



CONFERENCE ON CREATIVITY,  
TECHNOLOGY, AND SUSTAINABILITY.

Strategic Principles to  
Promote the Concept of  
Sustainable Cities in Saudi  
Arabia

Author Name

*Waleed S. Alzamil*

Affiliation

*King Saud University, Saudi Arabia*

# INTRODUCTION

A sustainable city is one that meets human needs and reduces negative social, environmental, and economic impacts through urban planning. Goal 11 of the United Nations Sustainable Development Goals emphasizes “to make cities and human settlements inclusive, safe, resilient and sustainable”

Economic growth leads to the prosperity and development of societies, but it can lead to negative impacts on the environment and society if it is outside the ethical framework. The concept of sustainable development is one of the common concepts that seeks to achieve economic growth and prosperity in a way that preserves the environment, achieves social justice, and preserves the rights of future generations.

# RESEARCH PROBLEM

---

In the past decades, urban growth in Saudi Arabia came as a response to current urban problems without setting a model for a comprehensive future direction that integrates all sectors of economic, social, and environmental development within the context of the city. Therefore, municipal agencies in cities have been preoccupied with solving immediate urban problems such as traffic congestion, housing, and providing services and infrastructure without developing sustainable strategic principles that improve living standards and achieve a balance between environmental, economic, and social dimensions.

# OBJECTIVES

---

This paper aims to develop strategic principles to activate the concept of sustainability of Saudi cities, based on experts' evaluation of sustainable city indicators, Goal No. 11, and the extent of their compatibility with the local efforts of Saudi cities.

# LITERATURE REVIEW

---

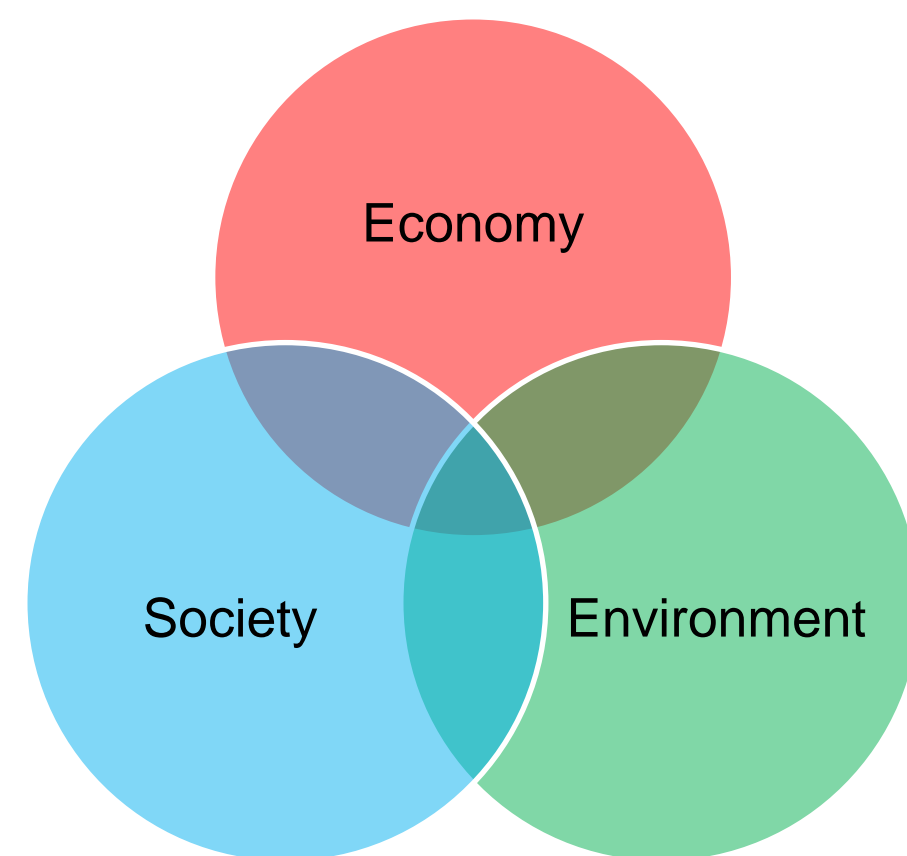
A sustainable city is an urban settlement that provide a quality of life meets the needs of the local community without discrimination, including environmental, cultural, political, institutional, social and economic components, without leaving an economic, social or environmental burden on future generations.

