E3G

Underpinning the MENA Democratic Transition

Delivering Climate, Energy and Resource Security

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Executive Summary

1. Understanding the fragility of MENA democratic transitions

Democratic transition in MENA remains vulnerable to economic shocks

The democratic awakening in the MENA region is stalling. Prospects for future development in political and security terms are uncertain given the worsening regional security situation.

The focus of international attention is unsurprisingly on immediate political developments. However, history shows that successful democratic transitions take decades and are driven as much by their ability to deliver economic stability and rising living standards as by the strengthening of formal governance institutions. Lessons from the recent past suggest that countries in the process of constructing democratic institutions are particularly vulnerable to internal instability. Such instability can open the space for non-democratic forces to seize control; in the mirror image of the way economic shocks helped spark the Arab Spring by giving political space and leverage to democracy activists.

Perhaps the biggest immediate driver of instability would be a decline in living standards driven by increases in global food and oil prices. Indications are that the unprecedented droughts in the US in 2012, related to climate change, will lead to significant tightness in global food supply. This will produce a spike in commodity prices in 2013 similar to that seen in 2008 and 2010. Meanwhile net oil and food importers in the MENA region have ever fewer resources to buffer these risks given worsening fiscal balances caused by lower exports and several years of high energy and food subsidy payments.

These risks in 2013 are symptomatic of broader regional vulnerabilities to energy and resource scarcities, all of which are being exacerbated by climate change. This is unsurprising given that the region uses the equivalent of another Nile in “virtual water” each year embodied in food imports.

Vulnerabilities differ across countries in the region given different political, social and economic conditions. However, there are also many similarities given common trends in demographics, resource vulnerabilities, development imbalances and climate change impacts; especially in net energy importing countries. Fossil fuel exports are currently mitigating risks in some countries but as resources decline underlying risks will emerge.

Even under best-case scenarios instability risks remain high in Egypt and Tunisia to 2025

Scenario analysis done for this project suggests that risks of instability will remain high in countries such as Tunisia and Egypt into the 2020s. These risks are driven by enduring economic factors such as high youth unemployment, weak economic governance, regional and social inequalities, resource constraints, and a dependence on low-value and underperforming export sectors such as textiles and tourism. Internal weaknesses and stresses are exacerbated by harmful exposure to global energy and food markets, a lack of intra-regional economic integration, and strong competition from emerging economies.

A number of economies in the broader regional area have aggressive export-led manufacturing strategies often based on access to cheap gas; for example, Turkey, Russia, Qatar and Ukraine. Their emergence as diversified industrial exporters will exacerbate competition for weakly growing European markets. European markets are unlikely to open significantly for exports of goods or additional immigration in the post-economic crisis environment. Conversely, growing investment into these countries from China, India, and some regional economies such as Turkey and Qatar could act as a stabilising force if it contributes to diversified growth. Areas like the Gulf could also provide more dynamic export markets and opportunities for short term labour migration. However, as 75% of current FDI flows into fossil fuel exporting countries in the region the pattern and scale of both investment and trade would have to change markedly to offset negative impacts on stability.

Growth rates are unlikely to be high enough to generate the resources needed to manage critical risks without significantly more focus on investment in resilience. Under more pessimistic scenarios there will be significant challenges to democratic governments and a high risk of political extremism emerging. **Development strategies in the region need to focus more strongly on building economic and social resilience alongside broader-based economic growth.** Strategies need to explicitly define risk management processes to keep critical vulnerabilities at manageable levels; and it is crucial that they account for impacts related to climate change and resource scarcity.

2. Risk managing a resource scarce, low-carbon and climate changed future

MENA faces disproportionate future challenges from climate change and resource scarcity

The MENA region faces a daunting set of development challenges and in addition is one of the most vulnerable regions in the world to climate change. Already, countries in the region are facing major constraints on growth due to energy and water pressures, vulnerability to volatile international food prices, and climate impacts on critical industries, such as tourism and agriculture.

Climate models consistently estimate that warming will occur much faster in this region than the global average. Without a major effort to radically reduce global greenhouse gas emissions in the next ten years the region could see an average temperature rise of over 4°C by mid-century and 6-8°C by 2100. This will be felt in growing seasonal extremes of temperature and weather events. The impact on rainfall is more uncertain, but a general reduction of rainfall by up to 10-30% by mid-century is expected. This will accentuate the growing scarcity of water driven by population growth, industrialisation and depletion of aquifers which is already acute across the region.

Tunisia, for example, will see a decrease in available drinking water of 30% by 2030; increases in the likelihood of crop season failure of over 50% by 2050; and over 5% of its population would be impacted by a 1m sea level rise. Egypt's concentration of industry and population in the Nile Delta makes it the third most vulnerable developing country in the world to sea level rise. There are also potential risks from international disputes over the Nile Basin management as water flows become more volatile and upstream countries drier due to climate change.

Food prices will increasingly become a major cause of economic shocks. Modelling suggests that major import crops like wheat are likely to increase in price by up to 80% by 2030 due to growing global demand; climate change could increase prices by a further 40%. Food price volatility will increase even more rapidly as climate change drives extreme weather events in producer countries.

