Pulse Polio Campaign is a unique program in which 0-5 yr aged homeless children are administered with oral polio drops during night.
- City Task Force for Immunization (CTFI) has already been constituted in UT Chandigarh. This task force will access the gaps, provide updates and progress of immunization in urban area. The actions of this task force will help in strengthening urban immunization in Chandigarh.
- Surveillance activity in AEFI (Adverse Events Following Immunization) is already going on very well and recently Chandigarh has been ranked as “EXCELLENT” performing state/UT in the country.
- The Social Welfare Dept. is carrying out vaccination against Cervical Cancer for children/young adults girls residing in the Child Care/After Care Homes in the U.T.

Government Health Institutions

- Tertiary care/Medical Colleges/Hospitals
 - Post Graduate Institute of Medical Education and Research (PGIMER)
 - Govt. Medical College and Hospital, Sector 32, Chandigarh
- District Hospital (DH)
 - Govt. Multi-Specialty Hospital, Sector 16, Chandigarh
- Sub Divisional Hospital (SDH)
 - Sub Divisional Hospital Manimajra
- Urban Community Health Centers (UCHC)
 - Civil Hospital, Sector - 45, Chandigarh
 - Civil Hospital, Sector 22, Chandigarh
- Health and Wellness Centres - 29
 - Health and Wellness Center (AYUSH) - 5
 - Non-Bedded PHCs/Civil Dispensaries - 3
 - Others (ESI, Urban/Rural Health Training Centres etc.) - 7

Strengths

- Very good hospitals and professionally qualified doctors.
- Strong public health system with robust infrastructure serving a large number of people not only from the City but also from other States and abroad.
- People in general have confidence in availing health services from Govt. hospitals.
- Voluntary blood donation movement — Chandigarh is pioneer in this area.
- Presence of renowned medical educational institutes in the tricity - PGI, National Institute of Pharmaceutical Education and Research (NIPER), Indian Institute of Science Education and Research (IISER), Institute of Microbial Technology (CSIR-IMTECH), Homi Bhabha Cancer Hospital

Weakness

- Since Govt. Hospitals of the UT especially PGI, GMCH-32, and GMSH 16 are the catchment areas for health services for adjoining 4 states, it leads to overburdening of the facilities and increased need of supporting infrastructure for the patient families, attendants and care takers, including support services for patients who come for OPD consultations only.
- Provisioning of basic healthcare (dental care, ENT, palliative care) to be further strengthened
- Limited presence of natural therapies in the city.

Opportunities

Multiple thematic aspects were discussed during the workshop. Few areas of opportunities that emerged are listed below:

- Positioning medical tourism with quality services.
- Public Private Partnership for delivering health services.
- Promoting and provisioning for healthy lifestyles and natural therapies
- Integrated health care services with risk informed planning and inter-sectoral coordination
- Developing model state of art palliative care services with specialised care
- Strengthen super specialised healthcare services like organ transplant etc.
- Integrated and Universal Health Coverage with focus on primary healthcare

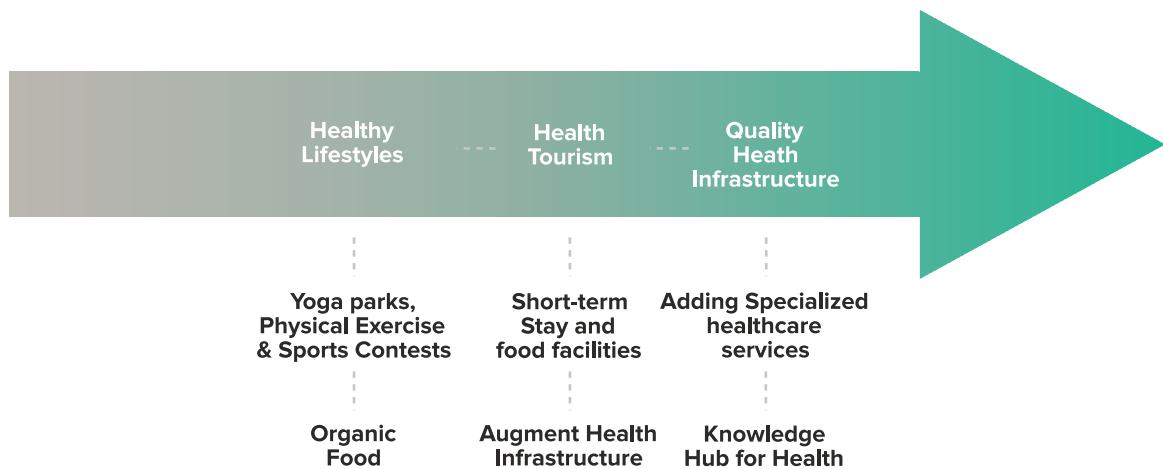
Challenges

- With lifestyle changes, there are rising rates of Non-Communicable Diseases (NCDs).
- There is prevalence of food borne diseases, making people resistant to functional antibiotics.
- Aging population requires targeted health interventions.
- Out of pocket expenditure on health is rising.
- More tertiary care centres are required because of excessive load on the existing institutes.

OUR VISION 2030

We are City Beautiful – because our focus will be on nature based lifestyles for good health and well being.

We are looking to build beyond just medical infrastructure in Chandigarh – we are looking to develop a model city of people who enjoy good health, well-being, nourishment and quality lifestyle, In collaboration with academic and research institutes. We envision to develop Chandigarh as hub for healthcare & well-being and to become an epicenter of health tourism in the region.



Analyzing the opportunities and challenges, the following areas have been identified. These are the areas, starting work on which will pave way to achieving the vision statement.

Promote Healthy Lifestyles

Good nutrition, daily exercise and adequate sleep are the foundations of healthy living. These can reduce obesity, diabetes, blood pressure, heart problems and many other NCDs.

- Yoga parks in different sectors: Yoga parks should be setup in different parts of the city where people can practise yoga to keep them fit. It offers physical and mental health benefits for people of all ages.
- Physical exercises: citizens should be encouraged to do physical exercises including cycling. Periodic competitions, sports contests should be organised to involve more & more people for physical activities.
- Organic Food: city should promote organic food that is grown without the use of synthetic chemicals, pesticides and fertilizers. People should be encouraged to develop their own kitchen gardens that may be in open area near houses, individual balconies, roof tops etc.
- UT may device a policy to mandate that all restaurants to have a healthy menu option without the HSSF (High Sugar High Salt) items.

Alternative Healing & Natural Therapies

- Infrastructure and facilities should be created/added for alternative healing & natural therapies such as aromatherapy, meditation, yoga, reflexology etc.

Health Tourism - Hub for Healthcare & Well-Being

- Chandigarh is already a preferred destination for availing health services in North India. Many people from adjoining States and other countries as well come to Chandigarh for availing health services. Thousands of people come to PGI daily from other States.
- Besides medical services, good road connectivity, hotels, clean environment also favours the uptake of medical services in the City from across the state and national borders. However, people (patients and attendants) also need economical place to stay and procure food etc. during their stay for treatment in the City. Hence, facilities need to be expanded in terms of affordable short-term stay facilities (guesthouse, hotels), hygienic food etc.

Quality Assurance for Health Services

In general, the quality of health services in the City is very good. Large number of people have faith and avail health services from Govt. Hospitals. However the quality of services can be further strengthened through quality certification like National Quality Assurance Standards (NQAS). This certification ensures high standards are maintained by the hospitals in public health system. These standards cover - service provision, patient rights, support services, clinical care, infection control, quality management and outcome. It helps in improving the weak points without undermining strong points.

Strengthening National Health Mission (NHM)

Health Department UT Chandigarh should be a role model for the whole country and should provide:

- Green Channel for inter hospital referral among PGIMER, GMCH-32, GMSH-16, UCHC-22, UCHC-45 and SDH Manimajra specially for gynecology paediatrics, emergency, trauma, stroke patients so that there is smooth communication & proper referral mechanism for fast and smooth transfer of referred patients from one facility to other facility and also there should be coordination with traffic police for fast and safe transportation to save time and many lives.
- For upgradation all HWCs where expended range of services are available including tele-consultation so that patients are able to avail services closer to their home and overcrowding at secondary & tertiary care facilities can be controlled.
- For increase full immunization coverage from 93% to 100%.
- For DBT to be 100%, notification of TB case and cure rate to be 100%.
- Strengthening of MCH services & maintaining institutional services at almost 100% so there is negligible Maternal Morbidity & Mortality.
- For Setting up District Early Intervention Center (DEIC), One skill labs, governance redressal system as well as pediatrics care unit.
- For Non Communicable Diseases (NCDs) – Apart from population above 30 years, adolescents to be screened for NCDs so that Hypertension and

Diabetes can be managed at early age.

- The vision of SHS-NLEP, Chandigarh is Leprosy Free Chandigarh. The Mission of the programme is to increase awareness about leprosy, provide quality leprosy services free of cost to all sections of society and to eliminate discrimination against leprosy patients and their family members.



**Strengthening
Health
Infrastructure**

- Health Centres to be strengthened for added services: Health Centres are located in different parts of the City and should be the first point for availing not only primary healthcare but also for added services such as emergency, oral, mental, eye, ENT services and palliative care.
- The Health Centres will have to be augmented with additional facilities, medical staff to support the added services and their uptake. This will help reduce the patient load on PGI, GMCH- 32, and GMSH-16.
- More tertiary care centres may be added to reduce excessive load on the emergency in existing institutes. At these facilities then, specialised healthcare services like organ transplant may be provisioned for.

**Health
Knowledge
Hub**

- The Tricity has very prestigious institutes like PGI, National Institute of Pharmaceutical Education and Research (NIPER), Indian Institute of Science Education and Research (IISER), Institute of Microbial Technology (CSIR IMTECH), Homi Bhabha Cancer Hospital and Research Centre etc. With collaborative education & research the Tricity should also be promoted as a knowledge hub.

**Innovative
Approaches**

- Health Management Information System (HMIS): It is an integrated system to facilitate use of relevant information by health department, hospitals, health centres, various institutions, and individuals at all levels for effective planning, implementation, and monitoring healthcare services. The existing system provides information and documentation services of gathering, aggregating, analysing and then using the generated information for taking actions to improve performance of health systems. It needs to be further strengthened, so that day-to-day operations become more efficient with timely availability of reliable information.

- Includes capturing and reporting data related to curative and preventive control not limited to immunization programs (Tuberculosis, Diphtheria, Pertussis, Polio, Measles & Tetanus); Maternal Health - Antenatal care (ANC); HIV/AIDS, Tuberculosis, Malaria etc.
- Helps in effective real-time monitoring and optimal utilization of resources, for improving accountability and effectiveness at all levels of the health system.
- HMIS can act as a knowledge base and communication tool for all stakeholders
- E-Health/Teleconsultation Services: It uses ICT wherein healthcare providers and patients are not directly in physical contact and their interaction is mediated by electronic means. It includes Electronic Health Records (EHR), decision support systems, tele-consulting and tele-medicine.
 - The EHR should be searchable, easy-to-navigate documents with key terms highlighted to reduce record review time.
 - It includes medical records, pathology & diagnostic test reports, that allows doctors to have access to complete medical histories of patients.
 - With e-Health systems, patients can schedule their own appointment and can have online consultation (including video).
 - Provides quick access to patient records and information for efficient health care, saves time, reduces administrative burden and helps in reducing rush at hospitals.



**Future
Course of
Action**

Works already initiated

- E-Sanjeevani- National Tele-consultation Service is functional in all OPDs at GMSH and 29-HWCs and CDs
- Specialists to Super Specialists Consultations with PGIMER and GMCH has been made functional.
- Coordination will be done with NIPER, IISER. Genome sequencing is being done in coordination with CSIR-IMTECH.
- NCD screening and early interventions are being done. Efforts are on to start cervical cancer screening in all HWCs.
- Earlier, the mother & child tracking portal was functional for tracking the service delivery to pregnant women, lactating mothers, children and immunization but now it has been changed to RCH portal. For monitoring the service delivery at all public health institutions, we have functional HMIS portal.

Short Term Actions

- Organise periodic competitions, sports contests in different sectors of the city.
- Promote education & awareness against junk food.
- Strengthen distribution of nutritious food for children in primary schools under mid day meal scheme.
- National Quality Assurance Standards (NQAS) certification for public hospitals and health centres.
- Add super - specialised healthcare services like organ transplant in tertiary hospitals.
- Knowledge Hub creation through collaborative education & research with prestigious institutes in the Tricity.
- Promote 'Plant your own Food' without the use of synthetic chemicals, pesticides and fertilizers.
- Strengthen the existing Health Management Information System (HMIS) wherein health record of all patients can be kept with unique ID in lines with National health ID system.
- Accelerate implementation of E-Health / Tele-consultation system
- Set up health centres with alternative healing & natural therapies.
- Augment primary healthcare centres with added services such as emergency, oral, mental, eye, ENT services and palliative care.

Long Term Actions

- UT may device a policy to mandate that all restaurants to have a healthy menu options without the HSSF (High Sugar High Salt) items.
- Promote the City as a hub for healthcare & well-being. Augment health infrastructure, affordable short-term stay facilities (guesthouse, hotels), hygienic food etc. for people coming from other states/countries for health services.
- 2-3 more tertiary care centres to reduce excessive load on the emergency in existing institutes.
- Private hospitals/health institutes to collaborate for knowledge hub creation.

5. SOCIAL PROTECTION & SAFETY

The coronavirus pandemic has laid bare the growing inequalities in cities between those who have money and options to remain safe and employed and those who do not. It has exacerbated the effects of a long-standing urban services divide, with disastrous consequences. On one side of that divide are city dwellers who have access to crucial urban services and infrastructure; on the other side are those who lack even the basic amenities viz. running water and sanitation, electricity, decent housing, transport, and such. These inequalities are deepening and spreading, particularly in growing cities of the global south.



Setting the Context Where we are?

Social protection and welfare is a vast thematic area that affects every citizen. It is a cross-sectional theme and government provides a plethora of initiatives and schemes to cater to it. It involves convergence at all levels within the government infrastructure and an integrated approach amongst all stakeholders like CSOs, academia, etc. Social Welfare, Women & Child Development Department - UT Administration is working towards upliftment of multiple beneficiary segments through various schemes and legal provisions. Further, the department strives to work towards convergence within departments to benefit the beneficiaries at the last mile. UT Administration is making earnest efforts to modify its schemes and policies with changing times and make them more accessible to the target group by widening the scope of various national and state level schemes. Details of ongoing activities being implemented by the Department of Social Welfare, Women & Child Development, Chandigarh Administration.

Strengths

- Collaboration and co-creation with civil societies and citizens
- Community Mentorship Initiative
- Adequate infrastructure and services development, focusing on needs of the disadvantaged.
- Award for Excellence in Public Service - Pradhan Mantri Jan Dhan Yojana
- Chandigarh received the best city award for earmarking land for the poor. Also, the Best Planned Habitat for Urban Poor 2020
- Strengthened government systems- Transgender Welfare Board, Women Police Stations, Corporations for Women children and other groups.

Weakness

- Low Sex Ratio specially child sex ratio
- Increase in crime rate; High percentage of gender violence in the city
- Increase in digital frauds with elderly population
- Need to expedite execution of relocation plan for slum dwellers including plan for making existing locations more habitable
- Imbalance between the influx of marginal/migrant community and livelihood opportunities for them
- Shortage of gainful opportunities for women, differently-abled and vulnerable groups (TGs etc.)

