



 **CLUSTER**



POLICY REPORT

**BREAKING CYCLES**

**How Planning and Investing in the Circular Transition  
Can Reverse the Spirals of Youth Marginalisation and  
Ecological Degradation in the Mediterranean**



## PARTNERS



## POLICY REPORT

### **BREAKING CYCLES**

How Planning and Investing in the Circular Transition Can Reverse the Spirals of Youth Marginalisation and Ecological Degradation in the Mediterranean

### **CLUSTER POLICY REPORT ON YOUTH EMPLOYMENT IN THE CIRCULAR ECONOMY OF THE MEDITERRANEAN: state and near-future prospects**

#### **Authors:**

**Marta Pallarès Blanch**, Doctor in Geography, specialised in local development and rural and gender studies

**Edoardo Superchi**, MSc in Anthropology, Environment and Development

**Editorial team:** Karina Melkonian, Oumaya Amghar

**Proofreading:** Pere Bramon

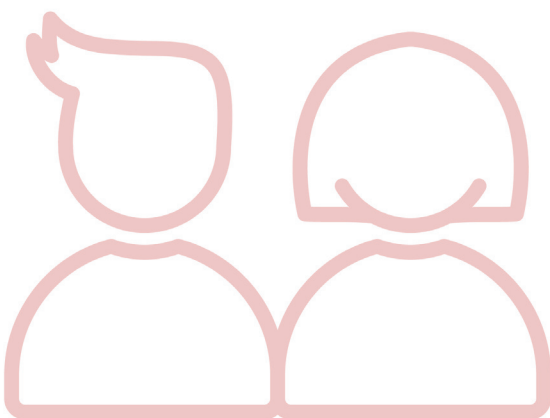
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# EXECUTIVE SUMMARY

The ecological crisis and youth unemployment are two of the most pressing challenges that Mediterranean countries are facing. These nations are very diverse but share a number of commonalities especially in this regard: high rates of youth unemployment, high rates of youths not in education, employment or training (NEETs), considerable gender gaps in employment and education, limited success of education and training systems satisfying the labour market's demand, and often stagnant national economies that are unable to absorb the increasing supply of educated and highly skilled workforce.

Circularity rates are quite low in almost all Mediterranean countries with a few exceptions, and solid frameworks and plans for the transition are not in place everywhere, but employment prospects in the near future are undoubtedly positive. Moreover, we do not have much data on the state and trends of the Circular Economy (CE) in Southern and Eastern Mediterranean (SEMED) countries, but certain informal sectors of the economy show great potential for the circular transition.

Through literature review and interviews with specialists, we identified possible actions and measures for Mediterranean countries to directly and indirectly foster youth employment in the CE:

**Shift labour demand towards circular models** through circular and green tax regimes, circular industrial policies and benefits for circular businesses that employ young people.

**Mitigate the impact of employment erosion** created by the circular transition in linear sectors, nationally through schemes combining social protection, reskilling and lifelong learning, and abroad through equal-footed cooperation.

**Generate an adequate labour supply to sustain the transition** by revising high-school curricula, fostering Science, Technology, Engineering and Mathematics (STEM) studies, giving more centrality to Technical and Vocational Education and Training (TVET) systems, developing reskilling and upskilling schemes for new and old workers, facilitating lifelong learning opportunities.

**Foster entrepreneurial literacy and skills** through self-employment programmes, integrating entrepreneurship modules in university curricula, expanding innovation hubs and Living Labs, and supporting start-ups and young entrepreneurs.

**Implement gendered approaches to unemployment, education and training** by promoting women's access to university, TVET and other learning and employment programmes, ensuring equal

rights in the work environment through legislation, facilitating a balance between personal and working life, and recognising the need for a more equal share of care responsibilities between men and women (e.g., paternity leave).

**Promote youth protagonism** at all levels in private and public organisations, through youth quotas in executive positions.

At national, regional and local level, **prioritise circular strategies that build on already available resources**, traditional activities, local knowledge, and social relations.

**Raise awareness of the benefits and existing instruments and programmes of the CE**, since top-down transition approaches will hardly be successful in the absence of a broad popular base agreeing with and demanding such a shift.

**Develop strong and clear legislative frameworks** that define circularity in all fields, integrate and coordinate sectorial efforts, and progressively make circularity the dominant modus operandi in the economy.

