

ACHIEVING SUSTAINABLE DEVELOPMENT GOALS: THE RELEVANCE OF A NEXUS APPROACH IN THE EURO-MEDITERRANEAN AND AFRICAN REGION



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ABSTRACT

Sustainable development as a holistic framework is a top priority in the global agenda.

Abundant literature tackles Sustainable Development. But in a context characterised by global threats, such as the COVID-19 sanitation crisis, climate change and gaps in worldwide development, Sustainable Development Goals appear more relevant than ever and achieving them is more urgent than ever. To accelerate the path towards this objective, this policy paper advocates the need to implement a strategy, based on two pillars.

The paper defends the idea that it is of utmost importance to emphasise the need for a “nexus approach” rooted in a “geography sensitive” and “multi-scalar” vision of Sustainable Development, for targeted implementation at regional and local levels, particularly within the Euro-Mediterranean and African region. Such an approach would also be a fundamental accelerator for regional integration, which remains really weak in this part of the World. Many indicators show that the present context offers a unique opportunity to adopt such an approach and, thereby, accelerate the pace towards reaching global Sustainable Development Goals. The paper also highlights how, considering its geostrategic position and its long-term commitment to Sustainable Development as an holistic framework, Morocco plays a preminent role in the implementation of such an approach.

Keywords

Sustainable development, SDGs, nexus approach, multi-scalar vision, Euro-Mediterranean and African region, regional integration, COVID-19.

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“Climate change is indeed running faster than we are, and we have the risk to see irreversible damage that will not be possible to recover if we don’t act very, very quickly.”¹
Antonio Guterres, SG of the United Nations, 2018

1 INTRODUCTION

Sustainable development has gained significant importance within the global agenda over the last decade and is now a top priority. The worldwide COVID-19 sanitation crisis made it clear that Sustainable Development Goals (SDG) appear more relevant than ever and achieving them is more urgent than ever.

Sustainable development can be portrayed as an “*intellectual pursuit*” which strives “*to make sense of the interactions of three complex systems: the world economy, the global society, and the Earth’s physical environment*” (Sachs 2015).

The global architecture was reinforced in 2015 with the adoption by the United Nations of 17 Sustainable Development Goals (SDGs), with a 2030 horizon and a strong impetus for action (**Figure 1**). The progress achieved to attain these aforementioned goals is being closely and thoroughly monitored through a number of indicators measured on a yearly basis².



Figure 1: The Sustainable Development Goals (SDGs)

¹ Antonio Guterres, Secretary General of the United Nations, Remarks at the UN High Level Event on Climate Change, September 2018

² The United Nations. The Department of Economic and Social Affairs. The Sustainable Development Knowledge Platform. Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators (E/CN.3/2016/2/Rev. 1). Final List of proposed Sustainable Development Goal Indicators. <https://sustainabledevelopment.un.org/content/documents/11803Official-List-of-Proposed-SDG-Indicators.pdf>.

The year 2015 was certainly a landmark year for multilateralism and international policy, with the adoption of several major agreements:

- The *Sendai Framework for Disaster Risk Reduction* (March 2015).
- The *Addis Ababa Action Agenda on Financing for Development* (July 2015).
- The *2030 Agenda for Sustainable Development: Transforming our World*. The *2030 Agenda for Sustainable Development* with its 17 SDGs was adopted at the UN Sustainable Development Summit in New York in September 2015.
- The *Paris Agreement on Climate Change* (December 2015)³.

Nevertheless, in 2021, within the context of the COVID-19 pandemic, the accelerated pace for the implementation of the SDGs seems to be an important pre-requisite for the recovery of the global economy.

The interdependence between countries and continents is closer than ever and the need for a global consolidated (and reformed) multilateral agenda is a necessity.

So, the question today is: how can we achieve SDGs better and faster? To try to answer this question, this policy paper advocates the possibility of adopting a new matrix combining two key parameters:

- **By using to its benefit the “accelerator effect” triggered by the COVID-19 crisis, the Euro- Mediterranean-Africa region can resort to Sustainable Development as a backbone for shaping a truly reinvented regional Agenda. Using an holistic framework, Sustainable Development can leverage well-being, inclusive growth as well as job creation, thus facilitating regional integration.**

The first part of the paper emphasises the multiple arguments building the case for an acceleration of the implementation of Sustainable Development Goals in the Euro-Mediterranean and African (EMA) region, by underlining the momentum constituted by:

- The existing institutional dynamics which provide a political framework for action.
- The scientific evidence exposing the growing vulnerabilities in the EMAR region and,
- The socio-economic considerations with all the challenges (and opportunities) of the postCOVID-19 recovery schemes.

³The United Nations, *op.cit.*

The aforementioned key arguments call for concerted and integrated action to be deployed by the EMA Region.

According to the OECD & UNDP⁴, “the adoption of a regional approach is all the more important as it allows SDG alignment which unlocks the resources, directs them towards needs, and builds a more sustainable and inclusive economy, which protects against risks, builds resilience and generates financial returns and economic growth.”

- The deployment of such a concerted and integrated action can be rooted in a nexus approach, as a concrete contribution to the holistic framework of the SDGs.

The second part of the paper indicates how adopting a nexus approach is key to tackling the numerous challenges to Sustainability. Essential framework dimensions of the nexus approach to Sustainable Development are exposed, to illustrate how such integrated strategies can contribute to turning common challenges into reinvented opportunities. It is worth emphasising that such integrated strategies can truly enhance regional integration and be positive and constructive contributions to the multilateral agenda.

In particular, the COVID-19 crisis reinforced the need for taking health into account as a transversal issue, in order to achieve the SDGs. Thus, Jeffrey Sachs considers health to be one of the 6 "transformative SDGs".

The pandemic affected livelihoods and, forthwith, the global economy, resulting in a forecast of a 5.2% contraction of global GDP, according to the World Bank.

Paradoxically, the COVID-19 crisis has demonstrated the ability of Nations to innovate and rethink their action patterns within the framework of sustainable economic growth and anchored in current and future challenges.

The nexus approach is built upon the belief that this is a unique momentum to adopt an “holistic view that reconciles economic recovery, balancing economic aspirations with social development and the sustainable management of ecosystems.”⁵

This policy paper will also highlight the case study of Morocco as a key player in multilateral and regional policies and as a strategic stakeholder for the deployment of the nexus approach to SDGs in the EMA Region.

⁴ OECD & UNDP (2020). Framework for SDG Aligned Finance.

⁵European Climate Foundation & Positive Agenda Advisory (2021). Africa Green Resilient Recovery Report for North Africa

2 THE CASE FOR ROOTING SUSTAINABLE DEVELOPMENT IN A EURO-MEDITERRANEAN AND AFRICAN GEOGRAPHICAL SCOPE

The adoption at international level of Sustainable Development Goals (SDGs) and the subsequent overall governance of the process should be accompanied by a “multi-scalar vision”, which designates here a “geography sensitive approach” to the extent that it is deployed by emphasising the geographic location. In other words, such an approach takes into account the geographic variable and is subsequently declined by continent, region and country.

If we take the Mediterranean region for example, the countries within it are either part of the European track, the African track or the Asian one. It is to be underlined here that there is no specific Mediterranean track.

Yet, the Mediterranean region needs its own integrated framework. Such an approach will lead to the consideration of regional specificities: resources, opportunities, as well as challenges.

Indeed, the Mediterranean is a recognised hotspot for sustainable development, with significant challenges and opportunities.

This is also true for the whole African continent.