This concept emphasizes the preservation of the natural environment in its original state as much as possible, the effective use of non-renewable resources in order to preserve it, the consumption of resources in an organized manner and in a way that helps them to be renewable, and giving the right to future generations to use the resources.

# LITERATURE REVIEW

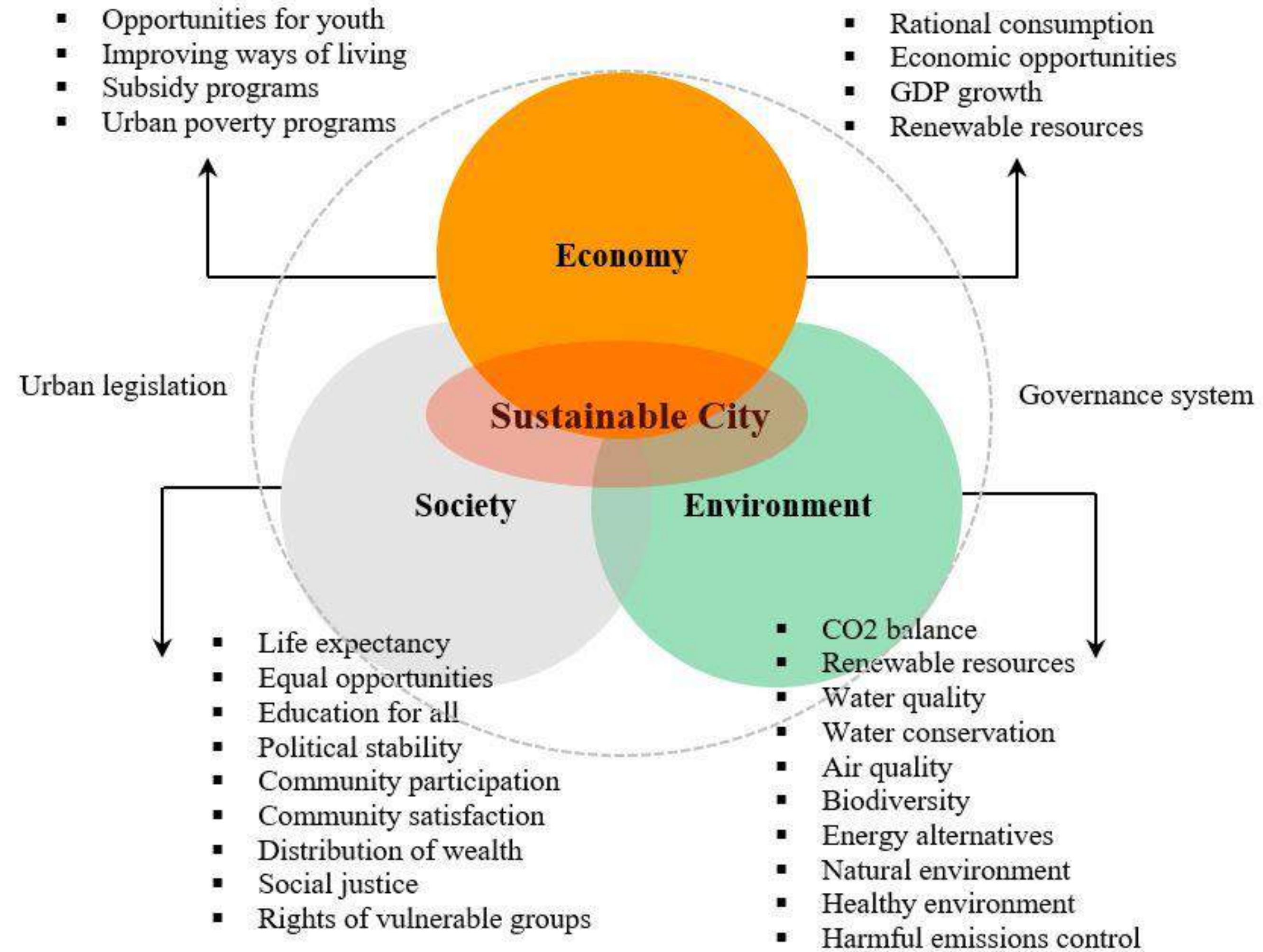
## Dimensions of sustainability

- Environmental: Environmental policies that allow the rational consumption of natural resources without depletion or disruption, while taking into account the rights of future generations.
- Economy: Flexible economic base that allow economic investment in a way that serves the public good, is self-renewing, and does not negatively affect vulnerable groups.
- Social: An active community capable of participation in development decision-making and involve all segments of society.



