

Circular Economy developments in the GCC region and opportunities for collaboration with the European Union

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Structure of the presentation

1. The circular economy concept, policies in the EU and international developments
2. Circular economy developments in the United Arab Emirates (UAE)
3. Circular economy developments in Saudi Arabia
4. EU – GCC collaboration opportunities





- Independent European think tank based in Brussels, founded in 1983
- Objectives:
 - Policy-oriented research
 - Forum for discussion
- Strong in-house research capacity and an extensive network of partner institutes throughout the world
- Extensive portfolio of work in the circular economy field:
 - CIRC4Life: Circular economy business models in the electronics and food value chains
 - CICERONE: Platform for circular economy funding and programming in the EU
 - CEPS is a Knowledge Partner of the Green Growth Knowledge Platform

Research approach

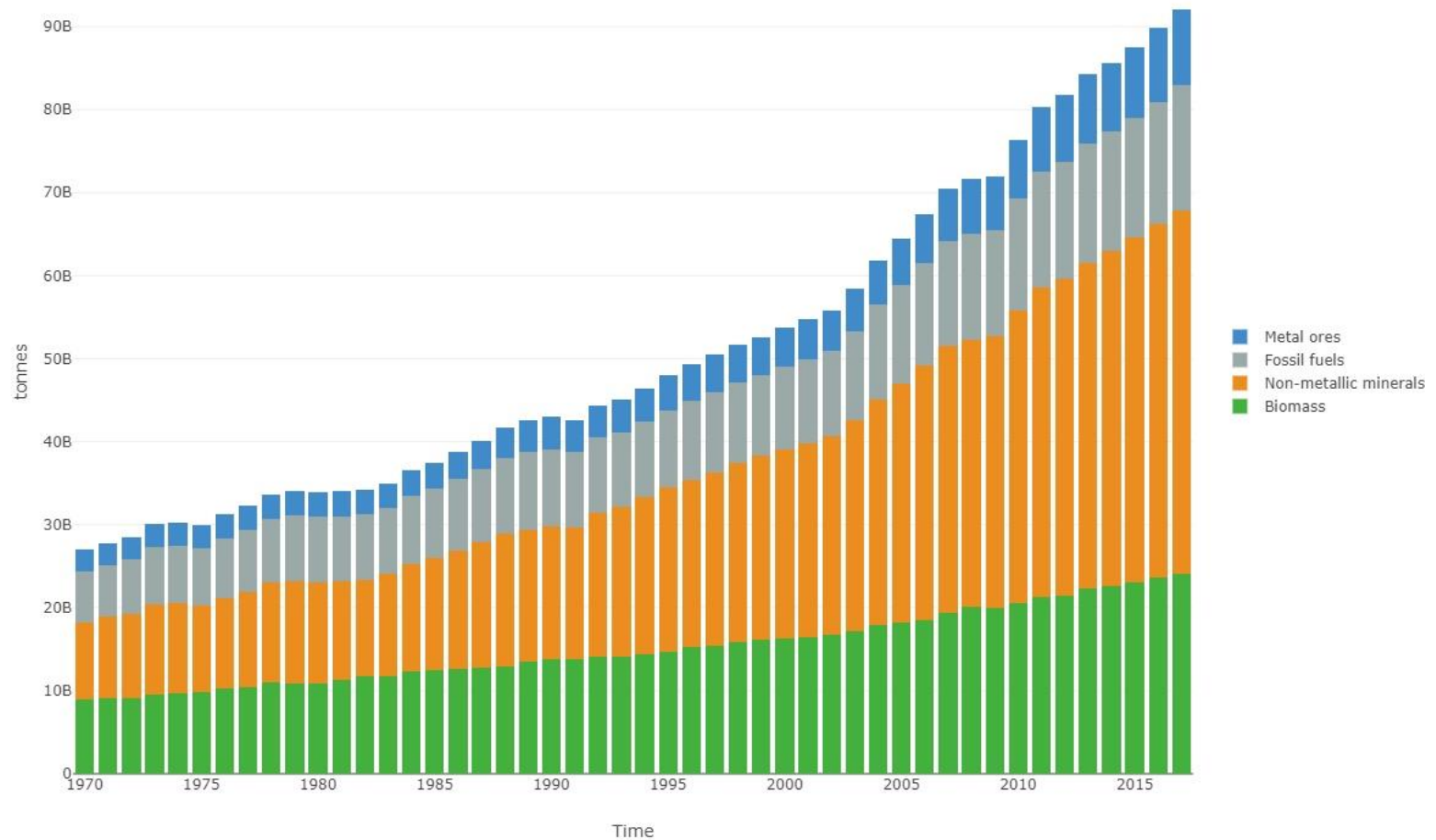
- Focus on two countries: Saudi Arabia and United Arab Emirates
- Desk based research of reports, studies and policy documents on circular economy published for the GCC region
- Online semi-structured interviews with experts from policy, research, private sector, and NGOs



