

PLANNING FOR CLIMATE CHANGE AND RAPID URBANISATION

# CONTINUING PROFESSIONAL DEVELOPMENT, LECTURE SERIES FOR PROFESSIONALS

**Thank you for joining!**

**This lecture will begin shortly at 12PM BST**



Image credit:  
Morley von Sternberg for Allies and Morrison

# Lecture Series

## Overview of the seven lectures forming part of this series:

- 1. Introduction to the UN 2030 Sustainable Development Goals**, Mina Hasman, SOM  
Provides an overview of the UN 2030 SDGs together with other related international agreements, and describes the importance of the Goals for Built Environment Professionals.
- 2. Planning for Rapid Urbanisation**, Ben Bolgar, The Prince's Foundation  
Outlines a framework for use in secondary cities which are experiencing rapid growth but which may have little or no access to professional planning expertise.
- 3. Planned City Extensions**, Alfredo Caraballo, Allies and Morrison  
Provides a reminder of key master-planning and urban design principles such as: site analysis, micro-climate design, density, mixed use, walkability etc.
- 4. Resilient Infrastructure**, Ian Carradice, Arup  
Explains the context, relevance and drivers to develop resilient infrastructure by adopting an integrated design approach and considering planetary solutions to address climate related challenges..
- 5. Climate Responsive Design**, Peter Clegg, Isabel Sandeman and Rachel Sayers from FCB Studios, and Rafiq Azzam, Shatotto  
Part one is focused on 'A Manifesto for delivering Climate Responsive Design', and Part Two, entitled 'Collaborating for Sustainable Development', provides a case study of how the principles of Climate responsive design have been used on a project in Bangladesh to create an inspiring and comfortable educational environment for the Aga Khan Academies Unit.
- 6. Heritage-led Regeneration**, Geoff Rich, Feilden Clegg Bradley Studios  
Describes the value of heritage led regeneration in terms of the reuse of existing buildings, and the potential to generate social and economic development.
- 7. Sustainable Outcomes Guide**, Gary Clark, HOK London Studio  
Provides a practical explanation of the outcomes that need to be delivered if we are to achieve development which is sustainable. Includes meaningful, measurable targets and associated metrics.

# UN 2030 SUSTAINABLE DEVELOPMENT GOALS

## FROM PRINCIPLES TO PRACTICE

JULY 2020

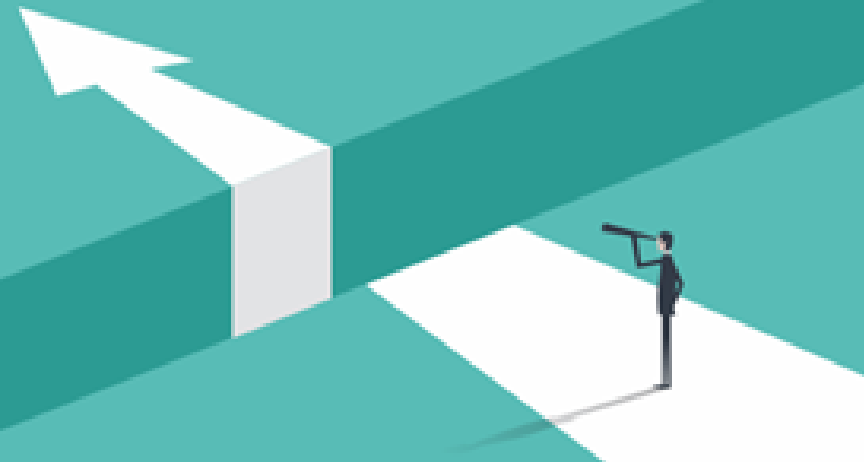
SOM



# UN 2030 SDGs

## Aim:

1. to inform on the global climate change context as it relates to built environment and people
2. to give insights on the international commitments that aim to address climate change
3. to provide a detailed understanding of the UN 2030 Sustainable Development Goals







**We are living in a rapidly changing world – where climate change has pushed the Earth into an uncharted territory.**



## ... Where climate anomalies and extreme events are experienced more frequently.

Selected significant climate anomalies + events – January 2020

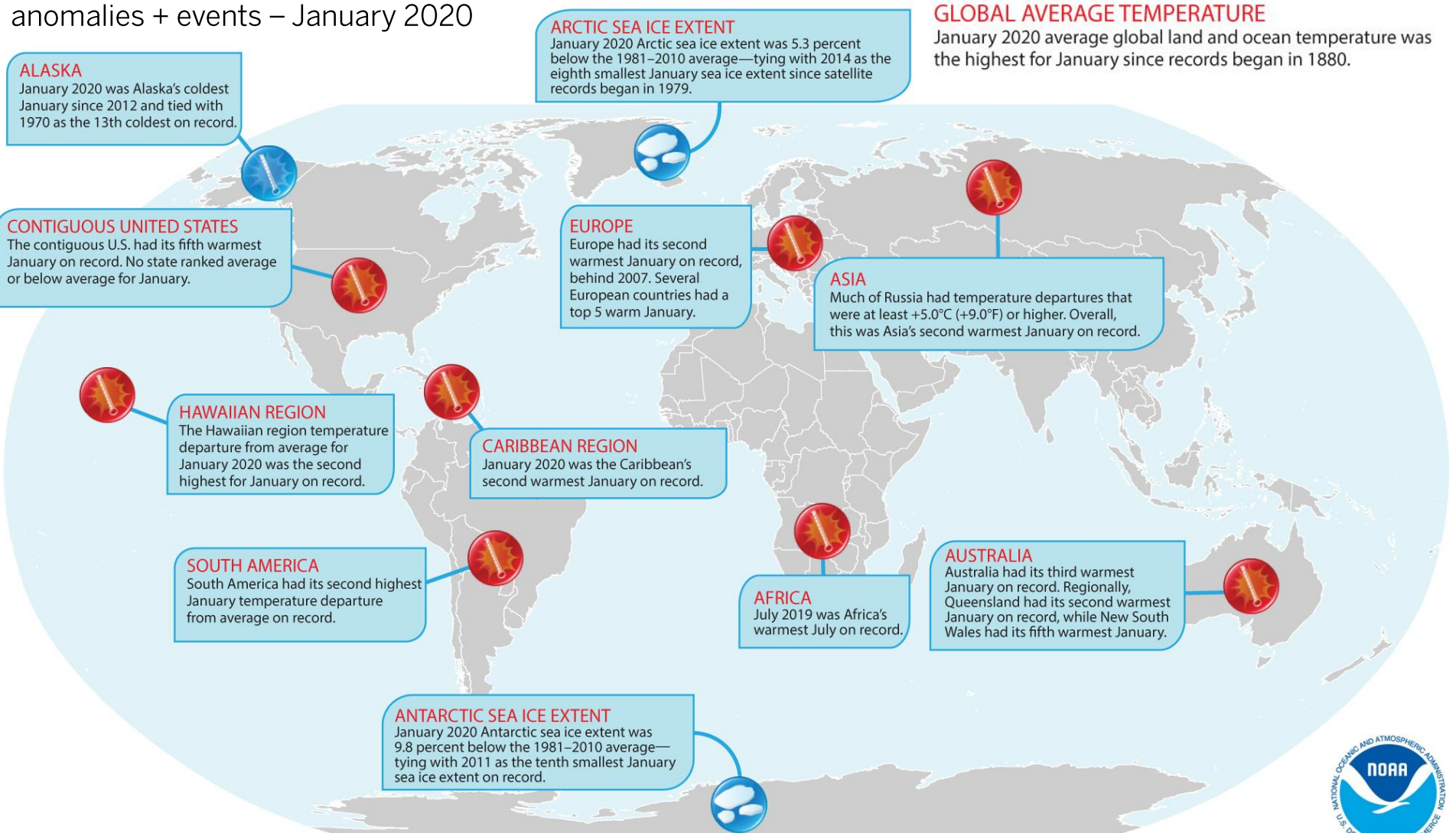




IMAGE SOURCE: RODI SAID, REUTERS, 2014. INFORMATION SOURCE: "GLOBAL REPORT ON INTERNAL DISPLACEMENT – GRID 2019", INTERNAL DISPLACEMENT MONITORING CENTRE.

**Last year, sudden-onset hazards resulted in over 17 million displacements in 144 countries and territories around the globe.**





SOURCE: UN DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, 2019.

**Urban population is expected to increase by 2.4 billion in the next 30 years – with the majority of people living in cities.**





SOURCE: ARCHITECTURE 2030, 2020.