Opportunities

Multiple thematic aspects were discussed during the workshop. Few areas of opportunities that emerged are as listed below:

- The focus on strengthening the bases: Re-think policies towards building an inclusive society
- Engagement of disadvantaged communities (migrant population) – inclusion in decision making processes
- Citizen service delivery card
- Revision of income criteria for schemes for EWS beneficiaries
- Expand Mentorship Programme – social and legal aid for all marginalized and disadvantaged communities
- Economic and social inclusion of women is crucial; frontline health workers can play a key role for the same
- Focus on elimination of malnutrition in Chandigarh
- Creation of an Intellectual Hub in Chandigarh to discuss ideas and develop relevant policies in this space.
- Gainful engagement for children enrolled in childcare institutions (18+age)

Challenges

- An India Today report – “Top 10 wealthiest towns in India” had placed Chandigarh at the top position with a per capita income of INR 26,710/month but, over the years, a wide gap between the have and have-nots has surfaced. Provision of social protection to the latter remains a challenge for the administration and civil society.
- Influx of a large number of laborers and migrant workers from neighbouring as well as other states, is adding to the infrastructure burden of Chandigarh. As it is, the city wasn't designed for a population as huge as it is catering to presently.
- Challenge lies in ensuring access to social protection and welfare to economically and socially weak sections of the community living in the peripherals of the city of Chandigarh.
- Lack of awareness amongst the low socio-economic strata citizens regarding social protection schemes and entitlements is also leading to their exclusion. Lack of digital literacy further adds to this challenge.
- Upgradation of Rehabilitation Colonies to ensure decent living,

remains a challenge even though Chandigarh Administration has done extensive work in rehabilitation of slum dwellers (including construction of 18000 flats for which a complete new model has been worked out). It is crucial to upscale these efforts

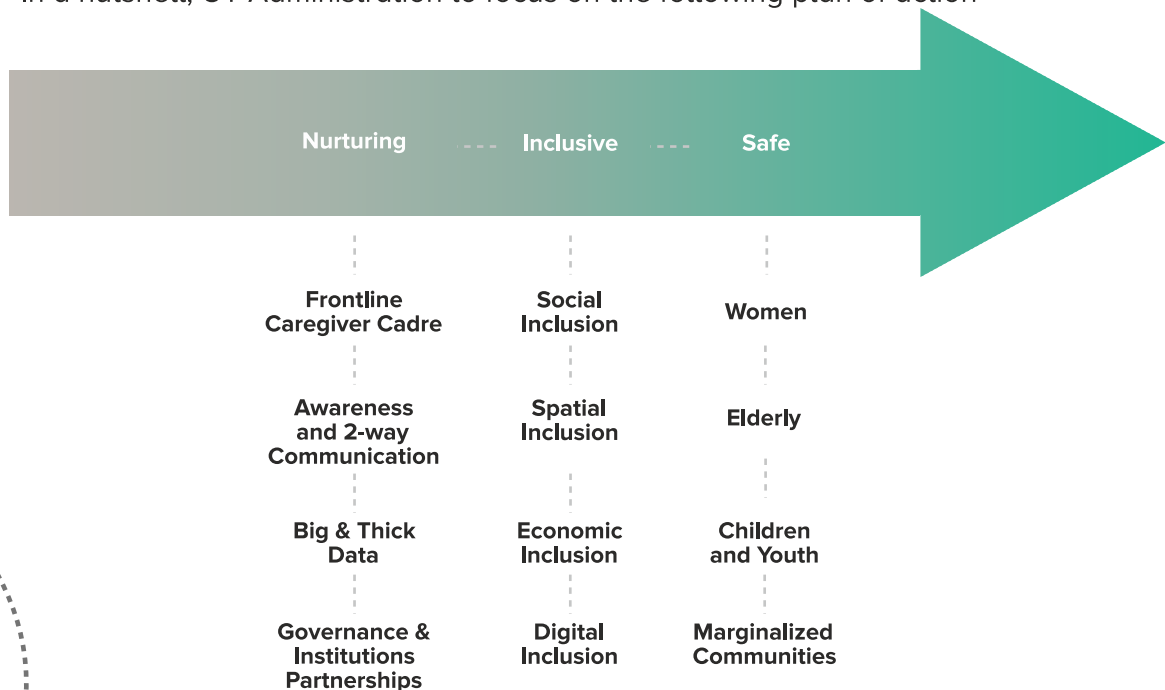
- Lack of gender sensitization awareness amongst masses is also adding to social exclusion for a large section of the society – leading to issues pertaining to women's safety, workforce participation, etc. Engaging NGOs to work with students at school and higher education levels in addition to dissemination of gender sensitive knowledge material at the last mile, could be some steps in this regard
- Limited scope of economic activities in Chandigarh (especially in terms of the informal economy), has led to widening of the economic and social gap amongst citizens.

“OUR VISION 2030

**We are City Beautiful – because we are a city that
'Cares for all its inhabitants'** ”

To become a city that 'cares', Chandigarh to take forward the legacy of Le Corbusier and become nurturing, inclusive and safe.

In a nutshell, UT Administration to focus on the following plan of action



Analyzing the opportunities and challenges, the following areas have been identified. These are the areas, starting work on which will pave way to achieving the vision statement.

I. SAFETY

- **One crucial focus area for Chandigarh is safety for all** - especially for children and women and senior citizens, the groups that face discrimination and violence. Also, we need to appreciate the fact that safety means different things for different women - working women compared to women from SC/ST population compared to women from elite communities.
- **Safety in public spaces** i.e. transportation and residential and other areas where the marginalized groups live and work is crucial too.
- **Legal awareness** and access to legal aid/justice for marginalized groups is extremely crucial.

II. INCLUSIVENESS

A multidimensional approach to resolve the multiple spatial, social and economic factors that lead to exclusion and marginalization. Similarly, universality should be considered as a guiding principle – implementation can be in phased manner but that's where administrations should be headed.

- **Spatial Inclusion** – Design, improve, and maintain municipal infrastructure to ensure access to services for the under-served. Developing well-served, affordable housing in accessible locations would be a crucial step in this space (Odisha Land Rights model and Ahmedabad Parivartan model)
- **Economic Inclusion** – Recognizing the legitimacy of informal and home based workers and granting them the same rights as others can bolster the economic resilience of Chandigarh. The focus should be on providing them requisite capacity building, credit support (bank linkage), safe working environment and insurance etc. to bring them out of vicious poverty cycle.
- **Social Inclusion** – Access to public spaces, services and social safety nets. It is important to address the contingencies of illness, disability, old age, and death; protection against occupational health and safety risks; and safety nets when work or incomes are disrupted.
- **Engagement** of disadvantaged communities (migrant population) as well as co-creation with youth i.e. their inclusion in decision making processes and incorporating their voices in policy making is crucial.
- **Digital Inclusion** – Going forward, digital inclusion of all, especially women, marginalized sections of the community will be vital to access information, services and rights. Thus, focus on universal digital literacy will go a long way in shaping Chandigarh's future.

III. NURTURING

- **Communication and Awareness** - Information and knowledge give power and access. The communication needs to be two way - at multiple locations, in multiple languages and in multiple ways. In addition, designing digital solutions that can be accessed in a centralized manner, could also go a long way in enhancing awareness levels.
- **Rethink our data** i.e. the ways we gather it and the ways we categorise, analyse and discourse based on it. Thick ethnographic analysis, reflexive and dynamic data collection, modalities for conflict-resolution - all of these need to be woven into the process of deriving solutions. We need to use new technologies for better data and more granular local insights and increase city capacity to collect and effectively utilize data through partnerships with academia and CSOs.
- **Effective governance supporting coalitions for change** - Establish and support new partnerships for joint service delivery by partnering with communities and private entrepreneurs. This can expand services in ways that best match local needs. Communities can also help manage local operations while the City plans and expands its coverage of mainline infrastructure.
- **Creating and supporting cadre of front-line workers** – Front line workers can reach last mile to provide social care, while enjoying the trust and confidence of local inhabitants. Strengthening of local community bodies can also prove to be a huge step in ensuring healthy living for most vulnerable communities. In addition, the focus should also be on engaging them in design, implementation and monitoring of social protection schemes.

Some Over-Arching Factors while implementing the vision:

- **A regional approach towards developing infrastructure such as transportation, waste management, water and sewerage will ensure fairness in terms of gender, class and caste.** For example, last mile connectivity needs to be integrated into public transport in the Tri-city. This can be done by regularizing and systematizing informal public transport networks along with the public systems.
- Encourage **investments by private sector.** A significant chunk of the working population is working in the informal sector and private sector is a huge benefactor of the same. Thus, private sector should be engaged to invest in key social welfare activities/initiatives. UT administration can look at setting up a Social Protection Fund and in turn making it tax deductible for engagement of the private sector in this space.
- **Coordination** between departments and collaboration with NGOs, research institutions, community organizations, system influencers. Chandigarh tri-city region has excellent resources in terms of research and educational institutions and these are not being adequately utilised in terms of studies that can inform policy making.

**Future
Course of
Action****Work Already Initiated**

Details of ongoing activities being implemented by the Department of Social Welfare, Women & Child Development, Chandigarh Administration are as mentioned below:

- Presently under Supplementary Nutrition Programme (SNP), hot cooked meal on daily basis and Take Home Ration (THR) comprising of ready-to-eat items is being supplied twice a month i.e. on 1st and 15th of each calendar month at Aanganwadi Centers.
- The Department of Social Welfare is providing pension @ Rs. 1000/- p.m. per beneficiary to Old Age, Widows and Disabled Persons (having disability below 70%) and Rs. 2000/- (having disability above 70%) w.e.f. 01.04.2016.

- CCWDC and CSC/BC & MDF are running several senior citizen homes and day care centres in Chandigarh. Further, day care centres for senior citizens with disabilities and destitute people, along with homes for mentally ill and intellectually disabled persons have also been set up.
- Chandigarh Child and Women Development Corporation is running a Women Helpline for redressal of grievances of the women residing in the city at the tollfree number 181. The facility of the said helpline has also been extended to children and persons with disability.
- A mentorship program for children and young adults residing in Child Care Institutions & aftercare program respectively is being carried out by the District Child Protection Unit since September 2021.
- Child Friendly Corner has been established in Sector 17, Police Station.
- Chandigarh Commission for Protection of Child Rights to conduct a Child Safety Audit of all the Schools across U.T., Chandigarh in order to ensure that the children studying in schools are provided with conducive and safe environment.
- Total 19 points identified in respect of schemes of Social Welfare and its allied units in Phase-I have been simplified for citizen related services.

Short Term Actions

- Ensuring safety for all, especially for children, women and senior citizens to safeguard them against discrimination and violence.
- Taking a multi-dimensional approach to inclusiveness – social, economic, spatial and digital, with support from academia such as IISER, ISB, etc.
- Enhancing communication and awareness about welfare schemes amongst citizens.
- Adopting innovative technologies for better data management.
- Ensuring safety in public spaces including public transport.
- Setting up Child Friendly Police Station in all the 17 Police Stations of UT Chandigarh

Long Term Actions

- Joint service delivery by partnering with communities and private entrepreneurs
- Creating and supporting cadre of front-line workers for last mile service delivery.

**PLENARY DISCUSSIONS
AUDIENCE FEEDBACK AND
WAY FORWARD**

PLENARY SESSION

The Plenary session was held post lunch on the second day of the workshop. It was an open house session covering all five thematic areas.

With the feedback from all participants, SWOT analysis report for all five thematic areas was prepared and presented.



1. Urban Infrastructure & Planning; Transport & Mobility

Chandigarh is a very well planned city modelled on human anatomy. It has concept of self-sustained neighbourhood. It is a landlocked city and steep population rise is stressing the infrastructure. City is also facing traffic congestion.

There is need to transit to cleaner fuels and improve public transport system. Electrical vehicles needs to be encouraged with consideration towards incentivizing the populace to use non-fossil fuel options.

2. Environment, Climate Action & Eco Tourism

The city has 50% forest and green cover. There is already an ambient air quality monitoring system. There are schemes for promoting tourism such as Nidhi Scheme, Saathi Scheme, Prashad Scheme.

Being a landlocked city, there is no alternate landfill area available for solid waste management. There is need to accelerate implementation of State Action Plan on Climate Change. Measures are required for reducing carbon emissions through renewable energy sources, switching to e-vehicles etc. and efforts to turn existing building into green buildings (with retro-fitting) need to be promoted.

3. Education, Skill Development Employment, Economic Ability

Chandigarh leads in education related indices - 1st Rank in School Education Quality Index (SEQI) by NITI Aayog, 1st Rank in Performance



Grading Index and zero percent dropout rate at elementary as well as secondary level.

The city has limited industries and thereby limited employment opportunities. Youth female work participation rate is 2.5 times lower than that of males.

Chandigarh should be developed as a 'Hub' of specific/niche area(s) and take advantage of current industries/ service sectors and create jobs in these sectors.

4. Health, Nutrition & Well Being

The city has very good public health infrastructure in terms of tertiary & specialised hospitals, and professionally qualified doctors. The Tri-city has presence of eminent medical educational institutes (PGIMER, NIPER, IMTEC, ICER, Homi Bhabha Cancer Institute).

The PGI, GMCH-32, and GMSH-16 are overburdened due to heavy rush of patients that come from other States as well as abroad. The UT citizens, even those who can pay for private medical services, prefer to avail the same from government facilities leading to relatively low contribution of private health sector to the service delivery mix

Chandigarh should be positioned for Medical Tourism with quality services. Advance healthcare (like organ Transplant Services) should be strengthened.



5. Social Protection & Safety

The city was awarded for Excellence in Public Service - Pradhan Mantri Jan Dhan Yojna. There is collaborative effort and co-creation of Civil Societies and citizens. The city has Transgender Welfare Board, Women Police Stations, Corporations for Women, children and other vulnerable groups.

There is low Sex Ratio specially child sex ratio.

Juvenile friendly police stations need to be added.

People actively participated by giving their suggestions, feedback for the Vision for Chandigarh.

The SWOT analysis was followed by detailed discussion on deriving the vision and clear action points under all five thematic areas. The vision statements and action points are given in the main section of the vision document.



Hon'ble Administrator, UT Chandigarh, Sh. Banwarilal Purohit congratulated all the Experts, Council Members, and Administrative Secretaries of Chandigarh Administration. He appreciated the experts for giving valuable inputs in framing the Vision for Chandigarh 2030. He also appreciated UNDP for involving all stakeholders especially general public, in giving suggestions. He agreed to extend his full support in bringing this vision into reality through concrete action on ground.

Deliberations concluded with vote of thanks by Dr. Vijay Namdeorao Zade, IAS, Finance Secretary, UT Chandigarh.

CITIZEN FEEDBACK & ENGAGEMENT

RESEARCH OBJECTIVES

The primary objective of the survey was to understand citizen's perspective about Chandigarh and evaluation of the 5 key vision themes for future.

More specifically, the study delved into the following:

- Understanding citizen's current associations
- How satisfied people are with their UT
- What all is important for the citizens – health, education, economic opportunity, gender equality, social justice, clean environment, etc.
- Evaluating current future vision themes
- What is more important for them and why
- How well they relate to each theme
- Which themes are more relevant for them personally
- Which themes are more relevant for their city/ UT
- Participation/ Practices/ Actions
- Who all, in their opinion can contribute or help achieve these visions for the UT
- What can they do to achieve the visions for the UT
- What role can they play as citizens of the UT
- What can each do personally to achieve the vision

RESEARCH DESIGN

In line with the research objectives, a mix of qualitative and quantitative research was adopted. Key research modules included the following

- Module 1A: Qualitative FGDs to understand citizen's perspective about Chandigarh and evaluation of draft Visioning statements
- Module 1B: ICE* especially in lower strata of population to understand their current needs and expectations and what they want as their vision for Chandigarh
- Module 2: Quantitative structured interviews to assess the 5 Vision statements and its prioritization and also involve a large number of citizens in finalizing the vision for Chandigarh

A structured questionnaire was developed based on the learning from the qualitative research to quantify the preferences of citizens of Chandigarh for vision of Chandigarh

*ICE - Research tool developed and employed by research agency, to assimilate data from the last mile population, otherwise unable to participate in the research.

Analysis of the data

All FGDs (Focused Group Discussions) were audio and video recorded for reference and analysis.

Quantitative data

During each FGD, individual response to the vision themes were also collected using self-administered rating questionnaire.

1. All the data were captured through pen and paper mode during the FGD's.
2. All the responses were then fed into excel.
3. The data was then analysed to understand citizen's preferences
4. All the data shown in tables are in percentages (%).
5. Absolute data is shown by denoting "N".

We have generated the tables on the basis of standard demographic criteria viz. socio-economic class and age groups.

Qualitative data

- All the discussions were audio and video recorded.
- The discussions were translated in English.
- The translations were further analysed in 3 level content analysis.
- Apart from recording of the discussion, some notes were taken from the exercises done with respondents during the discussion, and these were considered as well while preparing the report.

Geographical Coverage & Target Respondents

The study was conducted in the city of Chandigarh across age groups and socio-economic classes. The target respondents for the study were aged 18 years and above.

Each group consisted of 10 participants. All the respondents were selected through purposive sampling, we carried out listing at places where eligible profiled respondents could not be found.

Sample Size

A total of 12 groups were planned and conducted, and an additional mini FGD (with senior women) was also done to gain better insights. We had 10 respondents in each group. Thus, a total of 125 respondents participated in the study.

Details of FGDs conducted are given below:

Target Group	FGDs (Module 1A)			ICE Interactions (Module 1B)
	Lower	Middle	Upper	
				Mainly Lower Strata
18-25 year old (Mix of male & Female)	1	1	1	30-40 people across multiple interactions at markets, parks and sectors and colonies
26-35 year old	1 M	1 F	1 M	
36-45 year old		1 M	1 F	
46-55 year old		1 F	1 M	
56 year & above		1 M	1 F + 1 Mini FGD	
Total	12 FGDs + 1 Mini FGD			30-40

MATERIAL FOR TESTING:

A total of 5 vision themes and 12 theme elements were assessed in this study. Questionnaires were in typed format in English and Hindi. Punjabi translation was also done for a few groups.

RESEARCH FINDINGS

Chandigarh Citizen's view about their city

The Citizen's association with Chandigarh spanned across three broad themes listed below

Chandigarh is best city to live

- I feel proud that I am living in Chandigarh. It is pollution free. It does not have extreme summers, weather is generally good, so best for tourists.
- My city is beautiful & attractive. Its neat and clean with open roads. We can go in any sector easily as direction boards are there.
- No city matches with Chandigarh. It was my dream that I should be married in Chandigarh and my dream has come true.
- Neat and clean gardens and parks, less pollution.

Citizenry is aware & disciplined

- People are aware & disciplined especially towards following traffic rules.
- People follow rules and regulations. In other cities people don't follow rules. We follow rules because cameras are there in Chandigarh if we don't follow, we get challan.
- I like this city very much. I feel secure. Less crime is there as compared to others

Well Planned with Good Facilities

- Markets for each sector
- Good education facilities
- MNC offices are there
- Medical facilities are good

Current Challenges faced

Amongst the current challenges faced by the citizens of Chandigarh, the most troublesome is the garbage collection and disposal followed by increasing traffic and parking problem. There is also some concern with crime & drug abuse which is closely associated with outsiders coming to Chandigarh and the paying guest culture.