# ABBREVIATIONS

**ACEN:** African Circular Economy Network

**CE:** Circular Economy

**CEAP:** Circular Economy Action Plan

**CEN:** Circular Economy Network

**CNR-NANOTECH:** Institute of Nanotechnologies at the Consiglio Nazionale delle Ricerche (Italian National Research Council)

**EC:** European Commission

**ETF:** European Training Foundations

**EU:** European Union

**GVA:** gross value added

**ILO:** International Labour Organization

**JSF:** Jordan Strategy Forum

**MBZ:** Ministerie van Buitenlandse Zaken (Dutch Ministry of Foreign Affairs)

**MEF:** Ministero dell'Economia e delle Finanze (Italian Ministry of Economy and Finances)

**NEET:** not in education, employment, or training

**MSME:** micro, small, and medium-sized enterprises

**NEP:** National Employment Policy

**NOMED:** Northern Mediterranean

**SDG:** Sustainable Development Goals

**SEMED:** Southern and Eastern Mediterranean

**STEM:** Science, Technology, Engineering, Mathematics

**TVET:** Technical and Vocational Education and Training

**UN:** United Nations

**WFP:** World Food Programme

# INTRODUCTION

The ecological crisis and youth unemployment are two of the most pressing challenges that Mediterranean countries are facing. This report will focus on how governments and policy-makers can break these two vicious cycles through the “circularisation” of the economy and the creation of “circular jobs”. Its chapters will:

- briefly depict the state of the Circular Economy (CE) in the region;
- point out some of the existing policies that link youth and the CE;
- delineate the employment opportunities that the CE can create between now and 2030;
- propose policy measures to foster inclusive youth employment in the CE.

Greater analytical focus was put on six countries in the CLUSTER project (France, Italy, Jordan, Palestine, Spain and Tunisia), but there are also references to other Mediterranean countries.

Mediterranean countries vary greatly in a wide range of economic, cultural, geographical and geopolitical factors, but the two issues tackled here show deep structural commonalities that seem to differ in degree rather than in quality.

First of all, only three<sup>1</sup> of the 22 countries bordering the Mediterranean have unemployment rates for ages 15-24 lower than the global average (15.6%), while the average of the region (including Jordan) is 25% (World Bank, 2023). A substantial share of these values is made up of young people not in education, employment or training (NEETs), which is also a common thread across the Mediterranean (ETF, 2021). There are many drivers behind these high rates, but they can be generally attributed to mismatches in national labour demand and supply, with an increasingly educated and skilled youth unable to find jobs that fit their aspirations (e.g., ILO-ROMENA et al., 2023; ETF, 2019a; ETF, 2019b; WFP, 2023; MEF, 2022). This is the combined effect of outdated curricula, the limited success of training systems and often stagnant national economies that are unable to absorb the increasing supply of an educated and highly skilled workforce. In some cases, other more specific phenomena have had tremendous impact on youth employment, for example the reduction of public employment experienced in many Southern and Eastern Mediterranean (SEMED) countries (ETF, 2019a) or war and conflict, as in the cases of Syria, Libya and Palestine (WFP, 2023).

Another widespread feature is the gender gap in employment, due to a culturally deep-rooted separation

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<sup>1</sup> Israel 6%, Malta 8.3%, Slovenia 11.1%



of roles between the sexes under a substantially patriarchal social structure. Although the widest gaps can be found in SEMED countries (e.g., in Palestine, 43% of women and 22% of men are unemployed) (WFP, 2023), Northern Mediterranean (NOMED) countries show similar trends (e.g., in southern Italy, employment rates are 25% for young men and 14.7% for young women) (MEF, 2022).



# OVERVIEW OF THE CIRCULAR ECONOMY IN THE MEDITERRANEAN REGION

A CE is one that maximises the lifetime and value of materials, products and services throughout the entire value chain, prioritising waste minimisation and material recovery (Ribeiro-Broomhead & Tangri, 2021). Since many activities and sectors potentially contribute to a CE, for this report we limited our scope to those sectors whose circular element is most evident, namely:

- Water and waste management;
- Service and commodity sharing and leasing;
- Repairing, reusing, remanufacturing, and recycling.

Figures specifically related to CE in the Mediterranean region per se are not widely available. Here we provide data from specific countries or global estimates and try to infer general states and trends of the sectors involved for the whole region.

