جامعة بنها
BENHA UNIVERSITY

Benha University's strategy
To reduce Carbon Emissions 2023-2028

Benha University gives the greatest attention to the issues of preserving the environment, especially the trend towards reducing carbon emissions responsible for climate change. This can be achieved by using more clean energy in a more efficient manner and using advanced and sustainable strategies to preserve the environment, and this represents the essence of the idea of sustainability, which calls for preserving the right of future generations to resources.

Therefore, Benha University tended to develop a strategy to reach zero carbon (the carbon footprint) to reduce the total amount of greenhouse gas emissions that come from the production, use, and end-of-life of a product or service within the university campus. It includes carbon dioxide, which is the most common gas that humans emit, and other gases. Which traps heat in the atmosphere, causing global warming on campus. The bulk of an individual's carbon footprint usually comes from transportation, buildings, and food.

Towards a zero-carbon university:

A large proportion of carbon emissions comes from electricity generation, where most of the electricity is used in offices and laboratories to operate everything from cooling systems to lights and computers inside

faculties. Therefore, Benha University has taken upon itself the policy of using renewable energy and alternative energy and increasing energy efficiency in buildings, this includes installing more efficient lighting and also providing energy on site using renewable energy sources and other climate-friendly energy resources such as rooftop solar panels, solar water heating, small-scale wind generation and natural gas fuel cells.

In addition, improving fuel efficiency and gradually shifting to the use of gas, electricity and hybrid energy as an alternative source of energy in cars, electric cars, fuel blending, diesel engines and advanced hybrids. Benha University adopted a policy of afforestation of the university campus, the use of modern farming methods, the development of modern varieties that tolerate drought and salinity, as well as appropriate farm management of livestock and fertilizers in a way that reduces carbon emissions, finding innovative solutions for fertilizer management, and the optimal use of resources.

Implementation mechanisms:

- Define the roles and responsibilities of the various stakeholders in order to achieve the strategic objectives.
- Participation of the private sector in financing climate and awareness activities.
- Prioritizing actions to implement the activities presented.
- Implementation of a number of awareness convoys to the cities and centers of the province.
- Identify ways and means to incorporate biodiversity considerations into impact, vulnerability and climate adaptation assessments.

- Ensure that climate effects are included as part of the research plans of the university's faculties, each in his specialization.
- Spreading the culture of rooftop cultivation as a means of mitigating the effects of climate change and carbon emissions.

Objective: Reducing carbon emissions to reach zero carbon

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
Reducing carbon emissions to reach zero carbon	1- Planting the university campus and preserving the green area	- Community service sector - Administration of Engineering - Environment committees in faculties - faculty of Agriculture - Youth Care	1. Increasing the green area in each faculty by 25% annually 2. Increasing the number of trees in each faculty by 25% annually	Determining the current green space in Kafr Saad and El-Obour campuses	√																			
				Determining the number of trees in Kafr Saad and El-Obour campuses	√																			
				Establishment of a nursery for trees and shrubs in Kafr Saad and El-Obour campuses		√	√		√				√				√				√			
				Establishment of ponds for planting		√	√		√				√				√				√			

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
				trees in Kafr Saad and El-Obour campuses																				
	٢- Rehabilitation of cars with gas or electric ones	- Community service sector -Administration of Engineering - Quality Unit - Administration of maintenance and operation of means of transport	١. Increasing the number of gas-powered cars by 10% annually ٢. Increasing the number of electric cars by 5% annually ٣. Increasing the rate of car exhaust examination by 30% annually ٤.Reducing the use of methyl bromide by 10% annually	Determine the number of gas-powered cars	√																			
				Determine the number of electric cars	√																			
				Know the current position of the vehicle exhaust inspection	√																			
				Increase the number of gas-powered cars		√	√	√	√	√	√	√												

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
				Increase the number of electric cars									√	√	√	√	√	√	√	√				
				Periodic inspection of cars (exhaust ratio)				√				√				√				√				√
	٣- Transition to use new and renewable energy sources	- Community service sector -Administration of Engineering - Quality Unit - Environment committees in faculties - Research centers in faculties	١. Increasing the percentage of renewable energy used in the university (10%) annually ٢. Increasing the number of buildings that use renewable energy in the university by 10% annually ٣. Increasing the number of research	Determine the number of buildings that can use renewable energy	√							√				√				√				√
				Determine the number of 2 buildings per year to use their renewable energy	√				√				√				√				√			