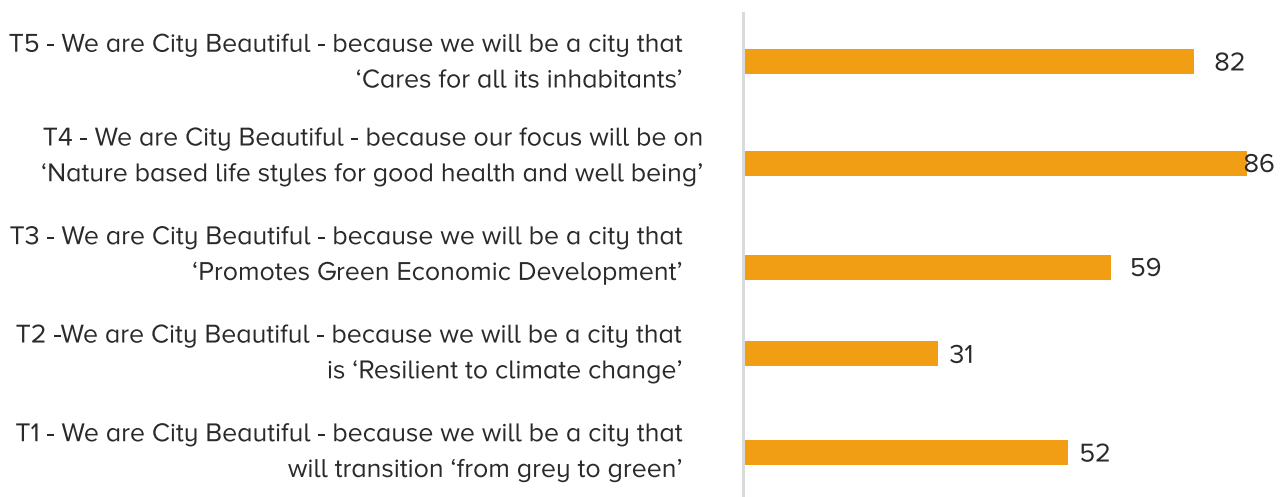
- Garbage collection and proper disposal of waste is the most mentioned problem by citizens of Chandigarh
- The next most recurring problem is the increasing traffic and resultant parking issue because of rising number of vehicles
- Though overall citizens feel that Chandigarh is a safe and peaceful city, there is a growing concern about crime and drug abuse. The problem is strongly linked with the PGs in the city which is also making the citizens concerned about their culture and impact on next generation

Future Expectations - Feedback on Themes

Overall, all themes for Chandigarh visioning were liked by the citizens. However, citizens related more to themes that talked about “City that cares”, “Nature-based Lifestyle”, “Green Economic Development”.

Based on the feedback during the focus group discussions and ranking of various themes; we developed an index score reflecting citizen preference. The index scores are depicted below:

Theme Scores



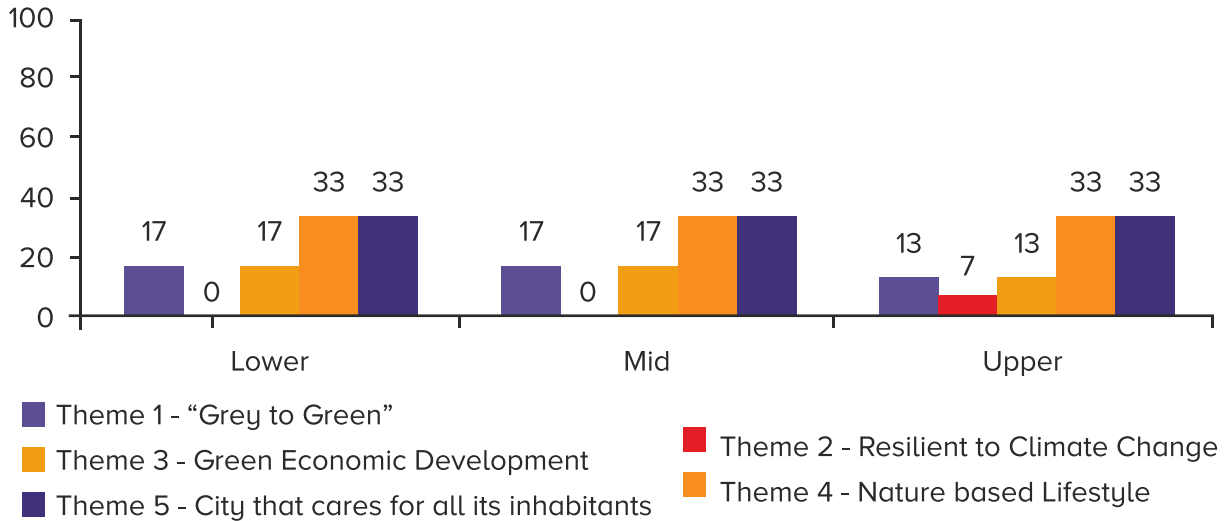
Theme 4 and Theme 5 were most liked by the citizens of Chandigarh with 46% giving Theme 4 “Nature based lifestyle for good health well-being and quality lifestyle” rank number 1 and 39% giving Theme 5 “City that cares for all its inhabitants” rank 1.

However, if we look at top 3 ranks, then both Theme 5 and Theme 4 are at par with other.

Overall Theme 4 has more broad-based appeal across all socio-economic classes and theme 5 comes close on its heels.

Let's look at the Theme ratings at overall level and by socio-economic class and by age groups.

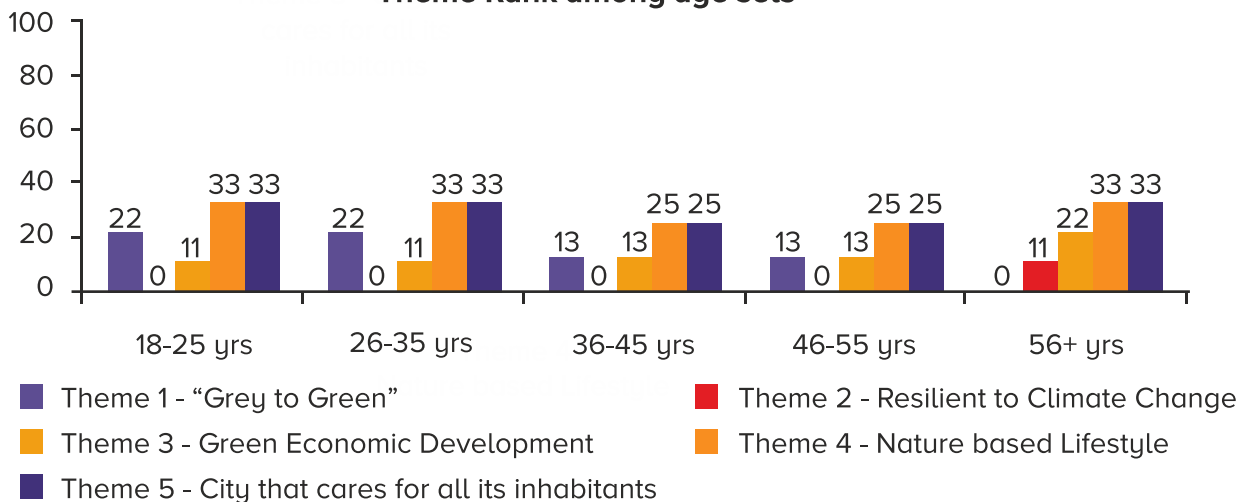
Theme Rank among socio-economic sets



Ranking of themes by Socio-economic class shows that Theme 5 "City that cares for all" had appealed to all socio-economic classes. Similar preference observed for Theme 4 "Nature based Lifestyle".

When we look at the ranking preference by age groups, we find similar preferences with Theme 5 "City that cares" and Themes 4 "Nature based lifestyle" being most preferred.

Theme Rank among age sets



Let us now look at each Theme and how citizens of Chandigarh felt about each

Theme 5

We are City Beautiful – because we will be a city that 'Cares for all its inhabitants'

1. Become nurturing – create effective governance systems, ensuring information and knowledge transfer to citizens and relevant beneficiaries.
2. Become inclusive – ensure spatial, economic, social and digital inclusion of the under served and marginalized sections of the community.
3. Become safe (especially for children and women, for groups that face discrimination and violence and for senior citizens).

Assessment of
Theme 5
“City that Cares”

Feedback to Theme 5 – High Appeal

Theme 5 “City that cares for all its inhabitants” has a very strong appeal score. People especially related to “City that cares” as a modern city that takes care of citizens in all aspects. Some have even related to this theme with the lifestyle people seek in other countries, especially “Canada”.

However, concept of inclusivity and nurturing was not fully comprehended, and as a result lost its appeal slightly. It would require rewording for this theme to have a better understanding which will subsequently improve the score. However, people from lower strata & people from both younger and older age group related more to this theme. Many people also felt that this theme includes all other things such as “clean and green city”, “economic development” and “nature-based lifestyle”.

Some of the verbatims mentioned by the citizens are stated below:

“This is a very good concept because as **we know that everyone wants to go to Canada and other countries and we can compare our Chandigarh with those cities because we can have all the facilities of education, health, wealth, nature and safety here as like in those countries**”(Mix, Mid)

“If you have such facilities and city that cares, **no one will move out of Chandigarh to other cities and countries**”

“When you say care for all it means it will have **everything for all its citizens**”

“Care for all means it will **care for** its inhabitants **health, economic, safety and other facilities**”

As you said all these points are related to each other. And this is good that **it has equality among the people** which will be better for all” (M, Mid)

“**Safety for all** which we liked very much”(F, Up)

We had asked people to rank various theme elements to assess which specific elements they relate more and which elements appeals more to them.

	Become nurturing	Become inclusive	Become Safe
Must have	A++	A+	A+++++
Good to have	B+++	B++	
Not so Important		C+	

“According to me all age groups of people should have the knowledge of all the things. It is government responsibility to provide all the information to the people so that they can understand the things very well” (M, Mid)

“Govt. should give information digitally so that people know how they can get those things. All these things makes this point beneficial”(M, Mid)

“All people will be safe here. I was working for NGO and provided things to needy & poor people and for animals also. We are helping people who are having any kind of issue“ (M, Mid)

Overall, all three elements of the theme were found to be appealing. “Become safe” was most liked elements followed by “Become nurturing” and “Become inclusive”. As mentioned earlier, slightly lower appeal for nurturing and inclusivity were mainly because of difficulty in understanding it. When explained all elements were found to be appealing.

Assessment of
Theme 4
Nature Based
Lifestyle

Theme-4

We are City Beautiful – because our focus will be on 'nature based lifestyles for good health and well-being”

1. Build beyond the medical infrastructure in Chandigarh – we are looking to develop a model city for people to enjoy good health, well-being, nourishment and quality lifestyle
2. Develop Chandigarh as a hub for healthcare & well-being and ultimately become an epicentre of health tourism in the region (in collaboration with academic and research institutes)

Very strong appeal for the theme “**nature based lifestyle**” as it connected with their pride for the city. It meant good health, good lifestyle, also conveyed good economic development and being the epicenter of health tourism instilled pride.

Some of the verbatims were:

"Yes 100 marks, because it is related to nature and that's why **it will be better for us**" (M, Mid)

In this point I liked the tagline of nature based things for **good health and well being** (F, Mid)

"This is modern point, that's why it is good and health will be good then everything will be good. If our **health will be good then people will come to our city and recommend other people also come here**"(F, Up)

"This is also good point. We feel very good if people will come to our city and travel here and we will feel that our **city is like foreign so we don't have need to go to somewhere else**"(M, Low)

"Quality of lifestyle will improve and **city becomes attractive** "(Mix, Up)

"If medical facilities are good then human resources will be good, **it will also lead to economic development**. It is better if facilities are there"(Mix, Mid)

The feedback on specific elements of the theme is depicted in the following table

	Build beyond the medical infrastructure in Chandigarh – we are looking to develop a model city for people to enjoy good health, well-being, nourishment and quality lifestyle	Develop Chandigarh as a hub for healthcare & well-being & ultimately an epicentre of Health Tourism in the region
Must have	A+++++	A++++
Good to have		B+
Not so Important		

"Because in this point theme said about our good health so if we will have good health then our wealth will also good. So this is good because healthy person can earn wealth also" (F, Up)

Very good, because people from abroad will come as this place will be a modern city (F, Mid)

"Everything will be good and people can get everything here so that they will not go to abroad"(F, Up)

Assessment of Theme 3 "Green Economic Development"

Theme-3

We are City Beautiful – because we will be a city that 'Promotes Green Economic Development'.

1. Build a robust mechanism to develop a human capital pool that is future ready (with due focus on creating and providing green jobs)
2. Create career/employment/entrepreneurship opportunities in the city by building strategic and specialized hubs that not only create opportunities for the working population but also supports the city's journey to becoming self-reliant

Theme 3 (promotes green economic development) is liked for the reason that it talks about employment opportunities for people in Chandigarh. The idea of building human capital that is future ready was also liked a lot as it ensured economic development. Some of the verbatims included:

“Because if there will be employment then there will be **income and standard of living will be increased**“ (F, Mid)

“I like the thinking of that person who made these points and that this will be implemented. Because if we will give all things on the hand of that person which has this type of thinking then **our city will become more successful**“ (M, Low)

“**Employment opportunities**” (Mix, Up)

“**Employment will increase our per capita income also**”(M, Up)

“**All will get employment as well as our city will become pollution free**” (F, Up)

“**Disadvantage is also more as people will be coming to Chandigarh and which will increase more pollution**”(M, Up)

The feedback on specific elements of the theme depicted in table below

	Build a robust mechanism to develop a human capital pool that is future ready (with due focus on creating and providing green jobs)	Create career/employment/ entrepreneurship opportunities in the city by building strategic and specialized hubs that not only create opportunities for the working population but also supports the citys’ journey to becoming self-reliant
Must have	A+++++	A+++
Good to have		B++
Not so Important		

“According to this our city become pollution free and also future generation will learn how to survive and also there will be greenery all around us“ (M, Mid)
 “Job opportunities and promote green environment“ (Mix, Up)

“We want Chandigarh like to be as Noida and Gurgaon because it has many job opportunities just like that Chandigarh should also have. So, that people will be attracted towards our city“ (F, Mid)

Assessment of
Theme 1 –
Grey to green

Theme 1

We are City Beautiful – because we are a city that will transition 'from Grey to Green'.

1. Green infrastructure will be augmented with efficient governance and digital systems
 - a. Smart & energy efficient green buildings
 - b. Sustainable transport systems
 - c. 24x7 Access to piped potable water to all households
2. Making Chandigarh Carbon Neutral - Identifying, tracking, and benchmarking greenhouse gas emissions across all sectors and portfolios in order to take informed decisions, reforms and investment in renewable energy, energy efficiency or other clean, low-carbon technologies.

Some of the verbatims were:

"I liked the focus on greener, which is good for us" (M, Mid,) (M, Up)

"Its very good concept" (M, Mid)

"I liked the point 24*7 water supply" (F, Up) (Mix, Up)

"These are basic needs, it will make our Chandigarh good" (M, Mid)

"It will be good for our next generation. It will make city beautiful" (M, Mid)

"It is amazing, because there is very much problem of water supply"
(F, Mid)

"Many trees will be planted"(M, Up)

"Actually, sometimes we have to call water tankers because of less supply of water, so if this is applicable then it will be better for us" (M, Up)

"Yes, we like it. It is good in hearing so it will definitely look good to see "
(F, Up)

The feedback on specific elements of the theme listed in table below:

	Green infrastructure will be augmented with efficient governance and digital system	Making Chandigarh Carbon Neutral
Must have	A++	A+++
Good to have	B+++	B++
Not so Important		
	"It will solve our water problems" (F, Mid) "It will save electricity" (F, Mid)	"It will reduce the emission from factories" (F, Mid)

Assessment of
Theme 2
Resilient to
climate change

Theme 2

We are City Beautiful – because we will be a city that is “Resilient to climate change”

1. Build adaptation and resilience into policies, business plans and operations to prepare for impacts and damage due to climate change.
2. Chandigarh will be a thriving city by adopting a “sustainable plus” model that will not just generate resources for the present generation but also preserve for future generations.
 - a. Sustainable land use practices
 - b. Sustainable water management
 - c. Sustainable value chains/ESG reporting
3. Promote sustainable tourism for transition to a climate resilient and resource efficient Chandigarh
 - a. Encouraging bicycles for hire as a mode of transport for tourists.
 - b. All vehicles to be used by tourists within the city to be electrified.
 - c. Ensuring segregation of waste at all tourist spots.
 - d. Bringing down use of fossil fuel driven vehicle in select zones for all locations of tourist interest.

Theme 2 had moderate appeal with people, they related to sustainable plus model and ensuring resources for future generations. The specific elements were liked more than the overall theme mainly because some could not understand what “resilient to climate change” meant.

Some of the verbatims were:

"It will secure our future“ (M, Mid)

"Because if we will improve our city for our next generation then it will be better“ (F, Up)

"This plan is also good because in this plan we are thinking not only about ourselves but our future generation as well“ (F, Mid)

"Because if these things will be in our city then we will not go abroad to earn money infact we can earn it in our city“ (F, Mid)

Yes, it is a tagline for Chandigarh“ (Mix, Up)

“Like it very much because it will reduce traffic and pollution also” (F, Up)

“Changes which you are telling is same like in foreign country. It will make our city more smart” (Mix, Mid)

“Pollution will be less in city with electric vehicles” (Mix, Mid)

The feedback on pefic elements of the theme depicted in table below

	Build adaptation and resilience into policies, business plans and operations to prepare for impacts due to loss and damage caused by climate change	Chandigarh will be a thriving city by adopting a “sustainable plus” model to not just generate resources for the present generation but also preserve for future generations	Promote sustainable tourism for transition to a climate resilient & resource efficient Chandigarh
Must have	A++	A+++	A++
Good to have		B+	B+++
Not so Important	C+++	C+	

"Yes, in fact in Chandigarh Govt. started utilizing waste-water and they became Sustainable plants to purify the waste-water and utilize it which is very good for future generation” (M, Mid)

“Tourism part in which all green revolution will happen, and bicycles will be used and also no use of fossil fuel" (F, Mid)

Assessment of Vision Elements

“Become safe”, “Health & Wellness”, “Human Capital development”, “Epicentre of Health Tourism” were the most liked elements of themes. A safe city resonated well with a city that cares and hence was most liked. Development of human capital leading to economic development was also felt to be part of “city that cares”. Similarly “good health and well-being” and “becoming an epicentre of health tourism” evoked both pride and aligned with the overall theme of “city that cares”.