The Mediterranean area (as well as Africa) gathers together the least polluting countries in the world, but it is also the region that is the most affected by climate change, thus the urgency to act coherently.

Therefore, the adoption of the geography sensitive approaches applied to Sustainable Development has become a priority in the Euro-Mediterranean and African region, to the extent that “partial approaches neglecting cross-effects may underestimate or overestimate the consequences of uncoordinated actions and lead to biased policy implications” (Bhaduri *et al.* 2015).

2.1 A Momentum to be Seized

The current momentum can be seized, in order to root Sustainable Development in a Euro-Mediterranean and African Horizon.

Multiple arguments, building the case for the geography sensitive approaches, can be highlighted, including: the political and institutional momentum; the existing scientific expertise, in addition to the compelling socioeconomic considerations.

2.1.1 The Political and Institutional Momentum

The need to promote and structure a Mediterranean dynamic around Sustainable Development led to multiple initiatives being adopted within the framework of regional organisations:

- **The 2014-2020 Ministerial** Conferences on Environment and Climate Change, Blue Economy, Transportation, Water, Energy, and Urban Development (Union for the Mediterranean)⁶;
- **The 5+5 meetings** on Water, Energy, Environment, Transportation and Tourism⁷;
- **The Barcelona Convention:** Adoption by the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) – namely the 21 Mediterranean countries and the European Union of the revised Mediterranean Strategy for Sustainable Development (MSSD 2016-2025), at the 19th Ordinary Meeting (COP19) held in Athens, Greece, 9-12 February 2016 (MCSD 2016). This strategy is rooted in the conviction that investment in the environment is the best way to secure long-term sustainable growth (MCSD 2018).
- **The 2021 New European Union Agenda for the Mediterranean** emanates from the consciousness of the urgency of coping with existing common challenges within the Euro-Mediterranean and African region. It must be pointed out that the New Agenda for the Mediterranean includes a dedicated Economic and Investment Plan, in order to accompany the long-term socio-economic recovery in the Southern Neighbourhood.

“Under the new EU's Neighbourhood, Development and International Cooperation Instrument (NDICI), up to €7 billion for the period 2021-2027 would be allocated to its implementation, which could mobilise up to €30 billion in private and public investment in the region in the next decade.”⁸

⁶ The Union for the Mediterranean. www.ufmsecretariat.org.

⁷ Le Dialogue 5 +5. www.medthink5plus5.org.

⁸ EU Neighbours South. Southern Neighbourhood: EU proposes New Agenda for the Mediterranean. <https://www.euneighbours.eu/en/south/stay-informed/news/southern-neighbourhood-eu-proposes-new-agenda->

This New Agenda for the Mediterranean targets multiple areas, including:

- Human development, good governance and the rule of law;
- Resilience, prosperity and digital transition;
- Peace and security;
- Migration and mobility;
- Green transition: climate resilience, energy and environment.

In particular, this New Agenda for the Mediterranean comes at a time when the EU is also launching the Green Deal, thereby accelerating the pace towards a green transition.

A unique opportunity for commitment to “*a common and people-centered agenda*” is also offered by the perspective of a post-COVID-19 recovery⁹, as we move towards COP26 in Glasgow by the end of 2021.

But one can question whether, at this stage, these agendas provide concrete roadmaps and financial details that would allow a real alignment of IFIs and donor strategies related to the implementation of the SDGs.

2.1.2 Scientific Expertise Establishing Growing Vulnerabilities in the Euro-Mediterranean and African Region

Political awareness and institutional actions are based on solid scientific work highlighting the growing vulnerabilities of the Mediterranean region.

In 2019, a group of scientists from across the Mediterranean region gathered within the framework of the UfM-supported MEDECC, to draft the first ever scientific report on climate change¹⁰ (**Appendix A**). Amongst the major findings of the aforementioned report, it has been established that the Mediterranean region is warming 20% faster than the global average, making it one of the World’s hotspots. (UfM, 2018)¹¹. If the status-quo, as well as current policies are to be maintained, temperatures are projected to increase by 2.2° Celsius by 2040, whereas the Paris Agreement has defined a +1, 5° Celsius target.

⁹ The European Commission. Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Renewed partnership with the Southern Neighbourhood: A new Agenda for the Mediterranean. https://eeas.europa.eu/sites/eeas/files/joint_communication_renewed_partnership_southern_neighbourhood.pdf.

¹⁰ The Network of Mediterranean Experts on Climate and Environmental Change (MedECC). <https://www.medecc.org/>.

¹¹ The Union for the Mediterranean (UfM). (2018). UfM Water Policy Framework for Actions 2030, Water Division.

Interconnections between climate change and migration, security and stability issues came to the fore vehemently over these last few years. These interconnections are acutely illustrated by the emergence of concepts, such as: climate refugees.

Climate change is already considered by many security experts to be a “risk multiplier” or “threat multiplier” (Bremberg 2018).¹²

For instance, as a “risk multiplier”, climate change leads to within-country displacements, as well as international migration flows. **In accordance with a 2018 World Bank Report**, “*the worsening impacts of climate change in three densely populated regions of the world could see over 140 million people’s move within their countries’ borders by 2050, creating a looming human crisis and threatening the development process*”(World Bank 2018). Additionally, **climate change is increasingly posing serious security threats including:** “*increased risk of famine, damage to infrastructure, houses and shelter, and violent conflict are exacerbated by climate change through gradual changes in ecosystems and extreme weather events*”(Bremberg 2018).

In the same vein, the EU Global Strategy of 2016 pointed out the intricate impact of climate change on States and warned that it “‘exacerbate[s] potential conflict’ due to desertification, land degradation, and water and food security”.¹³

The cross-border nature of the security challenges in the region strengthens the need for a regional approach and for developing regional cooperation. It can be inferred, based on the readily available scientific data, that the urgency of the situation of extreme vulnerability in the Mediterranean region cannot be overstated.

2.1.3 Socio-Economic Considerations

Striving to reach the SDGs through compliance with the orientations of the United Nations can positively impact inclusive growth, employment and competitiveness, in so far as “SDGs call for socially inclusive and environmentally sustainable growth” (Sachs 2015). A contrarian, ‘do-nothing’ policy would lead to massive job losses.

According to the International Labour Organisation (ILO):

- Over 600 million new jobs need to be created by 2030, in order to keep pace with the growth of the working-age population: around 40 million per year.
- 780 million working women and men are not earning enough to lift themselves and their families out of US\$2-a-day poverty.
- Amongst developing and emerging countries, those that invested the most in quality jobs from the early 2000s, grew nearly one percentage point faster every year since 2007 and experienced lower income inequalities.

- With around 200 million people out of work worldwide, full employment remains a distant reality for many countries.
- Throughout the world, women are often in undervalued and low-paid jobs, and lack access to education, training and recruitment. They have limited bargaining and decision-making power and still shoulder responsibility for most unpaid care work. Globally, only about half of the world's women are in the labour force, compared to nearly 80 per cent of men, earning on average 23 per cent less than men, with mothers particularly hard hit.
- Worldwide, over 73 million young people (aged 15–24) were looking for work in 2014. The global share of young people not in employment, education or training exceeded more than one in five. In addition, more than a third of young people with jobs in the developing world were living on less than US\$2 a day in 2013. Early school-leavers are those most likely to remain trapped in jobs, where their rights are not respected and where they work in conditions of great insecurity and poverty.¹⁴
- The green economy could create 24 million new jobs by 2030. Nonetheless, if the appropriate policies are not implemented, the ILO predicts that 72 million full-time jobs will be lost by 2030 due, to heat stress and temperature increases (ILO 2019).