First of all, the circularisation of economies around the world has been a downward trend for some time, falling from 9.1% of the global economy being circular in 2018 to the current 7.2% (The Circle Economy, 2023). Although it is not a promising figure for the planet and we cannot provide an analogue for the Mediterranean, we can conclude that our region shows great potential for the development of zero waste systems, sharing schemes and reusing mechanisms. This is thanks to both governmental and international investments, and to the very production and consumption patterns observed in various contexts and for the different sectors, especially in SEMED countries.

The waste management sector is certainly receiving the most attention, to the point that some governments equate these activities with CE in general, substantially ignoring most other key aspects of circularity (e.g., Algeria, Jordan) (Benamraoui & Berrached, 2021; JSF, 2023). An interview with experts from the African Circular Economy Network (ACEN) confirms that this pattern is particularly present in, but not limited to, SEMED countries.

Some countries have started to integrate a more systemic approach to waste and reuse, including other sectors in circular actions, but still present a very low rate of circularity (e.g., Croatia, which included construction waste recovery in its Waste Management Plan 2023-2028, but has a circularity rate of only 2.7%) (MBZ, 2023).

A few countries have already shifted focus from merely recycling waste to more comprehensively

addressing resource efficiency in plastics, textiles, electronics, biomass and food, as shown by Türkiye's Green Deal Action Plan (JSF, 2023). Two big countries in the Mediterranean are leading in terms of approach to the circular transition: France and Italy, with 19.8% and 18.4% circularity rates, respectively (compared to the European Union [EU] average of 11.7%); Italy also has the highest rate of waste recycling, at 79% (EU average: 49.6%) (CEN, 2023). Malta (11.4%) and Slovenia (11%) have circular rates in line with the EU average, but Spain (8%), Cyprus (2.8%) and Portugal (2.5%) are underperforming (EU, 2022).

Although it seems that countries with higher levels of gross value added (GVA) also show higher contributions to GVA from circular business models, there is actually no significant correlation between the size of the economy and its relative circular contribution, meaning that the countries' potential for circularity is not solely dependent on wealth (WRAP, 2021). Indeed, it could be argued that less wealthy societies and communities can achieve high levels of efficiency in limiting consumption, sharing, recycling and reusing precisely because linear models for specific goods are more expensive. A clear example is the rubble-recycling industry, which grows every time conflict ignites in Gaza and allows the construction sector to endure despite the harsh embargo imposed by Israel (Muhaisen & Ahlbäck, 2012).

In sum, the circular landscape in the Mediterranean is extremely variegated and has reached different levels of results, but beyond the official indicators there might be an abundance of informal, poorly measurable practices on which governments and civil society could build to foster contextually effective, locally coherent circularity models.

# MAPPING OF YOUTH EMPLOYMENT POLICY FRAMEWORKS IN THE CIRCULAR ECONOMY IN THE MEDITERRANEAN

To the best of our knowledge, across the Mediterranean there are no policies that directly and specifically link youth employment and the CE.

There is, of course, a wealth of policies aimed at fostering the CE. The EU is at the forefront of policy-making in this regard, at least since 2015 and as recently as 2022, when the European Commission (EC) adopted some of the measures proposed in its Circular Economy Action Plan (CEAP), and 2023, when it proposed a Directive on Green Claims and common rules on the right to repair (EU, 2023a). Albania, Croatia, France, Greece, Italy, Malta, Portugal, Slovenia and Spain have included Circular Commitments in their Nationally Determined Contributions (NDCs), but they are the only Mediterranean countries to have done so (WRAP, 2021).

In fact, outside the EU, strategic approaches tend to be more scattered and devoted to individual sectors. For example, Jordan is investing significant resources in its Water Demand Management policy, which will positively impact water use efficiency and circularity, but it is not integrated in a wider circular framework (UN SDG, 2021). Other countries, like Palestine, totally lack a coherent action plan or framework for a Green and Circular Economy, and even the stand-alone laws that exist are poorly enforced, resulting in very limited impacts (UNEP/MAP MedWaves, 2022b).

There are also many countries in the region deploying varying effective measures to tackle youth unemployment. For example, Palestine developed both a Labour Sector Strategy and a National Youth Strategy for 2017-2022 aimed at reducing unemployment, fostering Technical and Vocational Education and Training (TVET) systems, enabling poverty alleviation schemes, reforming the legal framework and overall strengthening its national employment framework (World Bank, 2019). An even more ambitious example is the EU-wide Youth Guarantee programme aimed at ensuring that all people under 30 receive a good quality offer of employment, continued education, apprenticeship, and traineeship within four months of becoming unemployed or leaving education, resulting in over 24 million young people embarking on such activities after registering for the programme (EU, 2023b; ILO, 2023b).