We had also asked citizens to suggest some alternate themes. Most people just reworked and combined the themes that were tested to come up with a combination. Let us look at what they came up with.

Alternate Themes

City beautiful or city forever beautiful has strong connect with the people. In addition, people want their city to be caring, safe and achieve green economic development. Nature-based lifestyle leading to good health, economic development and Chandigarh becoming a health tourism destination was mentioned to be a well connected theme.

Alternate Theme 1 - Chandigarh – Perfect City

Option 1 - Forever Beautiful

Chandigarh will be “city forever beautiful” because we will live nature-based lifestyle enjoying good health & wellbeing along with green economic development

Option 2 – Beautiful Green City

We are Beautiful City that is attractive, neat & clean, disciplined, pollution free where one enjoys good weather and less crowd and traffic

Option 3

We are City beautiful because we promote advance technology with nature-based lifestyle

Others Alternate Ideas

“Smart City Smart people”

“Health for Wealth”

“We are number 1 city in India”

“Green Chandigarh Happy Chandigarh”



CONCLUSIONS & WAY FORWARD

- Overall, all themes had good likeability & appealed to most of the citizens
- **Themes 5 & 4 had almost equal preference.**
- **Theme 5 – “City that cares for all its inhabitants” has high appeal especially among younger, older age group & among all socio-economic strata.**
 - The key elements appreciated – “Cares for all” aspect will provide required facilities that people seek and get in foreign countries like “Canada”
 - However, elements like “become nurturing” & “becoming inclusive” needs to be communicated more effectively, for better comprehension of the same.
- **Theme 4 – “Nature Based Lifestyle for good health, Well-being & Quality lifestyle” had high appeal with all its elements, finding strong connect amongst the citizens of Chandigarh**
 - Citizens appreciated key aspects like “Nature based Lifestyle”, “Good Health & Well-being”, “Model City” & “Epicentre of health tourism”
- **In addition to above 2 themes people also related well to Green Economic development**
- **Hence, the Five strong elements which people of Chandigarh relate to are as following:**
 - City that Cares
 - Good health & well-being
 - Green / Nature based lifestyle
 - Green economic development (generating human pool for the city within the city)
 - Safe City

In conclusion, a vision theme that revolves around “the city that cares” and includes nature-based lifestyle with focus on good health, would strike a resonant chord with the citizens.

REFLECTIONS & MOVING FORWARD

REFLECTIONS & MOVING FORWARD

The Vision document has been prepared by UNDP in consultation with Chandigarh Administration and engagement of National and International Experts of five thematic areas: urban infrastructure & planning, environment, climate action, tourism & heritage preservation, Education, skill development (including sports) employment, economic ability, health, nutrition and well-being and social protection and safety for all.

The workshop brought all key stakeholders on a single platform to discuss and brainstorm on how Chandigarh - city beautiful should become a leader in livability, sustainability, equality and innovation – a Future Ready Chandigarh 2030.

The discussion around Chandigarhs' Future Ready Vision took into account sustainability at the core of all interventions, Tri-city mutual interest and dependence and 'Leaving No one Behind' policy. The visioning workshop helped us define Chandigarh - The City Beautiful. The discussions spread over two days suggested that Chandigarh will be City Forever Beautiful because:

- we will be city that will transition 'from Grey to Green'.
- we will be a city that is 'Resilient to Climate Change'
- we will be a city that 'Promotes Green Economic Development'.
- our focus will be on 'Nature based lifestyles for good health and well-being”.
- we will be a city that 'Cares for all its inhabitants'

All the above statements culminated to a to a final vision statement i.e.

“Chandigarh will be “City Forever Beautiful” because it's a “City that Cares” in every facet of urban living”



Next steps for implementing Chandigarh Vision for 2030 and beyond

To take this agenda forward, Chandigarh administration can set up a coordination centre which should do the following

- Initiating actions on the suggested interventions and support their implementation.
- Finalizing modalities for preparing field level action plans.
- Capacity building and training of field level officers, including for developing suitable training modules and mentoring master trainers.
- Develop a communication strategy as well as IEC materials for making government functionaries and the public aware of their roles & responsibilities to achieve Vision for the city.
- Analyse and propose strategies, schemes towards acceleration of progress towards achieving the Vision, including integrated development solutions.
- Develop monitoring and evaluation framework with targets and indicators to track the progress on different interventions. Develop and introduce tools/technology, including dashboards, citizen feedback loops, real-time monitoring technologies etc.
- Develop an institutional mechanism & suggest policy level change for efficient coordination to implement the Vision through establishment of technical and management support group at appropriate levels.
- Identify and assess service delivery bottlenecks especially in priority areas, and propose remedial solutions.

ANNEXURES

Inaugural

The inaugural ceremony of the Chandigarh Visioning Workshop on “Future Ready Chandigarh: 2030 & Beyond” commenced with the lighting of lamp by dignitaries – Hon'ble Administrator, UT Chandigarh - Shri. Banwarilal Purohit, Adviser to the Administrator, UT Chandigarh - Shri. Dharam Pal (IAS), Deputy Resident Representative, UNDP – Ms. Nadia Rasheed, Mayor of Chandigarh - Shri Ravi Kant Sharma, Principal Secretary to Governor of Punjab & Administrator of Chandigarh - Shri J.M. Balamurugan (IAS), Finance Secretary - Dr. Vijay Namdeorao Zade, (IAS) and Regional Head North, UNDP - Mr. Vikas Verma.



Mr. Vikas Verma, Regional Head – North, United Nations Development Program, welcomed the dignitaries, the technical experts, delegates, and other participants of this workshop and explained its purpose and objectives. Mr. Vikas highlighted the importance of SDGs framework to help each stakeholder in curating their targets and decide their ultimate destination. He highlighted the overall performance of Chandigarh in NITI Aayog SDG Index report from 2018 to 2020 where Chandigarh has retained first position among Union

territories. In context of its performance, Chandigarh has performed very well in 10 goals while there are 5 goals wherein there is potential for improvement.

Mr. Verma posed the question to the audience as to what future they aspire for. He suggested that the planned City of Chandigarh needs a vision to move forward and become a role model within India and abroad. He mentioned that we need to deal with current and future challenges and take incremental steps to address the same. Mr. Verma made it clear that this workshop is not a response to historic trends or a rebranding exercise but seeks to present politically and economically viable opportunities which can deliver a smart and sustainable future for everyone. It is a participatory tool that brings citizens and stakeholders together and assists a group of stakeholders in developing a shared vision.

The aim of this workshop is:

- To achieve a vision for Chandigarh the city beautiful for 2030 and beyond – 5 clear visions based on selected themes
- Going forward, pave way for detailed thematic discussions and finalizing clear action points.

This workshop will help in qualifying the existing beauty of the city and making Chandigarh reach its potential for being sustainable, innovative, and eco-friendly.

Shri. Dharam Pal, IAS, Adviser to the Administrator, Chandigarh Administration, extended his warm welcome to all the dignitaries and expressed great pleasure to be able to attend this workshop. He said that this workshop is being organised to conceptualize vision and path for the future development of the Chandigarh city. While Chandigarh is performing well in most areas of the SDGs there are still certain development goals that require more effort and progress. He highlighted that it is necessary to visualize how Chandigarh will evolve and what are the challenges that need to be tackled. All the initiatives taken should have minimum effect on the environmental factor. In terms of health, Chandigarh needs to proactively deal with the challenges and make the health sector more resilient. It is important that Chandigarh achieves its full potential on three fronts: Liveability; Economic ability; and Sustainability.



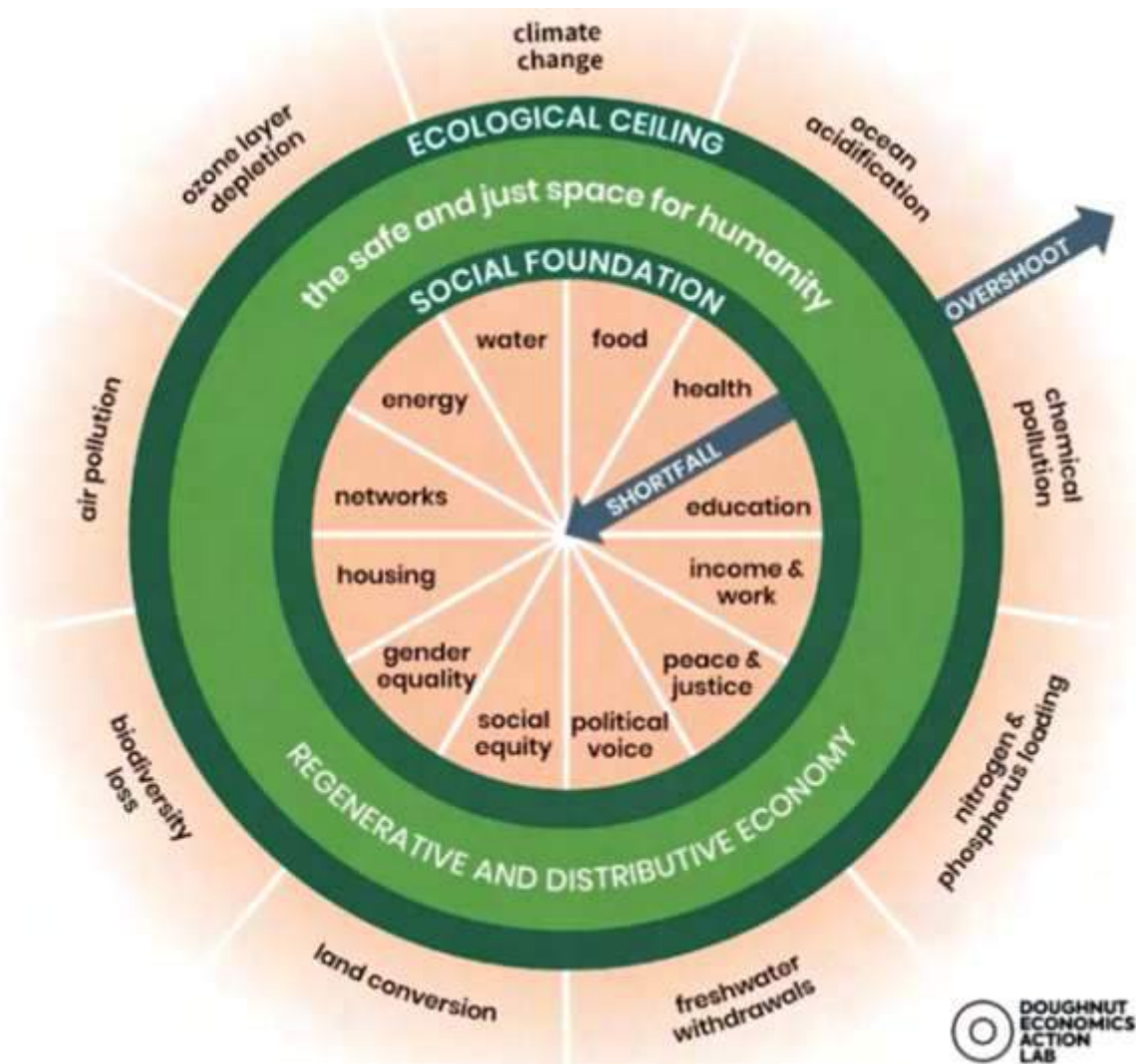
He explained the immediate actions being taken for making Chandigarh future ready. Chandigarh is working primarily on the themes of clean city, green city (model solar city, shifting to e-buses, bike sharing system) and smart city (intelligent transport command control centre, smart command & control system for the city, and all buildings to have 5 star green rating), and heritage conservation. He listed out future challenges, that need to be tackled for a future ready Chandigarh such as, readiness of Chandigarh to become carbon neutral by 2030, developing it as a regional hub for various sectors, designing of public transport in and around Chandigarh, policy developing towards private vehicles and unauthorized construction that does focus on inclusiveness without compromising on city's historical character. .



Mr. Calum Handforth, Advisor, Digitalisation and Smart Cities –UNDP, Singapore Global Centre for Technology, Innovation and Sustainable Development provided a perspective towards future cities. He highlighted how in general, SDG 11 is only taken into consideration for cities, but truly sustainable cities are a driver of every global goal. He emphasized that for a future city we need to go beyond AI and also look into how innovation can be used to make the environment more inclusive, people-centric and more sustainable. Future cities need to be more about 'PEOPLE'. He further mentioned examples of Singapore (use of hi-technology/ nature-based solutions for rainwater harvesting), Brazil (BRT) and Harare (passive cooling in shopping centre building), Kathmandu (electric taxis driven by women as well) as future cities.

Mr. Handforth suggested considering shifting to doughnut economy for making cities more sustainable. Doughnut economics can be used as an approach having ecological and social foundation as shown in the figure.

He shared four points that are essential for future cities: Tactical urbanism, citizen centric, big and lean data and innovation, sharing, learning. Lastly, he mentioned about the necessity of an interplay between majorly three stakeholders: government, community and private sector, wherein the role of actors, data and information is being used and the tools being used by the stakeholders.



Shri Banwarilal Purohit, Hon'ble Administrator, UT Chandigarh inaugurated this workshop and guided everybody to make Chandigarh future ready. He appreciated efforts made by Chandigarh Administration and UNDP for organising this workshop. He emphasized that the vision must provide citizen centric development ideas and highlighted the importance of common people in defining the vision for the city. The quality of amenities across all sectors and its peripheral areas should be homogeneous. Aspirations of the people must be kept in mind and we all as citizens, must aspire to take it forward. Social cohesion is very important.


He added that historical perspective must be kept in mind in the vision document. This rich Heritage and culture should also be leveraged for Higher Education in Arts. Collaboration of industry with academia is very important for relevant job opportunities for our students. Sustainability concept and importance should be introduced right from primary education.

The vision should incorporate not only Chandigarh as a UT but also its linkage with the neighbouring cities of Panchkula and Mohali. A sensitive and coordinated development is required to safeguard mutual interest.

Therefore, the vision exercise must consider institutional mechanism for planned coordination, with representatives from UT, Punjab, Haryana and the Central Government. Hon'ble administrator emphasized that there should be appropriate follow up actions to bring this vision into reality.

He appreciated that Five key thematic areas have been selected for the workshop. Thematic based sessions shall enable focussed discussions for clear framing of vision. He added that we need to keep improving infrastructure and services in each sector to provide a decent quality of life to the citizens, with a clean and sustainable environment.

After the workshop, there must be appropriate follow up actions to bring this vision into reality. With these words, Hon'ble Administrator declared the official opening of the 'Visioning Workshop – Future Ready Chandigarh 2030 & beyond', and hoped that the 2 days of Visioning Workshop are fruitful.



Mr. Arun Maira, Former Member of Planning Commission of India, shared his thoughts about how cities become great and, in that context, started to mention about the role that cities play in human civilization. The primary role of future cities is to enable people without opportunities to become included in the process of generating wealth and creating wealth for themselves through entrepreneurship. Cities are called the engines of growth of economies and countries such as New York in US, London in UK, Tokyo in Japan and, Mumbai in India include a huge number of people in the process. He added that innovation is key to creating opportunities for people. This can be done by bringing by bringing together the energies of diverse people so there is easier transactions and more innovation, thus cities becoming the

engines of growth in the economy. What is a city then? A city is an organism which is shaped by the energies of people who live in it. A city needs infrastructure but what is the infrastructure in a city? While concrete makes a part of the infrastructure but the vibrance is added by social inclusion, participation and governance. For whom is the city? We

must start there – the city is for the poorest people who come to work in it. It is about enabling the poor people create wealth opportunities. We need to create social and physical infrastructure for the ease of people and their living. A survey done by the University of Michigan some years ago stated that a great city is that one which with the least number of resources enables the largest number of people to raise their income levels – this is the criteria of judging a city. The results were startling and the greatest city in the world came out to be Dharavi in Mumbai. So, it is important to keep in mind for whom the city is being designed for and what the infrastructure should be for them to live and work in.

The needs and aspirations of people who shall live in the city needs to be prioritized in the plan. As about infrastructure there must be a theme shaping physical infrastructure and utilities, but the priorities will only come out by engaging and listening to the citizens. So, a new vision of the city must begin by the new vision of the process by which the city will transform itself. Planners will come and go but the people, especially, the poorest will be there always. Therefore, we need a living vision which is for the people and every administration that is there will be in charge to implement their vision. The quality of the process of engagement of citizens is essential and cannot be done merely by tertiary surveys but must be done by listening on the ground to the people. Thus, it is about using better techniques and technologies to understand how people would continuously be participating during the entire the process effectively for a shaping the city of Chandigarh.