**In the next 35 years, over 230 billion m<sup>2</sup> of buildings will be constructed and/or renovated in cities worldwide.**





SOURCE: ARCHITECTURE 2030, 2020.

**This is an area equal to the entire  
current, global building stock.**





SOURCE: ARCHITECTURE 2030, 2020.

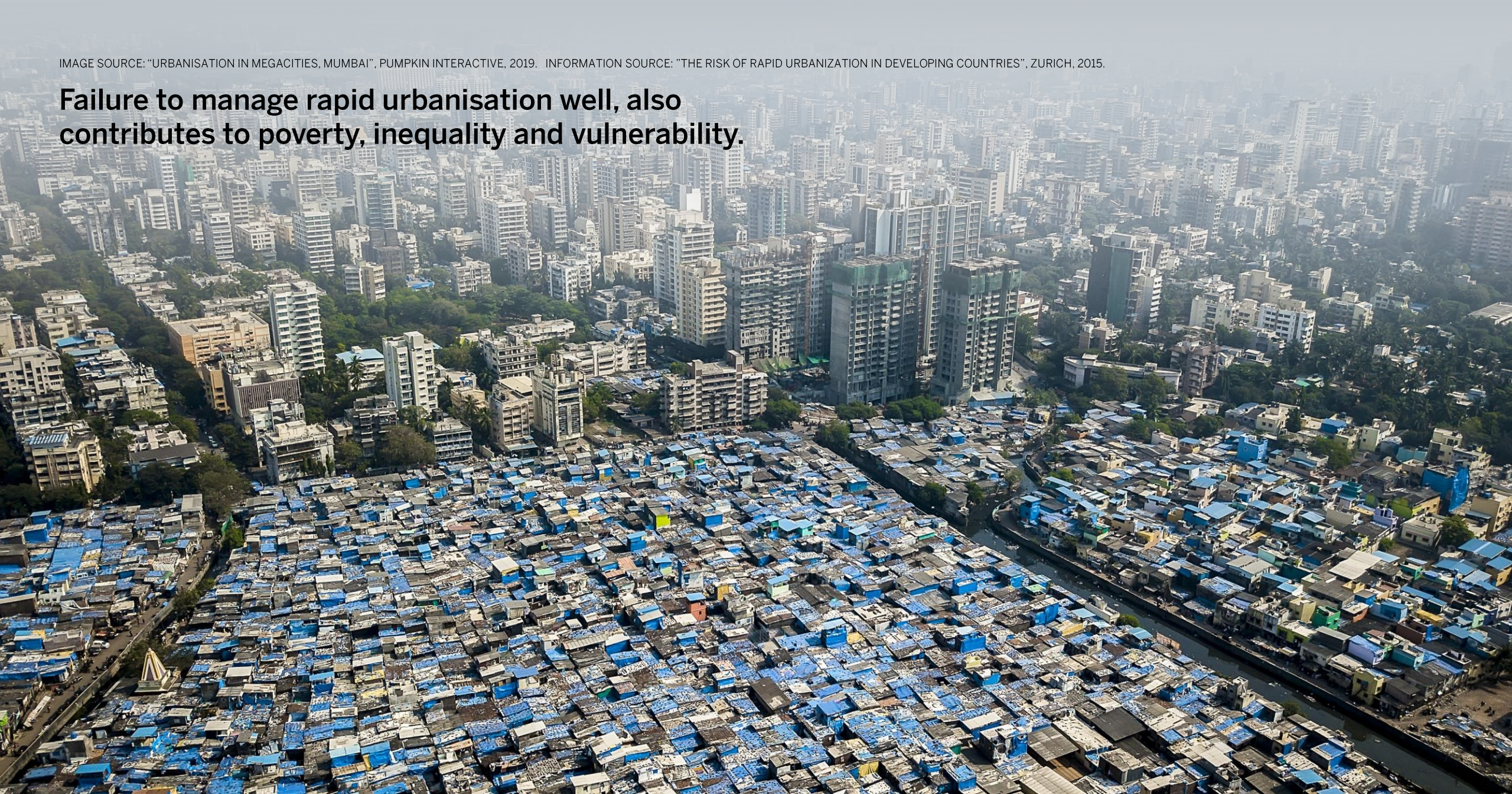
**Buildings generate nearly 40% of annual,  
global Greenhouse Gas emissions.**





IMAGE SOURCE: "URBANISATION IN MEGACITIES, MUMBAI", PUMPKIN INTERACTIVE, 2019. INFORMATION SOURCE: "THE RISK OF RAPID URBANIZATION IN DEVELOPING COUNTRIES", ZURICH, 2015.

**Failure to manage rapid urbanisation well, also  
contributes to poverty, inequality and vulnerability.**





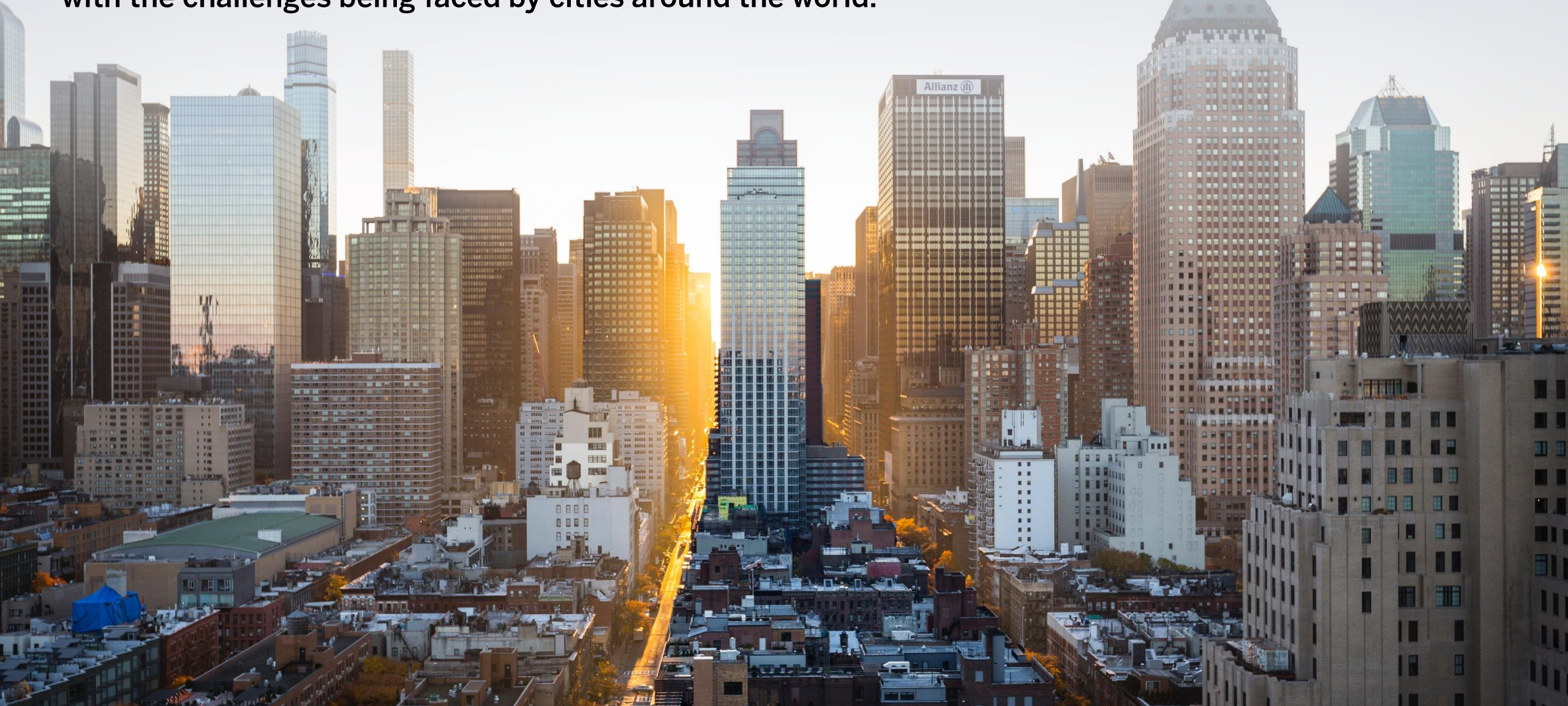
SOURCE: "CLIMATE CHANGE AND HEALTH", WHO, 2018.