In effect, recent statistics highlight the deteriorating figures for youth unemployment in the MENA region (Appendix B), which is the highest in the World.

2.2 The need to broaden the geographical scope of Euro-Mediterranean perspectives to the whole African Continent.

There is abundant literature on the Sustainable Development Framework in the European Union, the Mediterranean and the Sahel/Africa region separately. Nonetheless, scarce research focusses on the interconnections between these geographical areas. This is a paradox, because these numerous interconnections are growing, more specifically between the European Union, North Africa and the Sahel.

Let us look into key geographical facts and figures.

- The Mediterranean Sea and the Sahel region are two prominent areas. The Mediterranean, as a sea, is 2.5 million km² and the Sahel/Sahara, as a region, is a little over 7 million km² (from Mauritania to Sudan).
- The European Union is 4.5 million km² with 512 million inhabitants.

¹⁴ International Labour Organisation (ILO). (2018). Decent Work and the 2030 Agenda for Sustainable Development.

- The Mediterranean North African countries (Morocco, Algeria, Tunisia, Libya and

Egypt) are 5.18 million km² with a combined population of 195.5 million.

- The Sahel/Sahara countries are 7.03 million km² (Mauritania 1.03; Burkina Faso 0.3; Mali 1.2; Niger 1.3; Chad 1.3; and Sudan 1.9), with a combined population of 123 million.
- Africa has a global surface of 30.5 million km² and a total population of 1.3 billion (roughly equivalent to that of China and India respectively).

Let us also look at other relevant demographic figures.

- Close to 50% of Africa's present population is under 18.
- By 2030, the African population under 18 will grow by 170 million.
- By 2050, 40% of young people under 15 in the World will be living in Africa.
- By 2100, 50% of young people under 15 in the World will be living in Africa (UNICEF).

As is demonstrated in Appendix C, strong demographic growth tendencies are prevalent in the Southern Mediterranean Countries. In accordance with UNDP projections, the “greatest demographic growth of the 21st century will take place in this region, the inhabitants of which are expected to almost double by 2050 (from 1.1 billion to 2.1 billion).”¹⁵

Adding geographical and demographic facts to the observed development divide between Europe and Africa (*Appendix D*), through the existing conflicts and security threats in some parts of the Continent, one can easily reach the conclusion of **the need to accelerate the call for collective and global “Euro-Mediterranean-African” action.**

As stated by His Majesty King Mohammed VI of Morocco during His Speech at the COP 24 in Poland: “The African Continent is the hardest hit by the negative impacts of climate change even though it is not responsible for this unfair situation”¹⁶

The existence of multiple regional frameworks in the region (EU, UfM, AU, 5+5, G5, EU-AU, EU-ECOWAS *etc.*...) and numerous initiatives within such platforms of action, must be acknowledged.

¹⁵ Plan Bleu. 2020. Demographic Trends and Outlook in the Mediterranean.
<https://planbleu.org/publication/tendancesdemographiques>.

¹⁶ Excerpts of the Speech by His Majesty King Mohammed VI at the COP24, December 2018.

The action of intergovernmental organisations (IGOs) remains crucial to address “climate-related security risks”, in so far as they cross borders posing transnational threats. Intergovernmental organisations retain a significant role in “developing policy solutions and enhancing international cooperation.” (Bremberg 2018).

The existence of such frameworks and initiatives in the “Europe-Mediterranean-Africa” region provides a stronger capacity for action and for transforming risks into opportunities for inclusive growth, development and stability.

2.3 The Example of the Common Challenge of Rapid Urbanisation

The urban population in the South of the Mediterranean is estimated to be around 165 million and is expected to increase by 80 million by 2030 (Sijilmassi 2019). It is also projected that 80% of the population of the Southern Mediterranean countries will be living in urban areas (*Appendix C*). The rapidly growing urbanisation of the Southern Mediterranean countries is accompanied by significant human pressure on the surrounding biodiversity (Fraisie 2018). It is expected that, by 2025, more than half of the 46,000 km of coastal zones could be urbanised, increasing at such a rate that, by 2000, it had already covered 40 % (Fraisie 2018).

Urban policies and infrastructures, with their impact on the overall well-being of populations, will become increasingly important in the years to come. Therefore, urban policies and infrastructures are privileged areas, where local policies oriented by the SDGs are set to demonstrate their concrete impact on the populations.

Cities will progressively become “laboratories of successes and failures”. Outcomes are to be concomitantly compliant with the orientations of the SDGs. A thorough understanding of the challenges facing the territories of the Mediterranean area can only be achieved through attention to the diverse demographic and environmental characteristics of the region. In the face of the necessary changes, Mediterranean cities, including metropolises, both South and North, must anticipate change and adapt their urban strategies. The “Sustainable Mediterranean City” must pave the way for a resilient model of urban space development, that combines adaptation of territories with environmental changes, as well as mitigation of environmental impacts related to human activity.

3 THE NEXUS APPROACH AS AN APPROPRIATE METHODOLOGY TO REACH SDGS

Sustainable development covers a wide range of activities intrinsically linked to Human Development. The overall objective is to reach peace and stability in the World, through more balanced and comprehensive socio-economic development.

The growing interrelated security and development challenges in the Euro-Mediterranean and African region increase the urgency to build accelerated strategies towards the implementation of SDGs in the **Euro-Mediterranean and African region**.

Adoption of the nexus approach for the sake of achieving SDGs arises from awareness of the inescapable urgency posed by the numerous threats related to climate change.

The original Rio conference discussed environment and development together, in a sort of **nexus way**; however, after Rio we lost a little of this sentiment and the nexus concept faded away. Now, 20 years later, we must reinvigorate the message of sustainable development through ‘**a nexus approach**’ (cited in Martin-Nagle et al. 2011, 5).

“The Rio + 20 Declaration ‘The Future We Want’ stresses the need for a balanced integration of economic, social, and environmental concerns into economic development, and also highlights the need to address food, water and energy security in such a manner as to reduce the adverse impacts on nature (on water, biodiversity, air, and climate)”. (Niet, Arianpoo, Kuling, and Wright 2021)

The need for a nexus approach stems from the existing interlinkages between economic activities and the SDGs.

“More specifically, economic activities can promote industrialisation, infrastructure and innovation [SDG 9], economic productivity [SDG 8], housing and transport [SDG11], production and distribution of food [SDG 2], generation and distribution of energy [SDG 7], managing waste [SDG 12], providing access to health [SDG 3], education [SDG 4] and to information [SDG16]. But negative externalities abound and afflict the environment as well as people’s health. Nearly all types of economic activities emit GHGs [SDG 13], many use vast amounts of water and/or are related to water pollution [SDG 6], cause pollution and waste more generally [SDG 12], which erodes the natural environment [SDGs 14 and 15], and harms people’s health [SDG 3], directly, due to pollution, and indirectly as degradation of habitats may spread diseases from animals to humans – which is the likely origin of the current coronavirus pandemic.” (Van Zanten and Van Tulder 2020, 11).

It has been argued extensively in the literature (Weitz et al. 2014; Boas et al. 2016; Allen et al. 2019) that the nexus approach contributes to the promotion of “*co-benefits of economic activities*” and to the mitigation of “*trade-offs*” (Van Zanten and Van Tulder 2020).