Given these trends it is clear that resource scarcity and climate change risks will represent a growing threat to stability and peace in the region. Many countries may face higher migration pressures from Sub-Saharan Africa as climate change is impacting on the Sahel where resource-driven conflicts are already endemic; increased use of engineering-based water control could undermine community access to traditional water sources and fishing grounds. At the moment, however, no country in the region has a well-developed climate change adaptation plan, and basic information on current climate change impacts is not available.

Short term infrastructure choices and mal-adaptation to climate change increases risks

MENA faces significant energy shortages – particularly in electricity – and needs an estimated $30 billion each year to 2030 in new energy investment. At 3% of regional GDP this is three times the global average investment rate. This represents a significant challenge given that FDI has dropped over 50% since 2010 due to political risks and post-financial crisis caution among traditional FDI sources. Decisions made now on energy infrastructure will determine vulnerability for the next three to four decades to energy price shocks and climate change impacts on energy infrastructure, and lock-in effects could make it more difficult to

switch to more sustainable energy systems at a later stage. Therefore, a rush to meet short term energy needs through conventional energy solutions could risk leaving behind longer term vulnerabilities.

Too often investments in resource efficiency and low carbon infrastructure are wrongly seen as a luxury that these countries cannot afford, and as detracting from faster economic growth. More resilient economic infrastructure does generally require greater upfront investment of capital and more complex governance systems, but also delivers greater longer term economic value and stability. There is a need to move beyond perceptions of short term trade-offs and identify how investment in resource efficient and climate resilient infrastructure can help reduce multiple threats.

Given the growing impact of climate change and resource scarcities national development strategies must directly address vulnerabilities across a full range of future scenarios to identify best value development paths and shape long term infrastructure investment priorities.

3. Identifying high impact investments in stability and maximising the impact of external support

Developed countries have a strategic interest in successful democratic transitions

MENA is one of the most important regions strategically for Europe and other developed countries in political, security and economic terms. This is why, in the wake of the Arab Spring, G8 countries and other nations, multinational and bilateral development banks and other international financial institutions have pledged major sums to stabilise the region. These financial and economic support packages have the potential to become investments in regional stability and resilience.

But current support is not well-targeted and does not address critical economic and resource challenges

Current assistance packages are broadly focused on providing incentives for continued democratic reforms, building civil society institutions and providing immediate jobs for young people. These are all important areas. However, there is a failure to systematically address other vital areas for stability such as exposure to energy and water shocks, and there is no clear approach to medium term stability.

Resource efficient investment could bring multiple stability and economic dividends

Mitigating the impact of climate change through climate resilient investments that address vulnerability to drought and rising sea levels is necessary to build resilience against multiple future shocks. Energy and water are key components of economic development, growth and social security. They are also decisive for agricultural production and hence food security. Investments in the areas of renewable energy systems, energy efficiency, water infrastructure, desalination and irrigation systems, etc. therefore address some of the most pressing issues, such as energy poverty, economic development and public health.

The shifting global energy context is also opening new opportunities for the region. Action to tackle climate change has massively increased investment in renewable energy and dramatically lowered the costs of wind and solar power in the last 5 years. This price reduction has delivered a large increase in available domestic energy resources for countries in the region; all of whom have high potential in a range of renewable energy sources. Accelerating immediate deployment of available energy and water efficient end-use technologies in lighting, air conditioning, agriculture and industry would allow current resource shortages to be mitigated at positive national economic benefit.

It is important that investment in resource efficient infrastructure is made based on realistic analysis. A series of high profile initiatives have been proposed to greatly increase renewable energy investment in North Africa and build interconnectors which can export this to Europe; for example, MedGrid, Desertec and the Western Mediterranean Ring. These are driving some short term investment into North Africa for

domestic use, but it is highly unlikely that these projects will lead to significant exports to the EU before 2030-40. While clean energy exports from MENA could be a major source of income and stability, this is unlikely to be an important revenue factor in the medium term without an active policy to drive this development from Europe.

Industrial opportunities are more likely to be captured in resource efficiency and installation services, but active national industrial policy will be needed to drive supply-chain development in these areas. In addition, a focus on longer term power export opportunities has distracted attention from regional electricity market integration which could improve the investment environment more dramatically in the short term.

The current focus of external actors such as the IMF on reducing energy subsidies in the region – which consume over 10% of GDP in Tunisia and Egypt – looks primarily at improving fiscal stability. There is scope for redistribution as most subsidies flow to the richest consumers, but fiscal measures alone will not be sufficient to reduce the structural vulnerability of poor consumers and industries (and thus jobs) due to years of underinvestment in efficient processes. However, a shortage of upfront finance prevents investment in cost-effective efficiency measures. A policy of recycling some subsidy reduction into targeted energy efficiency would improve social and economic stability and support stronger fiscal consolidation. Similar issues affect water subsidies; 75% of subsidies in Egypt go to the richest 50% of households and similarly drive inefficient usage.