A closer alignment between strategies for youth employment and for the CE could have been expected in many post-pandemic Recovery Plans in EU member states. For example, Italy's National Recovery and Resilience Plan includes a €6.97 billion-strong Mission for Sustainable Agriculture and the CE, but a report by the Ministry of Economy and Finances does not include these sectors among those that will contribute most to the employment of young people in the near future, instead citing the digital, information and communication technology (ICT), tourism, renewable energy and sustainable transport sectors as the most promising (MEF, 2022).

# EMPLOYMENT PROSPECTS FOR THE CIRCULAR ECONOMY IN THE NEAR FUTURE

Although effective implementation and awareness-raising may be slow, there is no doubt that all activities contributing to a CE will increase its importance and labour demand in the next years and decades. To be sure, this does not mean that such a transition will not harm other linear and traditional sectors: some degree of job displacement is indeed expected (WRAP, 2021).

But overall, the vast majority of analyses agree that the circular transition will bring net positive advantages in terms of economic and employment growth (Bachus, 2022).

If governments boost their efforts and investments towards a deeper circularisation of their economy, it is estimated that up to 6 million jobs worldwide could be created by 2030, with a net job increase of 0.016% in construction, +0.0037% in waste management, +0.0047% in manufacturing, and +0.001% in services compared to a business-as-usual scenario (ILO, 2023a). It is also projected that such gains will not be evenly distributed across the globe, since Europe will see 0.1% more jobs from a global circular transition, while jobs will diminish by 0.35% in the Middle East and by 0.2% in Africa, given the greater dependence of these regions on the fossil fuel and mining sectors (ILO, 2023a.). This reality should oblige all policy-makers to develop fair strategies that take into account the historical asymmetries and injustice running between North and South, and that through cooperation, solidarity and reparations would ensure that no national community is left behind in the transition.

In the EU, employment numbers are already promising, with 4.3 million jobs in the economic sectors relevant to the CE in 2021, corresponding to 2.1% of all the jobs in the Union, with Italy and France alone having 613,000 and 524,000 directly and indirectly circular jobs,<sup>2</sup> respectively (European Commission, 2023). And the trend is growing: more than 500,000 circular jobs were created in the EU between 2014 and 2018, with a 17% increase that towers over the growth rate of other sectors (e.g., +9% of the manufacturing sector over the same period). If transition efforts are sustained, 2.5 million more jobs could potentially be added by 2030, accompanied by a boost in gross value added (GVA) of €241 billion and an emission reduction of 134 million CO<sub>2</sub>-equivalent tonnes. Most of these new jobs will be created in waste management: 660,500 more jobs (an increase of more than

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<sup>2</sup> Direct circular jobs are any full or part-time occupation that directly involves one of the elements of the CE. Indirectly circular jobs support CE activities (The Circle Economy, 2023).

50% in 10 years), largely offsetting the layoffs in traditional landfill (WRAP, 2021). In fact, it is likely that construction, electronics, non-metallic minerals, motor vehicles, plastics and transport sectors will experience (mostly modest) net job losses (Bachus, 2022). Considering such trade-offs with sectors suffering from the transition, the net job gain in the EU would amount to 700,000 units by 2030 and, depending on the scale of circularity efforts, the unemployment rate could fall between 0.04 and 0.24 percentage points (WRAP, 2021).

Regarding the share of CE-related jobs in national economies, however, the trend has not been uniform across all member states: between 2015 and 2021, Croatia, Spain, Cyprus and France slightly increased their circular jobs share (from +0.1 to +0.3%), while Italy, Malta and Slovenia decreased their share by similar magnitude, and Portugal and Greece remained stable (EC, 2023).

Data from SEMED countries regarding the employment prospects of a circularisation of their economy is extremely scarce, but there are signs that similar effects will be experienced on those sides of the Mediterranean as well, especially where dependency from fossil fuel extraction is less strong. For example, the implementation of Jordan's plans for water efficiency is expected to generate 31,000 new jobs in sectors ranging from water desalination to plumbing, and to water infrastructures (UN SDG, 2021).