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
			projects related to renewable energy by 25% annually																					
	٤- Waste recycling	- Community service sector - Youth Care - Environment committees in faculties - Administration of Engineering - Quality Management - Post Graduate studies sector - Occupational Health and Safety Committee	١. Increasing the rate of recycling organic waste by 20% annually ٢. Increasing the rate of recycling inorganic (mineral) waste by 20% annually ٣. Reducing the amount of food waste in university cities by 20% annually ٤. Increasing the rate of recycling wood and iron waste	Determine the percentage of organic and inorganic waste	√							√				√				√				√
				Recycle organic waste		√	√	√		√	√	√		√	√	√		√	√	√		√	√	√

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
			by 40% annually .oReducing the percentage of plastic waste by 10% annually																					
				Recycle metal waste		√	√	√		√	√	√		√	√	√		√	√	√		√	√	√
				Recycling wood and iron waste		√	√	√		√	√	√		√	√	√		√	√	√		√	√	√
				Reducing the percentage of plastic waste		√	√	√		√	√	√		√	√	√		√	√	√		√	√	√
				Reducing the percentage of food waste		√	√	√		√	√	√		√	√	√		√	√	√		√	√	√
	5- Taking into account the specification	- Community service sector	1. Increasing the percentage of	Determine the percentage of open	√	√																		

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
	s of environmentally friendly buildings and their codes in the new facilities	- Environment committees in faculties - Administration of Engineering - Quality Management - Post Graduate studies sector -Occupational Health and Safety Committee	open space for colleges by 20% annually 2. Increasing the green area percentage of the total area by 20% annually 3. Increasing the number of healthy, energy saving light	space in each faculty																				
				Determine the percentage of green space in each faculty	√	√																		
				٪٢٠increase in healthy light bulbs	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
				Increase open space		√	√			√	√			√	√			√	√			√	√	
				Increase green space			√	√			√	√			√	√			√	√			√	√
				Environmental impact assessment of facilities				√				√				√				√				√

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
			bulbs by 20% annually 4. Increasing the percentage of per capita space in the building (ventilation) by 20%																					
	Expanding sustainable agriculture in the Faculties of Agriculture and Veterinary Medicine	- Community service sector - Environment committees in faculties	1. Increasing plant production by 30% annually 2. Increasing the percent	Determine the percentage of plant, animal and poultry production	√	√																		
				Increasing the		√		√		√		√		√		√		√		√		√		√

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		- Engineering Administration - Research centers in faculties - faculty of Agriculture	age of animal and poultry production by 20% annually	percentage of plant production																				
				Increasing the proportion of animal production		√		√		√		√		√		√		√		√		√		√
				Increasing the percentage of poultry production	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	-۷ Rehabilitation of old buildings for climatic changes	- Community service sector - Environment committees in faculties - Administration of Engineering - Quality Management - Post Graduate studies sector	1. Increasing the rate of restoration of old buildings with thermal insulation materials (5%) annually 2. Increasing the rate of using environmentally	Determine the number of old buildings	√																			
				Determine the roofs of buildings that can be cultivated	√																			
				Determine the number	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		- Occupational Health and Safety Committee	friendly materials in restoration work by 10% annually	of 2 buildings for restoration annually																				
			3. Increasing the area of cultivation of the roofs of old buildings by 10% annually	Determine the number of 2 surfaces to be cultivated annually	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	٨- حملات التوعية والإرشاد	- قطاع خدمة المجتمع - رعاية الشباب - لجان البيئة بالكليات - لجنة السلامة والصحة المهنية	1. Increasing the number of environmental convoys to educate the local community by 50% annually	Determine the number of villages most in need in the governorate	√	√	√																	
			2. Increasing the rate of afforestation in the local community by 10% annually	Implementation of comprehensive convoys in villages	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
			3. Increasing the number of awareness sessions for the local community in recycling household waste and segregation at the source by 20% annually																					
	-٩Developing curricula and courses	- Post Graduate Sector - Education and Students Sector	1. Increasing the percentage of academic courses and scientific research related to sustainable development and climate change by 10% annually 2. Increasing the percentage of academic	Determine the percentage of courses related to sustainable development , climate change, environmental indicators, and community health	√	√																		

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
			courses and scientific research related to environmental indicators and community health by 10% annually	Adding a chapter in the "Societal Issues" course on sustainable development and climate change				√				√				√				√				√
	10- Directing scientific research to develop future solutions to confront the impact of	- Post Graduate Sector - Education and Students Sector -	1.Increasing the number of scientific research related to climate change by 10% annually 2. Increasing the number of patent innovations related to climate change by 5% annually	Determine the number of scientific research and the number of innovations and patents related to climate change	√				√				√				√				√			
				Increasing the number of scientific research related to climate change		√		√		√		√		√		√		√		√		√		√

Objective	Outcome	Responsible	Performance indicators	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
	climate change			Increase the number of patent innovations related to climate change				√				√				√				√				√
				Include the goal of reducing carbon emissions to reach zero carbon In the Strategic Plan 2023-2028	√																			