External support for energy and resource investment – whether from OECD, emerging economies or regional actors – should "stress test" the value of long lived infrastructure against future resource and climate change scenarios to ensure their economic value is resilient in the medium term. Successfully managing the wide range of risks in the MENA region will require directly addressing vulnerabilities in order to turn what will be a low carbon and resource constrained future from a risk into an opportunity.

4. Priority Policy and Investment Packages

Four strategic priorities emerge from this analysis on how international financial and economic support packages could help put the region on a more sustainable and stable development path.

1. **Improve resilience to shocks:** refocus investment to address immediate resilience challenges over food, water and energy.

> Address energy price vulnerability and energy subsidy reform through integrated packages of price reform, social support and energy efficiency. Draw on international climate finance to smooth transition and provide up-front financing.

> Develop packages of water management reforms based on efficiency, community management and targeted investment in areas of high potential water and social stress.

> Assess the sustainability of food and agriculture policy in the region under the full range of scenarios of food prices and volatility. Reassess focus of support to export agriculture vs. national food security based policies.

2. **Economic diversification into resource efficient industries:** support new industries which are sustainable under future resource stresses and climate policy contexts.

> Countries should stress test national development plans against a range of resource, trade, energy policy and climate change scenarios.

> Analyse actual potential of individual countries capability to develop competitive advantage in clean energy exports to Europe and the wider region.

- Carry out scoping studies for low carbon zones (LCZs) as a potential driver of economic diversification and industrial development. Explore linking LCZs to EU trade preferences.
- Develop active industrial strategies around existing investment in renewable energy and in resource efficiency sectors to drive development of local supply chains.

3. **Build resilient infrastructure:** in the national resource and social context – including shifting from hard to soft infrastructure and developing more flexible resource management solutions.

- Develop explicit national infrastructure planning assumptions and assessments for a range of resource scarcity, low carbon trajectory and climate change scenarios to 2040.
- OECD public investment – including public-private partnerships - should assess the resilience of their investments under different scenarios and put forward equivalent demand reduction alternatives for all new supply side investments in energy and water.
- Undertake a comprehensive review of planned water, food control and sewage infrastructure to develop alternative investment packages based on demand reduction, community control, and resource management in a way that improves social resilience.

4. **Rationalise external support on resource pressures:** focus current disparate avenues of external support on a few high impact stability and development objectives.

- The EU and engaged Member States should to carry out strategic assessment of how their related trade, migration, energy and aid policies impact stability in the region, and assess where reforms can be made to increase the impact of external support.
- Donors should assess aid delivery and allocation structures to ensure they can blend different funding streams to mitigate resource scarcity and climate change related risks.
- The European External Action Service should convene European and regional governments to identify a common view on the highest priority areas for international support to regional electricity interconnection projects.
- OECD countries should initiate a dialogue on sustainability and stability with regional and BRICs investors active in developing critical infrastructure in the region. Aiming to align short term competition with mutual interest of ensuring medium term stability.

Delivering Stability in Practice

Delivering the potential economic and stability benefits in these areas will not be easy. Global experience shows that driving resource efficiency and resilience at scale requires stronger and more sophisticated governance and regulatory systems than traditional infrastructure. However, failing to provide a stronger governance and to invest in preventive measures now will generate future risks that require additional government capacity to manage.

External support needs to be programmed and disbursed differently

Reducing instability and managing resource stresses is not the same as generic development in any country. It is critical that scarce external public funds flow to the best value investments, that creative use is not hampered by rigid disbursement criteria, and that MENA countries are not excluded from adaptation finance and use of the Clean Development Mechanism because they are not Least Developed Countries

Country-led development is vital but, given the immaturity of national plans, in these areas donors need to work with countries to ensure investment programmes have been rigorously assessed against future resource challenges, and to provide pipeline support for innovative projects via multiple routes including non-governmental actors. Dedicated resources should be provided to develop alternative solutions.

European governments should review their development and climate finance prioritisation in the MENA region to ensure that energy, resource and climate change drivers of instability can be tackled effectively.

1. Introduction: Analysing the MENA Democratic Transition

Summary:

- Following the Arab Spring there has been a surge of financial and economic support packages pledged to transitional governments in the MENA region.
- Experience from previous politically driven post-conflict economic support packages suggests that investment decisions often ignore medium term structural resource issues in a rush to maximise short run growth.
- MENA economies already face significant constraints on growth due to energy and water pressures, increasing economic volatility from international food prices, and climate impacts on tourism and agriculture.
- Investment packages should aim to improve stability and security in MENA by addressing climate, energy and resource resilience. Investments in strategic areas can and should mitigate immediate risks such as exposure to food and energy price shocks while also laying a foundation for long term sustainable economic growth.

Introduction

After months of speculation over a democratic awakening in the Middle East and North Africa (MENA) in the first half of 2011, hopes for lasting transformational change have been replaced by uncertain prospects for future development in economic, social and security terms.

This should not come as a surprise given that nascent democracies are usually the most vulnerable to instability. Economic stability in particular is a critical requirement for their future development. Yet, in addition to the common political and economic challenges of a post-revolutionary transition, countries such as Egypt and Tunisia are also at risk from exposure to global food and energy price shocks. Food price increases in 2013 driven by the US droughts will severely test regime stability. In the medium term stability will be strongly undermined by the economic impacts of energy and water scarcity and are already being exacerbated by climate change. Resource constraints are also a direct source of political tensions inside these countries.