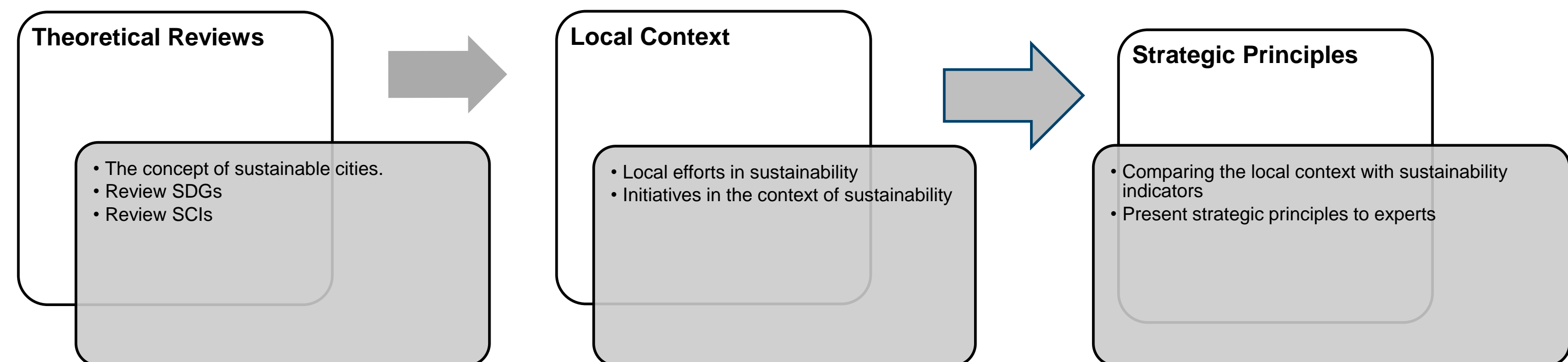


# LITERATURE REVIEW



# METHODOLOGY

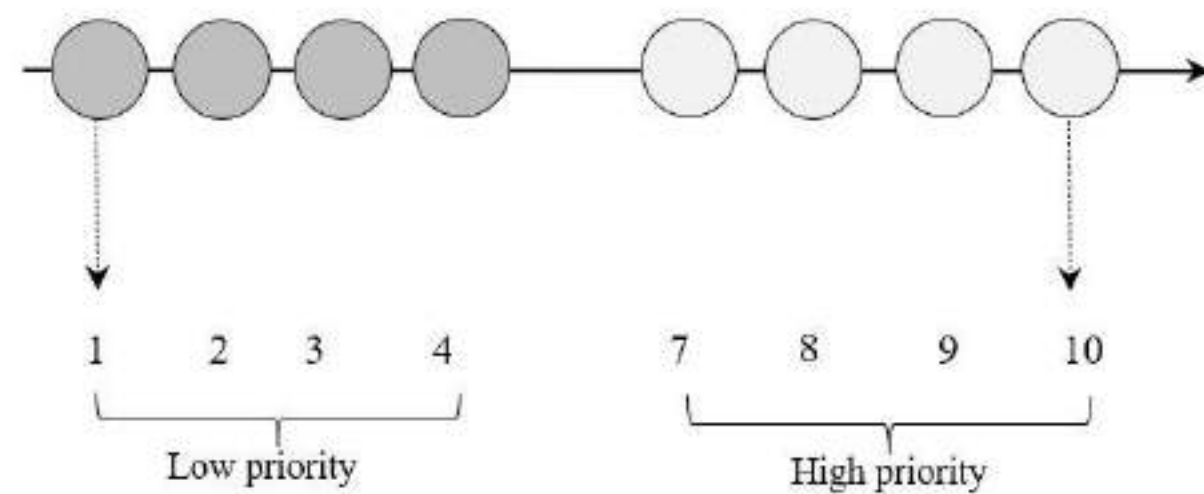
The study derived sustainable city indicators SCIs from Goal No. 11 of the Sustainable Development Goals SDGs. The study compared SDGs to the local efforts in the context of the sustainability of Saudi cities based on the results of the statistical report on the current status of Saudi cities issued by the General Authority for Statistics.