One of the main reasons for this net gain in employment is that approaches based on recycling, repairing and reusing are often labour intensive and create many more jobs per unit of resources than disposal-based approaches. It has been observed that, for 10,000 tonnes of waste processed per year, landfill or incineration processes produce only two jobs, while for the same amount composting activities create seven jobs, mechanised recycling 17, remanufacturing 55, semi-mechanised recycling 321, and repairing 404: over 200 times as many jobs as traditional disposal models (Ribeiro-Broomhead & Tangri, 2021). It is also noteworthy that contexts and economies (i.e., cities, regions, etc.) with currently low recycling rates will experience even greater job demand if measures are taken to initiate transition, compared with those where circularity models are already in place (Broomhead & Tangri, 2021.)

There is reason to believe that transition to the CE will create opportunities for workers of all skill levels, since circularity is a *modus operandi* with implications in virtually all aspects of the economy. However, it is likely that a greater proportion of the employment created will go to low- or medium-skilled labour rather than to highly skilled specialists, at least in the first phases of the transition and in scarcely automated contexts (Bachus, 2022). Some circular activities will certainly require specific sets of (possibly new) skills, and some degree of reskilling and upskilling of the workforce will be needed, but generally the transition could be initiated and largely brought forward with skills already present in the labour landscape: what a CE does require is a high degree of diversity of skills and professional profiles, including technical and specialist know-how but also soft, digital, social and communication skills (Bachus, 2022). The Spanish Observatory for Employment lists just some of the jobs that will be required (Observatorio de las Ocupaciones, 2023):

- Managers of waste management plants and companies;
- Research, design, development and production engineers;
- Environmental technicians, researchers and managers;
- Solid waste and wastewater treatment technicians;
- Motor and non-motor vehicle mechanics;
- ICT installers and repairers;
- Waste collection operators and waste sorters;
- Reconditioners of recycled spare and replacement parts;
- CE experts and sustainability strategy consultants;
- Material designers;
- Master composters;
- Rental, leasing and other product-as-a-service operators.

Focusing on the three major economies of the region and their projections by 2030, estimates report that France and Spain could respectively create 400,000 and 500,000 (gross) jobs in the recycling, reuse, rental, remanufacture, resale and servitisation sectors, and France could create 300,000 more in the repair, waste collection and innovative manufacturing sectors (WRAP, 2021).

For Italy, more specific data is available and, depending on the political and economic investment in the transition, a total of between 35,000 and 541,000 gross jobs and between 18,000 and 199,000 net jobs could be created by 2030. Most of these jobs would be absorbed by the recycling, manufacturing, reuse, servitisation and bioeconomy sectors. If the current business-as-usual model prevails and little effort is made towards circularisation, most of the (fewer) jobs created will be absorbed by the recycling and repair sectors, whereas if a full transformation of the economy is initiated the manufacturing sector will see the greatest figures in employment. In any case, about one third of the jobs created will go to those who are currently unemployed (WRAP, 2021).

Besides the concern for ensuring that the transition creates jobs for all, equal care must be invested in creating jobs with certain characteristics. Job duration is one of them, since greater attention and investments may lead to a sudden rise in demand for certain jobs that could, however, turn obsolete at later stages of the transition. Also, many circular jobs, like waste treatment, deal with hazardous conditions and tasks which, especially in informal economies, could be disproportionately filled by marginalised groups (Bachus 2022).

In this regard, we need to remind ourselves that circularity is not innately more humane or socially just and fair than linear models. Nothing prevents exploitative patterns from emerging in an environmentally-sustainable and zero-waste economy; therefore it is important to guarantee workforce, unions and civil society participation in the design and implementation of the transition.

## EU countries and jobs created in recycling, repair, rental/leasing, remanufacturing (WRAP, 2021)

Gross jobs created (GJ) Net jobs created (NJ)	Scenario 1*		Scenario 2		Scenario 3	
	No new initiatives		Current development		Transformation	
	GJ	NJ	GJ	NJ	GJ	NJ
Croatia	2,000	1,000	5,000	2,000	19,000	6,000
Cyprus	<1,000	<1,000	1,000	1,000	1,000	1,000
France	47,000	17,000	134,000	49,000	1,000	<1,000
Greece	3,000	3,000	6,000	6,000	13,000	12,000
Italy	39,000	18,000	146,000	65,000	326,000	140,000
Malta	<1,000	<1,000	<1,000	<1,000	1,000	<1,000
Portugal	6,000	2,000	14,000	4,000	29,000	7,000
Slovenia	1,000	<1,000	5,000	1,000	11,000	1,000
Spain	35,000	25,000	85,000	60,000	187,000	130,000
EU28	272,000	79,000	1,066,000	237,000	2,495,000	502,000

\* The E3ME model includes 43 consumer categories, 70 economic sectors, 23 users of 12 fuels, and 15 users of seven raw materials. The scenarios are defined by scaling up or down the level of CE activity in the economic sectors.