Countries in the MENA region need to build country capacity and resilience[1] to a range of risks and possible future shocks. One way of building resilience consists of strategic investments in the energy, water and resources sector. For example, climate resilient investments that address vulnerability to drought or rising sea levels can mitigate the economic, social and security impacts of climate change. Energy and water are key components of economic development and growth. They are also fundamental for agricultural production and food security. Hence, investments in the areas of renewable energy sources (RES), energy efficiency, water infrastructure, desalination and irrigation systems, etc address some of the most pressing issues in the region, such as energy poverty, economic development, and public health.

There has been a surge of financial and economic support packages pledged to transitional governments in the MENA from the G8 countries and other nations, as well as from multinational and bilateral development banks (MDBs and BDBs) and other international financial institutions (IFIs). It will be critical to invest these funds strategically and to learn from past mistakes. **Experience from previous politically**

[1] The UK Prime Minister's Strategy Unit (2005) defines country capacity as the "extent to which a country can absorb or manage a risk factor and take advantage of external stabilisation"; resilience reflects "how flexibly this capacity can be redeployed in response to new or increased risks or opportunities." See also the Annex.

driven post-conflict economic support packages, such as in the Western Balkans, suggests that many investment decisions often ignore medium term structural resource issues in a rush to maximise short term growth. This is often self-defeating in terms of securing stability and security goals.[2]

Measuring the impact of support packages cannot be reduced to GDP growth alone. GDP growth in and of itself does not say a great deal about the long term stabilising effects of an investment, its ability to increase resilience and to improve security. GDP growth does not guarantee a rise in living standards, employment or overall level of development across all groups in society which is a key feature of a resilient society. Investments in resilience improve a country's capacity to absorb or manage risks and take advantage of external stabilisation.[3] **Existing investment packages do not directly address either resilience or country capacity.** This suggests that the international public investment community is not yet joining the dots by asking how long term, sustainable impacts can be achieved, for instance by systematically including energy, climate, and resource factors.

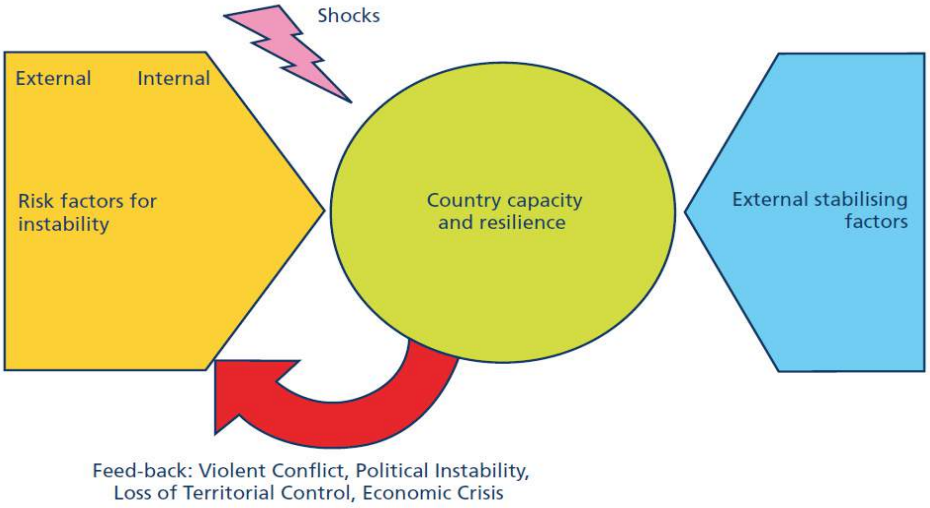
There is a disconnect between the high-level political decisions aiming to support stability and democratisation in the MENA region and the allocation priorities of practical investment processes. The EU and other international actors moved quickly to get "on the right side of history", and Europeans in particular "were largely forgiven their past complicity with the old autocrats, and, led by Brussels, converged on a common policy".[4] However, the action that has followed is perceived to be half-hearted and lacking in strategic outlook. If Western governments do not make use of existing momentum, domestic public opinion might turn against continued financial aid to a region that is increasingly viewed as hostile. Moreover, through their policy and investment decisions (or the absence thereof) domestic and external actors are creating path dependencies that will be difficult to reverse at a later stage, especially since Western investors are not acting alone in the region. The BRIC countries (Brazil, Russia, India and China), Saudi Arabia and Turkey have been increasing investment and political ties in MENA.

Methodology: the Instability Framework

While much of the research presented here is applicable to the MENA region generally, Egypt and Tunisia have been chosen as representative case studies. These countries are analysed using the "Analytical Framework for Instability" which was developed by the UK Prime Minister's Strategy Unit in 2005. This is graphically represented in Figure 1.