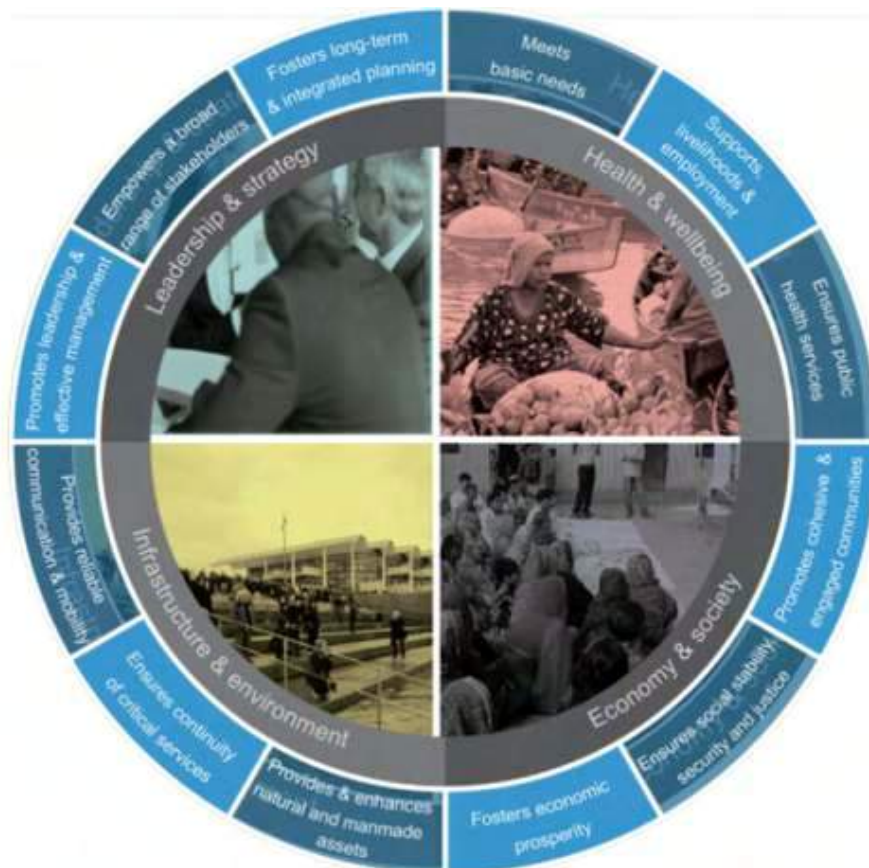
ANNEXURE I: URBAN INFRASTRUCTURE & PLANNING; TRANSPORT & MOBILITY

Ms. Anindita Mitra, IAS, Municipal Commissioner – cum-CEO Chandigarh Smart City Limited, Chandigarh helped set the context on the theme of urban infrastructure along with current status of Chandigarh, a very important matter for a city like Chandigarh. Infrastructure planning has been based on historical perspective of Chandigarh. The entire city was designed in two phases, in line with the growing population. The plan for Chandigarh was designed based on the human anatomy with a heart, a brain.



Chandigarh has a neighborhood concept of living which is self-sustained. There is also immense focus on the concept of a green city that ensures that we are in harmony with the environment. The city is on the UNESCO world heritage list, thus development of certain areas is heavily regulated.

The urban infrastructure of Chandigarh: water supply system covers the entire population but it is not supplied 24*7, to curb the wastage of water and regulate water table levels. Although Chandigarh is a modern city, we still use a lot of tube wells. Chandigarh also boasts of almost 100% underground sewerage coverage. Unfortunately, Chandigarh is unable to harvest any rainwater as of now. Solid waste management is an emerging issue in Chandigarh as segregation is not fully implemented. An automated traffic system is going to be fully operational in the coming years and it is believed that such innovation will greatly help decongest the roads. Chandigarh is a land-locked city that has a lot of regional dependence on Mohali and Panchkula. The most important thing to focus on the vision of Chandigarh while maintaining the sanctity of the heritage city. There is a hope that we can preserve the spirit with which Chandigarh was planned.





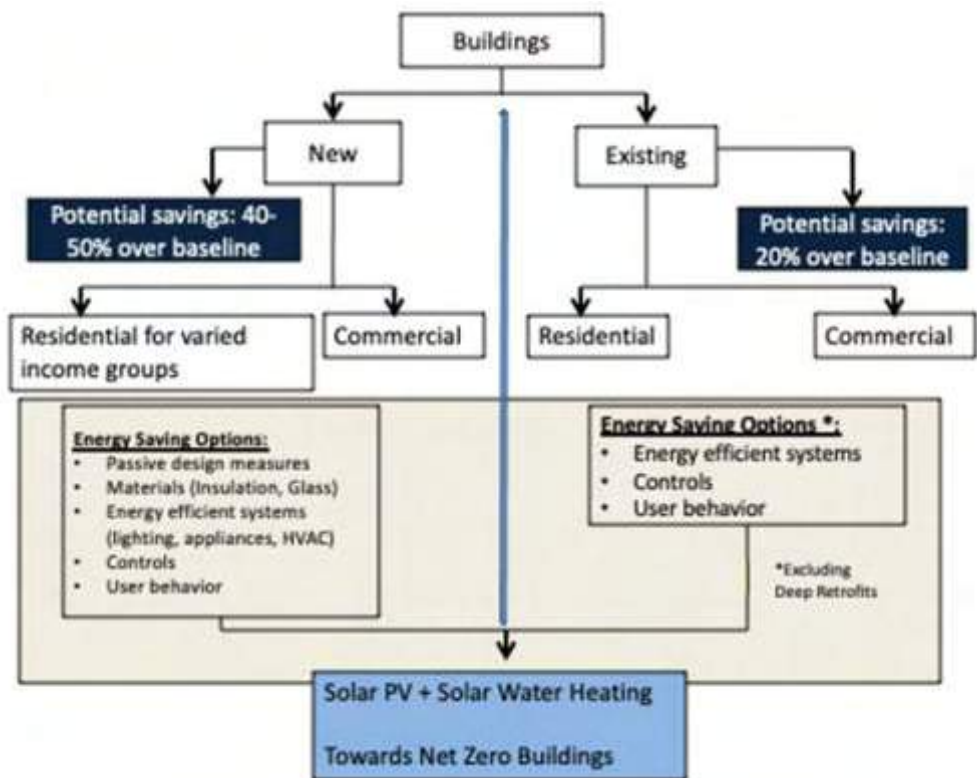
Ms. Mili Majumdar, Managing Director, Green Building Council India and Senior Vice President, US Green Building Council put forth her views on green buildings and their needs and benefits. Chandigarh is already designed as a safe, inclusive and green city. This, raises the question of whether we will have to compromise the look and feel of what we have or can new developments gel well with the current fabric of what Chandigarh has? It must be accepted that Green Buildings are for everyone, and architects are trained to design each building keeping in mind the environment. Chandigarh is fortunate to have a pool of qualified professionals who have made green buildings the norm in Chandigarh. A green building must not compromise with neither the external elevation of the building nor on its functionality.

When a building is designed responsibly, it makes an immense difference to the lives of the people who will use such structures. Green is essentially a value-engineering and sustainable design strategy that results in a more responsible design. It is important to understand how green buildings are actually performing in terms of water and energy savings and better environment quality. Thus, it is important to put in place frameworks that can assess the quantifiable performance of green buildings. There are multiple frameworks available with different ministries of the government but we still need an integrated framework that can take the vision of green buildings forward. Most importantly, retrofitting of old green buildings is the most pressing challenges that require our attention.



Dr. Umamaheshwaram Rajasekar, Chair, Urban Resilience India, Global Resilience Cities Network highlighted the need for a visioning workshop from the perspective of urban resilience. He spoke about how there was an exponential rise in the urban population in India over the years, especially after India globalized. In a situation as unprecedented as the pandemic, it is important to understand how we want to develop and become more future ready. There must be ways for us to make use of the shocks and stresses to develop more innovative mechanisms. A city requires more than just infrastructure, such as harmonization between the economy and the society, a greater focus on health and well-being and lastly, the environment must walk hand-in-hand with the infrastructure. It's important to understand that things such as leadership in a city, its infrastructure, its

environment are all important because they provide people with a better standard of living. Community engagement and quality of life see a massive change for the better when development is mindful and focuses on the right things. For example, New York has come a long way as a city, only through a very strategic effort. Surat in India has seen such a journey too. Once impacted by the plague of 1994, today Surat is a leader in waste-management and the implementation of the Smart Cities mission. Despite the floods of 2006, they have created and fostered a vibrant economy. It is important to think about ways to improve and to avoid stagnation.





Ms. Kanak Tiwari and Mr. Nilesh, Lead Urban Policy and Planning and project Coordinator MPD 2041 at National Institute of Urban Affairs (NIUA) spoke on the learning from the Delhi Master Plan 2041. The Delhi Master Plan is a product of four years of planning and designing. A few aspects of the planning process were shared. The initial vision contained a focus on the aspirations of the people of Delhi as well as the global positioning of Delhi as the capital of India. In the case of Chandigarh, the alignment with the global agenda through the SDGs is already underway. The development of the Delhi Master Plan focused on three things: redefine, rethink and reinvent. Redefining meant that there should be a paradigm shift in the way planning is done.

There is also a need to rethink how the regulatory planning approach can be adopted to the current planning processes. Lastly Rethinking involves how the renewed planning vision will be manifested on the ground.

By 2030, Delhi metro region will overtake Tokyo as the biggest megacity, and emerge as the **ALPHA CITY OF THE WORLD**

Delhi is a high impact city not only for India but for megacities across the Global South grappling with issues of:

- rapid growth, unplanned and degrading built environment, pollution, organic and slow economic growth, weak governance, etc. Requires 'fresh thinking' and customized solutions

Global Interest to see if Delhi can lead the way and be a **BLUEPRINT FOR MEGACITIES OF THE GLOBAL SOUTH**

MPD 41 is an opportunity to design a **TRANSFORMATIVE FRAMEWORK**

- 1 re-define**
the future directions that the city wants to take to emerge as a productive, vibrant, equitable and sustainable city
- 2 re-think**
the largely regulatory planning approach adopted as part of past planning efforts
- 3 re-invent**
the masterplan as a key instrument that provides the spatial strategies and enabling framework required for scripting Delhi's turnaround



Such an endeavour requires planners to ask where the city is right now and where it hopes to go in the coming years. There is a need to change from a norm - based planning approach to an evidence-based planning approach that makes the process more inclusive of the ideas of the residents of the city. Delhi's master plan emerged from a lot of inputs from citizens, case-studies, etc. When planning a city's future, it is important to put the city on a GIS base. It is worth noting that visioning is not a one-time activity. Every input must be validated, and this requires planners to bring in people and stakeholder agencies. The nuances of a vision come to life only through informed strategies.

It is easier to actualize a vision through a narrative rather than getting caught up in technicalities.



ANNEXURE II: ENVIRONMENT, TOURISM AND HERITAGE PRESERVATION



Mr. Debendra Dalai, Secretary (IFS): Chief Conservator of Forests, Director - Science & Technology, Director, Environment, UT Administration, spoke on the theme of environment, climate action and eco-tourism. He shared a brief background on the city beautiful - Chandigarh and highlighted some contemporary issues such as population growth and vehicular pollution. He mentioned about the rise in ambient temperature and urban heat island effect being experienced in the city. He discussed on land use pattern in terms of greening and the increase in percentage from 26% in 2001 to 50% in 2011. He mentioned about certain measures adopted in the city for reducing Carbon Emissions such as setting up of solar renewable energy which generates 155.2 million units, Migrating from diesel to CNG to electrical vehicles and adoption of rainwater

harvesting with potential of 34.38 million cubic meter (mcm). Further promotion of green building is being worked on - one such example is Paryavaran Bhawan that has adopted green building technology in Chandigarh.

There have been several measures adopted to address the issues of air pollution and vehicular congestionsuch as de-congestion of roads, awareness drives amongst public to use cycles, construction of cycle tracks in the city, awareness to use electric vehicles for transportation and construction of cycle stands. Some other initiatives in this regard are:

- Usage of Mechanical Street sweeping machines in the city to reduce the pollution caused due to particulate matter.
- Construction of Waste plant for handling the waste and recycling the same to make paver blocks etc.
- Greening and paving activities done around the city like planting small shrubs and plants for the reduction of the pollution levels
- Awareness activities on a frequent basis are organized so that the public grows more aware about the control of air pollution
- Sewerage system and treatment: Chandigarh Smart City Limited is in process to upgrade the operational STPs.
- The work of upgradation & rehabilitation of 6 STPs has been started to meet the new prescribed parameters.
- Solid waste management: material recovery facilities have been set up and treatment of Municipal solid waste is being carried out at these centers.

- Many initiatives have been taken to promote Ecotourism in the city such as 'Nature Trails' behind Sukhna lake.
- Ongoing programs for Environment protection are State Action Plan on Climate Change for Chandigarh, Environment Information System, National Clean Air Programme, Ghaggar Action Plan; Single use Plastic Plan, Model Solar City and District Environment Plan

Based on the issues and challenges being faced by the city, he emphasized on the action plans for the same. They are as follows:

- Implementation of SAPCC
- Source Apportionment Studies and Emission Inventory
- Maximize coverage of PNG/LPG for Domestic and commercial purpose
- Vertical Gardening
- Upgradation of solar panels from 50 MW to 75 MW
- Upgradation of STPs
- Restoration of Water Bodies



Ms. Nitika Pawar, (IAS) - Secretary, Social Welfare & Women & Child Development, UT Administration, summarized the tourism ecosystem in the city and elisted popular attractions such as museums and galleries, gardens and other popular attractions. She emphasised on four tourist information centres along with dedicated tourism police and souvenir shops. She highlighted the schemes implemented in Chandigarh that are, NIDHI Scheme, SAATHI scheme and PRASHAD Scheme. She added that a Bollywood facilitation

cell has been set up at Chandigarh and Chandigarh is being promoted as a brand as well. In this space Chandigrah Tourism Department has also taken initiatives such as celebration of Lohri Festival, Rose festival, awareness camp and vaccination drives at various tourist spots, celebration of world tourism day and Rashtriya Ekta Diwas.

Ms. Nitika Pawar shared a few action points that will be adopted by the city in regard to tourism enhancement:

- Revamping of website of tourism department, Chandigarh
- Celebration of iconic week of “azadi ka amrit mahotsav”

- Implementation of various activities under the Prashad scheme of Ministry of Tourism, Government of India
- Geographic Information System (GIS) mapping of all tourist spots and adjoining utilities
- Unified ticketing of tourist spots on a single platform
- Introduction of new activities, event & festivals on the basis of popularity index based on public survey & feedback

She further mentioned about the ways Chandigarh has been preserving its heritage. A total of 13 Heritage Zones have been identified and graded from I to III, each having its own recommendations with respect to the importance and significance within the total urban landscape of the City. Various heritage conservation activities have been adopted such as Façade restoration in secretariat building, of Haryana assembly hall and the high court.

A few action points to be implemented for heritage preservation are as follows:

- Heritage Furniture Museum to be consolidated with the existing Architecture Museum and the Le Corbusier Centre.
- Construction of an Air Force Heritage Centre will showcase Aircrafts, Simulator, Aero engines and other IAF artefacts.
- Martyrs memorial to be constructed in the memory of Freedom Fighters of the country.
- Rejuvenation of Sector 17 will include remodeling and redevelopment of North and South plazas, development of urban park and restoration of exposed concrete to maintain the façade of buildings.



Dr. B. N. Goswami, Art historian and former vice chairman of the Sarabhai Foundation of Ahmedabad shared his thoughts from the perspective of a citizen of this city. He mentioned a renowned singer from Bengal who said, I am blind and therefore I can see very far, as the vision that he has, is coming from within. 'Vision' can never be forced upon anyone but rather comes from within that person. Imagine a piece of land on which Chandigarh is built and ask a planner to envision a city – he has the freedom to do anything he likes. So, the famous people we talk about had a very crystalline idea of what a great city can be. He quoted a Persian saying, “When

placing a brick layer, if the first layer is placed at an angle and not straight then the wall can reach the planet but will always remain crooked”.

We need to ask ourselves the questions about what we want this city to be like in the circumstances we are currently placed. He quoted a book which from 19th Century America, which talks about how it got populated- the book states that there were three cities on the east coast that got populated immediately 1. Boston 2. Philadelphia 3. New York. The writer says when a new person settles in Boston the buzz was about “how much does he know” because Boston was considered as the knowledge city. When a new person settles in Philadelphia the question that was asked was about “who does he know” since Philadelphia was an influence city and, when a new person settled in New York the buzz was about “how much does he have” considering it was a money city. So, the important question is what kind of a city do we want Chandigarh to be? Dr. Goswami also threw some light on a great document that we ignore or are vaguely aware about is the document that Le Corbusier had prepared that is the 'Edict of Chandigarh'. He mentioned that the document contains a vision. Out of so many cities in the world, Chandigarh as a city has succeeded because Le Corbusier had a vision and turned the vision into a reality. It is a handmade city. If a city is unique then it is about exploiting the resources but not in a harmful way, rather where we can live in harmony with nature and is fully envisioned. The spirit of a city must be preserved. People who design a city need to keep in mind that it a city made for the humans to live.

The fact remains that there is a pressure on Chandigarh city and unless we recognize that we need to keep this burning vision of this city alive we risk that this golden goose will die one day.



Ms. Zeenat Niazi, Vice President at Development Alternatives discussed about four key aspects - the dimension of a local responsibility, global responsibility, social prosperity and environmental prosperity. The question we need to ask ourselves is how can we be thriving in a climate and a resource constraint world and how can we be responsible to this world. If we start answering these questions we will realize that ecological footprints and social hand-prints will become our guiding factors in rejuvenation and redesigning of the new

pathways that the city needs. This will lead us to the circular pathways but also technological models which will be different from what we have seen so far. We know that Chandigarh has very strict policy and architectural controls but now the times have changed and we need to understand that the city is going to grow exponentially – we need to question on how can we control the development that will be taking place. As the city will densify, there is going to be more debris – what is going to happen to the debris. The city will be building more, there will be more material needed, where is that material going to come from. She emphasised on having a responsibility towards the ecological footprint and these are the questions that need to be answered while making technology choices or developing business models.