**Climate change is expected to cause  
approximately 250,000 additional deaths/year.**





**Built environment professionals have a responsibility to engage with the challenges being faced by cities around the world.**





<https://www.un.org/en/>



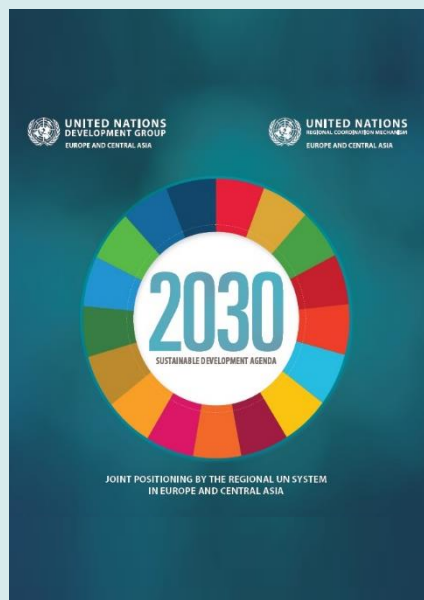
<https://www.worldgbc.org/>



<https://globalabc.org/>



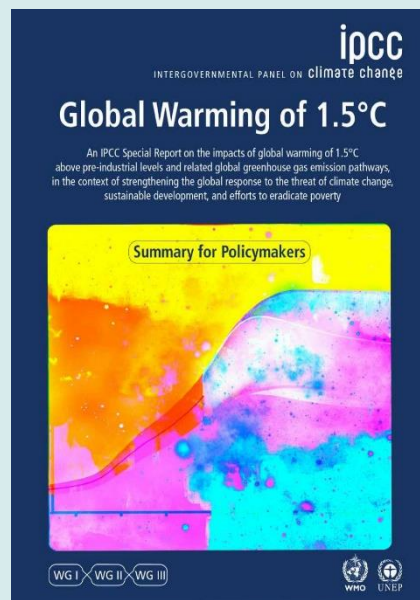
IMAGE SOURCES: NOTED UNDERNEATH EACH IMAGE. INFORMATION SOURCE: "ETHICS AND SUSTAINABLE DEVELOPMENT COMMISSION KEY FINDINGS AND RECOMMENDATIONS", RIBA, 2018.



<https://www.unece.org/runcwELCOME/publications/regional-un-coordination/2016/2030-sustainable-development-agenda-joint-positioning/docs.html>



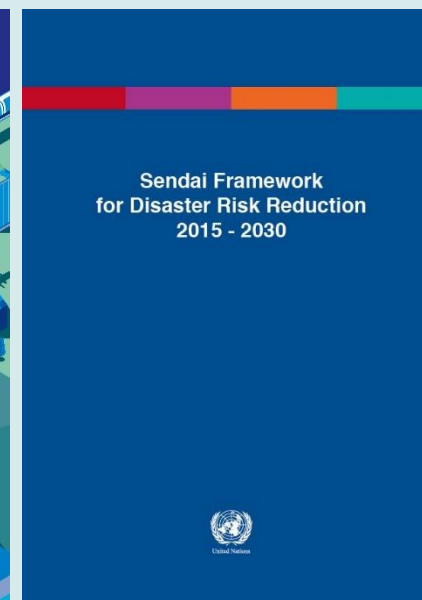
<https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>



[https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15\\_Full\\_Report\\_High\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf)



<https://wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y>



[https://www.preventionweb.net/files/43291\\_sendaimrameworkfordreren.pdf](https://www.preventionweb.net/files/43291_sendaimrameworkfordreren.pdf)



[https://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA\\_Outcome.pdf](https://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf)



IMAGE + INFORMATION SOURCE: "THE SUSTAINABLE DEVELOPMENT GOALS REPORT", UNITED NATIONS, 2019.

The *UN 2030 Agenda* is a plan for action for people, planet and prosperity, providing a blueprint to deliver a sustainable world in this 'decade of action' (2020-2030).





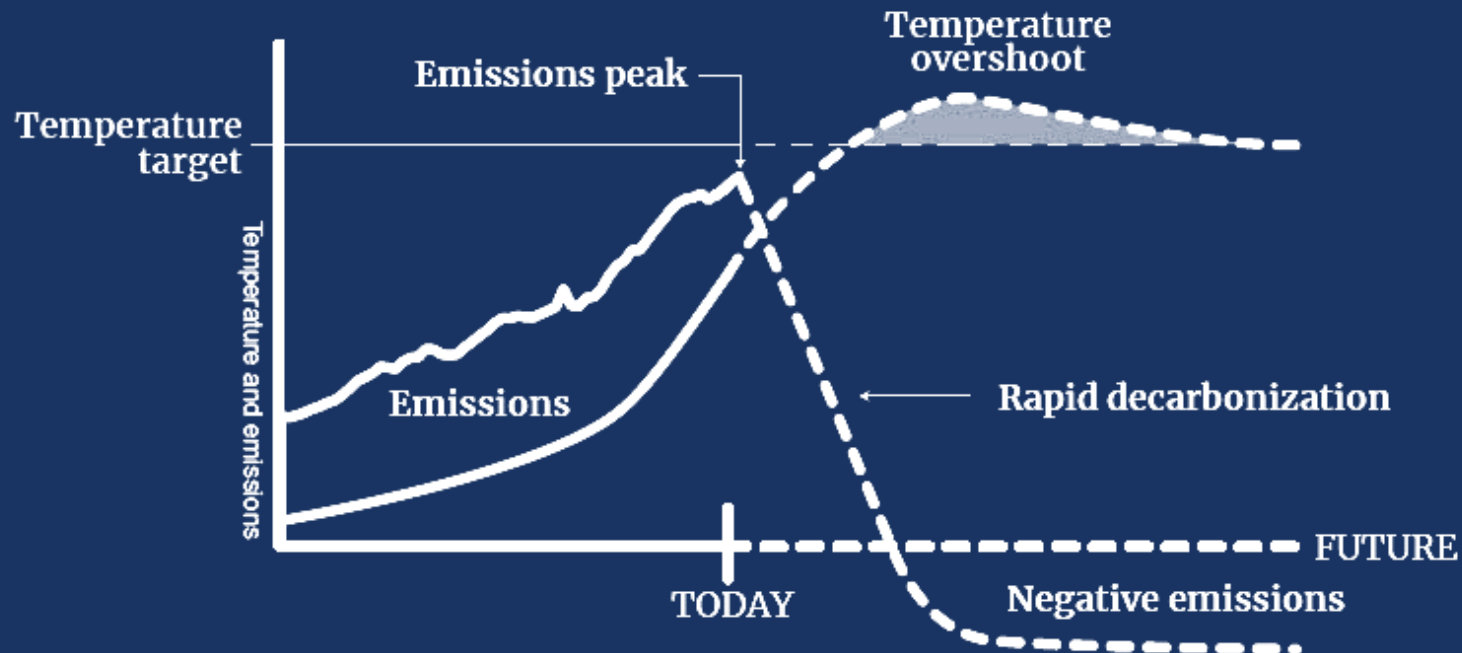
***The Paris Agreement*** – established in 2015 at the 21<sup>st</sup> Session of the Conference of Parties (COP21) – brings all nations together to combat climate change – by accelerating and intensifying actions and investments needed for a sustainable, low carbon future.





IMAGE + INFORMATION SOURCE: "SPECIAL REPORT ON GLOBAL WARMING OF 1.5°C", INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), 2018.

IPCC's Special Report on *Global Warming of 1.5°C* highlights the need for "deep emissions 'reductions'", and "rapid, far-reaching and unprecedented changes in all aspects of society" to limit global warming to 1.5°C .