2.4 Defining the Nexus Approach

Global challenges, defined through the Sustainable Development Goals, are intrinsically linked and cannot be viably addressed without the adoption of an holistic approach, which integrates diverse sectoral strategies where intrinsic links exist. The nexus approach adopts a **genuinely holistic vision**, to the extent that it seeks to couple sectoral strategies, in order to come up with an integrated multi- sectoral strategy, which deals with existing effectivity and efficiency gaps, as the “*world is far off course for achieving sustainable development*” (Sachs 2015). As underlined by Sachs (2015), sustainable development has been on the global agenda for over forty years at least and its presence dates back to the 1972 first UN Conference on the Human Environment in Stockholm and the publication ‘Limits to Growth’.¹⁷

It can no longer be afforded to address global challenges separately, to the extent it comes at the risk of “*reducing one problem while exacerbating others*”(Liu et al., 2018). The nexus approach is inscribed in a novel perspective as it “*(...) simultaneously examines interactions among multiple sectors*”(Liu et al. 2018).

To measure the effectivity of a sectoral strategy, the extent to which the defined objectives are attained is taken into consideration, since the efficiency of a sectoral strategy has to be conscious of the resources mobilised through the process of pursuing the defined objectives. Undeniably, effectivity and efficiency gaps pertain today in the implementation of Sustainable Development Goals. Multi-sectoral integrated policies, rooted in nexus approach, retain the potential to address such effectivity and efficiency gaps, to the extent they are to be designed whilst ensuring resource optimisation (efficiency) and attainment of cross sectoral objectives (effectivity).

The need for “integrated governance approaches” is by now established (Van Zanten and Van Tulder 2020). The “nexus approach” is one such approach “which induces policymakers to act on the interactions between individual SDGs, in order to reap co-benefits and reduce the risk of trade-offs” (Van Zanten and Van Tulder 2020).

Moreover, “the human and environmental dimensions” are at the core of the nexus approach (Bhaduri et al. 2015).

¹⁷ As explained by Sachs (2015), the Limits to Growth publication aims at identifying “*the challenge of combining economic development and environmental sustainability*”.

As argued by Cavelier Adarve, “*(...) in the developing world, climate programs cannot be implemented or measured without specifically linking them to social and economic outcomes. “You just can’t broadly talk about the disadvantages climate change brings the world—you must couple*

them with issues that press on people's lifestyles and pocketbooks.” (The MIT Technology Review Insights 2021).

2.5 The Nexus Approach for Sustainable Development

The nexus approach for sustainable development fits into Elinor Ostrom's recommendations for overcoming **the “panacea trap”** (Ostrom, Chang, Pennington and Tarko 2012, 69), which is one of the main challenges to sustainability.¹⁸

Amongst the major contributions of the author is the necessity to overcome the ‘panacea problem’. In other words, *“there is no correct way to manage common-pool resources that will always be effective. Different ways of managing resources will be appropriate in different contexts – for example within different cultures or where there are different physical characteristics of a natural resource.”* (Ostrom, Chang, Pennington and Tarko 2012, 15)

Therefore, the nexus approach for sustainable development must be conscious of the diversity pertaining to the contexts where they are implemented. The nexus approach for sustainable development must then be context-sensitive, to the extent it must reflect the specificities of **the “socio-ecological system (SES)”** (Ostrom, Chang, Pennington and Tarko 2012, 68)¹⁹. For Ostrom, it is acknowledged that:

“(…) the governance systems that actually have worked in practice fit the diversity of ecological conditions that exist in a fishery, irrigation system or pasture, as well as the social systems. There is a huge diversity out there, and the range of governance systems that work reflects that diversity.” (Ostrom, Chang, Pennington and Tarko 2012, 70)

Thus, it is high time to reflect upon a nexus approach for sustainable development in the Euro-Mediterranean and African region, inasmuch as local specificities, challenges and opportunities must be taken into consideration from the design phases throughout the implementation stages.

¹⁸ Ostrom, E., Chang, C., Pennington, M., & Tarko, V. (2012). The future of the commons-beyond market failure and government regulation. *Institute of Economic Affairs Monographs*.

¹⁹ For Ostrom, *“when we put people and ecologies together, we can think of the results as ‘socio-ecological system’ (SES)”* (Ostrom, Chang, Pennington & Tarko 2012, p.68). In other words, the concept of a ‘socio-ecological system’ (or SES for short), *“is simply a concise way of referring to the connection between a community and its natural environment”* (Ostrom, Chang, Pennington & Tarko 2012, 56).

2.5.1 *An Illustration of a Strategic Nexus Priority in the Europe-Mediterranean- Africa Region: The Water, Energy and Food Nexus*

Water is a strategic issue in the region. According to the Aqueduct Water Risk Atlas by the World Resources Institute (WRI), one in four people currently lives in a country under severe water stress (WRI 2019). As stated by Dr. Andrew Steer, President and CEO of the WRI, “Water stress is the biggest crisis no one is talking about. Its consequences are in plain sight in the form of food insecurity, conflict and migration, and financial instability.”

A total of 17 countries, namely Saudi Arabia, Bahrain, Botswana, United Arab Emirates, Eritrea, India, Iran, Israel, Jordan, Kuwait, Lebanon, Libya, Oman, Pakistan, Qatar, San Marino and Turkmenistan, use 80% of their available underground water resources in an average year. Agriculture, industry and human needs, especially in cities, are the main uses of this water (WRI 2019).

Water stress starts below 1,700 m³/year/person of water available for human, agricultural, industrial and environmental activities (The World Business Council for Sustainable Development 2009).

Some countries are well below this threshold. In the regions of North Africa and West Asia, virtually all countries are already experiencing large-scale water shortages.

The Mediterranean area is subject to intense water stress, affecting both surface and groundwater as it concentrates nearly 60% **of the so-called “water-poor” population** (Blue Plan 2008). Today, 180 million Mediterranean people have less than 1000 m³ of water per year, of which 80 million are in short supply, i.e., have access to less than 500 m³/capita/year to this resource.

Also, the water resources of the Mediterranean region are unevenly distributed (Ferragina 2010), since the southern shore holds only 13% of the fresh water available in the Mediterranean.

By 2025, more than 250 million people are at risk of water shortages, almost half of the estimated 524 million Mediterranean population in 2025 (Fraisie 2018).

Water “is not merely a local or national commodity” since it “crosses political boundaries and is thus a concern of transnational governance” (I. Boas et al. 2016). Along the same line, according to the World Bank, by 2050, water related challenges are projected to lower the MENA region’s GDP by 6% to 14%, if a status quo strategy is pursued.

The “relationships among food, energy, and water are dynamic” (Niet, Arianpoo, Kuling, and Wright 2021)²⁰. A sectoral approach to one of the aforementioned dimensions of the nexus, not taking into consideration repercussions on the other sectors, would be counterproductive. Coordination is not only a necessity, but an urgency, given the numerous “*cross-sectoral interactions among key climate-sensitive sectors such as water, energy, and food.*” (Niet, Arianpoo, Kuling, and Wright 2021)

The example of solar pumps in Morocco²¹

Within the framework of the New Green Generation Strategy" (2020-2030) implemented by Morocco, solar pumping is a successful application of the Food, Water and Energy Nexus.

Not only does the solar pumping model raise agricultural income for most small-scale farmers, but it also allows for efficient and sustainable access to water for domestic and irrigation purposes, whilst avoiding the use of fossil fuels and reducing equipment costs.