# METHODOLOGY

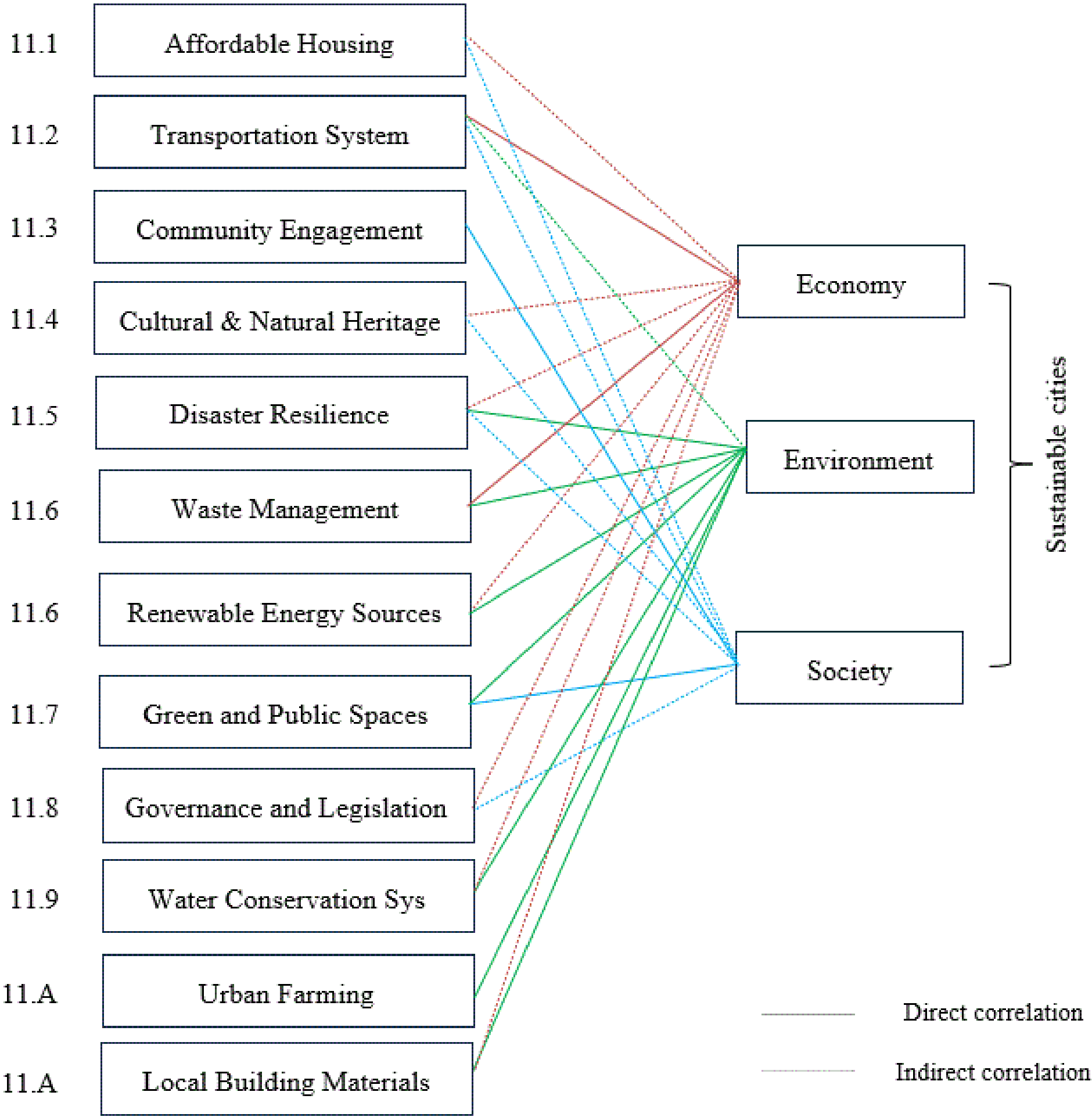
The initial strategic principles were presented for reviewing by the Research Centre at College of Architecture and Planning RC-CAP. 14 strategic principles for promoting the concept of sustainable cities in Saudi Arabia were distributed to 47 experts and academic. The survey form was distributed online to academic and professional groups through a sample of 15 academics, from King Saud University, College of Architecture and Planning, and 32 professionals affiliated with the Ministry of Municipal and Rural Affairs and Housing, the Royal Commissions for City Development RCCD, and the advisory offices. The percentage was converted to arithmetic averages from 1-10, where 10 indicates high priority and 1 indicates low priority