[2] One example concerns subsidies for high carbon coal power generation investments in the Balkans turning into barriers to these countries' accession to the EU.
[3] UK Prime Minister's Strategy Unit, 2005
[4] Dworkin & Witney, 2012

Figure 1 The Analytical Framework for Instability



Source: UK Prime Minister's Strategy Unit, 2005

The Instability Framework above provides a systemic framework for understanding and structuring risk factors of instability. **Stability** is understood as a dynamic outcome that "emerges from the peaceful management of change and internal tensions".[5] The starting point for the analysis is that instability arises from an imbalance between **country capacity, internal and external risk factors** and **external stabilisers**.

- **Country capacity and resilience** are two distinct and yet complementary concepts. The first is intended to reflect "the extent to which a country can absorb or manage a risk factor and take advantage of external stabilisation"; the second reflects "how flexibly this capacity can be redeployed in response to new or increased risks or opportunities."
- **Risk factors** can emerge from internal processes, such as economic decline or depletion of natural resources, and can be linked to regional political or economic developments.
- **External stabilising factors** help enhance country capacity and resilience. Three domains provide substantial support for the management of instability. These are mutual security guarantees, strong political relationships with other countries, and strong economic ties.
- **Shocks**: Low probability/high impact events can have a disruptive impact on country capacity and its ability to manage the consequences of such events. This is why resilience investments are essential.
- **Feedback**: Once instability has emerged, violent conflict or economic crisis can weaken a country's capacity to respond and also fuel the risk factors for instability.

Systematic assessment of each of these areas is guided by a set of generic factors which have been found to be significantly associated with promoting instability or increasing resilience in the literature and practitioner case studies. These generic factors are supplemented by country specific factors based on expert interviews and analysis.[6]

[5] UK Prime Minister's Strategy Unit, 2005
[6] For more details see Annex. An analytical handbook and research references for the Instability Framework can be found at http://webarchive.nationalarchives.gov.uk/+/http://www.cabinetoffice.gov.uk/strategy/work_areas/countries_at_risk.aspx.

2. Regional context: assessment of risk factors in Egypt and Tunisia

Summary:

- The MENA region is diverse but there are common trends that have emerged that will be major drivers of stability or instability in future.
- The region faces considerable economic challenges. Unemployment levels are among the highest in the world, particularly among youth. Economic activity is concentrated in sectors that are either capital intensive or demand unskilled labour.
- The region relies heavily on a few export commodities, primarily food, fuel and agricultural products. There is limited export diversification, which leaves MENA countries highly vulnerable to volatile prices in international markets.
- Egypt and Tunisia both face considerable challenges in achieving long term stability given current economic circumstances. These will only be exacerbated by climate change and energy and resource scarcity.

Context

The revolutions in both Egypt and Tunisia represent major milestones in the democratic development of the region. Like others in the Arab world, the regimes of Zine el-Abidine Ben Ali and Hosni Mubarak had alienated the population through political repression, endemic corruption and increasing inequality. Growth rates in a number of countries in the MENA region during the years leading up to the Arab Spring had not translated into widespread prosperity; rather, they increased existing social disparities because corruption and nepotism channelled the benefits of economic growth towards the elite.[7] A spike in food prices and unemployment rates amongst educated and disaffected youth in late 2010 led to major revolts against the regimes.

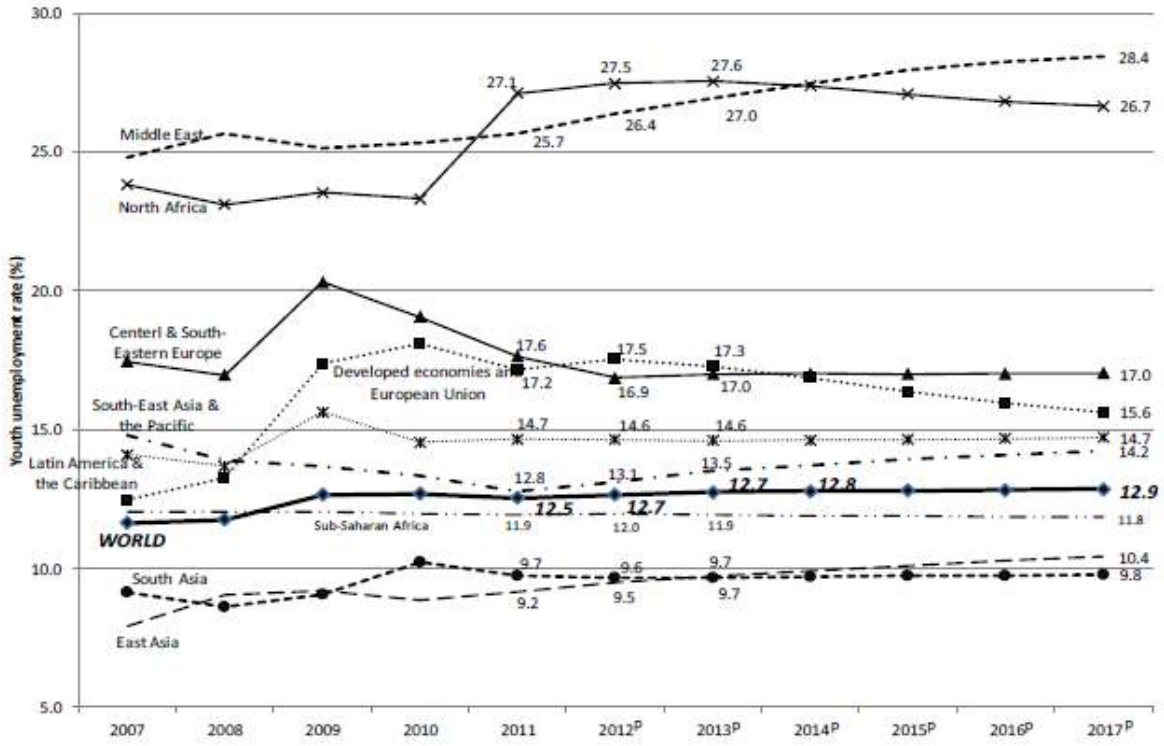
The transitions underway in MENA offer a chance to address many of the region's challenges; however, the new governments as well as international investors and donor countries face an uphill struggle. MENA, of course, is a diverse region with complex political and economic dynamics, geographies, vulnerabilities, and capacities. Individual countries will follow different trajectories over time. Nonetheless, there are common trends that have emerged in recent years that will be major drivers of stability or instability in the MENA countries in future. These relate to key indicators such as economic growth, social inequality, structural constraints, infrastructure investment, and employment availability.