This ambitious Moroccan strategy would allow the Kingdom to save up to 500 MW through the installation of solar pumps, whilst improving the food security of local communities and ensuring sustainable access to water.

In addition, it can be inferred from **Figure 2** that applying a nexus-based approach to ecosystem services, such as water, energy and food, implies acting in conformity with core principles of the sustainable development paradigm, including economic efficiency, social equity and environmental sustainability.

²⁰As underlined by (Niet, Arianpoo, Kuling, and Wright 2021, "*Actions in one area usually have impacts in one or both of the* both of the others, with profound economic, environmental, and social implications. Indeed, the security of one sector often cannot be achieved without undermining another sector (Lele et al., 2013; Newell, Phillips, & Purohit, 2011; Ringler, Bhaduri, & Lawford, 2013)."

²¹European Climate Foundation & Positive Agenda Advisory (2021). Africa Green Resilient Recovery Report for North Africa

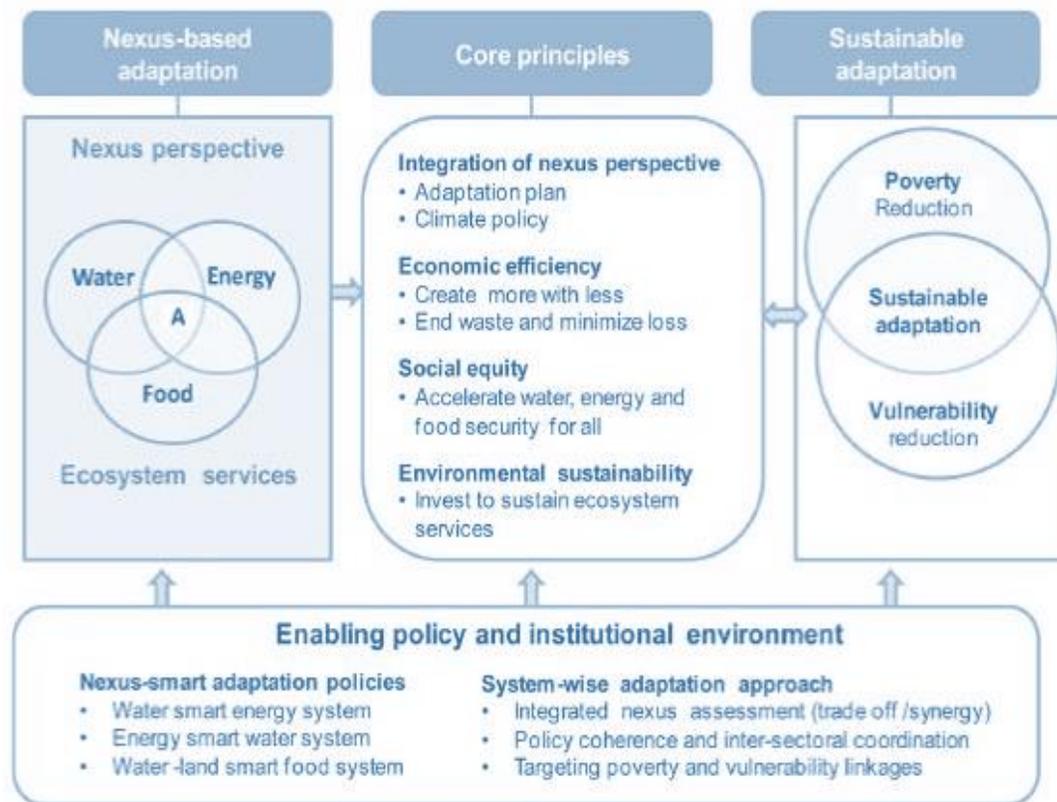


Figure 2: Outline for a nexus – based adaptation framework (Niet, Arianpoo, Kuling, and Wright 2021)

As explained in **Figure 2**, the nexus approach applied to ecosystem services are to design “nexus-smart adaptation policies”, such as water-land smart food systems, in order to be in line with a “system-wise adaptation approach”.

As such, applying the nexus approach to achieving sustainable development, with regards to key ecosystem services, this would lead to targeting societal vulnerabilities through a holistic framework, which envisions the role to be played by institutions as a priority in guiding the behaviours of actors.

Applying the nexus approach to SDG implementation is crucial, to the extent “SDG goals are interconnected and linked with the sectors of a particular nexus” (Liu et al. 2018). The existing interactions between sectors, such as food, energy and water, cannot be overstated; although they have an impact on all SDGs, “each is often treated in isolation” (Liu et al. 2018).

2.5.2 The Integration of the Multi-sectoral Interactions

The nexus approach needs to take into consideration the strong interactions between the different sectors (Figure 3).

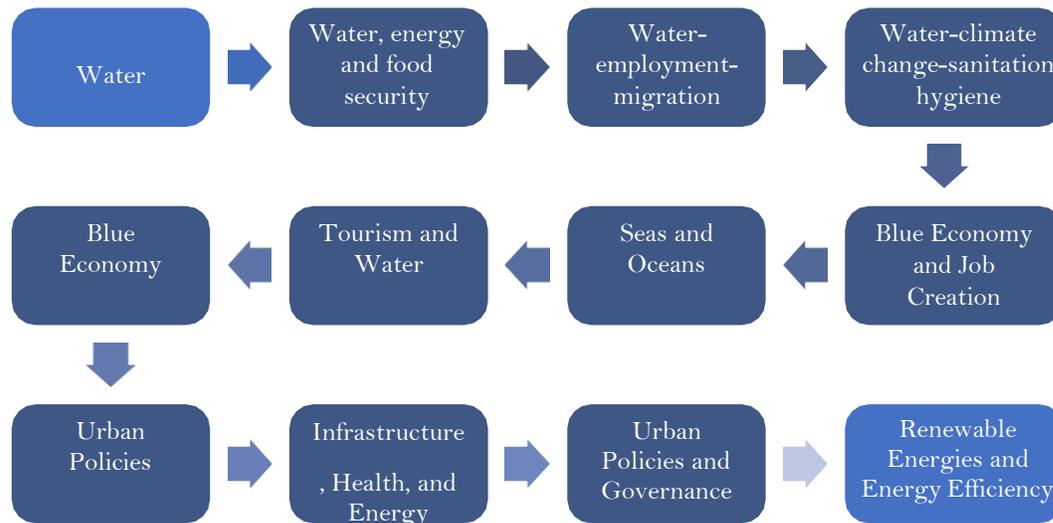


Figure 3: The Urgency of a Nexus Approach to Integrate the Multi-sectoral Interactions

Figure 3 emphasises the urgency of a nexus approach to integrate the various multi-sectoral existing interactions. It can no longer be afforded to design non-integrated sectoral strategies. For instance, a sectoral strategy to target tourism must also take into consideration environmental repercussions, by integrating critical components such as water. A sectoral strategy targeting tourism would be counterproductive if it were to contribute to aggravating water scarcity, for instance.

Thus, the nexus approach is conscious of the necessity to link sectoral strategies, to take into account the multi-sectoral interactions. Such an approach would undeniably lead to integration of the environmental dimension into the multi-sectoral strategies.

The nexus approach retains the potential to efficiently accompany policy making, at the Euro-Mediterranean and African regional level. On the one hand, such approaches would lead to taking into account specific challenges and particular opportunities of the region.

On the other hand, a nexus approach can lead to identifying “nexus co-benefits, trade-offs, and synergies in order to optimise resource use and production and to achieve water security, food security, human health, and energy security” (Liu *et al.* 2018).

