

Use Anaerobic fermentation to manage biodegradable waste, says AGU expert

● AF will help Bahrain produce 213.3 gigawatt-hours of electricity annually

● To produce 107,050 tons of compost

● Stop 536,000 tons equivalent of Carbon dioxide annually

TDT | Manama



Participants at the 14th Gulf Water Conference in Riyadh

Implementing anaerobic fermentation (AF) technology to manage biodegradable waste and sewage waste in Bahrain would help curb the production of 536,000 tons equivalent of Carbon dioxide annually, said a top expert from Arabian Gulf University.

Dr Sumaya Youssef of the Arabian Gulf University said the technology would also help

Bahrain produce approximately 213.3 gigawatt-hours of electricity and earn \$4,265,950 annually from its sales.

The Head of the Natural Resources and Environment Department at AUB said this while presenting a study on the feasibility of anaerobic fermenta-

tion technology for managing organic waste and sludge from wastewater treatment plants in Bahrain and biogas production at the 14th Gulf Water Conference in Riyadh.

Dr Youssef pointed out that sewage generated from landfill wastewater treatment plants

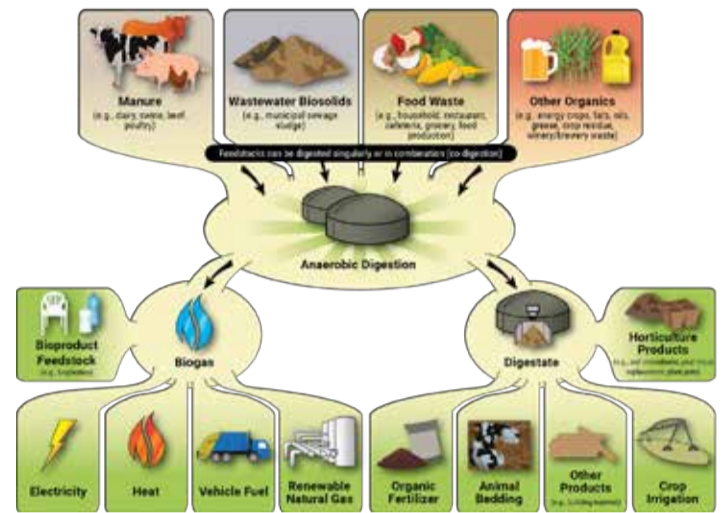
emits methane, a greenhouse gas 25 times more powerful than carbon dioxide, for its ability to cause global warming.

In this regard, Dr Youssef called on the decision-makers to utilise anaerobic fermentation technology to manage biodegradable water in Bahrain, especially for sewage sludge.

Production of biogas, the doctor said, is a promising source of renewable energy for Bahrain.

The anaerobic fermentation facility for treating biodegradable waste that goes to landfills annually would help generate approximately 213.3 gigawatt-hours of electricity and annual revenue of \$4,265,950 from electricity sales.

The second source of revenue from this project would be through the sales of compost produced along with biofuels. "This would generate revenues in the range of \$64,2301, considering that each tonnes of organic water produces 0.2 tonnes of the digester."



This figure illustrates the flow of feedstocks through the AD system to produce biogas and digestate. (Courtesy of United States Environmental Protection Agency).

"This project is expected to produce 107,050 tons of compost, at an international selling price of \$6 per tonnes."

The project, Dr Youssef said, would save about \$8.47 million annually in backfill costs in the landfill.

It would also result in direct environmental benefits achieved by stopping biodegradable waste in the landfill, which amounts to about 536,000 tons equivalent of Carbon dioxide annually, through an anaerobic fermentation plant.



What is anaerobic digestion technology?

Anaerobic digestion is a process through which bacteria break down organic matter—such as animal manure, wastewater biosolids, and food wastes—in the absence of oxygen. Multiple organic materials can be combined in one digester, a practice called co-digestion. The anaerobic process removes the bulk of COD (Chemical Oxygen Demand) from the wastewater by converting it into biogas (= methane + carbon dioxide) at low operational costs.

Anaerobic digestion is particularly suited to organic material, and is commonly used for industrial effluent, wastewater and sewage sludge treatment.

How does anaerobic digestion make electricity?