[7] Paciello et al., 2012

Regional overview

The MENA region, and North Africa in particular, suffers from some of the highest levels of unemployment in the world. As Figure 2 shows youth unemployment in MENA is 24% or more than double the global average and is projected to remain higher than in other regions for the foreseeable future. Labour market problems for youth have further deteriorated since the uprisings in Egypt and Tunisia. According to the World Bank, female labour force participation rate is only 26%, far below the 39% average for low and middle income countries.

Figure 2 Global and regional youth unemployment rates, age 15-24



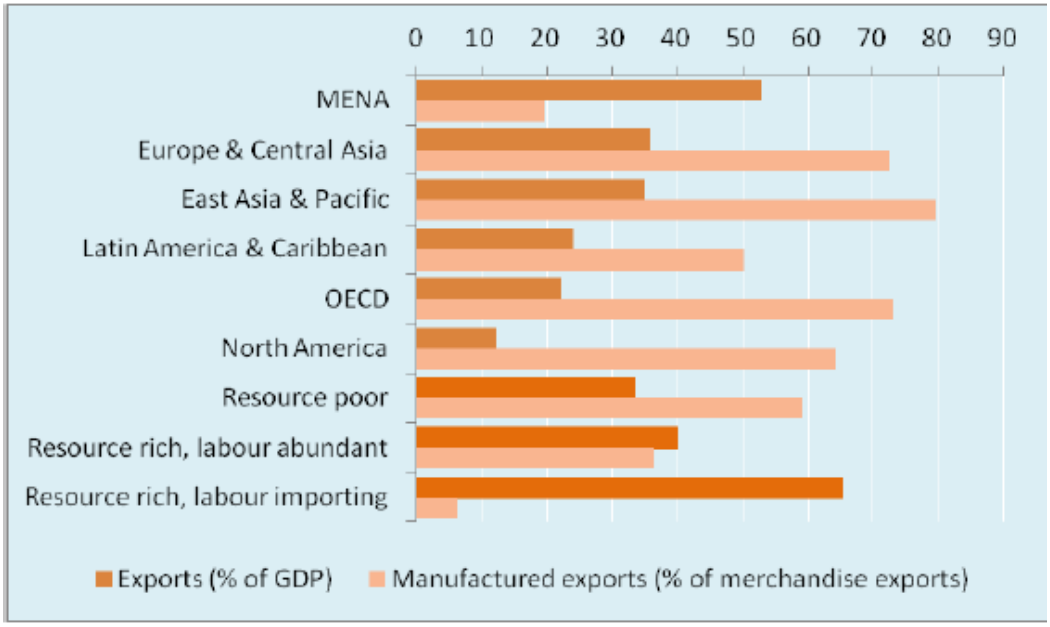
Note: Youth unemployment rates for young job seekers between 15 and 24 years in per cent of active youth population. Estimate (e) for 2011; Projections (p) for 2012 through 2017.
Source: ILO, Trends Econometric Models, July 2012; IMF World Economic Outlook, July 2012.

Source: ILO, 2012

Economic growth has also suffered following the Arab Spring: in 2011, Tunisia's GDP growth declined from 3% to 0% while Egypt's GDP declined from 5% to 1%.[8] An examination of per capita GDP growth rates shows that growth is not keeping pace with population increase. The gap between GDP and GDP per capita is one of the highest in the world.[9] While exports as a share of GDP are comparatively high in MENA countries, Figure 3 below shows that manufactured exports are a smaller share of merchandise exports than in any other region.[10]

[8] Kausch, 2012a
[9] O'Sullivan et al. (2011)
[10] Ibid.

