Sustainable Development Goals

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Sürdürülebilir kalkınma hedefleri (SDG'ler), 2015'te kabul edilen 17 hedefi içeren, BM'nin herkes için daha iyi ve daha sürdürülebilir bir gelecek elde etme planının küresel bir kalkınma programıdır. Yoksulluk, eşitsizlik, iklim değişikliği dahil olmak üzere küresel nüfusun karşılaştığı zorlukları ele alırlar. , çevresel bozulma, barış ve adalet. Programlar genellikle sürdürülebilir ekonomik büyümeyi ve sürdürülebilir kalkınma için 2030 gündemini uygulamak için sürdürülebilirliğin güçlendirilmesi modlarını vurgular. Bu SDG'lerden SDGS 7, 8, 9, 11, 12 ve 17, doğrudan ve/veya dolaylı olarak sürdürülebilirlik ve döngüsellik fenomeniyle bağlantılıdır. Birleşmiş Milletler'in (BM) SKH'lerine imza atan ülkelerdeki hükümetler, ulusal politika ve programlar da dahil olmak üzere farklı eylemlerde bulunarak hedefe ulaşılmasında çok önemli bir rol oynamaktadır,

sustainability circular economy sustainable development SDGs

1. Sustainable Development through Circular Economy (CE) Strategies and Practices

Sustainability is a word and science that is usually associated with development and denotes various connotations such as “living within means”, “balance between spaces”, “responsible consumption”, “ability to exist constantly”, etc. The awareness of sustainability is increasing in society, which can impact environmental, economic and social dimensions of SDGs. In terms of the environmental aspect, sustainability offers a reduction in emissions and waste, while regarding the economic aspect, it contributes to creating new opportunities for organisations through new regulations. From the societal perspective, sustainability creates the opportunity for a sharing economy [1]. Generally, it means the capacity for the biosphere and human civilisation to co-exist and focuses on meeting the needs of the present without compromising the ability of future generations [2]. With the issues of development, sustainability is a central concept of discussion. The academic debates and practices in this domain are mixed, partly because of the sustainability dimensions, which are catalogued and somewhat unequally addressed [3]. However, it is parallel to enduring socio-economic development.

In 1987, the World Commission on Environment and Development (WCED) defined sustainability for the first time as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” [4][5][6][7]. It promotes building towards an inclusive, resilient and sustainable future for people and planet through fighting against poverty [8][9]. It is also considered as an umbrella concept that incorporates “development” in its approach, methods and techniques. There is a functional relationship between sustainability, business and development that is a crucial part of the CE. As a new socio-economic and business phenomenon, CE is a business model [10] that focuses on recycling, reduction and re-use. It involves the shift of existing reserves to renewable energy sources; this then creates economic, natural and social capital, and an environmentally friendly atmosphere for the development of a just society [11].

The CE concept is opposite of a “take-make-use-dispose” pattern of growth and is based on the 6R principles of reuse, recycle, redesign, remanufacture, reduce and recover [12][13]. This concept is based on the closed loop principle of a natural ecosystem, where there ideally exists no waste output; all input and waste output enter the circle of the ecosystem that essentially extends the life cycle of products [14]. According to the Ellen MacArthur Foundation (EMF), the CE is an “industrial system that is regenerative and restorative by design, rethinks products and services to design out waste, and negative impacts and builds economic, social and natural capital” [15]. It emphasises that there is a recognition of the economy needing to work efficiently at all levels—both locally and globally for individuals, organisations and businesses. The EMF states that “a circular economy aims to redefine growth, focussing on positive society-wide benefits and entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system” [15].

According to Bocken et al. [16], CE advocates systems of closing, slowing and narrowing the loop. Closing the loop includes cradle-to-cradle material, through a process of recycling, reuse, remanufacture and maintenance. This is to prevent entering the disposal stage [17]. Narrowing the loop would adopt fewer resources in a product with higher efficiency. An example of a closing and narrowing the loop is Evian plastic bottles [18]. FFC Information Solution Private Limited (2020) stated that Evian had removed the plastic label on their new product design and manufactured a new bottle with recycled bottle material [19]. Therefore, the material loop is narrowed and closed. Reducing material flow serves to lengthen the product life duration via product enhancement [20]. Apple Inc., California, USA, is a case in point, which is constantly developing robust materials, such as screens and batteries, to increase its product life from usage to disposal [20].