# RESULTS

## Sustainable City Indicators SCIs

Achieving Goal No. 11 requires implementing strategic plans for cities that take into account comprehensive urban development and give all segments of society equitable access to basic services, affordable housing, efficient transportation, and green spaces



# RESULTS

	No.	Sustainable Development Goals SDGs	Initial Strategic Principles ISPs
Economy	11.1	Affordable Housing	1. The balance in regional urban development consistent with resources &economic opportunities 2. Rationalizing the consumption of non-renewable resources & energy alternatives, especially in small cities 3. Promote environmentally friendly transportation alternatives in cities 4. Developing residential neighborhood standards to increase proportion of green and open areas 5. Exploiting cities' internal resources to operate and manage city facilities 6. Growth according to economic opportunities and water and energy reserves. 7. Sustainable urban legislation that is consistent with each city’s environmental, cultural (identity), economic and social characteristics 8. Sustainable housing plans that take into account the variation in the housing market between cities. 9. Developing local agencies to manage cities. 10. Supporting smart growth, including mixed uses, transportation, accessibility, and density rates 11. Decentralization in urban administration. 12. A governance framework for measuring performance for cities. 13. Community participation in decision-making. 14. Improving the performance of municipal agencies line with the environmental, economic and social sustainability indicators of cities
	11.2	Transportation System	
	11.4	Cultural & Natural Heritage	
	11.5	Disaster Resilience	
	11.6	Waste Management	
	11.8	Governance and Legislation	
	11.9	Water Conservation Sys	
	11.A	Local Building Materials	
Environment	115	Disaster Resilience	
	11.2	Transportation System	
	11.6	Waste Management	
	11.7	Green and Public Spaces	
	11.9	Water Conservation Sys	
	11.A	Urban Farming	
	11.A	Local Building Materials	
Society	11.1	Affordable Housing	
	11.2	Transportation System	
	11.3	Community Engagement	
	11.4	Cultural & Natural Heritage	
	11.5	Disaster Resilience	
	11.7	Green and Public Spaces	
	11.8	Governance and Legislation	

# RESULTS

## Local Context

The Kingdom of Saudi Arabia seeks to be one of the first countries towards achieving the concept of sustainable cities, as the National Vision 2030 emphasizes sustainable development goals SDGs

Saudi Arabia has set local initiatives, policies, and performance indicators to ensure the implementation of sustainable development goals SDGs

the Quality of Life Program QLP emphasized an initiative to develop urban planning systems, legislation and standards aimed at modernizing the general policy of urban planning through the methodology of institutional development of the urban planning system, and adopted the urban planning system document, planning standards and legislation for Saudi cities, in accordance with modern international best practices in Sustainable planning and development to enhance national identity.

# RESULTS

## National Vision initiatives and Local Efforts



01

Updating the National  
Urban Strategy 2030

03

Neighborhood  
Improvement Initiatives

05

Housing Projects and  
Programs

02

New City & Projects

04

Public Transportation  
Projects

06

Green and Public  
Spaces Projects



# DISCUSSION

## Strategic Principles for Promoting the Concept of Sustainable Cities in Saudi Arabia

Based on the results of the study, there are strategic priorities for locally sustainable cities. Table 4 summarizes the experts’ assessment of the strategic principles for promoting the concept of sustainable cities in Saudi Arabia.

No.	Strategic Principles ISPs	Average (1-10)
1	Sustainable urban legislation that is consistent with each city’s environmental, cultural (identity), economic and social characteristics	8.27
2	Developing residential neighborhood standards to increase proportion of green and open areas	8.15
3	Promote environmentally friendly transportation alternatives in cities	8.12
4	Improving the performance of municipal agencies line with the environmental, economic and social sustainability indicators of cities	8.11
5	Growth according to economic opportunities and water and energy reserves.	7.94
6	Rationalizing the consumption of non-renewable resources & energy alternatives, especially in small cities.	7.88

# CONCLUSION

The paper discussed the strategic principles to promote the concept of sustainable cities in Saudi Arabia. The study discussed local efforts in the context of the transformation of Saudi cities towards concepts of sustainability, especially in urban transportation, urban design, housing, environment and resources. The study concluded with 6 high-priority strategic principles:

- Sustainable urban legislation that is consistent with each city's environmental, cultural (identity), economic and social characteristics.
- Developing residential neighborhood standards to increase proportion of green and open areas.
- Promote environmentally friendly transportation alternatives in cities.
- Improving the performance of municipal agencies line with the environmental, economic and social sustainability indicators of cities.
- Growth according to economic opportunities and water and energy reserves.
- Rationalizing the consumption of non-renewable resources & energy alternatives, especially in small cities.