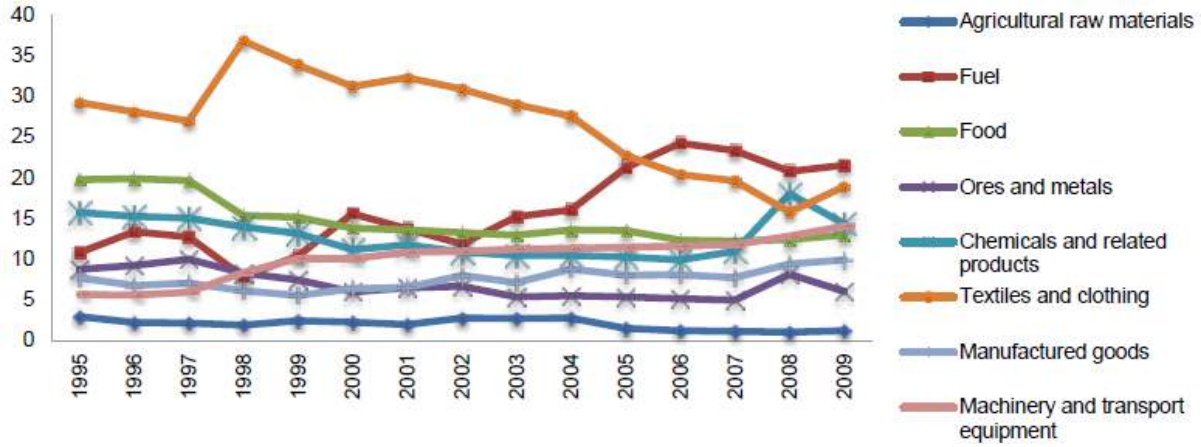
Figure 3 Exports as percentage of GDP and share of manufactured exports



Source: O'Sullivan et al (2011)

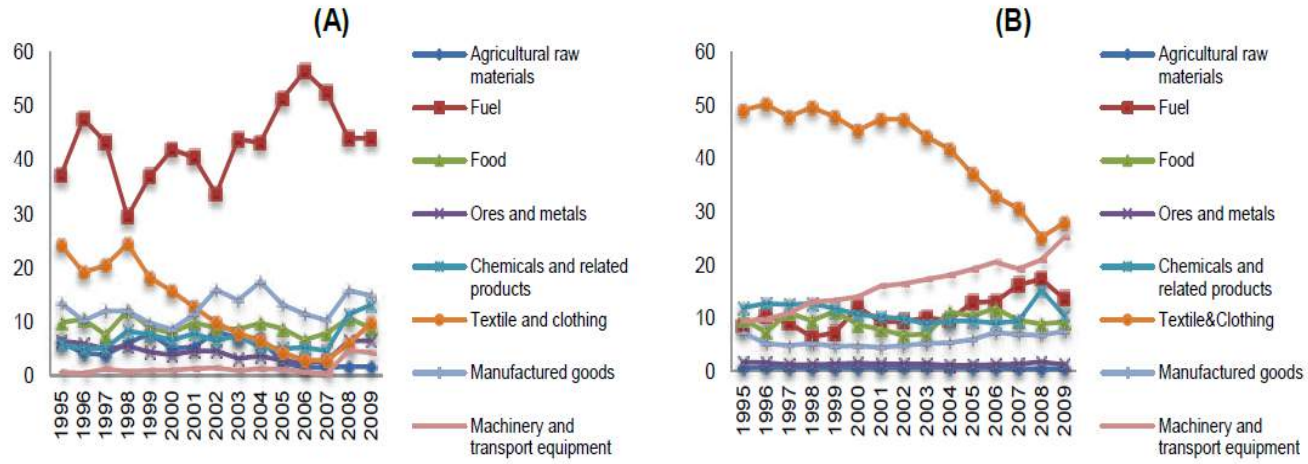
The region relies heavily on a few export commodities, primarily food and fuel and agricultural products. **Due to limited export diversification in the region MENA is left highly vulnerable to price swings in international markets**. The concentration of economic activity in sectors that are either capital intensive (especially the energy sector) or that demand unskilled labour (such as textiles and agriculture) leaves little room for economic growth and employment opportunities. Tourism is the primary source of foreign exchange earnings. Yet the sector is likely to suffer from climate impacts on seasonality, operating and insurance costs, especially in coastal regions. The agriculture and fuel sectors are equally climate-sensitive and will, as section 3 discusses, come under increasing stress from the impacts of climate change.

Figure 4 . Structure of commodity exports for oil-poor countries (Jordan, Egypt, Morocco and Tunisia), 1995-2009



Source: UNDP Arab Development Challenges Report, 2011

Figure 5 Structure of commodity exports for Egypt (A) and Tunisia (B), 1995-2009



Source: UNDP Arab Development Challenges Report 2011

MENA also has very low levels of private infrastructure investment.[11] While FDI has increased following structural and institutional reforms in the 1990s, most investment remains concentrated on the relatively wealthier oil exporters in the Middle East.[12] FDI in the region is concentrated in non-tradable sectors such as tourism and construction, with a low share in manufacturing and almost no investment in hi-tech services.[13] FDI to Egypt and Tunisia turned negative in the first quarter of 2011.[14]