# ACTION PLAN FOR REGIONAL POLICY-MAKERS TO IMPLEMENT INCLUSIVE YOUTH EMPLOYMENT SCHEMES IN THE CIRCULAR ECONOMY

Employment and ecological transition are extremely complex issues and should be addressed from a multiplicity of angles, especially if we are to design strategies to link them together.

Certainly, a way to foster youth employment through the circularisation of the economy is to adopt macroeconomic measures and approaches that foster a CE in the first place. At least since the global economic crisis of 2008-2009, the grip of neoliberal paradigms on national and international economic governance has started to wane, and discourses on the duty of governments to temper market distortions and reduce inequalities have gained renewed centrality (ILO, 2023c). As part of such shift, National Employment Policies (NEPs) are back on the agenda, and these include a wide array of measures from monetary and fiscal policies to social protection, to skill development and employment schemes.

One of the most relevant paths of action under the NEPs umbrella that Mediterranean countries could embark on is **industrial policies and sectorial strategies**: governments should map their productive landscape and identify areas and value chains crucial for the transition in order to assume a greater role in their development, since it seems that, against the inertia of business-as-usual dynamics, only binding roadmaps and public support could sustain the progress of circular efforts from niche experiments to comprehensive, country-scale transformation of production, and consumption (Bachus, 2022). Governments should thus initiate collaborative processes of sector adaptation and/or upgrading by bringing to the table all relevant stakeholders: ministries and their agencies responsible for job demand and training, sector federations and businesses, social partners, workers organisations and unions, and, obviously, the sector employees themselves (Bachus, 2022). This kind of public-private, employer-employee dialogue is essential for achieving consensus and ownership over the transition process, thus making its success more likely (ILO, 2023b). A small-scale example of strategic sector could be represented by domestic water management in Palestine: residential desalination and thermal collector systems are already popular, especially in Gaza, but through the concerted efforts of public authorities and businesses to integrate solar energy, building design, and saltwater and greywater purification, a more structured sector would emerge creating new job opportunities and greatly enhancing energy and water efficiency (Muhaisen & Ahlbäck, 2012).

In any case, success in imparting a certain direction to the economy or the labour market is always the result of well-coordinated sets of policies that go beyond merely sectorial issues. When talking about employment, these policies are traditionally categorised as demand-side and supply-side. Demand-side policies focus on redirecting capital and labour flows towards a desired state of workforce demand, usually from lower- to higher-productivity jobs or, in our case, from linear to circular jobs. Fiscal policies, for example, in the form of **green/circular taxes** shifting the fiscal burden from income to carbon emission or waste production, are recognised as a tool to further increase sustainable employment gains while reducing environmental impacts through the penalisation of impacting sectors and the promotion of circular and other green businesses (Bachus, 2022; ILO, 2023b). It is essential to design such fiscal policies as progressive measures by allocating part of the additional revenue to lower labour taxation (particularly for low wages), higher social benefits and/or tax credits for vulnerable people, or even to finance **employment, education, training, reskilling and upskilling schemes** that directly contribute to employment in the sustainability sectors (Bachus, 2022). These are mostly considered supply-side measures and are arguably more relevant to the issue of youth unemployment because they aim at creating the kind of labour force that matches the demand of the market or of the development strategy. It has been observed that such measures are more effective when integrated into “packages” of services that include training, income support, counselling, mentoring, and intermediation (ILO, 2022). Also, a **strong monitoring and evaluating framework and infrastructure** must be in place for such interventions to be efficient, requiring the development of skill taxonomies and digital tools for employers, placement agencies and job seekers to easily match offer and demand (e.g., through the implementation of open online databases and platforms) (ILO, 2023b).