The circular economy concept, policies in the EU and international developments



Global domestic material extraction

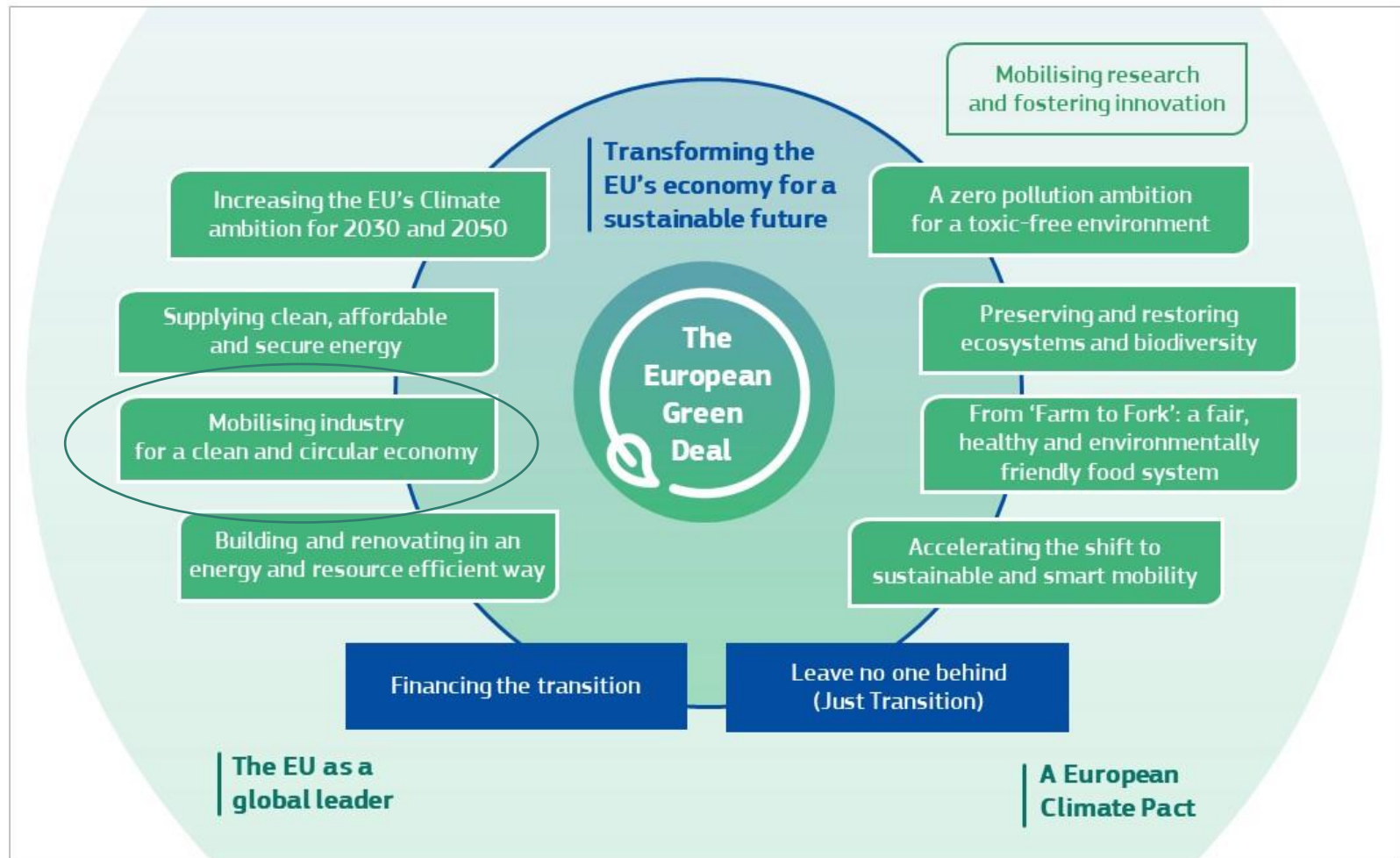


Source: WU Vienna (2019): Material flows by material group, 1970-2017.

