

Sustainable Cities in UAE

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Overview

Meeting the challenges of ever-changing natural phenomenon have put all countries in a mode where they need to create sustainable projects that benefit both the economy and the environment.

It is said 70% of the world's population will live in cities, 2/3 of the global energy demand will arise from cities and 1/5th of the carbon emissions would come from buildings.

Creating sustainable cities will ensure that the carbon footprint is highly reduced.

UAE has paved a path that will help the country create sustainable projects with various strategic plans and a long-term vision of the leaders of the country for the well-being of the country. By building enablers that contribute to the fulfilment of Sustainable Development Goals, UAE has set an example of how careful long-term planning will help in achieving goals. Under the framework of Vision 2021, UAE has plans and initiatives for sustainable infrastructure planned in each emirate.

The UAE government aims to invest AED 600 billion by 2050 to meet the growing energy demand and ensure a sustainable growth for the country's economy. Projects such as: Masdar City in Abu Dhabi, Sustainable City in Dubai and Sharjah have created pathways for UAE to become a key player in the world for building sustainable infrastructure.

The Expo 2020 is a site for various initiatives creating an example to the world on how to sustainably manage large scale events. The MBR Solar Park is the perfect example of how solar energy which is available in abundance in the region can be used for creating sustainable projects.

Masdar City, Abu Dhabi

Masdar City in Abu Dhabi was planned to establish one of the most prominent sustainable urban developments in the Middle East. Acting as a pioneer in sustainability practices, Masdar City utilizes different kinds of sustainable technology and solar power to help reduce energy and water consumption in turn preserving the environment. From elements of a large development, to the day-to-day operations of the city, Masdar City ensures that sustainable practices are incorporated into the daily lives of people living in the city. Innovative, low-carbon developments powered by renewable energy are the highlights of organizations operating from Masdar City. Effective monitoring and measurement of water consumption, use of high-efficiency appliances, smart water meters and treated wastewater, which is later recycled for plant irrigation are all supporting key capabilities promised and planned in Masdar City. Home to the headquarters of International Renewable Energy Agency, an intergovernmental organization supporting countries in their transition to a sustainable energy future, along with Masdar Institute of Science and Technology that aims to drive sustainability in the UAE, multinationals such as Siemens, Etihad Airlines etc, Masdar City is a vibrant community that stands as a testimonial to how sustainable cities can be created that support work and living.

Continuous Research and Development keeps Masdar city up to date on the latest sustainable technologies and the city supports innovative pilot projects that help advance smart design and technology. Some of the interesting [R&D initiatives](#) are:

- An innovative device that turns water vapor into drinking water called SOURCE powered by solar panels
- A device that helps convert end-of-life plastic into transport-grade fuel
- Sustainable mobility solutions such as Ecobus and solar powered hydrogen fueling stations
- Project that recycles wastewater from aquafarms to irrigate oil-rich and saltwater-tolerant plants

Sustainable City, Dubai

The [Dubai Plan 2021](#) aims to make Dubai a smart and sustainable city. One of the important projects aligning with this vision is the AED 1.1 billion worth [Sustainable City](#) that has been established serving as the first development of its scale in a cosmopolitan city. Established in 2015, Sustainable city in Dubai is an eco-friendly large-scale project focusing on practices and technology that helps to achieve social, economic and environmental sustainability. The city aims to cover all aspects relating to conserve energy and provide a wholesome lifestyle to its residents. Various architectural and technological innovations exist in the area that ensure energy conservation without compromising on luxury. Rooftop solar panels, nature-inspired architecture, green spaces, car-free zones and energy-efficient appliances are all a few examples of how residential and commercial spaces in this sustainable development in the UAE work on making the city more environment-friendly. Natural 'biodome' greenhouses, organic farms and individual garden farms for local food production are also present building a good synergy between humans and nature.



Source: [Sustainable City](#)

Sustainable City, Sharjah

The Emirate of Sharjah has planned an ambitious project on the same lines of the Sustainable City in Dubai. This project will be covering an area of 7.2 million sqft with an investment of AED 2 billion encompassing residential, schools and commercial properties.

Sharjah Sustainability City will reflect the commitment of the Emirate and the country to promote a green economy culture and create new opportunities for the establishment of world-class infrastructure promoting environment-friendly and sustainable living.

A first of its kind project in Sharjah, the city will ensure that natural resources are further preserved for generations to come. Stability in social, economic and environment factors will be provided to the residents of the city that ensure comfortable sustainable habitation.

The Sustainable City in Sharjah aims to:

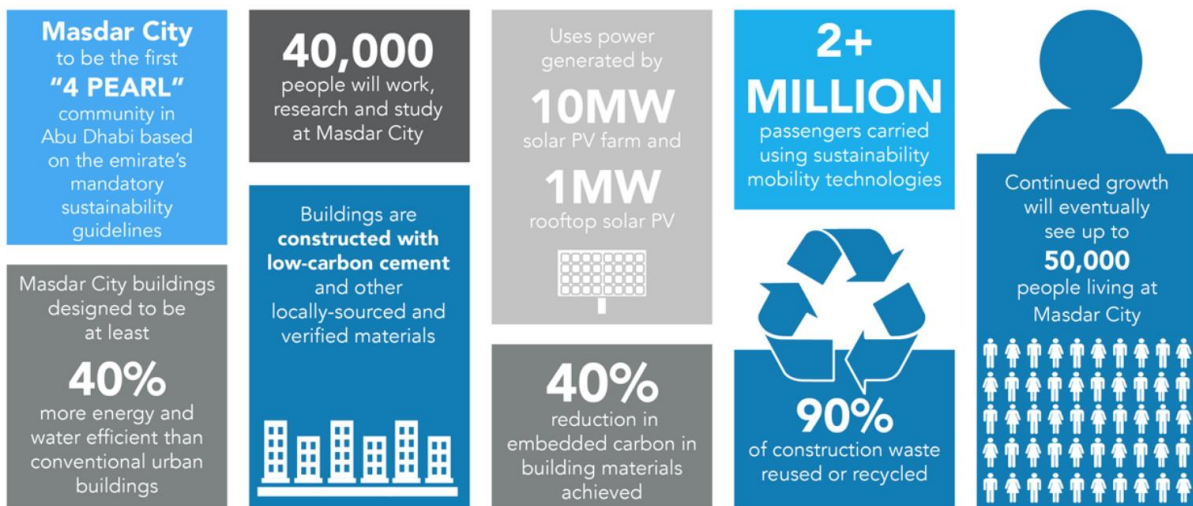
- Be 100% powered by renewable energy
- Reuse and repurpose 100% of the water utilized
- Build vertical farms and greenhouses
- Create the first autonomous car shuttle



Source: [Sharjah Sustainable City](#)

Impact

Masdar **City** is one such sustainable city that aims to be a model sustainable city for the world.



Source: [Masdar City](#)

In 2018, the [Sustainable City Dubai](#) community had diverted 84 per cent of its waste from landfills. This highlights how successful sustainable living is in combating environmental issues. The city also plans to achieve 90% reduction of single use plastic.

Conclusion

Creating sustainable cities ensure that the carbon footprint of the world is reduced efficiently, and people live, work and commute in an environmentally safe atmosphere. UAE has pioneered in creating model cities throughout the country ensuring the sustainable practices are embedded in the mindsets of the citizens.