The current economic situation and activities, both in terms of capacity and format, pose a serious threat to sustainability [21][22][23]. They are traditionally based on the “take-make-use-dispose” pattern with wider consumption of natural resources. Therefore, the transition from a linear economy to a CE is the need of the hour. From a business perspective, the transition to a CE has significant impact on economic growth in the global economies [24][25]. With respect to economic reforms, the transition of CE also influences environmental and research policies in organisations. Ramani [13] claims that the “Persistent deterioration of natural resources, greater contamination of air, water and soil, diminishing biodiversity, emergence of new types of pathogens, climate change and heightened fragility of human health (even when longevity is increased) are being noted”. These phenomena will have serious impact on sustainability goals.

Empirical studies by EMF [15] assert that CE designs, innovative business models, reverse cycles and enabling conditions are the essential building blocks for the transition to CE. The areas of circular design include material selection, standardised components, designed-to-last products, design for easy end-of-life sorting, separation or reuse of products and materials and design-for-manufacturing criteria that consider possible useful applications of by-products and wastes. Innovative business models are always profitable, and initiatives will inspire other players and will be copied and expanded geographically.

Reverse cycles are new, requiring additional skills for the material decomposition and back into the industrial production system. This includes delivery chain logistics, sorting, warehousing, risk management, power generation and even molecular biology and polymer chemistry [17]. With improved collection and treatment of wastes, and more robust segmentation of end-of-life products, the leakage of materials out of the system will decrease. This, in turn, would promote the economics of circular design. In addition, market mechanisms need to play a prominent role to introduce CE

principles, reinforced by policymakers, educational institutions and popular opinion leaders, for the widespread reuse of materials and higher resource productivity to become more commonplace [26][27][28][29]. Other factors such as collaboration, reviewing enticements, creating and implementing an appropriate set of international environmental rules, driving upscale fast and access to financing could further improve CE principles.

2. SDGs Status and Current Global Trends

The review of debates, documents and reports of SDGs so far generally indicates the gulf of difference between the set targets and achievements and the trend is far from the development path [30]. As we can see, economic growth and prosperity have depleted the world's natural resources and environment at an unprecedented speed. All around us, we can observe the consequences of climate change [5]. It is essential to push back these trends by transforming the current development path. Various discussions and reports of SDGs have provided ample information to countries to create a new development path [31]. Some recommendations are worth mentioning here, such as leave no one behind, transform economics for jobs, build peace and accountable institutions, focus on sustainability—environmental, economic and socio-political—and try to forge new global partnerships, free from conflicts and tensions [2]. The themes have prioritised marginalised and underrepresented groups to provide a level playing field.

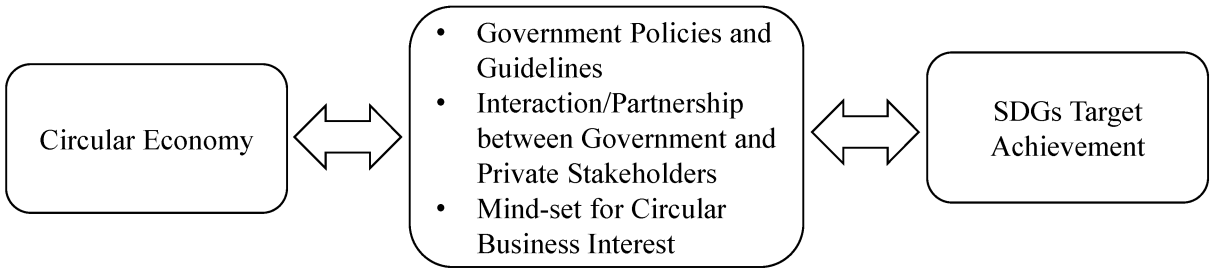
On a national level, each country needs to create its own development path, balancing both the SDG philosophy and the specific constraints and potential of the nation. In comparison with the Millennium Development Goals (MDGs), the SDGs provide greater autonomy and flexibility for national governments. More specifically, the SDGs provide a valuable opportunity for the countries to shift towards an inclusive, fair and sustainable development path. The UN's list of sustainable goals and targets help to highlight the status of the SDGs and track progress.