# RECOMMENDATIONS

The study found that there is importance in developing the strategic perspective of Saudi cities as a major factor in human and place development that can contribute to enhancing sustainability aspects, including social interaction, population economics, and improving the environment. Based on the above, the paper recommends the following:

- Develop local indicators for the transition towards sustainable cities and measure progress in cities in line with Vision 2030.
- Raising the classification of community participation in urban planning in a manner consistent with the goals of “city sustainability” to achieve partnership in decision-making.
- Promoting existing and targeted development opportunities and structuring them within the sustainable development system.
- Expanding scientific research and strengthening the relationship between the academic and professional sectors in the field of theories and applications of sustainable cities.



# REFERENCES

1. United Nations, "Goal 11.," Department of Economic and Social Affairs, 2024. [Online]. Available: <https://sdgs.un.org/goals/goal11>.
2. J. Nasser, A. Ajlan and W. Alzamil, "A Framework for Assessing Social Sustainability According to International Assessment Standards," Journal of Fayoum University Faculty of Engineering, vol. 5, no. 1, pp. 9-22, 2022.
3. A. Merino-Saum, P. Halla, V. Superti, A. Boesch and C. Binder, "Indicators for urban sustainability: Key lessons from a systematic analysis of 67 measurement initiatives," Ecological Indicators, vol. 119, 2020.
4. P. Rogers, K. Jalal and J. Boyd, An Introduction to Sustainable Development, London: Earthscan, 2007.
5. H.-E. Q. Perea-Moreno A-J, "The Sustainable City: Advances in Renewable Energy and Energy Saving Systems," Energies, vol. 14, no. 24, 2021.
6. S. COHEN, “DEFINING THE SUSTAINABLE CITY.” The Sustainable City, Columbia University Press, 2018, pp. 3-14.
7. R. K. Yin, Case Study Research: Design and Methods (Applied Social Research Methods), New York City: SAGE Publications, Inc; Fifth edition, 2013.
8. United Nations, "The Sustainable Development Goals Report," UN, New York, 2023.
9. National Vision 2030, "Annual report," Saudi Vision 2030, Riyadh, 2022.
10. General Authority for Statistics, "Sustainable development goals in the Kingdom of Saudi Arabia," General Authority for Statistics, Riyadh, 2018.
11. Quality of Life Program, "Quality of life program implementation plan," Quality of Life Program, Riyadh, 2020.
12. Ministry of Municipal and Rural Affairs and Housing, "Updating the urban development strategy," Ministry of Municipal and Rural Affairs and Housing, Riyadh, 2014.
13. Green Riyadh, "Green Riyadh," 2023. [Online]. Available: <https://riyadhggreen.sa>
14. Saudi Press Agency SPA, The Jeddah Governorate Slum Removal Committee continues its work according to the announced executive plan, 2023. [Online]. Available: <https://www.spa.gov.sa/2382872>. [Accessed 11 3 2024].
15. W. Alzamil, Evaluation of Affordable Housing and Subsidy Programs in Saudi Arabia, Saarbrücken: LAP LAMBERT Academic Publishing, 2016.
16. W. Alzamil, Expert survey form on "Strategic Principles to Promote the Concept of Sustainable Cities in Saudi Arabia". [Survey]. 15 3 2024.

# ACKNOWLEDGMENTS

*The author would like to acknowledge the Research Center in the College of Architecture and Planning RC-CAP at King Saud University, and many thanks to the Survey Form Re-viewers Panel SFRP: Prof. Osama S. Khalil, Dr. Mohammed H. Ibrahim, and Dr. Ibrahim Ballouz.*



---



# CCTS

CONFERENCE ON CREATIVITY,  
TECHNOLOGY, AND SUSTAINABILITY.

## THANK YOU