Therefore, the urgency of in-depth reflection on pathways, to turn common challenges in the Euro- Mediterranean and African region into opportunities, is established.

3.3 Turning Common Challenges into Reinvented Opportunities for Sustainable Development

Sustainable development as a processual approach to well-being optimisation, diversity, wildlife and natural resource preservation, pursues the need to achieve some sort of equilibrium. In other words, sustainable development strategies aim to “balance the trade-off between profitability and sustainability.” (Von der Osten, Kirley and Miller 2017, 4). In the framework of the “nexus between profitability and sustainability”, individuals must “make a harvesting decision in a dynamic common pool resource game.” (Von der Osten, Kirley and Miller 2017, 2)

Governance systems play a critical role in regulating those decision-making processes that are made at multiple levels by citizens and by institutions. Thus, the design of such governance systems, being deployed at regional and local levels, is crucial and must be conscious of regional and/or local realities in order to put in place the most viable framework for the “nexus between profitability and sustainability”.

Sustainable development, as a societal approach, is rooted in the necessity to accompany decision-making processes pertaining to resource management with a strategic outlook on the needs of future generations. Undeniably, sustainable development is genuinely driven by thinking of the generations to come and about the models which are to insure the protection of the common pool resources (CPR).

As exemplified by Figure 4, a polycentric approach is one that combines or integrates more than one policy; for instance: public policy, technological innovation and business policy.

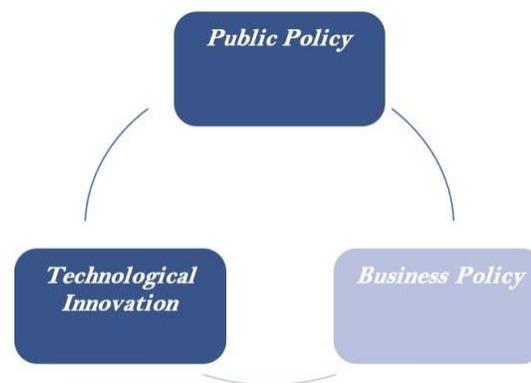


Figure 4: Towards Polycentric Approaches for Improving Sustainable Development. Authors’ own conception based on (Ostrom 2010; Van Zanten and Van Tulder 2020).

3 CONCLUSION

A Nexus Approach to Sustainable Development in the Euro-Mediterranean-African region as an accelerator for regional integration

3.1 Regional Integration: A Foremost Priority

The Euro-Mediterranean region is one of the least integrated regions in the World. According to a study conducted within the framework of the Union for the Mediterranean (UfM), 90% of global Euro-Mediterranean trade is conducted within the EU, 9% between the EU and the Southern Mediterranean Countries and only 1% only between the Southern Mediterranean Countries.

“(...) regional economic integration between (...) Southern Mediterranean countries is still limited: intra-regional trade is a small fraction (5.9% in exports, 5.1% in imports) of the countries’ total trade, one of the lowest levels of regional economic integration in the World.”²²

Many decades of institutional agreements between the EU and the Mediterranean countries have not led to a convergent development scenario, but rather to a growing development divide or gap (*Appendix E*).

Engaging in new dynamics for the implementation of a global, integrated and balanced sustainable development agenda in the region would, therefore, lead to 4 main strategic objectives:

- 1) Dealing with scientifically established, alarming emergencies.
- 2) Giving a new impetus to inclusive growth, investment and job creation.
- 3) Facilitating and accelerating regional integration.
- 4) Designing a new and modern “geography sensitive” and multi-scalar approach (including Africa), leading to “a multi-sectoral nexus strategy”.

Transnational partnerships can contribute to addressing the existing nexus between the Sustainable Development Goals (I. Boas et al. 2016). Partnerships at a cross-boundary level are essential for “sharing knowledge and practices, and creating new knowledge” to the extent that nexus management is “a new emerging field of expertise” (I. Boas et al. 2016).

²²The European Commission. The Euro-Mediterranean Partnership. <https://ec.europa.eu/trade/policy/countries-and-regions/regions/euro-mediterranean-partnership/>.

In the same vein, it has been argued throughout this paper that today, more than ever, **an holistic, multi-scalar nexus approach is needed to rethink development in the Euro-Mediterranean and African region.**

It has become essential to adopt the nexus approach for sustainable development in order to take into consideration the multiple sectors with regards to geographic specificities.

The Euro-Mediterranean and African dimension showcases multiple opportunities to that effect. Implementing public policies that rely on innovative tools is, ultimately, the hidden opportunity behind the COVID-19 crisis.

The challenge of achieving the Sustainable Development Goals would, thus, be made more accessible through pragmatic and holistic action.

Green Resilient Recovery through the nexus approach is, in this sense, a path to be further explored by decision makers at national and regional levels.

3.2 Morocco as a key player for a nexus approach to Sustainable Development in the region

Key actors in the **Euro-Mediterranean and African Region** can be identified as essential partners for the design, as well as the implementation, of the nexus approach for sustainable development.

Morocco, under the leadership of His Majesty King Mohammed VI, is amongst Africa's champions as far as "*efforts to combat climate change, reaffirming the country's commitment to the Paris Agreement on climate action*" (UNEP).

"The Kingdom of Morocco, faithful to its climate commitments, has implemented an integrated national policy to preserve environment, to deal with the effects of climate change and to mitigate greenhouse gas emissions by 32 pc by 2030"²³.

Morocco ranked 5th in the world for clean innovation, according to recent research produced by MIT and published in "The Green Future Index". (Cf. *Appendix G*)²⁴. The aforementioned

²³ Excerpt from the Speech of His Majesty King Mohammed VI during the signing ceremony of the Paris Agreement on Climate Change at the UN in New York, April 22, 2016.

²⁴ The Green Future Index is a ranking of 76 leading countries and territories on their progress and commitment towards building a low carbon future (MIT Technology Review 2021). The MIT Technology Review. 2021. <https://www.technologyreview.com/2021/01/25/1016648/green-future-index/>. EU Political Report. Morocco Ranked 5th in the World for Clean Innovation. <https://www.eupoliticalreport.eu/morocco-ranked-5th-in-world-for-clean-innovation/>; MIT Green Future Index Report 2021.

report affirms that Morocco has “ambitious climate policies” and they are “poised to improve their scores in coming years”.²⁵

Said Mouline, CEO of the Morocco Agency for Energy Efficiency (AMEE), “*envisions Morocco becoming a regional climate advocate within Africa*” (EU Political Report 2021). As such, he affirms that “*today in Africa we have 600 million people who don’t have electricity, and we have the tools and capabilities to help leverage renewables to bridge that gap.*” (EU Political Report 2021)

Indeed, Morocco plays an “(...) *active role in advocating for least developed countries in international negotiations was rewarded with a high expert rating for its international climate policy performance*” (CCPI 2020).²⁶

Given its long-term expressed commitment to Sustainable Development as a policy framework and its laudable achievements in recent years, Morocco could play a central and strategic part in accompanying the previously described nexus approach in the Euro-Mediterranean and African region and ensuring its effective implementation.

²⁵ The MIT Technology Review Insights. 2021. The Green Future Index 2021: A Ranking of 76 economies on their progress and commitment towards building a low-carbon future.
<https://mittrinsights.s3.amazonaws.com/GFI/Report2021.pdf>.

²⁶ Cf. *Appendices E and F* for the different dimensions or components of the Climate Change Performance Index and the Morocco Scorecard.