3. Conceptual Framework of Circular Economy for SDGs

Sürdürülebilir Kalkınma Hedefleri hedeflerine ulaşmak için hükümetler, sürdürülebilirlik yaklaşımını teşvik etmenin bir yolu olarak çeşitli ekonomik faaliyetler başlatmalı ve sunmalıdır [32] . Spesifik olarak, birden fazla SDG arasında ortak öncüller vardır: 7'si enerji, 8'i ekonomik büyüme, 11'i sürdürülebilir şehirler, 12'si sürdürülebilir tüketim ve üretim, 13'ü iklim değişikliği, 14'ü okyanuslar ve 15'i CE ile bağlantılı karada yaşam. Genel Kurul ve ECOSOC Ortak Toplantısına göre [31], bu, ürün ve hizmetlerin tasarlanması ve üretilmesi ve kaynakların tüketilmesi yoluyla atık ve kirliliğin bulunmadığı bir ekonomi sistemidir. Bu, 2030 yılına kadar küresel emisyonları yılda 3,6 milyar ton azaltabileceği için zorunlu olarak kabul ediliyor. Thomson, "döngüsel ekonominin ilke ve uygulamalarını tüketim ve üretim rejimlerine dahil etmenin, SKH'lere ulaşmak için kilit geçiş olacağını savunuyor. " [33] .

Politikalar, kurallar ve düzenlemeler ile prosedürler ve operasyonel yönergeler gibi küresel, bölgesel ve yerel mevzuat, SKH hedef başarıları ve hedeflerin gerçekleştirilmesi üzerinde derin bir etkiye sahiptir. Bölgesel düzeyde AB'nin Döngüsel Ekonomi Eylem Planı ve Avrupa Döngüsel Ekonomi Paydaş Platformu, ulusal düzeyde Nijerya'nın Genişletilmiş Üretici Sorumluluğu (EPR) operasyonel yönergeleri ve uluslararası düzeyde AB'nin Çin ile olan Mutabakat Zaptı (MoU) buna iyi örneklerdir. . Bunlar, 2030 gündemine doğru ilerlemeyi destekliyor. Bir CE için ticari çıkarların ve paydaş aktivizminin önemi göz ardı edilemez. Daly, çalışmasında [34]"Döngüsel bir ekonomiye geçişin ulusal düzenlemelerden ziyade iş çıkarları tarafından yönlendirileceği" ABD'ye odaklanıyor.

Yukarıdaki tartışmalara dayanarak, CE ile SKH'ler için uygulama planı arasında sıkı bir ilişki olduğu açıktır. **Bu ilişki, Şekil 1'de** önerilen bir çerçeve aracılığıyla kavramsallaştırılabilir.. Şekilden, CE ve SDG hedef başarıları arasında açık ilişkiler veya karşılıklı bağımlılıklar olduğu fark edilmektedir. Ayrıca, hükümet politikaları ve yönergeleri, hükümet ve özel paydaşlar arasındaki etkileşim/ortaklık ve döngüsel ticari çıkarlar için zihniyet gibi birkaç temel ilkeyi benimseyerek/takip ederek SDG'lere CE aracılığıyla ulaşılabileceği de görülmektedir. Politika açısından bakıldığında, tek bir ülkenin hükümeti, SKH hedeflerine ulaşmak için gerekli kural ve düzenlemeleri önermeli ve uygulamalıdır. Ayrıca, SKH'lere ulaşmak için politika uygulamasına ilişkin olarak hükümet paydaşları ve özel kuruluşlar arasında sıkı etkileşimler veya koordinasyon olmalıdır. Ayrıca, SGD'leri başarıyla gerçekleştirmek için,



Şekil 1. SKH'ler için CE'nin kavramsal çerçevesi.

Research-development-publication policies in terms of CE

The position of communities in the development process can be defined to a significant extent by sociocultural, environmental, and economic indicators. Undoubtedly, the initial phase of the social and economic development of humanity was dominated by rural and agricultural production. Considering the climate change projections, the risks posed by global climate change entail measures for increasing production and productivity in the face of population growth as well as the development of novel technologies and production systems based on adaptation to increases in temperature [https://www.intechopen.com/online-first/84351]. In this framework, R&D and technology policies and research and extension (R&E) policies need to be highlighted.