Definitions

Circular economy definitions and interpretations	
Sauvé et al. (2016)	“Circular economy refers to the “production and consumption of goods through closed loop material flows that internalize environmental externalities linked to virgin resource extraction and the generation of waste (including pollution)”.
Preston (2012)	“Circular economy is an approach that would transform the function of resources in the economy. Waste from factories would become a valuable input to another process – and products could be repaired, reused or upgraded instead of thrown away.”
Mitchell (2015)	“A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extracting the maximum value from them whilst in use, then recovering and reusing products and materials.”
Heck (2006)	“The utilisation of sustainable energy is crucial in a circular economy. The transition to a circular economy would require addressing the challenge of establishing a sustainable energy supply as well as decisive action in several other areas such as agriculture, water, soil and biodiversity.”
European Commisison (2015)	“An economy “where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised.”

European Green Deal



EU policy framework

EU Circular Economy Action Plan: 35 actions along the entire life cycle of products

- New Sustainable Product Policy Framework
 - Designing sustainable products: Ecodesign, improving product durability, reusability, upgradability and reparability, recycled content in, product passport
 - Consumer and public buyers: Revision of the EU consumer law, establishing a new 'right to repair, minimum mandatory green public procurement criteria
 - Production processes: Review of the Industrial Emissions Directive, Reporting and certification system for industrial symbiosis
- Focus on key product value chains
 - Electronics and ICT; batteries and vehicles; packaging; plastics; textiles; construction and buildings; food; water and nutrients

EU policy framework

- Less waste, more value
 - Specific waste reduction targets for more complex streams, harmonise separate waste collection systems, Review rules on waste shipments
 - Enhancing circularity in a toxic-free environment: Chemicals Strategy for Sustainability
 - Well-functioning EU market for secondary raw materials: New EU-wide end-of-waste criteria for certain waste streams
- Making circularity work for people, regions and cities
 - Cohesion Policy funds, Just Transition Mechanism
- Cross-cutting actions
 - Measuring circularity contribution to climate mitigation

EU policy framework

- Leading efforts at global level
 - Global Circular Economy Alliance, Ensure that Free Trade Agreements reflect the enhanced objectives of the circular economy
- Monitoring progress
 - Monitoring Framework for the circular economy

EU Recovery Process

- Recovery plan (Next Generation EU) to accompany the Multiannual Financial Framework (MFF) for the period 2021-27
- Next Generation EU (NGEU): €750 billion in grants and loans that will be available for member states under certain conditions.
- Most of the support will be provided through the Recovery and Resilience Facility (RRF) which is the biggest individual programme under NGEU, with a total value of €672.5 billion
- Access will be subject to the approval of the so-called national Recovery and Resilience plans prepared by member states

EU Recovery Process

- Recovery plans will be assessed via the European Semester mechanism against the criteria of contributing to the green and digital transition of the country
- Contributions to the 'green' transition contain both a climate and an environmental perspective; Circular economy is under the intended environmental goals of these plans

EU Recovery Process

- Opportunities exist, but the scale of contribution of these plans to the EU's decarbonisation trajectory will depend on the choices made in national Recovery and Resilience Plans
- Focus should be on investments that can have long-term impacts, for example putting an economy on a transition trajectory rather than aiming for incremental change
- It is uncertain how the climate and environmental (including circularity) impacts of these plans will be measured and monitored in practice



Initiatives for promoting global transition towards CE

- Global Alliance on Circular Economy and Resource Efficiency
 - Launched by the European Commission together with the United Nations Environment Programme and in coordination with the United Nations Industrial Development Organization
 - Countries that have joined the coalition: Canada, Chile, Colombia, Japan, Kenya, New Zealand, Nigeria, Norway, Peru, Rwanda and South Africa
 - Key objective: Identify knowledge and governance gaps in advancing global circular economy and take forward partnership initiatives, including with major economies
- Other initiatives
 - G20 Resource Efficiency Dialogue
 - World Circular Economy Forum

Circular economy developments in the United Arab Emirates (UAE)



