

Mohammed bin Rashid Space Centre contribution to the SDGs



Objective of the Study

- Emphasize on the contribution of UAE's Space Sector in general and Mohammed bin Rashid Space centre (MBRSC) in Particular to achieve the targets of SDGs
- Propose recommendations on increasing the effectiveness of the contribution

Sustainable Development Goals:



Examples of MBRSC contribution to the SDGs

Goal	MBRSC contribution
Goal 4: Quality Education	<ul style="list-style-type: none"> • Nanosatellite Outreach Program • Research Experience for Undergraduate Program which provides students with an international internship opportunity in EMM's academic partners. • Education & Outreach activities, such as workshops and event participation and EMM Teachers' Ambassador Program • Collaboration with ADEC & MOE to improve their curriculums • Entaliq Scholarships provided by MBRSC to undergraduates, who will later join the workforce.
Goal 5: Gender Equality	<ul style="list-style-type: none"> • Male to female ratio at MBRSC is 60:40 • Male to female ratio at EMM is 65:35 • Assistant Director General at MBRSC level is 50:50 • Deputy Project Managers of EMM is 62.5:37.5

Examples of MBRSC contribution to the SDGs

Goal	MBRSC contribution
Goal 6: Clean Water & Sanitation	<ul style="list-style-type: none"> Using DS-1, DS-2, and KS images to monitor the levels of reservoirs, which can then help define how people can access clean water Generating water area maps such as sea water, lakes and pools, in addition, studied the water surface area of dams with time to see the amount of surface water that changed
Goal 7: Affordable and Clean Energy	<ul style="list-style-type: none"> MBRSC built the region's first self-cooling eco-home that is completely independent from the power grid Feasibility study done for urban heat islands Feasibility study done for solar panels detection from satellite imagery

Examples of MBRSC contribution to the SDGs

Goal	MBRSC contribution
Goal 9: Industry, Innovation and Infrastructure	<ul style="list-style-type: none">• Participation in Innovation week for two years consecutively• Development of MBRSC SME program for technology and science sectors• Several new and innovative programs such as Nayif-1, NSOP, REU, etc.• Classification maps of urban areas, roads, vegetation, water, and undeveloped areas which help in infrastructure mapping and monitoring the area growth• Coastline detection to monitor the changes and the reasons effects these changes• Providing governmental entities with satellite data to support innovation, infrastructure and industrial projects

Examples of MBRSC contribution to the SDGs

Goal	MBRSC contribution
Goal 13: Climate Action	<ul style="list-style-type: none"> • Partnership with UNSPIDER for disaster management • DS-1, DS-2, KS images can be used to monitor deforestation, pollution levels, ice caps and desertification and enable preventative actions • Manufacturing an environmental nanosatellite, DMSAT-1, with instruments and tools specifically for environmental studies such as aerosol optical depth, aerosol effective radius, and greenhouse gases concentrations will contribute to the studies of Earth's atmosphere and greenhouse gas effect on the climate
Goal 14: Life Below Water	<ul style="list-style-type: none"> • Using DS-1 and DS-2 images to monitor the levels of red tides and fish stock • Monitoring maritime using satellite imagery (Red tide detection) • Desalination plant studies • Studies conducted about the effect on fishes in certain areas • Study conducted on coral reefs

Examples of MBRSC contribution to the SDGs

Goal	MBRSC contribution
Goal 15: Life on land	<ul style="list-style-type: none"> • Using DS-1 and DS-2 images to monitor deforestation and land changes • Monitoring natural disasters worldwide using space-based data • Vegetation mapping and health • Mangrove forestry detection • Palm trees detection and counting • Supporting entities dedicated to conserving natural resources by signing MoUs and providing them with space-based data such as Dubai Desert Conservation Reserve and Emirates Wildlife Society – World Wildlife Fund
Goal 17: Partnerships for the goals	<ul style="list-style-type: none"> • Numerous MBRSC partnerships, both nationally and internationally • Establishing collaborative projects for remote sensing earth observation applications field with international partners such as Deimos UK and OSI

Recommendations

- Collaborate with decision makers as well as stakeholders internally and globally to brainstorm on how the space sector and MBRSC could support the SDGs effectively
- Set strategies to improve the contribution and develop new initiatives
- Increase awareness of the community in regards to the importance of space sector to the economy and humanity
- Collaborate with SDGs Committee to increase MBRSC contribution into the SDGs

Thank You