Sharing status of CE-related technology

It should be noted right away that; Technologies to be used for CE should be the common property of humanity. This may be a new paradigm, but the main thing is the future of the earth, the continuity of sustainable life. As is known, worldwide experience shows that new technologies have been the driver of social and economic development. “Cumulative Adoption of Technology” refers to the sum of all countries. Generally speaking, countries compete to take, use and utilize the technology by their own means (locally) or under the influence of international scientific research. Naturally, countries’ ability to produce technology and adoption of innovations lead to faster utilization of the positive effects of such technologies, but not all countries have the capacity to develop and transfer from outside and uphold the technologies they need [https://www.intechopen.com/online-first/84351]. Therefore, it is necessary to define a new approach in which the technologies produced for climate change are considered, in a sense, the “common property of humanity” for

countries that are unable to produce or transfer technology and have no means to compete with others. It is a fact that the creation of such a culture of sharing will serve all of the 17 Sustainable Development Goals set forth by the UN. So, in order to reduce the effects of climate change, which is a global threat to the earth, it will be important that the UN develops a mechanism that will ensure the exchange of existing and new technologies to be developed among countries, regardless of their ability to produce technology. (Source:Özçatalbaş, O. (2022). An Evaluation of the Transition from Linear Economy to Circular Economy. In (Ed.), Sustainable Rural Development [Working Title]. IntechOpen. https://doi.org/10.5772/intechopen.107980)

References

1. Boar, A.; Bastida, R.; Marimon, F. A systematic literature review. relationships between the sharing economy, sustainability and sustainable development goals. Sustainability 2020, 12, 6744.
2. General Assembly and ECOSOC Joint Meeting. Circular Economy for the SDGs: From Concept to Practice. Available online: https://www.un.org/en/ga/second/73/jm_conceptnote.pdf (accessed on 3 December 2020).
3. World Commission on Environment and Development. Our Common Future; Oxford University Press: Oxford, UK, 1987.
4. Alaimo, L.S.; Ciacci, A.; Ivaldi, E. Measuring sustainable development by non-aggregative approach. Soc. Indic. Res. 2021, 157, 101–122.
5. United Nations. Take Action for Sustainable Development Goals. Available online: https://www.un.org/sustainabledevelopment/sustainable-development-goals/ (accessed on 16 March 2021).
6. Jennifer, R. Using case studies in research. Manag. Res. News 2002, 25, 16–27.
7. Bachtrögler, J.; Fratesi, U.; Perucca, G. The influence of circular economy of the local context on the implementation and impact of EU cohesion policy. Reg. Stud. 2020, 54, 21–34.
8. Investopedia. 2020 Predictions for the Global Economy and Markets. Available online: https://www.investopedia.com/2020-predictions-for-the-global-economy-markets-and-investors-4780156 (accessed on 12 January 2021).
9. Fortuna, S.; Martineillo, L.; Morea, D. The strategic role of the corporate social responsibility and cercular economy in the cosmetic industry. Sustainability 2020, 12, 5120.
10. Dias, M.A.; Loureiro, F.B. A systemic approach to sustainability—The interconnection of its dimensions in ecovillage practices. Ambiente Soc. 2019, 22, 1–18.
11. Jawahir, I.S.; Bradley, R. Technological elements of circular economy and the principles of 6r-based closed-loop material flow in sustainable manufacturing. Procedia Cirp 2016, 40, 103–108.