It must be noted that not all countries have the same investment capacity, infrastructure or human capital. Low and lower-middle income countries – which, in the Mediterranean, currently include Morocco, Algeria, Tunisia, Egypt, Jordan, Palestine, Lebanon and Syria (World Bank, 2022) – are often characterised by a so-called “dual” labour market, wherein the informal sector employs a substantial share, if not a majority, of the workforce (ILO, 2023c). This certainly poses a great obstacle for governments when they try to implement economic, labour and social protection reforms, since the informal economy is hard to monitor and regulate. However, when talking about the CE, some key features of many informal and traditional sectors, such as frugality and the reliance of close-knitted social networks, could be an opportunity as much as a hindrance. If an economic landscape has not yet developed complex formal sectors creating demand for highly skilled labour, governments could develop **strategies to try and foster green/circular transition in the informal economy**, rather than trying to vanquish it. Many informal activities already rely heavily on circular, cost-effective and resource-limited mechanisms (e.g., scrap collectors, rubble construction, etc.). The challenge would be to empower informal actors with practical interventions (e.g., providing infrastructures, safety equipment, etc.), workers’ rights and social protection.

Another issue is that the progressive circularisation of economies will shorten the heavily globalised value chains on which current linear patterns depend, and the increase of job opportunities in the CE in

high-income countries could result in employment losses in low- and middle-income ones (Bachus, 2022). Two consequences spring from this premise: first, that rich countries should **take into consideration the global impacts of their transition**; and, second, that developing and emerging economies cannot afford to keep on relying on low-value exports. The transition to a CE is an opportunity for these actors, too, to emancipate themselves from the whims of the market and muscular pressures from other countries, if they manage to **grow extractive, manufacturing and service sectors more reliant on the endogenous resources available and more aligned with the needs of the population**.

The key message is that transition strategies should be tailored to national and local circumstances. The concept of circularity also emerged as a counterpart against normative development models presenting industrialisation, automation, ease of doing business, commodification, and capital accumulation as indicators of a strong economy. Circularity means making the best out of the (meagre) resources available, and some SEMED countries may lack financial stability and spending power, but still have two assets that are being progressively eroded in NOMED countries: that is, an extensive social capital and an abundance of young people.

Characterising the features of this portion of the population is key to better integrate it into the future workforce, and an important first step is to **embrace the notion of NEETs** as the basis for policy-making rather than solely focusing on unemployment. In fact, the ailment of the Mediterranean youth (North, South and East) is not just the sheer lack of job opportunities, but rather a lack of perspectives, of tools to be in control of their futures, and of an ecosystem that can help them find a way forward if their path towards adult life was somehow interrupted. This broader focus naturally makes action more complicated, since NEETs are a very heterogeneous group, and their individual situations must be tended to through different approaches depending on the context. The EU Youth Guarantee scheme is widely recognised as a successful and comprehensive youth employment framework designed to reduce numbers of NEETs, but similar programmes rely on strong institutions and efficient bureaucracies and are extremely costly to implement, although their cost never matches that of total inaction (ILO, 2023b). Besides large-scale and broad-focus schemes, specific measures tailored to particular groups have the potential of having relatively greater benefits. For example, across the Mediterranean the majority of NEETs are young women, many of them educated, who are often prevented from further accessing education or employment because they are carers or viewed by their network as destined to that role. The implications of this phenomenon are too vast to be adequately discussed here, and there is reason to argue that women's emancipation and wellbeing do not necessarily involve formal employment but rather have to do with how we define "work", how policies can recognise family care in social protection systems and how such a burden can be shared more equally with men (ILO, 2023b). Nevertheless, it is evident that programmes targeting NEETs and youth unemployment in the Mediterranean should always be gender-conscious and invest adequate resources to balance gender gaps in access and completion of programmes (ILO, 2023b).

As mentioned, an important driver of youth unemployment in the Mediterranean is the mismatch between the skill profiles demanded by the employers and those offered by young people. Depending on the

