

dl h^cdjg: Vgj] "HnhiZb!"VXi c\ "Vh"V "ab 1" id \gdl i]

sectoral growth — as attention shifts towards end-of-life resource management, design-for-durability and services playing a larger role in the economy. The circular economy is also likely to bring production and consumption sites closer to each other, as material loops are more easily managed on a national and regional basis. As in many industrial areas and manufactures, inputs are predominantly imported. A circular economy can contribute to lower input-based imports towards greater regionalization of supply chains.

Table 1. How a Circular Economy can complement and intersect with other NESD concepts.

NESD Concepts	Key contributions	Complementary	Intersecting
Blue Economy	Reduction of dispersion of pollutants to waterways and oceans.	х	х
Green Economy	Less carbon intensity through higher reuse and recovery of secondary materials.	Х	Х
Orange/Creative Economy	Design-thinking for resource-e cient production and processes, and use of resource-e cient digital technologies.		
Purple/Care Economy	Valuing the innovation and productive capacities of labour and improved living conditions (environmental, health);	х	
Social & Solidarity Economy	Opportunity for using human innovation capacities in recycling, recovery and repair activities, including solidarity economy models conducive to upgrade working conditions from informal to formal sectors.	х	х
Yellow/Attention Economy	Norms setting to shift from goods-owner-ship to delivery-as-a-service models, highly driven by digital infrastructure and sustainable consumption behaviour.		х
Frugal/Innovation Economy			х

Source: UNEN

## SYNERGIES AND TRADE-OFFS OF A CIRCULAR ECONOMY WITH THE SDGS

I ] Z'X'gYj al/gZXdcdb n'gZaZh'dc'gZhdj gXZ'Z X'ZcXn'VcY' sustainable consumption and production, which are central concepts to achieve sustainable development. Resource Z X'ZcXn'gZ[Zgh'id'i] Z''b egdkZY'j hZ'd['gZhdj g\Zh''c'egdYj Xi'dc' and consumption processes, while reducing externalities in i] Z''cej i'id'dj iej i'egdXZhh#Hj hiV'c\W\Z'Xdchj b ei 'dc'VcY' production refer to "the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations"<sup>4</sup>.

@Zn\*\dVah\*hj XJ \*Vh\*H9< \*&' \*dc\*: chj gc\\*Hj hiV\*cVWZ\* 8dchj b ei dc\*VcY\*EgdYj Xi dc\*eViiZgch \*VgZ\*eVg \*Xj al/gn\* relevant to a circular economy, as the targets rely on recirculating what was previously seen as waste back into the economic space, via closed loop processes which reduce negative externalities.

A circular economy also relies on achieving goals such Vh°H9<°-!'ZheZXVan°iVg\Zi°-#°1]'X]'V'b h°id° \$b egdkZ° egd\gZhh'kZan'i]gdj\]" %(%'\adVWa'gZhdj gXZ'Z X'ZcXn'c° consumption and production and endeavour to decouple

ZXdcdb 'X"\gdl i] "[gdb "Zck'gdcb ZciVa"\YZ\g\YVi'dc "\thZZ" I V\\Z' dc"| Z cZmi'eV\Z\#

## BARRIERS AND POLICY OPPORTUNITIES TO THE DEVELOPMENT OF A CIRCULAR ECONOMY

There are multiple factors that prevent faster progress idl VgYh'b dg'ZXdcdb 'X'X'gXj aVgfn#EgXZh'VgZ'd[iZc'cdi' gZ ZXi 'kZ'd["VaiZck'gdcb ZciVaiXdhih'VcY'b Vni] j h'cdi 'WZ' hj X'Zci 'id'YgkZ'[j cYVb ZciVaiX] Vc\Z#Hj Wh'Y'Zh'b Vn'XgZViZ' incentives for the overuse of natural resources, undermining recycling options, and making linear production more attractive e.g., fossil fuel subsidies. Coordination failures may prevent the adoption of solutions across supply lines, including in the international context.