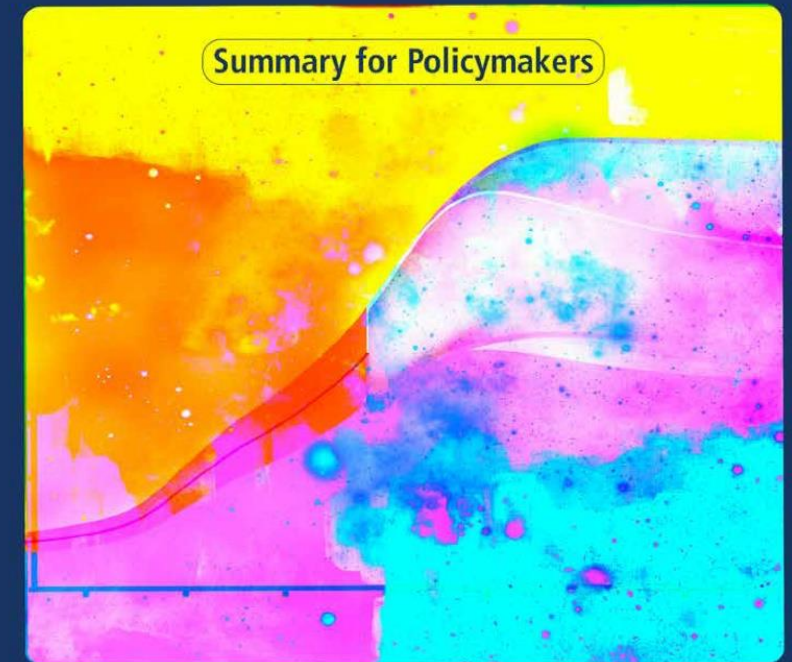


ipcc

INTERGOVERNMENTAL PANEL ON climate change

## Global Warming of 1.5°C

An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty

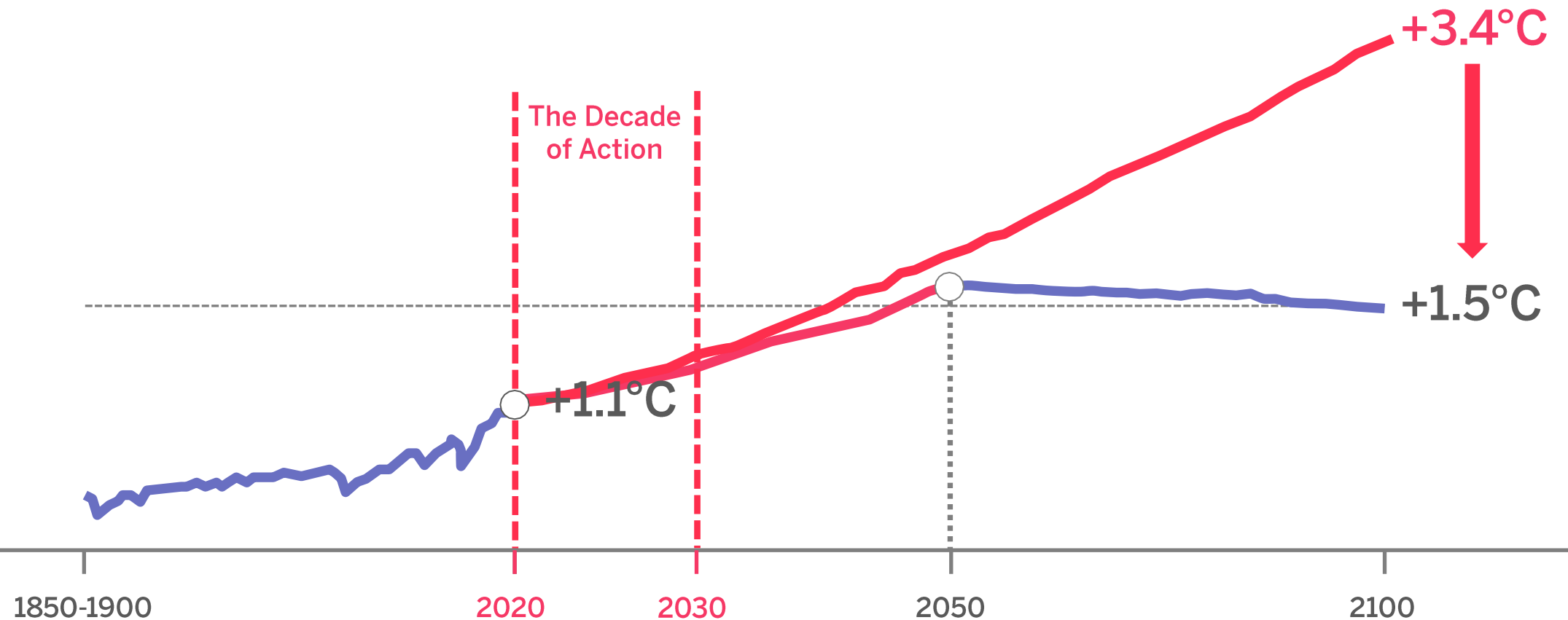


WG I WG II WG III



“...1.5°C would require **rapid** and **far-reaching** transitions...  
at an **unprecedented** rate”.

(UN Special Report, *Global Warming of 1.5°C*, October 2018)





UNEP's *Emissions Gap Report* presents the latest data on the expected gap in 2030 for the 1.5°C and 2°C temperature targets of the Paris Agreement.


The latest report of 2019 looked at the potential of the energy transition and efficiency in the use of materials.

**5x increase**  
in collective current commitments

## Emissions Gap Report 2019







SOURCE: "IMPLEMENTING SENDAI FRAMEWORK", UNITED NATIONS OFFICE FOR DISASTER RISK REDUCTION, 2020.

***The Sendai Framework for Disaster Risk Reduction***  
**2015-2030 advocates for substantial reduction of**  
**disaster risk and losses in lives, businesses and assets.**



SOURCE: ""FINANCING FOR DEVELOPMENT, ADDIS ABABA ACTION AGENDA", UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS FINANCING, 2015.

***The Addis Ababa Action Agenda*** – adopted in 2015 – provides a global framework for financing sustainable development by aligning all financial flows and policies with economic, social and environmental priorities.





**The 17 UN Sustainable Development Goals (SDGs) are an urgent call for action by all countries in a global partnership.**

**The SDGs are universal.**

**The SDGs are about integration.**

**The SDGs are about transformation.**





# 1 NO POVERTY



IMAGE + INFORMATION SOURCE: "GOAL 1: NO POVERTY", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #1's mission is to end poverty in all its forms and dimensions by 2030, everywhere.





# 1 NO POVERTY

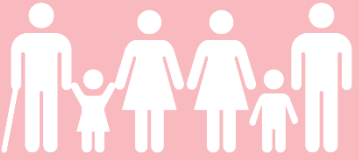


IMAGE SOURCE: "GOAL 1: NO POVERTY", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design contribute to the goal of ending poverty in all its forms and dimensions?**





IMAGE SOURCE: ANUPAMA KUNDOO & RAY MEEKER, 2013..

## Volontariat Home for Homeless Children, Pondicherry, India





# 2 ZERO HUNGER



IMAGE + INFORMATION SOURCE: "GOAL 2: ZERO HUNGER", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #2's mission is to end all forms of hunger and malnutrition by 2030.





# 2 ZERO HUNGER



IMAGE SOURCE: "GOAL 2: ZERO HUNGER", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design contribute to ending hunger, and encouraging the transition to sustainable agriculture?**



IMAGE SOURCE: AOD AKKAPOL. INFORMATION SOURCE: THE MICHIGAN URBAN FARM INITIATIVE, 2010.

# The Michigan Urban Farming Initiative, Detroit, Michigan, USA





# 3 GOOD HEALTH AND WELL-BEING



IMAGE + INFORMATION SOURCE: "GOAL 3: GOOD HEALTH AND WELLBEING", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #3's mission is to ensure healthy lives, address inequalities, and promote well-being for all at all ages.





# 3 GOOD HEALTH AND WELL-BEING



IMAGE SOURCE: "GOAL 3: GOOD HEALTH AND WELLBEING", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design help ensure healthy  
lives and well-being for all, at all ages?**





IMAGE SOURCE: "KONDITAGET LÜDERS", VISIT COPENHAGEN, 2020. INFORMATION SOURCE: JAJA ARCHITECTS, 2016.

## Konditaget Lüders – the Fitness Roof Lüders, Copenhagen, Denmark





# 4 QUALITY EDUCATION



IMAGE + INFORMATION SOURCE: "GOAL 4: QUALITY EDUCATION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #4's mission is to ensure inclusive, equitable quality education, and promote lifelong learning opportunities for all.





# 4 QUALITY EDUCATION



IMAGE SOURCE: "GOAL 4: QUALITY EDUCATION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

## How can this design support quality education and lifelong learning?





IMAGE SOURCE: MARTINA RUBINO,, 2017. INFORMATION SOURCE: EMERGENCY ARCHITECTURE & HUMAN RIGHTS, 2017.

## The Community Dome (Zaa'tari Classroom), Zaa'tari Village, Jordan





# 5 GENDER EQUALITY



IMAGE SOURCE: "GOAL 5: GENDER EQUALITY", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG  
#5's mission is to  
achieve gender  
equality and empower  
all women and girls.





# 5 GENDER EQUALITY



IMAGE SOURCE: "GOAL 5: GENDER EQUALITY", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design  
advance gender  
equality and the  
empowerment of  
women and girls?**





IMAGE + INFORMATION SOURCE: HKS ARCHITECTS, 2017..