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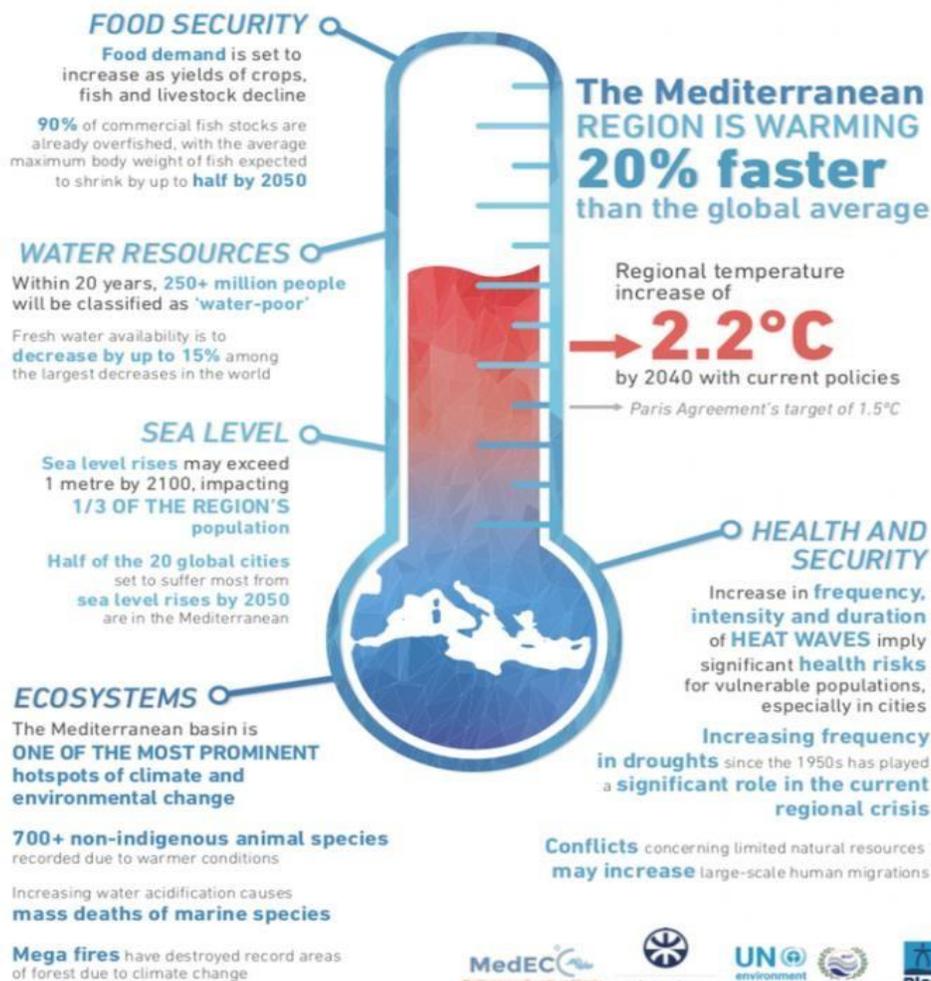
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6 APPENDIX

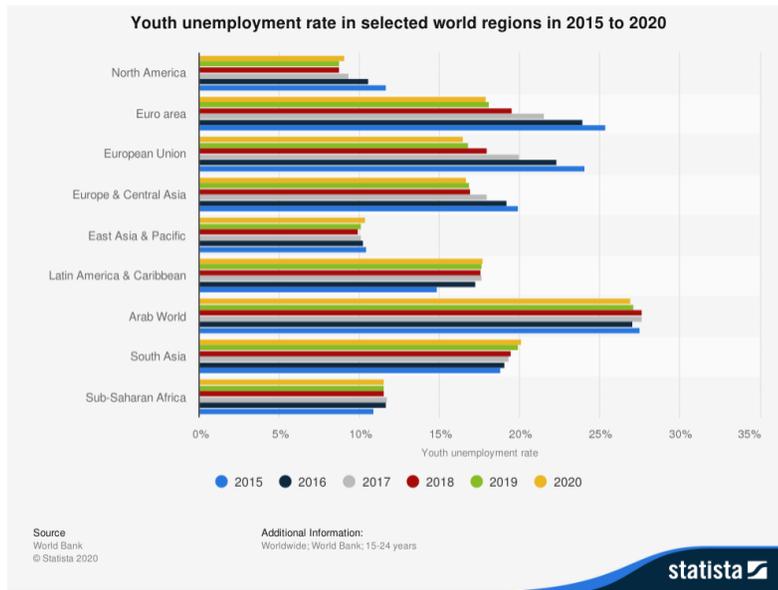
6.1 Appendix A: The First Assessment Report about Climate and Environmental Change in the Mediterranean (MedECC)

85 scientists from 20 countries of the Network of Mediterranean Experts on Climate and Environmental Change (MedECC) present:

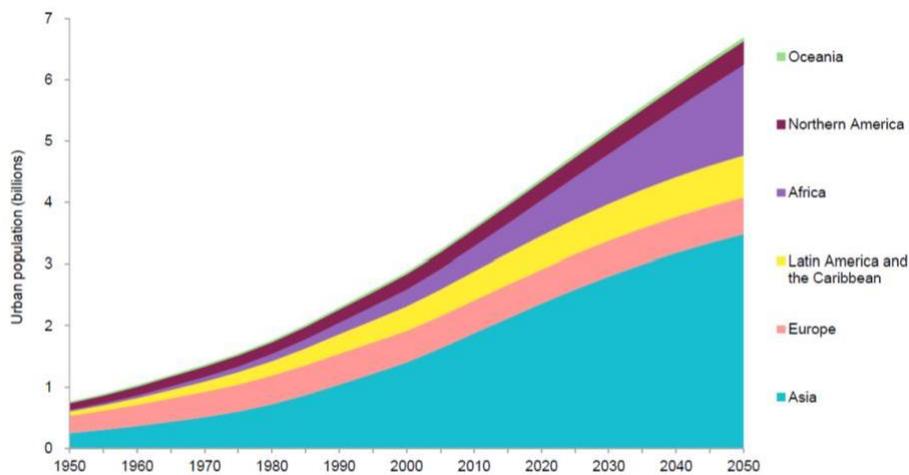
1st SCIENTIFIC ASSESSMENT REPORT ABOUT CLIMATE AND ENVIRONMENTAL CHANGE IN THE MEDITERRANEAN