context, labour supply is either too unskilled/uneducated or the contrary, and sometimes both cases coexist but in different sectors. Approaching this from a supply-side perspective, more or less radical **reforms in secondary and tertiary education** are needed. This will certainly involve the curricula and the specialisation opportunities offered by education systems, which should be revised and updated according to the needs of a green and circular transition. Fostering the number of Scientific, Technical, Engineering and Mathematics (**STEM**) students is a must, but also **TVET** will be key in this regard, since many jobs created throughout the transition will not require academic preparation but rather a high degree of technical competence and specialisation (ETF, 2021). Steps must be taken to “clean” the image of TVET, often viewed, in Mediterranean societies, as low-quality educational paths. In Jordan, for example, TVET provision is considered outdated, not “applied” enough, unable to provide the skills requested by employers, and it is indeed quite a fragmented offer that allows limited options to change the education path at any point. But the Jordan 2025 strategy is allocating €52 million – of which a substantial share from the EU – to overcome these criticalities and €268 million more to another 35 projects for curricula development, career guidance, job placement, supporting employment offices, and its own online National Electronic Employment System (ETF, 2019a). Another important theme is that of lifelong learning: in a fast- and ever-changing economy, even the most specialised skills could rapidly become obsolete. It is then the responsibility of students and employees to periodically update their skills and capabilities, but most importantly it is the businesses’ and governments’ duty to enable them to do so, providing paid leave, courses and other resources (Bachus, 2022).

Moreover, the role of young entrepreneurs, innovators and micro, small and medium sized-enterprises (MSMEs) cannot be overlooked. First, because young people are increasingly resorting to self-employment, mostly in the growing “gig economy” but also in the start-up and innovation sector (ILO-Regional Office for the Middle East and North Africa [ROMENA] et al., 2023). More in low- and middle-income countries than higher-income ones, **self-employment programmes** have been reported to have the largest and most viable impacts on youth unemployment (ILO, 2023b). Second, because **entrepreneurial skills** and know-how are extremely useful tools in the current economic environment, even for those that have no desire to become entrepreneurs themselves: being able to recognise business trends and opportunities, knowing whom to engage for developing innovative ideas, and intercepting and ensuring investment flows are invaluable resources that make highly appreciated employees, not only businessmen (cfr. EU EntreComp framework). It may sound radical, but to foster these skills across professional profiles, small start-up and entrepreneurship modules could be integrated in all university degrees. **Innovation hubs and Living Labs** functioning as beacons and crossroads for academia, industry, public administrations and young people will be the regional, national and international epicentres of the transition, and must thus be supported and expanded.

Lastly, we need young builders to construct the future, meaning that youth protagonism must be fostered at all levels of business and public administration. In rapidly aging national communities and in governance ecosystems refractory to change, young people are increasingly kept at the margins of decision-making processes, thus effectively silencing the voices of those who will face the consequences

of today's action the most. In an interview with Paolo Stufano, research scientist at CNR-NANOTEC, **youth quotas in private and public executive positions** emerged as a viable option to rejuvenate the approaches to transition in many ways.

Addressing the education and training of young people is necessary but insufficient in the absence of demand-side and sectorial policies. Both in higher- and lower-income Mediterranean countries, over-qualification and low skills utilisation are a pressing reality that increasingly leads to the so-called “brain drain” and will not be resolved in the absence of investment in innovation, decent job creation, and a boost in job quality (ILO, 2023b).

Finally, we provide a summarised list of possible actions and measures for Mediterranean countries to directly and indirectly foster youth employment in the CE:

**Shift labour demand towards circular models** through circular and green tax regimes, circular industrial policies and benefits for circular businesses that employ young people.

**Mitigate the impact of employment erosion** created by the circular transition in linear sectors, nationally through schemes combining social protection, reskilling and lifelong learning, and abroad through equal-footed cooperation.

**Generate an adequate labour supply to sustain the transition** by revising high-school curricula, fostering STEM studies, giving more centrality to TVET systems, developing reskilling and upskilling schemes for new and old workers, facilitating lifelong learning opportunities.

**Foster entrepreneurial literacy and skills** through self-employment programmes, integrating entrepreneurship modules in university curricula, expanding innovation hubs and Living Labs, support start-ups and young entrepreneurs.

**Implement gendered approaches to unemployment, education and training** by promoting women's access to university, TVET and other learning and employment programmes, ensuring equal rights in the work environment through legislation, facilitating a balance between personal and working life, and recognising the need for a more equal share of care responsibilities between men and women (e.g., paternity leave).

**Promote youth protagonism** at all levels in private and public organisations through youth quotas in executive positions.

At national, regional and local level, **prioritise circular strategies that build on already available resources**, traditional activities, local knowledge, and social relations.

**Raise awareness about the benefits and the existing instruments and programmes of the CE**, since top-down transition approaches will hardly be successful in the absence of a broad popular base agreeing with and demanding such a shift.

**Develop strong and clear legislative frameworks** that define circularity in all fields, integrate and coordinate sectorial efforts, and progressively make circularity the dominant *modus operandi* in the economy.

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