## Kachumbala Maternity Unit, Kachumbala, Uganda, Africa





# 6 CLEAN WATER AND SANITATION



IMAGE + INFORMATION SOURCE: "GOAL 6: CLEAN WATER AND SANITATION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #6's mission is to ensure availability and sustainable management of water and sanitation for all.





# 6 CLEAN WATER AND SANITATION



IMAGE SOURCE: "GOAL 6: CLEAN WATER AND SANITATION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design help ensure the sustainable management of water and universal access to sanitation?**





IMAGE + INFORMATION SOURCE: SKIDMORE, OWINGS & MERRILL, 2020.

# Wild Mile, Chicago, Illinois, USA





# 7 AFFORDABLE AND CLEAN ENERGY



IMAGE + INFORMATION SOURCE: "GOAL 7: AFFORDABLE AND CLEAN ENERGY", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #7's mission is to ensure access to affordable, reliable, sustainable and modern energy for all.





# 7 AFFORDABLE AND CLEAN ENERGY



IMAGE SOURCE: "GOAL 7: AFFORDABLE AND CLEAN ENERGY", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

## How can this design contribute to a sustainable energy transition?





IMAGE + INFORMATION SOURCE: KLIMENT HALSBAND ARCHITECTS, 2019.

## Mount Sinai Kyabirwa Surgical Facility, Kyabirwa, Uganda





# 8 DECENT WORK AND ECONOMIC GROWTH



IMAGE + INFORMATION SOURCE: "GOAL 8: DECENT WORK AND ECONOMIC GROWTH", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #8's mission is to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.





# 8 DECENT WORK AND ECONOMIC GROWTH



IMAGE SOURCE: "GOAL 8: DECENT WORK AND ECONOMIC GROWTH", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

## How can this design promote decent work for all?





IMAGE + INFORMATION SOURCE: FEILDENCLEGGBRADLEYSTUDIOS, 2019.

## Tourist Burma Building, Yangon, Myanmar





# 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



IMAGE + INFORMATION SOURCE: "GOAL 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

**The UN 2030 SDG #9's mission is to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.**







IMAGE SOURCE: "GOAL 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design advance sustainable industrialization and innovation, especially in those places that do not have access to modern industry?**





IMAGE + INFORMATION SOURCE: ARUP, 2020.

# Madinat Al Irfan, Muscat, Oman





# 10 REDUCED INEQUALITIES



IMAGE + INFORMATION SOURCE: "GOAL 10: REDUCED INEQUALITIES", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #10's mission is to reduce inequality within and among countries.





# 10 REDUCED INEQUALITIES



IMAGE SOURCE: "GOAL 10: REDUCED INEQUALITIES", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

## How can this design help to reduce inequality within and among countries?





IMAGE SOURCE: MARTIN SCHUBERT. INFORMATION SOURCE: CUBO ARKITEKTER & FORCE ARCHITECTS, 2014.

# The House of the Disabled People's Organization, Taastrup, Denmark



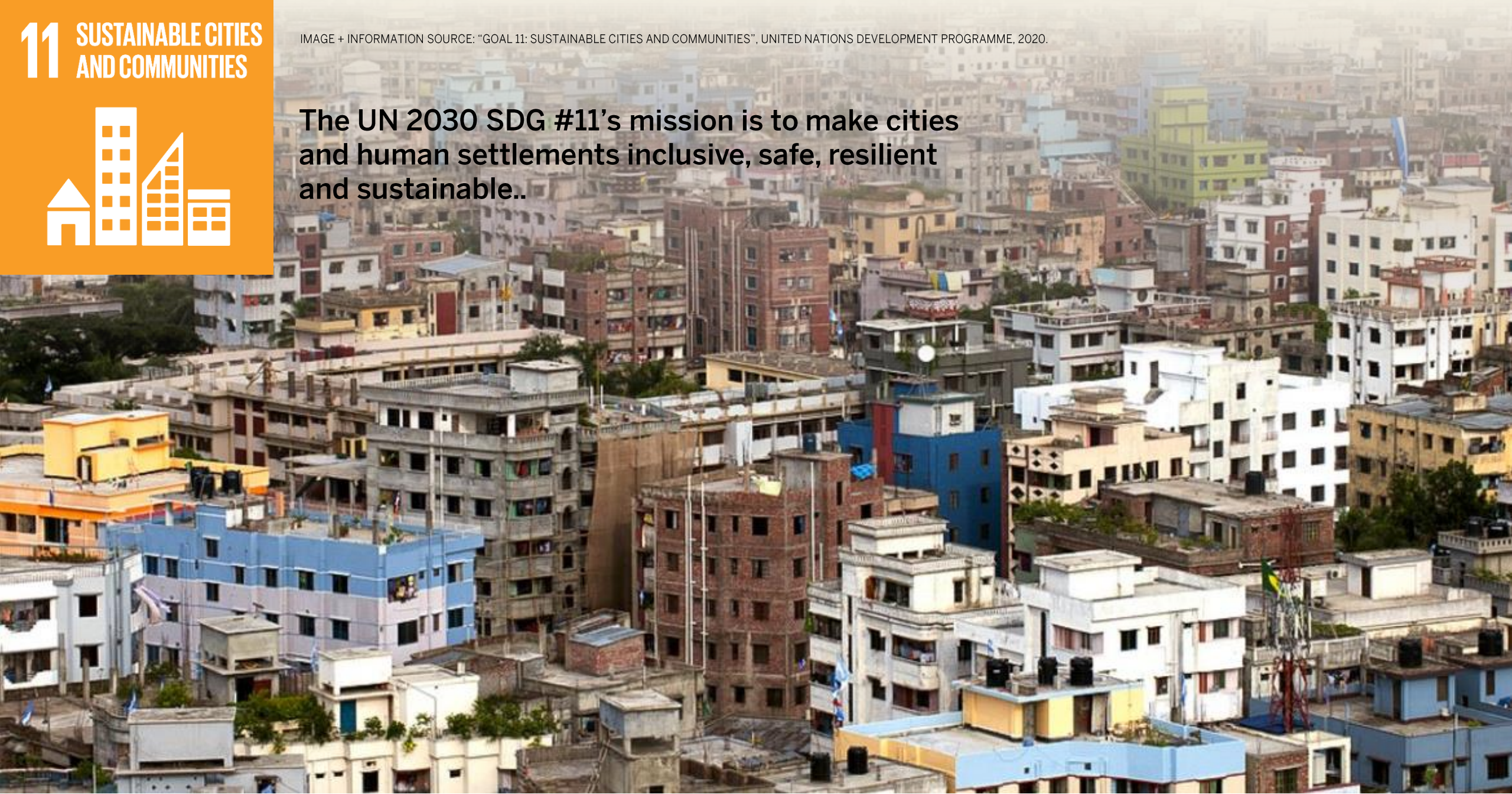


# 11 SUSTAINABLE CITIES AND COMMUNITIES



IMAGE + INFORMATION SOURCE: "GOAL 11: SUSTAINABLE CITIES AND COMMUNITIES", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