Mr. Souvik Bhattacharjya, Associate Director, Integrated Policy Analysis Division, TERI presented his views on the concept of circularity and the importance of its adoption. He highlighted the ways a circular economy approach will help in supporting sustainability, climate change mitigation and economic growth. He further identified six key themes that would help in building climate resilience in Chandigarh. The themes are as follows: climate resilience and urban forestry, sustainable water system, sustainable land use and building practices, municipal solid and liquid waste management, sustainable tourism and sustainable transport system. Presented were certain case studies of cities under each theme highlighting the adoption of climate resilience in those respective cities.

<p>Climate resilience and urban forestry</p>	<ul style="list-style-type: none"> • 'Smart Forest City' near Cancun, Mexico, is a city masterplan with a difference. Called the 'first forest city of the new millennium', it is a contemporary city-cum botanical garden, which, as well as hosting 130,000 inhabitants, containing staggering 7.5 million plants • Athens authority mandates planting of atleast two-three citrus trees, herb gardens and a small vegetable garden in front yards 	<p>Sustainable Land use and building practices</p>
<p>Sustainable Transport</p>	<ul style="list-style-type: none"> • The city of Netanya in Israel have created diverse neighborhoods by dividing the city into high rises as 3-4 stored apartments based on socio-economic profiles for better land use. It has developed better walkability by promoting better infrastructure for cyclists and pedestrians. • City has set itself a goal to expand open space from 56 to 70 percent • Bogotá, Columbia operates one of the largest and busiest BRT systems with 2.4 million passengers daily, mobilizing 69 percent of the population with the 112km long route and 17,335 buses. • Chinese city Liuzhou has emerged as one of the leading EV based cities having 30% of the cars sold in 2020 are EVs 	<p>Sustainable water system</p>
<p>Municipal solid and liquid waste management</p>	<ul style="list-style-type: none"> • In Mysuru, India, citizen awareness programmes have helped cities segregate compostable from non-compostable waste, with reusable items such as bottles, metal, footwear being sold to scrap dealers, and the remainder being composted and sold to farmers. • Municipality of Eskiltuna has developed a mall, ReTuna, for reused and repaired products. It allows residents to drop off various used items, which are then sorted and upcycled 	<p>Sustainable Tourism</p>
<p>Sustainable water system</p>	<ul style="list-style-type: none"> • Berlins has sustainable management service for water-energy cycle in urban drainage systems. The features include (i) control of inflows to the drainage network; (ii) control of the polluting load generated; (iii) thermo-energy benefits; (iv) potential of rainwater for reuse. 	<p>Sustainable Tourism</p>
<p>Sustainable Tourism</p>	<ul style="list-style-type: none"> • MISSION BUTTERFLY" was launched calling for action from the local community of Nainital a decade ago. Tourists were checked to see if they were carrying any plastic or polythene with them and requested to part with it before entering the town. 	<p>Sustainable Tourism</p>



Dr. Madhu Verma, Chief Economist, WRI India, talked from a different perspective about making the city of Chandigarh more attractive with respect to tourism and environment. She insisted on the point of quantifying the practices and interventions in numbers and monetising them, to make everybody realise and understand the ecological importance of any ecosystem. She posed the question and asked if we know the value of the trees in Chandigarh and their contribution to the economic

system of Chandigarh – not only in Chandigarh but it goes beyond the local boundaries when it comes to carbon sequestration, biodiversity conservation and water harvesting. Many cities around the globe such as, Toronto and Canberra have done activities involving tree mapping of quantifiable sequestration. Such cities have developed mobile applications where one could scan any tree in the region using mobile phone and all the details regarding the benefits provided by the tree, will be available to the citizen. Ecosystem services valuation and green accounting is carried out using UN frameworks to understand what are the ecological contribution of these ecosystems and ecological losses of development activities, further to get the net value out of it. This can help in providing incentives for good actions and penalisation for bad actions implemented.

Secondly, it is important to consider nature based solutions such as, conservation of wetlands, lakes and trees. We need to understand the source of an ecosystem present in the city. The problem never lies in the site where you are located but always farther away from the site so, the catchment area of Chandigarh city needs to be understood and managed to develop holistic solutions. Thus, it is important to trace back the steps of any actions being implemented.

In terms of the carbon footprint generated, one needs to adopt the landscape based approach. Using the landscape economics approach, we are looking not just one particular ecosystem but the connectivity of all the ecosystems. It is necessary to convert all the interventions into a value to understand what is the return on investment in the entire system is. This will lead to a thriving city. Lastly, we talk about sustainable cities of which we have many examples of cities adopting a sustainable model but it is time to make it “sustainable plus” and not just generate resources for the present generation but also for future generations.



Dr. Prodipto Ghosh, Distinguished Fellow, Earth Science and Climate Change, TERI; Member of the Scientific Advisory Council of the Cabinet, and Governing Council of the Indian Council of Social Science Research also shared his views. on building Chandigarh as a climate resilient city.

As part of this workshop, Dr. Prodipto along with his colleague Souvik Bhattacharaya discussed the key initiatives and programmes implemented by the Chandigarh administration under the themes of climate change and sustainability, and then look at further actions that can be

taken to maximize impact. For example: the State Action Plan for Climate Change (SAPCC) was adopted in Chandigarh in the year 2015 with fairly extended consultations. The SAPCC comprised of seven and it sets forward a very detailed implementation structure for each mission. Under each of these missions, a lead agency and a lead person was identified along with a participating department, hence, leading to the horizontal coordination. In terms of vertical coordination, a steering committee has been put in place to monitor the activities and other ongoing processes. Dr. Ghosh insisted that this example of horizontal and vertical coordination is very suitable and necessary in cities. He pointed out that in respect to Chandigarh, there might be certain challenges when it comes to approving development plans and activities as any development in the region requires prior approval from all three regional entities.

Dr. Ghosh discussed about the development activities taking place globally since 2015, viz. the Paris agreement on climate change that was adopted and has been identified in the NDCs in addition to the fifth and sixth assessment reports of the IPCC that affirm that climate change is impacting different sectors of the world. Technologies in number of areas have developed rapidly such as, solar, wind etc. that are fully competitive with conventional power

International development on financial front has been observed such as setting up on the green climate fund having significant funding, The UN system and other multi-lateral financial systems have taken targets for investment in climate change and are mainstreaming green investments.

Dr. Ghosh appreciated that there are several action plans which have already been adopted and acted upon by the Chandigarh administration for which he congratulated the administration for successful implementation.

Mr. Ghosh further set out clear action points under each theme as mentioned below: Action points for Theme 1: Making Chandigarh climate resilient through urban forestry

- Enrichment plantation in the catchment area of Sukhna lake and Forest conservation by broad-leafed indigenous species for management of silt inflow in Sukhna lake and soil management (2030)
- No diversion of notified forest land to non-forest use. All fellings in other areas to require twice the number of saplings of fruit tree species indigenous to the region (to attract urban fauna) surviving till the completion of the fifth year.
- Prevention of grazing of cattle in forested and landscaped areas. The impounding of all feral cattle. Development of village common grazing grounds. (2030)
- Wildlife migration corridors connecting the Sukhna Wildlife Sanctuary to other wildlife protected areas to be secured with cooperation of the neighboring state. (2030)
- Planting indigenous fruit trees in landscaped areas and Sukhna Wildlife Protected Area to attract urban fauna (2026)
- Enhancement of linear tree plantations along city roads. (2030)

Action points for Theme 2: Adopting 'Sustainable Land use and building practices'

- Mandating GRIHA/ECBC (Energy Conservation Building Code) for all upcoming commercial, institutional and public buildings, incorporating passive solar architecture, in Chandigarh UT (2026)
- Retrofitting existing buildings with energy efficient lighting, space conditioning, double-glazed UPVC windows, reflective painting/tiling of roofs, and water harvesting (2026)
- Promoting passive solar architectural design for reducing energy consumption in all new buildings, public, institutional and commercial (2026)
- Net metering of power consumption and solar feed-in tariff to promote installation of rooftop solar PVs. (2026)
- Utilization of C&D waste for future construction thus reducing demand for primary top soil for bricks production. (2026)
- Relocation of all slum-dwellers into modern, apartment blocks, built according to the GRIHA rating for Green Buildings. 2030

**Activity: Environment,
Climate Action,
Tourism and Heritage
Preservation**

Action points for Theme 3: Ways of promoting sustainable water management in the city of Chandigarh

- Mandating water audit for existing commercial and public buildings, and progressive targets for reducing water consumption to 50% of current levels (2030).
- Mandating rainwater harvesting for all buildings, new and existing, for recharging aquifers (2026)
- Sector-level treatment of gray wastewater for landscaping, gardening, and washing cars. (2030)
- Replacement of conventional paving with permeable paving to facilitate aquifer recharge (2030)
- Ensuring 100% metered water connections (2026)
- Employing sprinkler based systems for watering of all lawns, gardens, and landscaped areas. (2026)

Action points for Theme 4: Ways of supporting sustainable transport system for Chandigarh

- Facilitating modal shift to electrified public transport through enabling private operators to provide app based flexible commuter services at different comfort levels. (2026)
- Expansion of the public transport system, including modern, comfortable buses, and adoption of a route rationalization plan to minimize aggregate passenger-kilometers traveled in the city for the emerging patterns of demand. All new buses to be electric propulsion. (2030)
- Introducing zero motorized vehicle zones in selected locations (2026)
- Creating dedicated bicycle/pedestrian tracks shaded by solar panels/green creepers connecting all Sectors and Public/Institutional areas (2026)
- Not more than one petrol/diesel/CNG vehicle per household (2030)
- Encouragement to electrified private transport by setting up of charging stations at short distances throughout the city, and equipping all parking slots with charging points.

Action points for Theme 5: Promoting efficient management of municipal solid and liquid wastes

- Annual Waste Audit Report of commercial, institutional and public buildings, and mandated reduction in waste generated to 50% of current levels (2030).
- Mandating 100% solid waste segregation at source in all residential, public, institutional and commercial buildings and door-to-door garbage collection by the Municipal Corporation. (2026)

- All wet waste to be composted within each sector and used in landscaping (2026)
- Establishing common waste-water treatment facilities for industrial clusters and ensuring disposal of hazardous waste (including biomedical and pharmaceutical waste) in secure facilities (2030).
- Retro-fitting sewage treatment facilities to collect biogas for power generation of industrial use and recovery of sewage sludge for forestry purposes (2030).

Action points for Theme 6: Promotion of Sustainable Tourism for transition to a climate resilient resource efficient Chandigarh

- Encouraging bicycles for hire as a mode of transport for tourists. (2026)
- All vehicles to be used by tourists within the city to be electrified (2026).
- Ensuring segregation of waste at all tourist spots. (2026)
- Declaring zero fossil fuel driven vehicle zones for all locations of tourists' interest (2026).

ANNEXURE III: EDUCATION, SKILL DEVELOPMENT, EMPLOYMENT AND ECONOMIC ABILITY



Ms. Palika Arora, (PCS) Director, School Education and Higher Education, Administration, presented a brief overview on Chandigarh's education status, with special focus on sports skill development and industrial growth of the UT Chandigarh. In total, there are 210 schools in the city which are government and private owned. According to the UDISE 2020 - 21 survey data, there has been 0% dropout rates at elementary schools and 4.54% at senior secondary. It has been observed that there is 46.60% share of girls participation. 3305 Out of School Children (found in survey) have been brought into the fold of education through 131 Special Training Centres. There are various higher colleges and technical institutes in the U.T. as well and it is the first

state/UT in the country to achieve 100% accreditation agenda of MoE. She mentioned that UT Administration has done a lot of work in terms of infrastructure such as, science & knowledge parks, mathematical gardens, setting up of Atal Tinkering Labs, setting up of sanitary napkin vending and incineration machines in secondary schools, launching the project “KILKAARI”, installing rooftop solar plants in government schools and colleges and operational state of art sports complex having multipurpose halls.

GLIMPSES OF STATE OF ART SPORTS COMPLEXES



23

CRICKET GROUND WITH PAVILION & NET PRACTICE GMSSS-26 TM



Concluding Ms. Palika discussed few actionable points that the UT has decided to implement for better education and employability. They are as follows:

- Development of School Management Information System along with online Teacher Transfer Policy module.
- Setting up of Smart Classrooms (02 in each school) in balance 89 govt. schools.
- Promotion of sports activities in schools by organizing Talent Hunt Sports Competition.
- Setting up of Employability, Entrepreneurship, and Innovation (EEI) Hub at Panjab University under RUSA. This EEI hub would be instrumental in providing job opportunities and startup avenues.
- Under Share Toy Share Joy campaign collection of toys will be done from their local area so that the same can be utilized in classroom teaching at pre-primary level.



Ms. Christine Wellington Moore, SDG Integration advisor, UNDP BRH, Asia Pacific expressed her views on youth employment and barriers of access to labor markets. It is observed that Government is the major employer in Chandigarh for regular services including armed forces. Under service sector highest demand comes from FMCG, FMCD, Power and energy sectors, followed by manufacturing sector, BPO/IT sector and logistics. There has been strong effort by the Chandigarh Administration to bring digital jobs however, unemployment rate in Chandigarh is still one of the highest amongst States/UTs and alarmingly higher than the national average of 6.3%. Despite efforts, youth unemployment and therefore there are some systemic challenges that could be addressed. Few action points she suggested are mentioned below:

- Address gender gap issues in higher education and job market as youth female participation is very low in the work force
- Under demographic and gender concentrations, there is only 10.8% of population that is under 6 years. Thereby, Chandigarh will be having more retiree population and no growth in the future especially if the female population does not increase and included in employment sector.
- Interventions for school to work transition by providing multiple incentives such as counseling and monitoring sessions; skilling and placement programs; social entrepreneurship; integration of youth in value chains.

Ms. Christine further highlighted the conundrums identified by UNDP in the future of Work (FoW). 1. Massive disruption to supply chain and loss of jobs and earnings 2. Need to maintain the existing jobs while creating new ones. 3. Basic income and social protection are needed to help recover from all manner of shocks. This further leads to the four issues that frame FoW Agenda: equal access to digital literacy; green jobs; reliance on adaptive techniques; and gender gap around wages and employment opportunities must close. She further explained about the emerging areas of demand as per the Global Production Networks (GPN) services and tools such as climate finance, green livelihoods, SDG Finance etc. Lastly, Ms. Christine elaborated that socio-economic recovery relies on leveling the playing field between men and women and integrating the twin agendas of gender and economic inclusion to accrue social, economic and environmental benefits for all.



Dr. Praveen Saxena, CEO - Sector Skill Council for Green Jobs pointed out that even though Chandigarh has been doing well in terms of skilling its youth, it has the potential to do much better. Considering green jobs, there are two things to keep in mind: 1. Green jobs are jobs that contribute to the technology that is green in nature. It can be said that even conventional jobs can be transformed to incorporate the concept of 'green'. 2. Chandigarh has always been a leader in various aspects such as the way it was conceived, the architecture and culture thus, making it is easier to

implement various programs typically relating to climate change and other environmental factors. A typical example is of when the solar renewable policy was implemented in the country. Chandigarh along with Bangalore led the entire country's solar energy movement. The same was observed with the solar water pumping system that was started in Chandigarh and entire Punjab was leading the way through the country. So now is the time to take the step as to how Chandigarh can lead the way by becoming not only a climate resilient city but also a pioneer in green livelihoods. Firstly, it is essential for the city Chandigarh to be energy independent by adopting solar systems at every household level. Secondly, since the city has been surrounded by water canals, so power requirement should come through non-fossil fuel power generation. Thirdly, to adopt CNG apart from e-vehicles. As far as skilling is concerned, Chandigarh skilling and

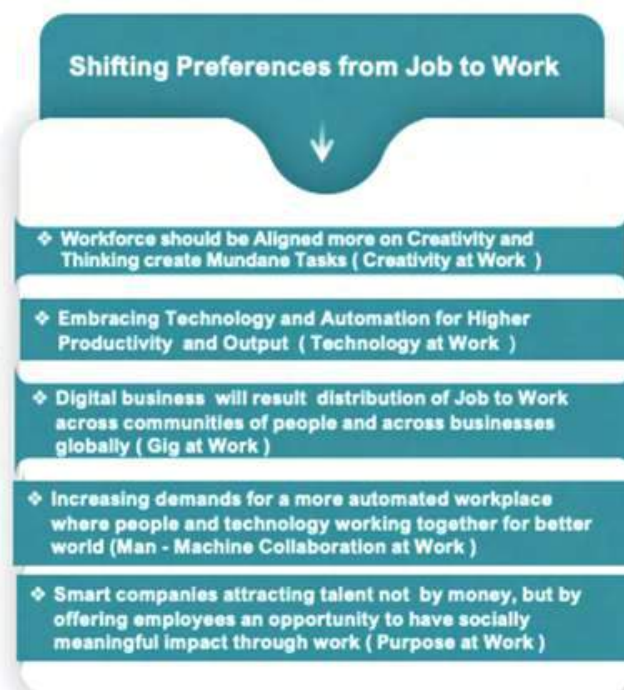
up-skilling as per industry need where green jobs can be implemented. Mr. Saxena emphasized that it is not only about jobs in the green sector but the way we can add a green component in the conventional jobs as well. One example of such is when drivers are asked to switch off their engines on red light – this is an example where a conventional job is being told to include a green component in their activity. This culture needs to be included in the schools and their curriculum i.e. starting young to inculcate this practice