6.2 Appendix B: Youth Unemployment in Different Regions of the World (Statista 2020)



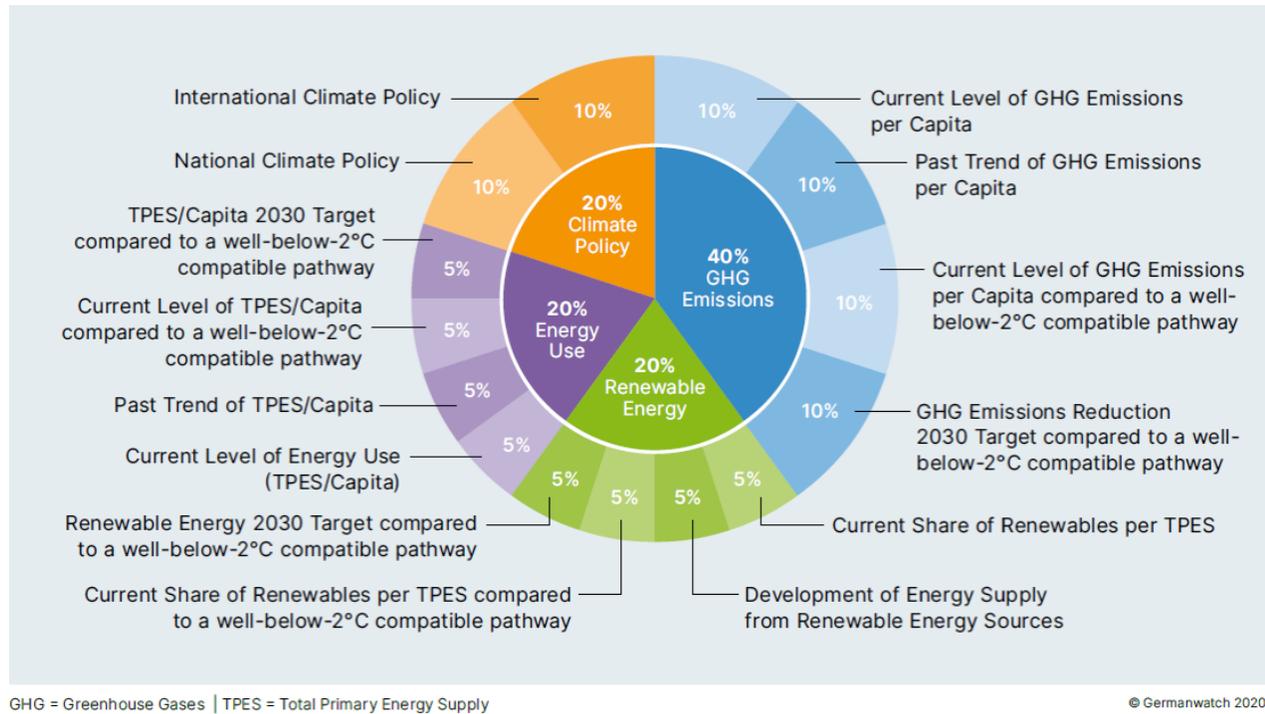
6.3 Appendix C: Urban Population of the World by Geographic Region (1950 – 2020)



Data source: United Nations, Department of Economic and Social Affairs, Population Division (2018a). *World Urbanization Prospects 2018*.

The United Nations. Department of Economic and Social Affairs. *World Urbanization Prospects 2018: Highlights*. <https://population.un.org/wup/Publications/Files/WUP2018-Highlights.pdf>

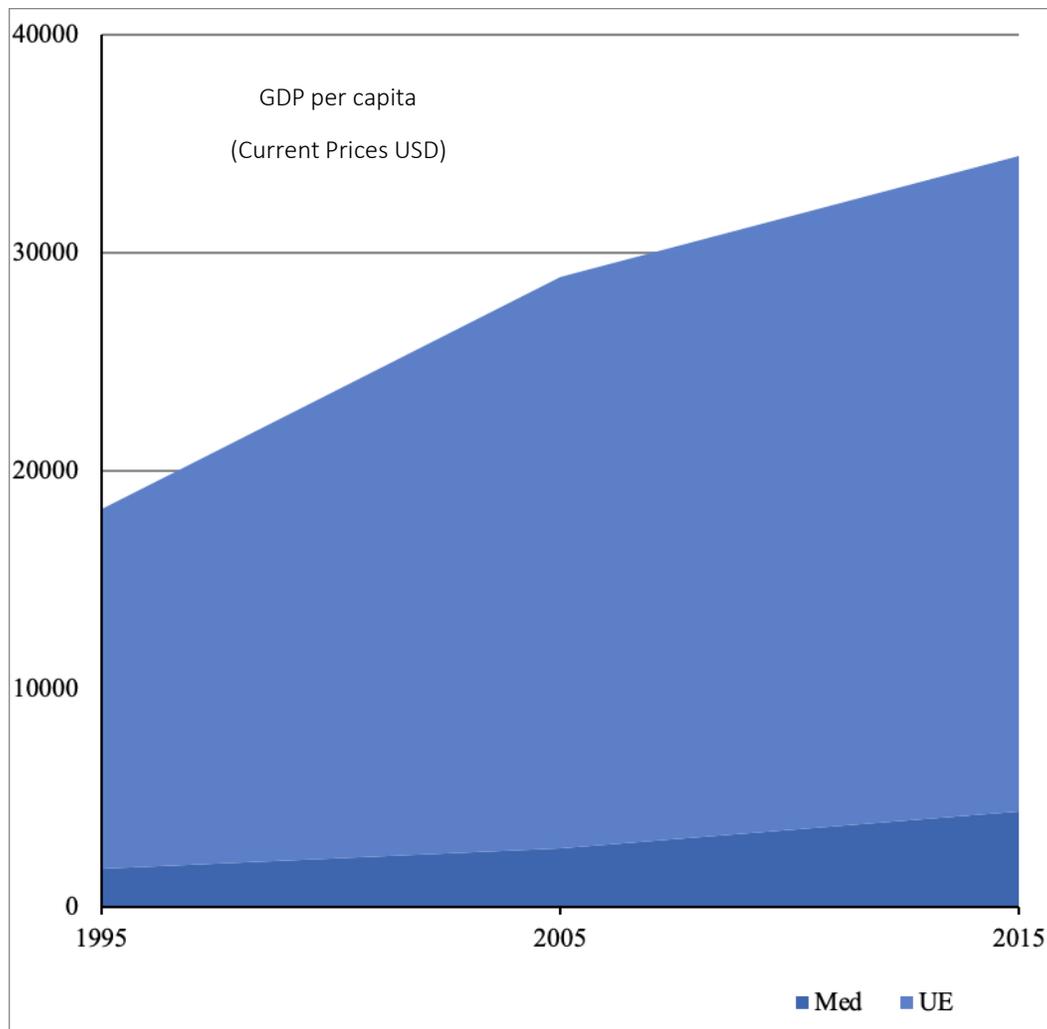
6.4 Appendix D: Components of the “Climate Change Performance Index”.



Source: German Watch 2020.²⁷

²⁷ The Climate Change Performance Index. <https://ccpi.org/download/the-climate-change-performance-index-2021/>. “The annual Climate Change Performance Index (CCPI), published since 2005, is an independent monitoring tool for tracking the climate protection performance of 57 countries and the EU. The CCPI aims to enhance transparency in international climate politics and it enables comparison of individual countries’ climate protection efforts and progress.”

6.5 Appendix E: The Evolution of the Development Divide between Europe and the Southern Mediterranean Countries 1995-2015.



Source: (Sijilmassi, 2019).

6.6 Appendix F: The Climate Change Performance Index (CCPI) - Morocco Scorecard.



6.7 Appendix G: Highest and lowest performers in the clean innovation pillar (MIT Technology Review Insights)

A high score means a higher relative number of green patents, investment in cross-border clean energy initiatives, and investment in foodtech.

RANK	COUNTRY	SCORE	RANK	COUNTRY	SCORE
1	Singapore	7.6	67	Poland	3.6
2	Finland	7.4	68	Hungary	3.4
3	Chile	7.2	69	Romania	3.3
4	Luxembourg	7.0	70	Angola	3.0
5	Morocco	7.0	71	Bulgaria	3.0
6	Denmark	6.9	72	Iran	2.2
7	Kenya	6.8	73	Bangladesh	2.0
8	Egypt	6.7	74	Qatar	2.0
9	France	6.6	75	Algeria	1.3
10	Uruguay	6.5	76	Paraguay	1.0

Source: MIT Technology Review Insights, 2021

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