To get electricity from anaerobic digestion, we burn the biogas in generators. While this does produce CO₂, it's still a renewable, carbon-neutral process. ... By capturing the methane and converting it to CO₂, we generate electricity while preventing methane from escaping into the atmosphere.



The Minister of Foreign Affairs, Dr Abdullah bin Rashid Al-Zayani, held discussions yesterday at the ministry with the editors-in-chief of local newspapers. Akhbar Al-Khaleej Editor-in-Chief, Anwar Abdulrahman, Editor-in-Chief of Al-Ayyam, Issa Al-Shayji, Editor-in-chief of Al-Bilad, Mounis Al-Mardi, and Editor-in-Chief of Al-Watan, Ihab Ahmed, were present. The minister briefed the latest developments and diplomatic efforts made to implement the foreign policy of Bahrain at the regional and international levels. The meeting was also attended by the Undersecretary for Political Affairs, Ambassador Dr Shaikh Abdulla bin Ahmed bin Abdulla Al Khalifa, the Chief Executive Officer of the National Communication Centre (NCC), Yousif Mohammed Albinkhalil, the Director-General of Ministry Affairs, Ambassador Talal Abdulsalam Al-Ansari, the NCC's Deputy Chief Executive Officer, Ahmed Khalid Al Oraifi, and the Acting Chief of Communications at the ministry, Dr Ismaeel Naji Al-Ameen.

Court cases

Publishing Fake news: Public Prosecution releases 'Delmon Post' official on bail

TDT | Manama

Public Prosecution said it is investigating *Delmon post*, an online news website, for allegedly publishing a fabricated news piece on a meeting between local societies and a foreign party.

Without naming the person under investigation, the Prosecution said they had released

The online news website allegedly published a new piece on a meeting between local societies and a foreign party, which the societies later denied.

the person on bail, pending further investigation.

The statement said he gained his release on "the guarantee of his place of residence."

Interior Ministry, in a statement, earlier announced referring a person in charge of an online news website to the Public Prosecution for publishing fake news.

The investigation follows the

statements issued by members in the said meeting denying claims made by the *Delmon Post*.

The Public Prosecution statement said that the news published on the website is bound to inflict damage to the public interest of Bahrain.

Prosecutors questioned the man facing the accusation in the presence of the President of the Bahrain Journalists Association.

Dilmun expo @ Louvre in Paris

TDT | Paris

Bahrain's Ambassador in Paris Shaikh Khalifa bin Ahmed Al Khalifa yesterday held talks with the Director of the Musée des Arts Décoratifs, Olivier Gabet, on the upcoming Dilmun exhibition at the Louvre in Paris.

This came as Shaikh Khalifa visited the Les Arts Décoratifs in Paris. Decoratifs is closing its "Cartier and Islamic Arts" exhibition sponsored by the Louvre and Cartier Foundation.

The exhibition sheds light on the contribution of Islamic arts to modernity in the West.

Shaikh Khalifa toured the section featuring pieces made using Bahraini pearls.

The upcoming Dilmun exhibition at the Louvre in Paris comes in response to a bilateral agreement on the sidelines of the last visit of His Majesty the King to France.

Évelyn Possémé, the chief curator at the Musée des Arts



Shaikh Khalifa bin Ahmed Al Khalifa at "Cartier and Islamic Arts" expo



Décoratifs, underlined the importance of Jacques Cartier's visits to Bahrain to look for authentic pearls, referencing the photo he took himself, showing his mission to make direct connections with pearl merchants.

The exhibition includes a section on "Jacques Cartier in India and Bahrain". Jewellery on display has Bahraini pearls, which Jacques Cartier was looking for in the Kingdom.

The section also reviews archival documents and historical photos of pearl fishing and trade in Bahrain documented in



the archives of Jacques Cartier during his visit to Bahrain during the years 1911 and 1912.

TENDER NOTICE

The Embassy of India, Bahrain invites bids/ quotations from reputed firms for supply of 04 (four) Local Security Guards for manning its Chancery cum Residential Complex. For details, please check the Tenders page of the Embassy's website at <http://eoibahrain.gov.in/> or send email to hoc.bahrain@mea.gov.in