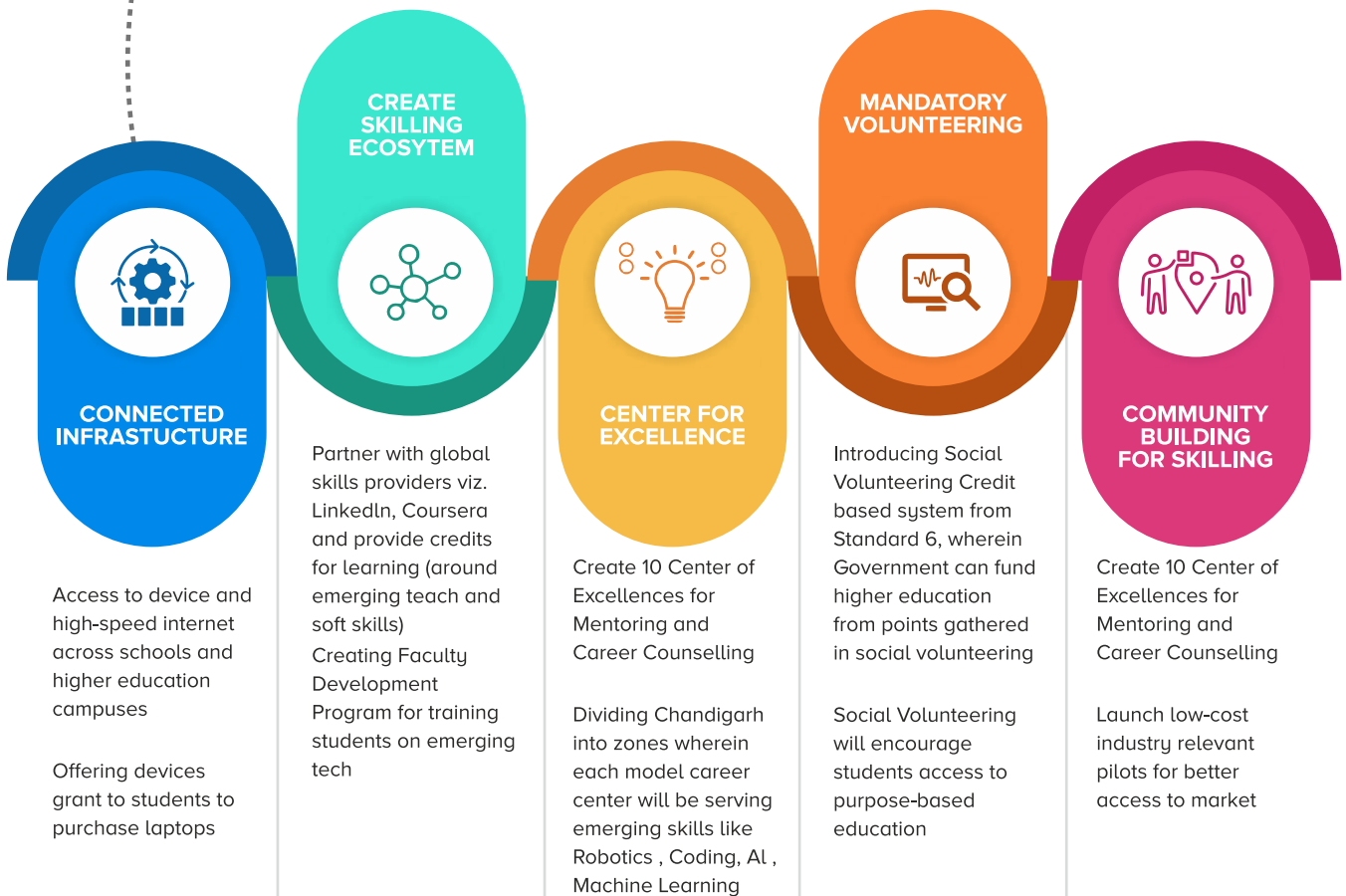
Mr. Vivek Atray, Ex IAS Officer, Governing Council Member and Independent Advisor shared his thoughts on what could be done by Chandigarh administration for the UT. He shared the three P's – People, Positioning and Practice. Overall, he mentioned about the way a flip can be given to the economy, industrial and economic progress without disturbing the original character, culture and architecture of the city.



Mr. Nirmal Singh, Founder and CEO, Wheebox explained the need to shift from 'Job' to 'Work'. He differentiated between performing a job and doing work a JOB is defined as “an activity that an individual performs in exchange for a specific fee or payment”, whereas, WORK is defined as “a physical or mental activity that is performed in order to accomplish or produce something.” Mr. Nirmal elaborated on the ways the shift can be made which is shown in the image below.



Further, he mentioned about upskilling that is required for making workforce ready for future jobs. This is done by identifying the skill gaps, building a future-proof skills strategy, laying the cultural foundation and implementing up-skilling programmes and measuring the return on investment from multiple skilling programmes. He gave examples of best practices from the UK's Social Erasmus + and SkillsFuture SG in Singapore. He then made some key recommendations for making Chandigarh a global talent capital. The recommendations around connected infrastructure, creating skilling ecosystems, centre for excellence, mandatory volunteering and community building centres. The same are elaborated in the following figure:





Mr. D N V Kumara Guru, Director- External Relations, Indian School of Business limited his observations to three points: Firstly, what really has got us here to this visioning workshop? Dr. Guru believed it is because we love Chandigarh and would want to invest in the future of Chandigarh. Secondly, what motivates us? It is because we have inherited the city beautiful but also would like to pass it on in a better way to the future generations and lastly, how do we make it happen? The answer lies in conversing, collaborating and co-creating a future

Considering the city's character and demographic profile, we need to realize that the next generations are unable to find employment opportunities in the city and thus, migrate to other parts of the country or the world. This is the reality that we need to acknowledge. Chandigarh as a city is sometimes referred to as a 'pensioners paradise'. But it is about time to think that why should the coming generations be deprived of the work opportunities and be forced to move elsewhere in the world.

Dr. Guru emphasised on the fact that we need to protect the ethos of the city but also make sure that in some calibrated manner, accept changes for the betterment of the city. He finds Chandigarh as a city is not very inclusive as we are being rigid with the idea of just protecting the original vision of the city but not include any change for its advancement in a better way.

While there are certain limitations with the safeguarding the principles of the city, the next steps should include the growth of other sectors such as, service and knowledge sectors, in addition to the existing industries in the city. This is essential for providing jobs to our next generations and until we cannot provide employment we will not be very successful as a city. We need to develop jobs by becoming a hub for a particular sector. We need to attract educational institutions to be in the city and improve the skilling ecosystem in the city. Mr. Guru suggested that certain skill sets are essential for the youth if they want to be future ready such as business literacy, behavioural skills, digital literacy, entrepreneurial literacy, etc..

ANNEXURE IV: HEALTH, NUTRITION AND WELL-BEING



Mr. Yashpal Garg, Secretary (IAS): Health, Medical Education & Research, UT Administration, expressed his views on Chandigarh's Health System that included health infrastructure, government backed health programmes, indicators, challenges and future plans. Chandigarh is a front runner amongst the UTs as per the report of State Health Index. He added that the city is committed to providing universal access to equitable, affordable and quality health care services with due focus on safeguarding the services towards safe health of the poor, vulnerable and disadvantaged. Strengthening public health systems as a basis for universal access and social protection against the rising costs of health care is the top priority for the administration, he emphasized.

There are several government health institutions, private hospitals and health care facilities. He further discussed about Health Department's flagship scheme for poor population, i.e. Ayushman Bharat Pradhan Mantri Jan Arogya Yojana:

- The scheme is being implemented in U.T. Since 23rd September 2021.
- The target beneficiary group is of 23687 SECC families comprising beneficiary population of 106500 members.
- The scheme provides cashless medical insurance up to Rs. 5 lakh per family per year.
- The cashless services are being provided through the empanelled hospitals from private as well government hospitals.
- The National Health Authority provides all kinds of IT platforms for beneficiary card generation, hospital empanelment, raising claims online by the hospitals etc.

Other ongoing programmes in the state are as follows:

- Reproductive, Maternal, Newborn, Child Health and Adolescents (RMNCH+A)
- Universal Immunization Programme
- Revised National Tuberculosis Programme (RNTCP)
- National Vector Borne Disease Control Programme
- Integrated Disease Surveillance Project
- National Program for Control of Blindness

- Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH)
- National Iodine Deficiency Disease Control Program
- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS)
- National Leprosy Eradication Programme (NLEP)

Mr. Garg highlighted the issues & challenges being faced in the city with regard to the health infrastructure. They are mentioned below:

- More tertiary care centres are required because of excessive load on the emergency in existing institutes.
- Decentralization of MCH centres: at least five more MCH centres are required to be setup. Infrastructure, manpower, equipment & drugs need to be planned simultaneously.
- Peripheral centres need to be strengthened especially emergency services.
- Regular employment rather than contractual

Lastly, future plans for the city were also discussed such as tele-consultation, facilities digital connectivity, e-hospitals and rolling out range of services at Health & Wellness Centres in addition to NQAS certification of health facilities as per target.



Ms. Meenakshi D. Ghosh, IAS, Former Special Secretary, Ministry of Health and Family Welfare; Former Director General/ Project Director National AIDS Control Organization, India Former Chairman, CITCO, Chandigarh expressed her views on the future of health sector from the perspectives of other countries. She put forth the example of Public Health England (PHE), which is a distinct organization with operational autonomy, an executive agency of the Department of Health and Social Care, England. PHE brought together public health specialists from more than 70 organizations into a single public

health service, and employs 5500 staff. But the Covid crisis showed that it is not enough and there is a need of an institution whose only job is to prepare for and respond to external threats like pandemics e.g. South Korea and Germany's Robert Koch Institute, where their health protection agencies have a huge primary focus on pandemic response. Therefore, in 2021 a policy paper came out which states that the health protection capabilities of PHE and National Health Services (NHS) Test and Trace will combine into a new UK Health Security Agency (UKHSA) that will bring together their national public health science to protect against infectious diseases and external health threats – in bad times and in good.

Then she talked about the UK and Europe's strategies to counter foodborne diseases and Anti Microbial Resistance (AMR)

During July 2021, England commenced a cross-government surveillance project to protect public health. To test the application of genomic technologies in the surveillance of food-borne pathogens and Anti-Microbial Resistant (AMR) microbes in all four nations of the UK.

- This project is designed to help safeguard UK food, agriculture and consumers by using cutting edge technology to understand how pathogens and AMR spread.
- demonstrates that the “One Health” approach is critical to better understand and track antibiotic resistance.
- shows upfront how AMR in the environment, with profound implications for other sectors, is being addressed.

She highlighted Europe's Food Safety and General Food Law Regulation. Food traceability is the cornerstone of that reform i.e. the ability to track any food, feed, food producing animal or substance used for consumption through all stages of production, processing, and distribution.

It enables identification and subsequent withdrawal or recall of unsafe food from the market. EU's General Food (and Feed) Law regulation ensures a high level of protection of consumer interest, human and animal life.

In India, the Food Safety and Standards Authority of India (FSSAI), 2006 promulgated The Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011:

- A 2014 Supreme Court order observed that with no periodic supervision or inspection of functioning slaughter-houses, weak implementation is apparent. The FSSAI ensured the closure of illegal slaughter-houses and butcher shops.
- Action: Ensure that all slaughter-houses in Chandigarh are registered and licensed.

- Action: Ensure that all state food labs for food testing and certification functions, are NABL certified, and have the requisite qualified food analysts.
- Action: in addition, The UT administration must speedily fill up any vacancies of licensing and enforcement officers.



Prof. K. Srinath Reddy, President, Public Health Foundation of India, expressed his views on the importance of achieving universal health coverage and the ways to energise health systems. It's very clear that COVID-19 has amply demonstrated the failures of public health systems and posed the question on what we really require for efficient and equitable health systems. He laid stress on the point that universal health coverage provides the framework for an efficient working health system. It is fairly important to provide affordable health care without fail and provide assured quality of the services to all sections of the society.

Prof. Reddy emphasized that in today's world, primary health care services are very critical and India's National Health Policy is also reaffirming the same. Primary care forms the foundation of a well-functioning health system. Being the first point of contact with the health care system, primary care professionals ensure that the patients get the right treatment in consistence with patient needs and history.



Mr. Vikas Sheel, IAS, Additional Secretary & MD (NHM), Ministry of Health and Family Welfare highlighted the importance of "Information and data management for building resilient Health Systems". He said IT systems and the way we adopt them is going to play crucial role in coming times. He mentioned about Ayushman Bharat Digital Mission (ABDM) that has been developed to create a national digital health eco system that supports universal health coverage in efficient, accessible, inclusive, affordable, timely and safe manner. It provides a wide range of data, information and infrastructure services, duly leveraging upon open interoperable standards based digital systems and ensures security confidentiality and privacy of health-related personal information. The key building blocks of ABDM include: individual registry through a unique Health ID, a registry of health care professionals and a registry for each health facility.

Ministry of Health and Family welfare has offered various IT solutions like e-Sanjeevni platform used for tele consultations, used widely during recent Covid times in addition to the Mother and Child Tracking System (MCTS) which tracks the progress of service delivery to pregnant women, lactating mothers and also targets to measure the progress with regards to routine immunisations and coverage of children.

Mr. Sheel mentioned about the NCD application wherein the system tries to assess the status of various chronic diseases among the population especially in the age group of thirty years or more and provide early intervention for prevention of morbidity, escalation of problems and prevention of mortality. He emphasised on aligning all IT systems with the national eco system which is being created by the ABDM. Mr. Sheel further emphasized on building simple open inter-operable systems which can talk to each other through the unique health IDs. Chandigarh is in a good position due to its location and progress - it should become a pioneer in digital health and role model for the entire country to replicate.



Dr. Edmond Fernandes, CEO, CHD Group & Director, Edward & Cynthia Institute of Public Health started his session narrating an insightful story of a family that is economically weak with an unstable informal job, making it vulnerable to multiple social challenges and problems. He implied that convergence is key - there is a need to build better social protection mechanisms, fixing urban congested environment, addressing food insecurity, malnutrition, and education. He emphasized on upgrading urban planning, environment, disaster management, health, education and skill development from a holistic point of view and not view them as social issues in silos.

The following actionable points were suggested by Dr. Fernandes:

- Have a risk informed planning approach
- Involvement of professional non-governmental organisation is key to effective on-ground implementation
- Build a community-based model around social, economic, commercial, legal and environmental determinants of health
- Focus on the happiness index for sustainable future.
- A rapidly changing social fabric and a falsely created sense of security must actively be replaced by practices that prevent moral deterioration and deceptive illusion that we can achieve anything at a cost.
- Reducing the burden of Non communicable Diseases (NCD).



Dr. K.K. Talwar, Ex-PGI Director, shared his insights on the future of health tourism. Firstly, he highlighted the current status of Chandigarh as Hub for health services and its potential to become an epicenter for health tourism. He mentioned that Chandigarh/ Tricity has a good public health infrastructure. PGI is a destination for health services where people from all over North India come to avail health facilities. Chandigarh health systems are providing affordable medical care under the guidance of highly specialized doctors. Since, Chandigarh has good connectivity, it should also focus on ensuring availability of good, low-cost, clean and affordable hotels/lodges/etc. which is one of the key conditions for being known as a destination for 'health tourism'.

However, Dr. Talwar suggested that it important to promote Chandigarh/Tricity also as a medical knowledge hub with institutes like PGI, National Institute of Pharmaceutical Education and Research (NIPER), Indian Institute of Science Education and Research (IISER), Institute of Microbial Technology (CSIR-IMTECH), Homi Bhabha Cancer Hospital and Research Centre etc. While the hospitals in the city provide treatment for a wide range of illnesses it still needs to improve the provision of certain specialised health care facilities such as organ transplantation.

ANNEXURE V: SOCIAL PROTECTION AND SAFETY FOR ALL



Mr. Mandip Singh Brar, IAS, Deputy Commissioner, Chandigarh, helped in setting the context the theme on social protection and safety. Social Protection and welfare is a vast thematic area that effects every citizen. It is a cross-sectional theme and covers a plethora of initiatives and schemes. It involves convergence at all levels within the government infrastructure and an integrated approach amongst all stakeholders like CSOs, academia, etc.

UT Administration is working towards upliftment of multiple beneficiary segments under various schemes and legal provisions. Further, the department strives to work towards convergence within departments to benefit the beneficiaries at the last mile as illustrated below:



Ms. Nitika Pawar, IAS, Secretary (Social Welfare) mentioned all the schemes that are provided by the Chandigarh administration for social security, and are aligned to UN SDGs.

The UT Administration is making earnest efforts to modify its schemes and policies with changing times and make them more accessible to the target group by widening the scope of various National and State Level schemes. Some such initiatives are as mentioned below:

- Revision of income criteria for schemes for EWS beneficiaries
- Improving nutritional standards of supplementary nutrition at Anganwadi Centres
- Creating long term assistive living facilities for elderly, mentally ill and those with intellectual disabilities
- Augmentation of affordable accommodation for working women
- Enhancement in the rates of social security pensions
- Strengthening Public Grievance Redressal Mechanism
- Minimizing compliance burden
- Mentorship program for young adults and children
- Child & Gender Sensitive Police Stations
- Skill Development Programs
- Slum Removal & Rehabilitation – 20000 people from slums were rehabilitated on a rental model.