A fundamental policy challenge is how to correct these barriers and, more broadly, put in place policies and regulations that support the development of a circular economy and create opportunities for the business sector to engage in this transition. As the world moves towards circular economy patterns, countries should map

**Table 2.** Synergies between Circular Economy and the Sustainable Development Goals.

LINKS WIT	Н
SDG 1	Target 1.5 (build resilience to shocks and disasters)
SDG 2	Target 2.3 (double the agricultural productivity and incomes of small-scale food producers)  I Vg\Zih\ #\ZcY\] j c\Zg\CY\Zchj g\ VXXZhh\M\VaieZde\Z\id\h\[Z!\cj\] ig\ dj h\VcY\hj \ "X\Zci\[dd\Y!\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
SDG 3	Target 3.9 (reduce air, soil and water pollution).
SDG 4	Target 4.7 (foster education and skills for sustainable lifestyles, gender equality and culture).
SDG 5	Targets 5 (ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life) and 5.b (enhance the use of ICTs to promote women's empowerment).
SDG 6	IVg\Zih^+#(~12′begdkZ1ViZgfjVafnl~VcY°+#)~11ViZg"jhZ"Z~"X′ZcXnl#
SDG 7	Target 7.1 (ensure universal access to affordable, reliable and modern energy services) I Vg\Zih*, # 'Ł'cXgZVhZ*i] Zj hZ*d['gZcZl WbZ ZcZg\nł VcY*, #( 'ŁYdj WbZ \adVWagyliZ*d[*b egdk/c\ 'ZcZg\n'Z *'X/ZcXnł#
SDG 8	Targets 8.1 (sustain per-capita economic growth at 7% for LDCs), 8.2 (achieve higher levels of economic productivity), and 8.3 (support productive activities).  I Vg\Zih^-# \tarta\dV\dag\drigdthdj g\Z\Z\coloniz\drigdta\drigdthdj g\Z\Z\coloniz\drigdta\drigdthdj b ei \dc\seglYj Xi\dc\vc\Y\ZXdj eac\\\\ZXdcdb \drigdthdj g\Z\Z\\drigdta\drigdthdj g\Z\coloniz\drigdthdj g\Z\coloniz\drigdthdj \drigdta\drigdthdj g\Z\coloniz\drigdthdj g\Z\coloniz\drigdthdj \drighta\drighthdj \drighthdis\drighthdj g\Z\coloniz\drighthdj g\Z\coloniz\drighthdj \drighthdis\drighthdj \drighthdis\drighthat\drighthdis\dri
SDG 9	I Vg∖Zi". #) "Ł∕cXgZVhZ"gZhdj gKZ"j hZ"Z ""X∕ZcXn"VcY"gZh∕aZci"∕cYj higVaegdXZhhZhł#
SDG 11	Targets 11.6 (improve cities' air quality and waste management), 11.b (increase the number of cities implementing &iZ\g\niZY`ea\rch`[dg^&Xaj h\dc!`gZhdj g\ZZ ``X\ZcXn\b 1\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
SDG 12	I Vg∖Zih" f

I dg ZY XadhZan¹ 1 å] i] Z°<dkZgcb Zci EgdXj gZb Zci VcY° Ad\hi Xh°9 k hdc d[i] ZB chignd[; cVcXZid egdb diZ procurement targets that support a switch to a low-carbon gZhdj gXZ'Z X'Zci hdX'Zin#>c %k! i] Z°<dkZgcb Zci hZi targets for green procurement for governmental ministries, measured by the percentage of government tenders that had Zck'gdcb Zci VaXg1ZgV# ] dhZiVg\Zih'd[\*\*eZgXZci Whi] Z'ZcY'd[\* %k+!VcY\* %eZgXZci Whi] Z'ZcY'd[\* %k+!VcY\* %eZgXZci Whi] Z'ZcY'd[\* % %1 ZoZ'VaiVX] ZkZY#

## MARKET-BASED INSTRUMENTS USING FISCAL POLICY CAN BE POWERFUL INCENTIVES FOR CIRCULARITY

In the transition to a circular economy, public investment should be complemented by market-based instruments such as taxes or subsidies to help guide the behaviour of gb h! "Xdchj b Zgh" VcY" i] Z ej Wax"hZXidg" i & "ZcZgVi &\" revenue for direct action by governments". These policies can include tax deferrals, regulation for accelerated YZegZXVi dc" [dgcZl \*ckZhib Zcih" b VX] &Zgn" VcY" technology for circular economy processes, temporary lower corporate income tax for those making these investments, and higher temporary import tariffs on inputs i] Vi "XVc WZ Z XZciangZXnXZY" VcY" hj Whi hj iZY WhX gYj a/g inputs. The idea is to apply these policy instruments temporarily, shifting market behaviour, while avoiding permanent market distortions.