**The UN 2030 SDG #11's mission is to make cities and human settlements inclusive, safe, resilient and sustainable..**



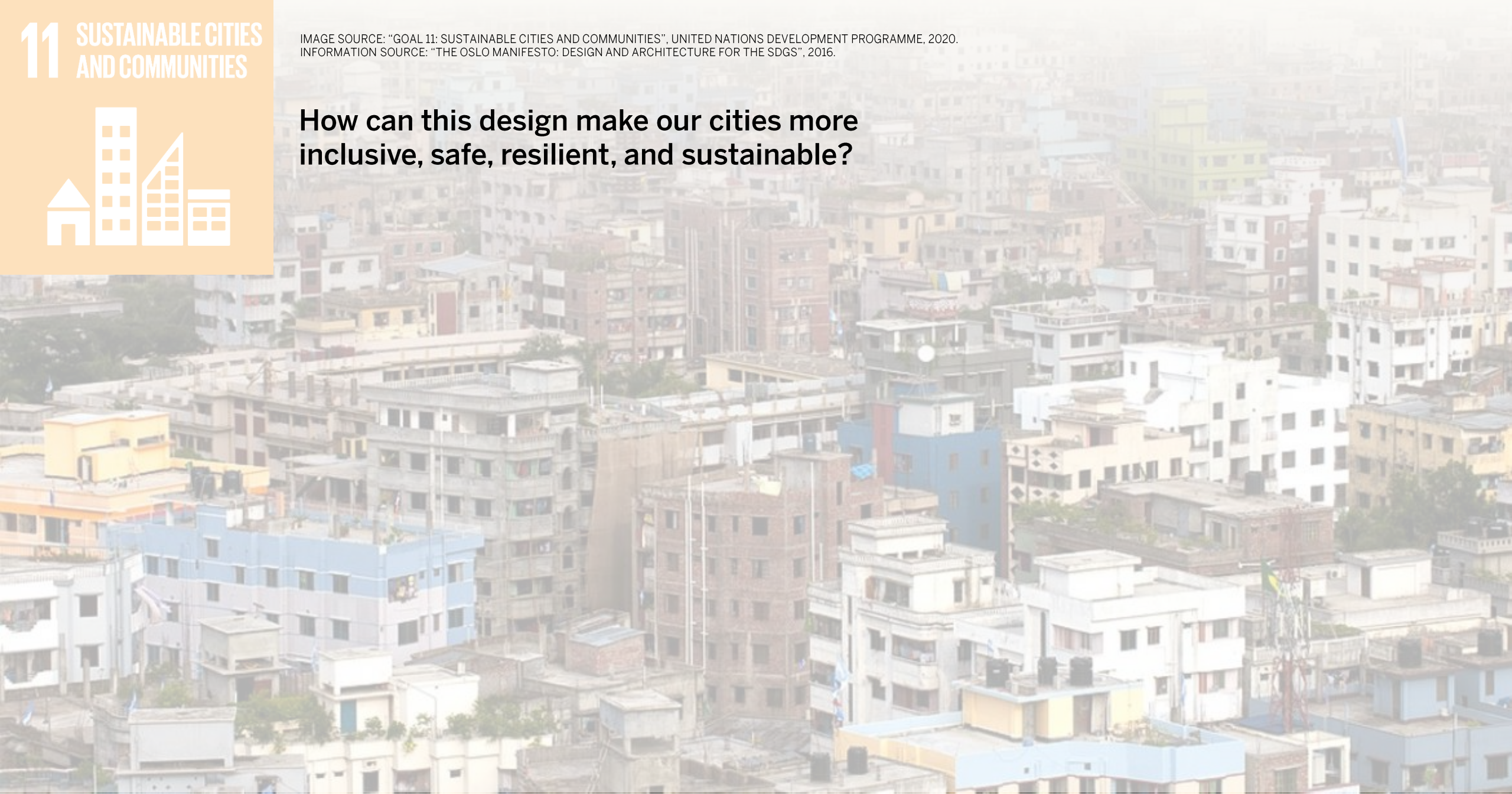


# 11 SUSTAINABLE CITIES AND COMMUNITIES



IMAGE SOURCE: "GOAL 11: SUSTAINABLE CITIES AND COMMUNITIES", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design make our cities more  
inclusive, safe, resilient, and sustainable?**





INFORMATION + IMAGE SOURCE: ETH, URBAN-THINK THANK, 2017.

## Empower Shack, Cape Town, South Africa





# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



IMAGE + INFORMATION SOURCE: "GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #12's mission is to ensure sustainable consumption and production patterns.





# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



IMAGE SOURCE: "GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design transform  
production and consumption  
patterns, to make them more  
sustainable?**

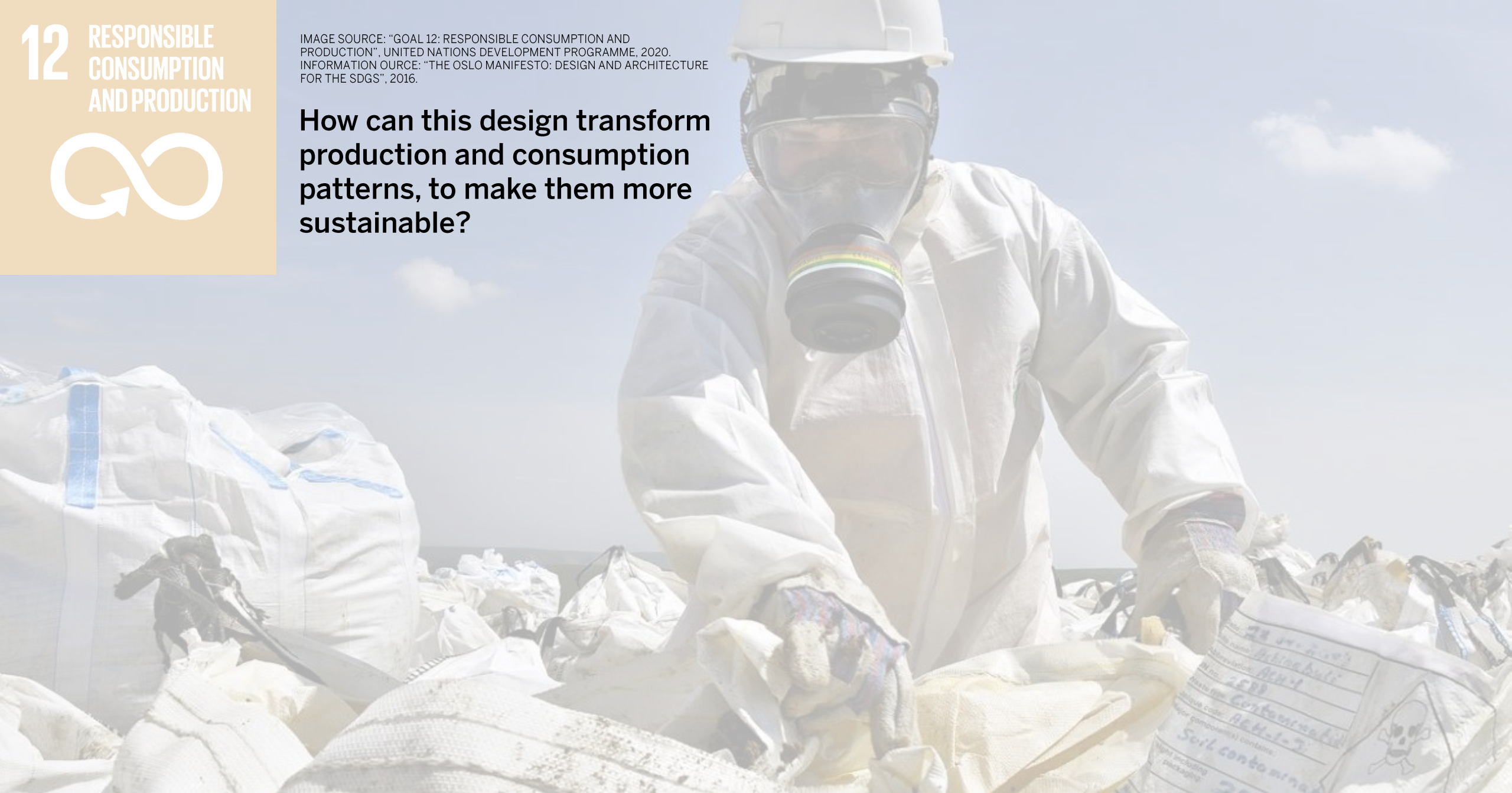




IMAGE + INFORMATION SOURCE: VOLL ARKITEKTER, 2019.

## Mjøstårnet, Brumunddal, Norway





# 13 CLIMATE ACTION



IMAGE + INFORMATION SOURCE: "GOAL 13: CLIMATE ACTION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

**The UN 2030 SDG #13's mission is to take urgent action to combat climate change and its impacts.**





# 13 CLIMATE ACTION



IMAGE SOURCE: "GOAL 13: CLIMATE ACTION", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design be part of the urgent action that is needed to combat climate change and its impacts?**





IMAGE SOURCE: TURENSCAPE, 2014. INFORMATION SOURCE: TURENSCAPE, 2014.

## Qún lì Stormwater Park, Harbin City, China





# 14 LIFE BELOW WATER

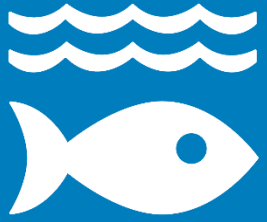


IMAGE + INFORMATION SOURCE: "GOAL 14: LIFE BELOW WATER",  
UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #14's mission is to conserve and use the oceans, seas and marine resources for sustainable development.