CE developments in the United Arab Emirates

- UAE National Sustainable Consumption and Production Plan (2019-2030)
 - Objectives: achieve sustainable management and efficient use of natural resources; support the private sector in shifting to cleaner production methods and techniques; promote sustainable production and consumption patterns
 - 4 priority areas: green infrastructure; sustainable food production and consumption; sustainable public procurement; and sustainable manufacturing
 - Key objective: Identify knowledge and governance gaps in advancing global circular economy and take forward partnership initiatives, including with major economies
- UAE Circular Economy Policy (January 2021)
 - Key objectives: promote environmental health, support the private sector in adopting clean production methods, and reducing natural environmental stress, to achieve the country's vision to be a global pioneer of green development
 - Priorities include infrastructure, sustainable transportation, sustainable manufacturing, sustainable food production and consumption
 - Establishment of the UAE Circular Economy Council to oversee the drafting of a mechanism to implement the strategy

CE developments in the United Arab Emirates

- Various investments and industry initiatives on recovery and recycling facilities (e.g. Sharjah to become the first zero-waste-to-landfill city in the region with 76% waste diversion rate)
- CIRCLE Coalition
 - Signed a pledge to develop a CE model to combat plastic and packaging waste pollution
 - Most of food and beverage (F&B) companies in the coalition have made commitments to achieve 100% recyclability of packaging material by 2025, and 100% collection and recovery of packaging material
 - Initial members were big companies however effort is put to include companies of all sizes, including small local businesses
- SCALE 360
 - Initiative in collaboration with the World Economic Forum (WEF) and aims to help stakeholders scale up solutions in partnership with government entities, investors, and companies to create markets for CE goods and services
 - UAE became the first signatory to adopt the WEF's SCALE 360 initiative to fast-track the CE through nationally-led innovation challenges
 - Focus on 4IR technologies such as the Internet of Things (IoT) and Artificial Intelligence (AI) to accelerate the CE transition for plastics and electronics

CE developments in Abu Dhabi

- In Abu Dhabi the Environment Agency Abu Dhabi (EAD) is the entity responsible for environmental policies including waste management
- Abu Dhabi Waste Management Center (Tadweer) introduced a waste classification policy and established wood, paper and plastic recycling facilities and incineration facilities in Abu Dhabi
- Abu Dhabi Single Use Plastic Policy establishes a policy framework for reducing and eliminating single use plastics and provides a roadmap for action with a timeline from 2020 to 2022
 - EAD worked with local and federal levels as well as the private sector to define issues related to recovery of single use plastics
 - Sets a target of 50% recovery of PolyEthylene Terephthalate (PET) bottles by 2022
 - EAD is putting in place an incentive-based return scheme to recover 50 % of plastic bottles and is also introducing levies on cutlery, cups, plates and stirrers to reduce their consumption

Challenges and areas with potential for implementing circular economy projects

- There is a need for more push at the implementation phase where a sectoral-focused approach could be useful
- Challenges related to using of post-consumer recycled materials (PCR) in food grade packaging and lack of green public procurement policies
- Underdeveloped markets for recycled materials and limited incentives for recovery of waste streams other than plastic
- Need for more investments on material sorting facilities
- Lack of consumer understanding of how and what to recycle
- Potential for developing recycling facilities for PET bottles and cardboard to utilise waste resources that are currently exported



Circular economy developments in Saudi Arabia



CE developments in Saudi Arabia

- Saudi Arabia's Vision 2030 (2016)
 - Objectives: The overarching aim is to reduce oil dependence; diversify the economy & improve competitiveness
 - 96 strategic objectives across 13 Vision Realisation Programmes, including objectives to ensure sustainability of vital resources; Circular Carbon Economy (CCE); solid waste management and food waste management; establish comprehensive recycling projects; reduce consumption; utilise treated and renewable water
- National Waste Strategy (started 2020 – major upgrade 2020)
 - Key objectives: improve the management of municipal solid waste (MSW) and generate business opportunities by establishing material recovery and waste-to-energy facilities
 - By 2035, the country aims at reaching 82% landfill diversion of all waste, 77% recycling of all waste, 100% landfill diversion of MSW (currently 5%), 81% recycling of MSW (currently 1%), 60% landfill diversion of construction and demolition waste (CDW), and 12% recycling of CDW

CE developments in Saudi Arabia

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Actions:

- In 2017, a regulation to stop the import of non-biodegradable **plastic** and to allow only the use of oxo-biodegradable plastic
- In 2020, the Ministry of Environment, Water and Agriculture circulated a draft Waste Management Policy in which **Extended Producer Responsibility (EPR)** is mandated and regulated:
 1. source segregation of waste and to build the infrastructure for waste treatment and recycling,
 2. focus on EPR and circularity
- The Kingdom's formal advisory body, has explored the possibility of introducing laws addressing and penalising food waste
- End-of Life-Tire (ELT) or an ELT management organisation in discussions: regulations and public-private agreements: **construction** sector for material and energy recovery.
- October 2019, Saudi Arabia established a **green building rating system** known as **Mostadama**: part of efforts to standardise sustainable practices in the **construction and building** sector.