INFRASTRUCTURE AND SERVICES	
SOCIAL SECURITY AND WELFARE SCHEMES	<ul style="list-style-type: none"> • 29,261 Women, Children, Senior Citizens, SCs and Persons with Disabilities beneficiaries have been enrolled upto May 2021. • 100% Disbursal of Social Security Pensions through Aadhaar Based Payment System.
INSTITUTIONAL CARE SERVICES	<ul style="list-style-type: none"> • 02 Senior Citizen's Home and Day Care Centres; • Swadhar Greh, Nari Niketan and Sakhi for Women • Protection Centre for Run Away Couples and Working Women Hostel
CHILD PROTECTION SCHEME	<ul style="list-style-type: none"> • 09 Child Care Institutions for children in need of Care and Protection and Children in conflict with Law and 02 After Care Homes • Non-Institutional Care Services- Adoption, Foster Care, Sponsorship, etc.
INTEGRATED CHILD DEVELOPMENT SERVICES	<ul style="list-style-type: none"> • Services- Supplementary Nutrition, Immunization Health, Check-up, Referral Services, Pre-School Education and Nutrition & Health Education in 450 Anganwadi Centers • POSHAN Abhiyan- flagship program
CORPORATIONS	<ul style="list-style-type: none"> • Provides vocational training, institutional services & loans to Women, Persons with Disabilities (PwDs), SC/BC, Minorities, Safai Karamcharis • Helpline for Senior Citizens, Women, Children, SC/ST, Minorities, Persons with Disabilities (PwDs), and Transgenders.
OTHER SERVICES/UNITS	<ul style="list-style-type: none"> • Crèches run by Bal Bhawan, State Resource Centre for Women, Mahila Shakti Kendra, Transgender Welfare Board, Distribution of Aids and Appliances to Divyangjans,



Ms. Prema Gera, ex-Assistant Country Director and Heads Poverty Unit UNDP India, Advisor, Development Alternatives, highlighted her views on social equality, welfare and protection: what future readiness looks like. One of the important aspects of smart cities is that while a lot has happened, it is important to look at the distributional effects of smart cities on people, planet and places. Looking at and beyond people living below poverty lines but also about disadvantaged social groups, workers engaged in informal economy and communities who experience discrimination. It is important to provide 'safety for all' and especially for children and women, for groups that face discrimination and violence and for senior citizens. A future ready Chandigarh needs to be inclusive at multiple levels - Social inclusion, Economic inclusion, Spatial inclusion and Digital inclusion.

In terms of future readiness It is crucial to invest in data, frequent assessments, surveys, studies with academia can lay a good foundation for deliberations and policies at higher levels. Frequency and nature of outreach activities need to be more intense in moderate and high-vulnerable areas; so while Chandigarh has a great infrastructure, we should look at the uptake and nature of uptake of these facilities. Processes and systems for consultation, feedback and communication need to go deeper for vulnerable individuals and groups – the language, the framing of questions and the narrative needs to come from people at the last mile. Engaging system influencers (community members) and putting in place a platform for crowd sourcing of ideas and co-creating solutions ensures high level ownership amongst citizens.

It is also imperative to look at safety that goes beyond law and order; for the vulnerable groups facing discrimination, in terms of ensuring safety at public places and creating legal awareness.

These transformational shifts create new realities as entire societies are re-shaped. They also influence attitudes and perceptions. Since people act based on how they feel, these attitudes and perceptions matter for inclusion. Feelings of being included and respected by others or being heard, are central to the opportunities people have and the way in which they take part in society. Further, gathering big and thick data and communicating via digital media along with physical interface is crucial for citizen engagement.



Dr. Amitabh Kundu, Distinguished Fellow, Research and Information System for Developing Countries, shared his thoughts on operationalising inclusivity in large cities. The case of Chandigarh, compared to many cities in India, Chandigarh is performing higher in most SDGs. The city has performed well in larger number of indicators while certain indicators require more interventions. It is important to note that in SDG 5, five out of seven indicators really need attention

There has been considerable improvement in areas of sex ratio and child sex ratio in Chandigarh in last 5 years and it has been much faster as compared to other regions in the country.

Despite the high ratio of women police personnel in

Chandigarh, the graph of crime against females in the city is

becoming a matter of concern. The NCRB-2020 reports that Chandigarh has the highest rate of rape cases in the country. Sexual harassment cases have increased in the UT while aged citizens have been prone to monetary frauds (NCRB). The rate of crime against women in Chandigarh have gone up in the recent years; 453 cases in 2017, 442 in 2018 and 515 in 2019 but fortunately, all the rates declined as per NCRB report in 2020 which is a positive sign. It is significant for Chandigarh to have improved slum regions by not evicting the poor but rather choosing the approach of rehabilitation. It is important for cities to boost economic development as economic absorption of poor is crucial for overall development of the region.



Dr. Anu Sabhlok, Associate Professor, Deptt. of Humanities and Social Sciences, IISER Mohali, expressed her views on gender, labour and informality in the tricity region. Dr. Sablok highlighted ecology, sustainability, health, infrastructure, biodiversity, architecture and social relations, which are all intricately connected. To make sustainable progress, Chandigarh must address these together. The SDGs are listed separately numerically, not because they form independent action areas but to ease action and understanding - their rationality must never be forgotten. It is imperative that we consider social access and public health as we develop blue-green infrastructures for storm-water management. Similarly, we can't ignore the effects of caste relations as we make plans for waste management,

proposals for public transportation must converse with climate experts and ensure gender and class equity.

The view that Chandigarh is land-locked is limiting. Yes, the municipal

boundaries of Chandigarh cannot be expanded but we are not surrounded by an ocean - it is essential that we take a regional approach. The seasonal stream that runs through the leisure valley and the green belt in Chandigarh, does not stop at municipal borders. People live and work across the tri-city region. We fail to ensure gender safety in Chandigarh, the house-help that comes to our house from across the municipal borders feels unsafe in terms of health, safety, the moment she goes back home etc.

Dr. Sablok suggested that the city needs to rethink the data - the ways we gather it and the ways we categorize, analyse and frame our discussions. Thick ethnographic analysis, reflexive and dynamic data collection, modalities for conflict-resolution (for there is bound to be conflict when we talk across differences) - all of these need to be woven into the process of arriving at solutions.

Dr. Sablok gave three suggestions for improving social inclusion in the city:

- Thinking beyond municipal boundaries is essential for gender equity. For example, when water connections stop at the municipal border, it raises burden on women (who are generally responsible for household labour, end up queuing for hours to fetch drinking water). A regional approach towards developing infrastructure such as transportation, waste management, water and sewerage will ensure fairness in terms of gender, class and caste. For example, last mile connectivity needs to be integrated into public transport in the tricity region. This can be done by regularizing and systematizing informal public transport networks along with public systems.
- Communication - There are so many wonderful schemes initiated by the administration. However, very often they are unable to reach the intended beneficiaries. A simple and doable action point in this regard is for the administration to put up billboards outlining these schemes, places like gurudwaras and not just advertising but explaining the process - at multiple locations, in multiple languages and in multiple ways. Long term view of the policies is crucial in this regard. In addition, digital solutions that can be accessed in a centralized manner could also go a long way in addressing this issue.

Dr. Sablok concluded by saying "We are City Beautiful - the way forward I argue is building a city that cares - a caring city that is beautiful not just on the outside but also from the inside."

Coordination between departments and collaboration with NGOs, research institutions, community organizations, system influencers. Chandigarh tricity region has excellent resources in terms of research and educational institutions and these are not being adequately utilised in terms of studies that inform policy. In-depth ethnographic studies with migrant labourers and workers that inhabit our cities are important before any policies are framed.



Ms. Mirai Chatterjee, Director, Self Employed Women's Association (SEWA), presented her views on social protection and safety nets for informal workers. She expressed SEWA's main goals which are: full employment and self-reliance for providing social security in terms of health care, insurance, childcare, housing, and pension. She further discussed about basic approaches for universal social protection i.e.

decentralized approach, pro-actively reaching out to migrant workers, front-line workers-cum-educators. It is crucial to invest in education and digital literacy. All the schemes and programs should have a long-term view rather than being time-bound. To ensure portability there should be linked platforms or one common service delivery card. Majority of the working population is working in the informal sector and private sector is a huge benefactor of the same. Thus, private sector should be engaged to invest in key social welfare areas. UT administration can look at setting up a Social Protection Fund in turn making it tax deductible for engagement of the private sector in this space.

A solution for housing with basic infrastructure is to adapt and adopt the 'Parivartan model' of Ahmedabad Municipal Corporation that works on providing 7 basic services in-situ to these low income and marginalized communities. Also, mohalla-based community organizations (CBOs) or committees can be set up – at least 50% women in these to maintain these infrastructure facilities.

Lastly, she emphasized that “universality” should be the guiding principle for social protection and inclusivity. Decentralized facilitation centers will be helpful for educating about social protection.

Discussion
Guide

Section I:
Introduction

ANNEXURE VI: CITIZEN FEEDBACK QUESTIONNAIRE

INSTRUCTION TO MODERATORS:

Please note that this is just a guide to aid an unstructured discussion with the respondent. Language and flow of discussion need to be based on the feedback given keeping in mind the local sensitivities & language.

Introduction

- Self, with details about market research & i3rc insights
- Explain that there are “No right or wrong answers”
- Explain about audio/ video recording & confidentiality of recordings and data collected
- Explain usage of notepads and pencil

Objective: To make the respondent comfortable in group/interview
Time: 10 mins.

INTRODUCTION:

A1. Before we start today's discussion, why don't you tell me about yourself

PROBE:

- Name & Occupation
- Family Structure – Nuclear v/s Joint family
- Married vs Unmarried.
- Do you have kids? How many? Which class?
- Occupation – Company Name with Designation
- Hobbies – what they like to do in their leisure time
- How long you have been living in Chandigarh
- Do you travel outside Chandigarh? Which places? Which mode? How often?

Life in Chandigarh:

A2. How do you feel about your city Chandigarh?

- a. What all do you like about it? Anything else?
- b. And is there anything that you dislike about your city?

A3. Overall, how happy and satisfied you are with your city?

- a. Please tell me in more detail....
- b. With which aspects you are more satisfied? With what aspects you are not so happy?

A4. A lot goes in making of a city. An infrastructure must be put in place like roads, parks, hospitals, schools, transportation, opportunity to earn for the citizens and so on...Can you please tell me how Chandigarh performs on these various parameters?

- a. Let's talk on each of these in more detail. Tell me about each of these areas one by one? How you feel about them?
- b. Are there any need gaps? Would you want any changes?

Future Chandigarh – Understanding Citizens' Needs and Aspirations

- To understand needs and aspirations of citizens in order to make Chandigarh future ready what do citizens want for their city in future 2025 and 2030
- What themes for Chandigarh do they relate to and why? What specifically they would want under specific themes?

UNDERSTANDING CITIZENS' NEEDS AND ASPIRATIONS

About the Job:

B1. Any city is continuously evolving? How do you see your city now vis-à-vis 10 years ago?

- a. What changes have come about?
- b. What is good?
- c. What is not so good?

B2. And what about last 5 years?

B3. Now, in the same way we will discuss about future of Chandigarh. However, we will talk more from the point of “what kind of a city, you want Chandigarh to be”. It is not dependent on where Chandigarh is today. But we want it to be.

- a. So please tell me what kind of city you want Chandigarh to be in next 5 years? And next 10 years?
- b. Lets discuss this in more detail....PROBE....PROMPT IF REQUIRED
- c. What kind of infrastructure....Roads, Parks
- d. Healthcare facilities...Hospitals
- e. Schools, Colleges,...educational facilities
- f. Sports and recreational facilities

Section B:
Time: 20 min

- g. Malls, Shopping areas/ markets
- h. Health & Hygiene
- i. Quality of life
- j. Gender Equity – equal rights, crime against women
- k. Law and Order
- l. Opportunities of livelihood – good earning for all, no poverty and hunger in the city
- m. Environment/ Pollution/ Clean Air

B4. Now lets do a small exercise. We will make a list of all these things that you talked about for your city.

- a. Let's try and arrange these needs and expectations in order of importance
- b. Let's first put them in 3 groups
 - i. Those that are a must have without which you will not live in the city
 - ii. Those that are good to have and will make life much better and comfortable
 - iii. Those that are not so important and you maybe able to compromise a bit
- c. Okay, now lets take the 1st group
 - i. Can you put these in order and rank them?
- d. Now lets take group 2 and rank these with this group
- e. Finally, I would want you to pick top 3 aspirations/ visions for your city from these. It can be from any of the 3 groups we have
- f. And what about the top most aspiration / vision for our city Chandigarh

B5. Could you please tell me why do you want this (MENTION TOP ASPIRATION) as your top aspiration/ vision for your city?

MODERATOR TO MAKE A NOTE OF TOP MOST AND TOP 3 ASPIRATIONS/VISIONS

I have with me a few statements that describe what people want from their city Chandigarh? I will share each one by one and lets discuss how you feel about them

MODERATOR TO SHOW THEME 1

“We are City Beautiful – because we are a city that will transition 'from Green to Greener.’”

Section C
Time 20 Min

1. Green infrastructure will be augmented with efficient governance and digital systems

- a. Smart & Energy efficient Green buildings
- b. Sustainable transport systems
- c. 24x7 access to piped potable water to all households

2. Making Chandigarh Carbon Neutral - Identifying, tracking, and benchmarking greenhouse gas emissions across all sectors and portfolios in order to take tough decisions, reforms and investment in renewable energy, energy efficiency or other clean, low-carbon technologies.

FEEDBACK TO THEMES

C1. How do you like this theme for your city Chandigarh?

- a. What all do you like about it?
- b. What do you dislike about it?
- c. In your opinion how relevant it is for your city? And for you personally?
- d. Once your city achieves these goals, how will it make you feel?
- e. How will you describe your city to others/

MODERATOR TO SHOW ALL THEMES ONE BY ONE AND TAKE FEEDBACK AS ABOVE

C2. Now I would like to rank these themes as per your preference,

- a. Which one do you find most relevant for your city and you would want your city to adopt in next 5 years? And next 10 years? Why do you feel so?
- b. Which would be next best themes for your city? And next? Rank 1 to Rank 5

C3. Now I will show you some specific vision statements for your city.

C4. Now let's do a small exercise. We will list the vision statements for Chandigarh

- a. Let's try and arrange these in order of importance
- b. Let's first put them in 3 groups
 - i. Those that are a must have without which you will not live in the city
 - ii. Those that are good to have and will make life much better and comfortable
 - iii. Those that are not so important, and you may be able to compromise a bit

- c. Okay, now let's take the 1st group
 - i. Can you put these in order and rank them?
- d. Now let's take group 2 and rank these with this group
- e. Finally, I would want you to pick top 3 aspirations / visions for your city from these. It can be from any of the 3 groups we have
- f. And what about the top-most aspiration / vision for our city Chandigarh

C5. Could you please tell me why do you want this (MENTION TOP VISION) as your top aspiration/ vision for your city?

C6. Finally, let's do another small exercise. Let's try creating a vision statement for our city on our own. What would that be?

MODERATOR TO LET IDEAS FREE FLOW AND MAKE NOTES OF SOME KEY ELEMENTS/ PARAMETERS

C7. I found these 4-5 key elements in your discussion (MENTION THE ELEMENTS). Lets now construct a vision statement using these elements.

So the final statement is “_____” Do you all agree? Great!

THANK & END THE DISCUSSION

Themes for
Chandigarh
Visioning

1. We are City Beautiful – because we are a city that will transition 'from Grey to Green'.
2. We are City Beautiful – because we will be a city that is “Resilient to climate change”
3. We are City Beautiful – because we will be a city that 'Promotes Green Economic Development'.
4. We are City Beautiful – because our focus will be on 'Nature based lifestyles for good health and wellbeing’.
5. We are City Beautiful – because we will be a city that 'Cares for all its inhabitants'

VISION STATEMENTS FOR CHANDIGARH

1. Green infrastructure will be augmented with efficient governance and digital systems
 - a. Smart & Energy efficient Green Buildings
 - b. Sustainable transport systems
 - c. 24x7 Access to piped potable water to all households
2. Making Chandigarh Carbon Neutral - Identifying, tracking, and benchmarking greenhouse gas emissions across all sectors and portfolios in order to take tough decisions, reforms and investment in renewable energy, energy efficiency or other clean, low-carbon technologies.
3. Build adaptation and resilience into policies, business plans and operations to prepare for impacts relating to loss and damage due to climate change
4. Chandigarh will be a thriving city by adopting a “sustainable plus” model that not just generate resources for the present generation but also preserves for future generations.
 - a. Sustainable Land Use Practices
 - b. Sustainable Water Management
 - c. Sustainable Value Chains/ESG Reporting
5. Promote Sustainable tourism for transition to a climate resilient resource efficient Chandigarh
 - a. Encouraging bicycles for hire as a mode of transport for tourists
 - b. All vehicles to be used by tourists within the city to be electrified
 - c. Ensuring segregation of waste at all tourist spots
 - d. Declaring zero fossil fuel driven vehicle zones for all locations of tourists interest.
6. Build a robust mechanism to develop a human capital pool that is future ready (due focus on creating and providing green jobs)
7. Create career/employment/entrepreneurship opportunities here by building strategic and specialized hubs in the city that not only create opportunities for the working population but also supports the city to tread the path to becoming self-reliant
8. Build beyond the medical infrastructure in Chandigarh – we are looking to develop a model city of people who enjoy good health, well-being, nourishment and quality lifestyle
9. Develop Chandigarh as a hub for healthcare & well-being to finally become an epicentre of health tourism in the region (in collaboration with academic and research institutes)
10. Become nurturing – create effective governance systems, ensuring information and knowledge transfer to citizens and relevant beneficiaries.
11. Become inclusive – Ensure spatial, economic, social and digital inclusion of the underserved and marginalized sections of the community.
12. Become safe (especially for children and women, for groups that face discrimination and violence and for senior citizens)