# 14 LIFE BELOW WATER

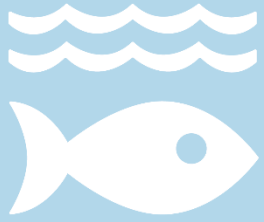


IMAGE SOURCE: "GOAL 14: LIFE BELOW WATER", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design be  
part of caring for our  
oceans and seas?**





IMAGE SOURCE: ADAM MØRK, 2017. INFORMATION SOURCE: DORTE MANDRUP ARCHITECTS, 2017.

## The Wadden Sea Centre, Jutland, Denmark





# 15 LIFE ON LAND



IMAGE + INFORMATION SOURCE: "GOAL 15: LIFE ON LAND", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

**The UN 2030 SDG #15's mission is to protect, restore and promote sustainable use of terrestrial ecosystems.**





# 15 LIFE ON LAND



IMAGE SOURCE: "GOAL 15: LIFE ON LAND", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

**How can this design help to protect and restore ecosystems and preserve biodiversity?**





IMAGE + INFORMATION SOURCE: TURENSCAPE, 2009.

## Q in Huángdào Red Ribbon Park, Q in Huángdào City, China





# 16 PEACE, JUSTICE AND STRONG INSTITUTIONS



IMAGE + INFORMATION SOURCE: "GOAL 16: PEACE, JUSTICE AND STRONG INSTITUTIONS", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

**The UN 2030 SDG #16's mission is to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.**





# 16 PEACE, JUSTICE AND STRONG INSTITUTIONS



IMAGE SOURCE: "GOAL 16: PEACE, JUSTICE AND STRONG INSTITUTIONS", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

## How can this design contribute to the development of peaceful, inclusive, and just societies?





IMAGE SOURCE: EDGAR LANGE, 2013. INFORMATION SOURCE: CAS STUDIO, 2017.

## Manica Community Centre, Manica, Mozambique





# 17 PARTNERSHIPS FOR THE GOALS



IMAGE + INFORMATION SOURCE: "GOAL 17: PARTNERSHIPS FOR THE GOALS", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.

The UN 2030 SDG #17's mission is to strengthen the means of implementation and revitalize the global partnership for sustainable development.





# 17 PARTNERSHIPS FOR THE GOALS



IMAGE SOURCE: "GOAL 17: PARTNERSHIPS FOR THE GOALS", UNITED NATIONS DEVELOPMENT PROGRAMME, 2020.  
INFORMATION SOURCE: "THE OSLO MANIFESTO: DESIGN AND ARCHITECTURE FOR THE SDGS", 2016.

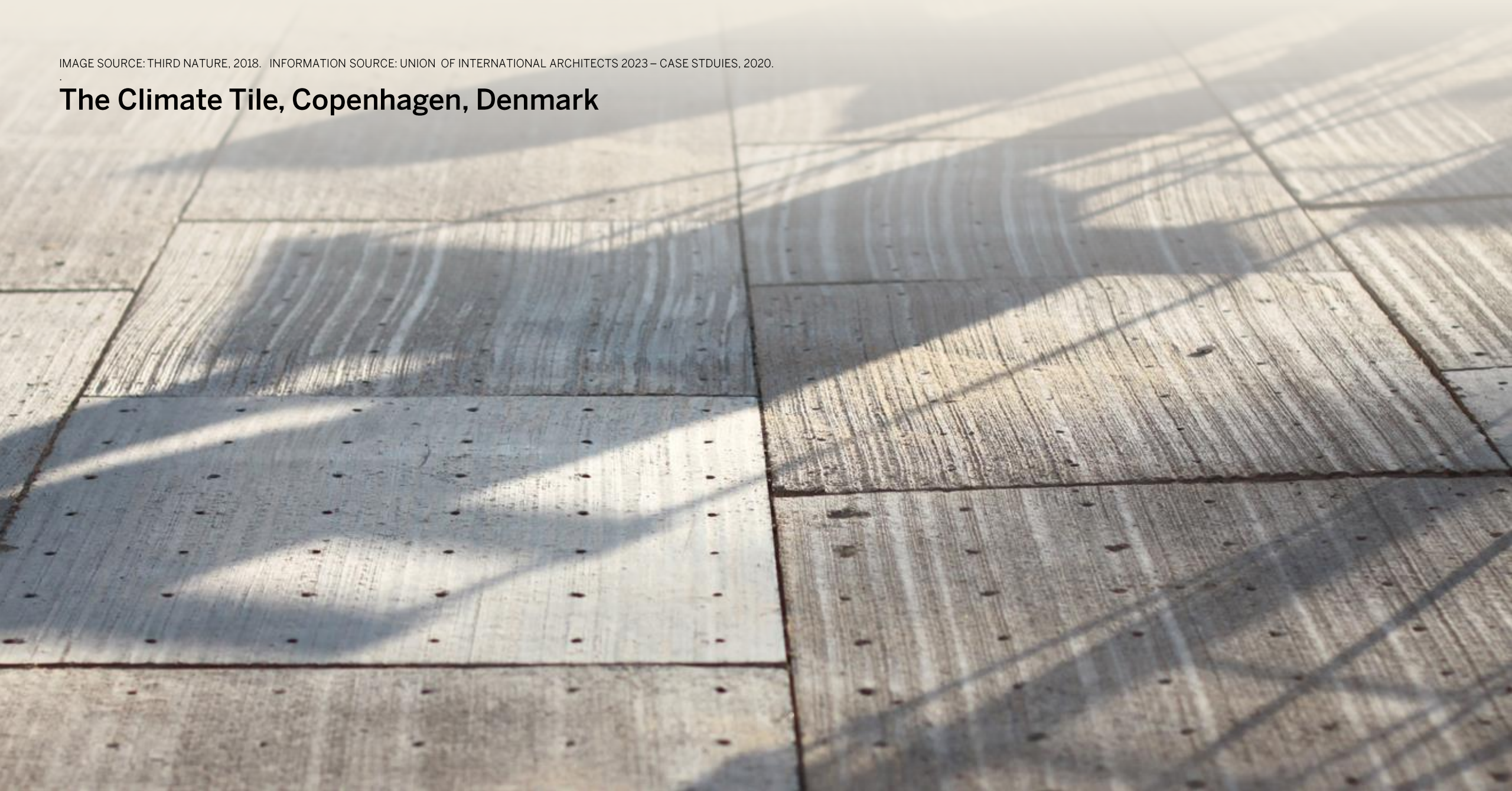
## How can this design advance the global partnership needed to achieve all of these goals?





IMAGE SOURCE: THIRD NATURE, 2018. INFORMATION SOURCE: UNION OF INTERNATIONAL ARCHITECTS 2023 – CASE STUDIES, 2020.