Challenges and areas with potential for implementing circular economy projects

- Challenges three key elements:
 - 1. build proper infrastructure: sorting facilities or composting facilities.**
 - 2. Proper regulations / mechanisms for enforcement.**
 - Regulatory enforcement needed in sectors such as agriculture, e-waste, vehicles and sewage
 - 3. Funding mechanisms and business models underdeveloped.**
 - Costs of waste collection and disposal are paid by the government and only to a limited extent by private entities.
 - On MSW, currently there is no sorting at source and thus no market for recycled products
 - Informal trading or zero-cost landfilling are common in the country.
 - On construction and demolition waste there is widespread and illegal dumping

Challenges and areas with potential for implementing circular economy projects

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- Actions on waste: Ministry of Economy and Planning (MEP) 2018: voluntary national review to measure progress toward Sustainable Development Goals (SDGs)
Projects include:
 - **Initiative to set up a Saudi recycling company**
 - **Upgrading of municipal waste management systems**
 - **Initiative for waste management in Jubail city**
 - **Integrated strategy for waste disposal in Riyadh city**
 - **Initiative to recycle food waste**
- Establish organisations to execute and enforce regulations for waste management and recycling:
 - 2017, the government founded the Saudi Investment Recycling Company (SIRC), a subsidiary of the Public Investment Fund of Saudi Arabia.
 - 2019, the government established the National Waste Management Center (NWMC) whose main mandate is to develop regulations and organise proper enforcement.



Challenges and areas with potential for implementing circular economy projects

Aims:

- Diverting 60% of Construction and demolition waste from landfills by 2035.
- Recycling of additional kinds of waste such as fertilisers, paper, **plastic** and metals

Other notable projects:

Launch by the Royal Commission for Jubail and Yanbu (RCJY) of an integrated environmental services initiative for the management of clean-up operations in **Jubail Industrial City**.

A smart cities programme for 17 selected cities including Yanbu, the first smart city in Saudi Arabia, on the water recycling front, **Green Riyadh** is an urban forestation project to increase the amount of green space.



EU – GCC collaboration opportunities



Conclusions and key messages

Advancements

- CE policy is still at early development stages in the GCC region although dedicated strategies have been emerging
- Awareness is rising and it is recognised that recycling and reuse need to be further developed
- Infrastructure developments in both UAE and Saudi Arabia: waste-to-energy plants, waste sorting facilities, 4IR technologies such as IoT and AI
- Various business led-initiatives: CIRCLE Coalition, Scale 360

Conclusions and key messages

Challenges remain:

- Lack of well-developed markets for various types of waste, lack of policies aimed at making landfill a less attractive option, limited extended producer responsibility and eco-design provisions
- There is a need for more targeted regulations focusing on specific waste streams or value chains
- CE policy in the region remains largely limited within the scope of waste management despite recent advancement in technologies, facilities, market regulatory solutions, and infrastructure

Conclusions and key messages

Collaboration opportunities

- EU technical assistance to support activities such as training of engineers or technicians, communication campaigns in multiple languages for migrant labour, and education programmes
- Collaboration and knowledge exchange on targeted regulations focusing on specific waste streams or value chains.
- Green public procurement and life-cycle costing
- EU could share experience gained from European regions and cities to reduce risks of having a varied approach policy implementation across borders.

Conclusions and key messages

Collaboration opportunities

- Life cycle assessments including the impact of products if they end up in marine or terrestrial environment
- Collaboration in the fields of standards to reduce inconsistencies in the market and on extended producer responsibility
- The EU and GCC build on the existing CE frameworks with initiatives for regional collaboration and gradually expand interaction
- Commercial offices and national trade promotion organisations in the EU to create awareness and inform EU specialised companies, while promoting contacts between and GCC counterparts.