12. Grdic, Z.S.; Nizic, M.K.; Rudan, E. Circular economy concept in the context of economic development in EU countries. Sustainability 2020, 12, 3060.
13. Ramani, S.V. Moving Away from the “Linear Economy Model” towards a “Circular Economy”. Available online: https://thefinancialexpress.com.bd/print/moving-away-from-the-linear-economy-model-towards-a-circular-economy-1518187431 (accessed on 9 October 2020).
14. Ellen MacArthur Foundation. What is a Circular Economy? A Framework for an Economy that is Restorative and Regenerative by Design. Available online: https://www.ellenmacarthurfoundation.org/circular-economy/concept (accessed on 6 October 2020).
15. Winkler, H. Closed-loop production systems—A sustainable supply chain approach. CIRP J. Manuf. Sci. Technol. 2011, 4, 243–246.
16. Bocken, N.M.; De Pauw, I.; Bakker, C.; Van Der Grinten, B. Product design and business model strategies for a circular economy. J. Ind. Prod. Eng. 2016, 33, 308–320.
17. Mestre, A.; Cooper, T. Circular product design. A multiple loops life cycle design approach for the circular economy. The Des. J. 2017, 20, 1620–1635.
18. Evian. Packaging and Recycling. Available online: https://www.evian.com/en_us/sustainable-bottled-water/water-bottle-recycling-and-packaging/ (accessed on 22 August 2021).
19. Inside FMCG. Evian Creates Label-Free Bottle in Circular Economy Move. Available online: https://insidefmcg.com.au/2020/08/04/evian-creates-label-free-bottle-in-circular-economy-move/#:~:text=%E2%80%9CThe%20new%20bottle%20is%20a,company%20said%20in%20a%20statement (accessed on 4 August 2021).
20. Apple Inc. Material Impact Profiles. Available online: https://www.apple.com/environment/pdf/Apple_Material_Impact_Profiles_April2019.pdf (accessed on 16 December 2020).
21. Islam, J.M. Bangladesh must Transition from Linear Economy to Circular Economy. The Business Standard. Available online: https://tbsnews.net/opinion/bangladesh-must-transition-linear-economy-circular-economy-42587 (accessed on 12 March 2021).
22. Busu, M.; Trica, C.L. Sustainability of circular economy indicators and their impact on economic growth of the European Union. Sustainability 2019, 11, 5481.
23. Gazzola, P.; Pavione, E.; Pezzetti, R.; Grechi, D. Trends in the fashion industry. The perception of sustainability and circular economy: A gender/generation quantitative approach. Sustainability 2020, 12, 2809.
24. Kirchherr, J.; Piscicelli, L. Towards an education for the circular economy (ECE): Five teaching principles and a case study, resources. Conserv. Recycl. 2019, 150, 104406.
25. Dagiliene, L.; Varaniut, V.; Bruneckiene, J. Local governments’ perspective on implementing the circular economy: A framework for future solutions. J. Clean. Prod 2021, 320, 127340.

26. Blomsma, F.; Brennan, G. The Emergence of Circular Economy: A New Framing around Prolonging Resource Productivity. J. Ind. Ecol. 2017, 21, 603–614.
27. Akenji, L.; Bengtsson, M.; Kato, M.; Hengesbaugh, M.; Hotta, Y.; Aoki-Suzuki, C.; Gamaralalage, P.J.D.; Liu, C. Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States; European Commission Directorate General for Environment and Directorate General for International Cooperation and Development: Brussels, Belgium; Association of Southeast Asian Nations (ASEAN): Jakarta, Indonesia, 2019.
28. Climate-KIC. Municipality-Led Circular Economy Case Studies: In Partnership with the Climate-Kic Circular Cities Project. Available online: https://www.climate-kic.org/in-detail/municipality-circular-economy-case-studies/ (accessed on 12 March 2021).
29. Hiraishi, T.; Krug, T.; Tanabe, K.; Srivastava, N.; Baasansuren, J.; Fukuda, M.; Troxler, T.G. (Eds.) 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands; IPCC: Geneva, Switzerland, 2014.
30. Esken, B.; Franco-García, M.L.; Fisscher, O.A.M. CSR perception as a signpost for circular economy. Manag. Res. Rev. 2018, 41, 586–604.
31. Islam, M.M.; Shamsuddoha, M. Coastal and marine conservation strategy for Bangladesh in the context of achieving blue growth and sustainable development goals (SDGs). Environ. Sci. Policy 2018, 87, 45–54.
32. Johnston, M.P. Secondary data analysis: A method of which the time has come. QQML 2017, 3, 619–626.
33. Bernard, H.R. Research Methods in Anthropology: Qualitative and Quantitative Methods, 3rd ed.; AltaMira: Lanham, MD, USA, 2002.
34. Ahmed, K.J.; Haq, S.A.; Bartiaux, F. The nexus between extreme weather events, sexual violence, and early marriage: A study of vulnerable populations in Bangladesh. Popul. Environ. 2019, 40, 303–324.

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