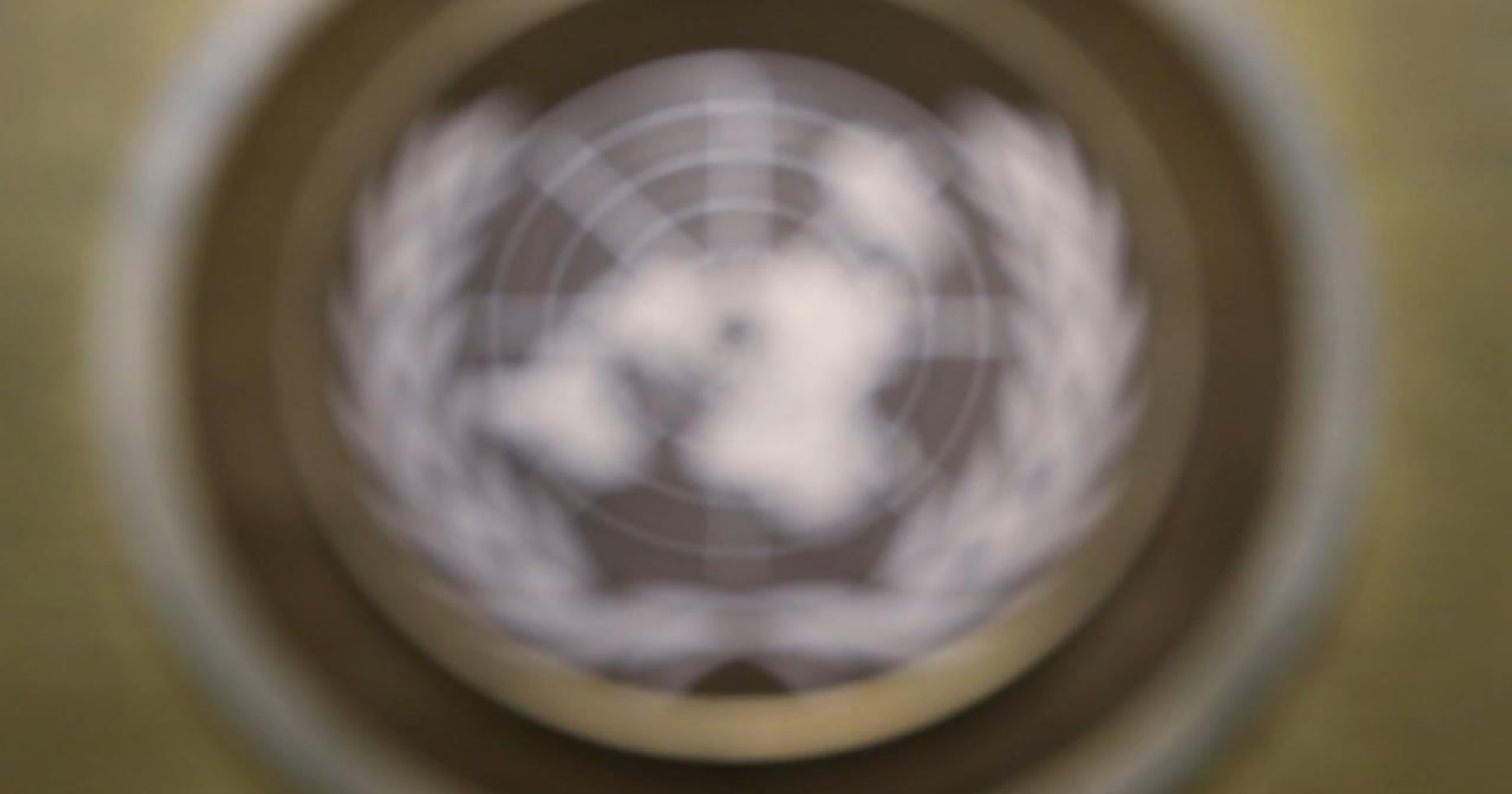
# The Climate Tile, Copenhagen, Denmark





# SDGs as a powerful tool to create change.









United Nations

<https://www.un.org/en/>



WORLD  
GREEN  
BUILDING  
COUNCIL

<https://www.worldgbc.org/>

UN  
environment  
programme



Global Alliance  
for Buildings and  
Construction

<https://globalabc.org/>



# Advancing Net Zero

A World Green Building Council global project



**WorldGBC definition:**  
A net zero carbon building is highly energy efficient with all remaining energy from on-site and/or off-site renewable sources

**100% of buildings** must operate at net zero carbon

**2050**

**2030**

**All new buildings** must operate at net zero carbon

GOVERNMENT  
ENGAGEMENT

TRAINING &  
EDUCATION

CORPORATE  
ENGAGEMENT

CERTIFICATION

## Key Principles

### 1. Measure and disclose carbon

Carbon is the ultimate metric to track, and buildings must achieve an annual operational net zero carbon emissions balance based on metered data



### 2. Reduce energy demand

Prioritise energy efficiency to ensure that buildings are performing as efficiently as possible, and not wasting energy



### 3. Generate balance from renewables

Supply remaining demand from renewable energy sources, preferably on-site followed by off-site, or from offsets



### 4. Improve verification and rigour

Over time, progress to include embodied carbon and other impact areas such as zero water and zero waste



Version 1 | March 2018



IMAGE SOURCE: ROLAND HUNZIKER, 2020. INFORMATION SOURCE: GLOBAL ALLIANCE FOR BUILDINGS AND CONSTRUCTION, 2020.

**The Global Alliance for Buildings and Construction (GlobalABC) connects private sector and organisations to drive the transformation towards a zero-emissions, efficient, and resilient buildings and construction sector.**



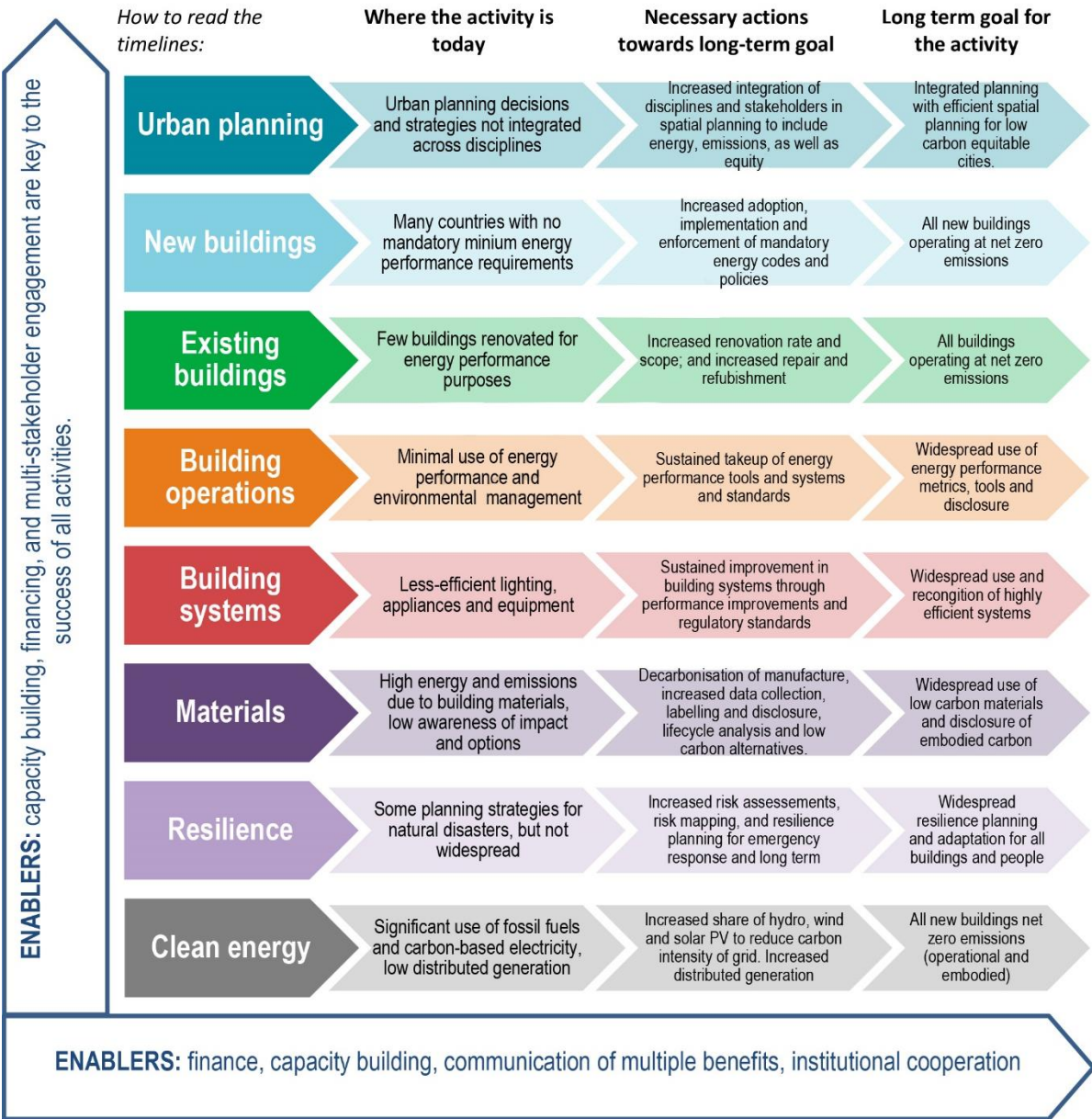


INFORMATION SOURCE: GLOBAL ALLIANCE FOR BUILDINGS AND CONSTRUCTION, 2020.

- Raising ambitions to meet the Paris Agreement goals
- Mobilising all actors along the value chain
- Connecting with key stakeholders



**“A Pathway to 2050” roadmap identifies that – with capacity building, multi-stakeholder engagement and financing – the transition towards zero-emissions is possible.**





**We must be bold enough to demand meaningful change, and inventive enough to make it a reality!**









# Commonwealth Association of Architects

## Engaging with the UN 2030 Sustainable Development Goals

We hope you found this lecture of interest and that you will be interested in the other lectures in this series:

1. **Introduction to the UN 2030 Sustainable Development Goals**
2. **Planning for Rapid Urbanisation**
3. **Planned City Extensions**
4. **Resilient Infrastructure**
5. **Climate Responsive Design**
6. **Heritage-led Regeneration**
7. **Sustainable Outcomes Guide**

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For this or any other issue, please contact: [admin@comarchitect.org](mailto:admin@comarchitect.org)



Thank you for joining!

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