; dgnZVgh! Zck gdcb Zci Vai VnZh\*] VkZ WZc\*j hZY\*Vh\* instruments to correct market failures derived from ZnnZgcVah\*Zh\*i] Vi "XVj hZ\*Vc\*cZ X\*Zci VadXVi dc\*d[\* resources. Yet, during recent years countries have also hi Vgi ZY\*i] c\* 'c\ "VWdj i "X'gXj a\/gZXdcdb n\* hXVaedaXn\* chig b Zci h#; dgZnVb eaZl\*; 'ca\/cY\*b eaZb Zci ZY\*V\*cVi dcVa road map towards a circular economy by identifying tax options and other economic instruments, together with best practices to promote circular economy goals\*. In Thailand, government policies provide an attractive business climate for those looking to add value to raw materials or turn waste and plastic into green industries\*.

## PRIVATE SECTOR ENGAGEMENT

Ej Wax"EgkViZ"EVgcZdn] 'eh"XVc"] Zæ"Vý 'ày 'Zc\V\Zb Zci "id" jump start a circular economy. Together, both public and private institutions can identify sectoral or cluster-based opportunities, develop short- to long-term growth agendas, and propose policy options to facilitate coordinated 'ckZhib Zcih#l ] Z"egkViZ"hZXiddj"] gdj \] "\h"chi \h"j i \dch"tZ\h# associations, chambers, etc.) should advocate and propose ej WaxsegkViZ"eVgcZdn] 'eh"d"\dkZgcb Zcih!"cxaj Y \c\"vi"] Z" b j c \dangle eVaVveY"adXVazkZah#GZhZVg\f\] "VcY"9Zk&\dangle Zadeb Zci" clusters can include both entrepreneurs and academic hZXiddh"id"Zchj gZ VeeaZY"ccdkVi \dc#; \c\"cVan\"i] Z"egkViZ" hZXidd\dangle id"Zchj gZ VeeaZY"ccdkVi \dc#; \c\"cVan\"i] Z"egkViZ" hZXidd\dangle id"Z\n'd[" cVc\"\dangle id\"] h i \doc\"ciZ\g\/iY\" but also through investment funds using the instruments

generated by the public sector, such as limited coverage guarantee funds. The private sector can also explore joint investments with domestic and foreign capital, taking advantage of incentives and favourable regulations frameworks designed by governments.

定"heZX^ X'Xġ hiZḍl'ej WáX'ckZhib Zci "XVc"iVḍ Zi "Hb VaāVcY'B ZYʾ b ': ci ZæghZh'lHB: hl #l ] ZhZ "XVc 'cXġ YZ' technical assistance, public guarantee funds to enhance X舜Y宀 [dġHB: hl'VcY'kZcij 舜 "XVe宀Va'ckZhib Zcih'j h'c\'ej WáX' V\ZcX'Zh#定"i] Z "XVhZ'd["8] '蚕'!"i] Z "EgdYj Xi 'dc '9ZkZadeb Zci '8dædy'i 'dc 'laBDG; Dl' 'h'V'8] '蚕'Vc"\dkZgcb Zci Vádqì Vc 'oVi 'dc' [dj cYZY' 'c' & (. "id'eglb di Z "ZXdcdb 'X`\gdl i] "i] gdj \] "entrepreneurship and innovation and competitiveness. In ' % &!'8DG; D'al/j cX] ZY 'Vc 'c' 'Vi 'kZ'dc'i] Z "XʻqXj al/gZXdcdb n' and sustainable consumption and production, through the program "Transforma Economía Circular". "8DG; D'eglk 'YZh' cVcX'c` 'VcY'iZX] c 'XVa'Vhh'hi VcXZ! 'Vb dc 'di] ZgʻhZqk 'XZh!' and accelerate startups development towards a circular ZXdcdb n#l] Z 'egl\'gl/b "[dXj hZh'dc'i] Z 'b Vhh^ XVi 'dc' 'c' i] Z "j hZ'd["8 'gŊj al/g: Xdcdb n°9 'V\cdh'hīddah'Vi 'eglYj Xi 'dc'

materials¹²#˚Hj X] °a/l h˚h] {i °i] Z°l VhiZ°b VcV\Zb Zci °cost from local governments to producers for packaging, newsprint, electronic products, batteries, tires, end-of-life vehicles, pharmaceutical waste, stray radioactive products VcY°g/Y′dVXi ′kZ°hdj gXZh#Hj XXZhh°[VXidgh°[dgi] Z°edaXn° include strong cooperation and trust between producers

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