Given the rate of population growth in the region, unemployment and other structural economic problems as well as resource pressures are likely to increase in severity without major effective policy interventions. Between 1950 and 2000, the population in the MENA region increased from 100 million to 350 million. By 2050, MENA will likely host over 700 million people.[15] Egypt's population is estimated to grow from 82.5 million in 2011 to 123.5 million in 2050; the population of Tunisia from 10.7 million in 2011 to 12.6 million.[16]

Against the background of these structural and macro-economic challenges, arguably the most influential external stabilising factor, the European Union, has little to offer due to its own political, economic and financial situation.[17] With the exceptions of France, Spain, and Italy, Europe's relations with North Africa have been lukewarm at best for decades. After years of largely ineffective policies rife with technocratic frameworks and declarations of good intentions yet void of strong political commitment, the EU faces the challenge of offering a new approach. In large part, the EU faces pressure to engage because other actors, such as Saudi Arabia, Qatar, China and Turkey are becoming increasingly relevant actors in the region.

The economic crisis in both Egypt and Tunisia might be the biggest stumbling block on the road to stability, though. The depreciation of the Egyptian Pound and the Tunisian Dinar makes imports, and hence subsidies, for food and fuel more expensive and might cost these states more than just economic stability.

[11] WB, 2003
[12] OECD, 2010
[13] WEF, 2012
[14] MIGA, 2011
[15] Madbouly 2009: 6
[16] United Nations, Department of Economic and Social Affairs, Population Division Populations Estimates and Projections Section, http://esa.un.org/unpd/wpp/unpp/panel_population.htm and World Development Indicators http://databank.worldbank.org
[17] Kausch, 2012b and Dworkin & Witney, 2012

Case Study: Egypt

Political context

Protests in Egypt were sparked by the surge in food prices, a lack of economic opportunities and political inclusion, and an intolerable human rights situation. President Mubarak was ousted on 11 February 2011 after 18 days of public protests on Cairo's Tahrir Square. The Supreme Council of the Armed Forces (SCAF) forced Mubarak to resign and assumed administrative control of the country until the presidential elections in June 2012. The first democratic elections in the history of the country took place in January 2012 when a new parliament was formed. The Freedom and Justice Party (FJP) which is close to the Muslim Brotherhood emerged as the winner securing more than half of the seats. President Morsi, a member of the FJP, was the first Islamist President to come to power by democratic means. Since the election, however, a power struggle began between Morsi and the generals of the SCAF. Multiple cycles of elections aggravated the problem.

At the time of the general elections, the FJP enjoyed great popularity amongst professionals and business owners due to its pro-business policy and free-market approach.[18] Its 2011 political manifesto emphasised both the need to reform the political system in order to eradicate corruption and the repeated violation of the rule of law, as well as the need to address the country's most urgent economic problems.[19] It called for enhancing competition, investments, economic growth and anti-monopoly laws but it also emphasised self-sufficiency in strategic assets, the introduction of both a minimum and a maximum wage, and the introduction of *sharia* principles as the main source of legislation.

The road to democratic institution-building has proven problematic. President Morsi's decision on 22 November 2012 to grant himself far-reaching powers until the election of a new parliament and the ratification of a new constitution met with public outrage and protests. The President finally agreed with the judicial authorities to limit the scope of the decree. On 30 November 2012, the constituent assembly approved the draft of a new constitution which had mainly been drafted by the Muslim Brotherhood. The run-up to the two-stage referendum on 15 and 22 December was marked by daily rallies of and clashes between proponents and opponents of the new constitution. In the end, only 33% of Egypt's 52 million registered voters went to the polls, with more than 33 million voters boycotting the constitutional referendum or staying away.[20] The constitution was adopted with 63.8% of the votes and signed into law on 25 December. The process had been rushed and the opposition was divided between those who encouraged participation and those who opted for boycott. This left little time for a public debate on the new constitution, resulting in its legitimacy remaining questionable.

The role played by the army in the formation of the new political system will keep determining Egypt's future ability to respond to instability. President Morsi has been trying to reconfigure the relationship with the military since his election, yet it remains unclear to what extent he is willing to challenge its privileged position. One reason why the military is clinging on to power lies in the SCAF's extensive economic interests, stretching beyond military goods. They produce not only military equipment, but also a range of civilian goods and services such as "vehicles, chemicals, cement, consumer goods ... mineral water, olive oil, pasta and bread ... gas stations ... restaurants ... construction ... and have extensive real-estate buildings".[21] Moreover, despite the series of neo-liberal policies adopted since 1992, the interests of the military's holdings have continued to benefit from non-competitive protection measures which created a corrupted, patron-client business network.[22]

Regional security concerns are also posing great challenges to Egypt's internal stability. The Sinai Peninsula is transforming from a near-empty territory as a result of the 1979 peace treaty into a theatre for the

[18] Kinninmont, 2012
[19] FJP, 2011
[20] Sadiki, 2012
[21] Kinninmont, 2012
[22] Abul-Magd, 2012

region's competing forces. The peninsula's stability is undermined by several developments including the regime collapse in Egypt, Islamist movements which are already responsible for the killing of 16 soldiers in August 2012, the Bedouin's struggle to maintain their share of scarce resources and territory control, and the Israel-Gaza conflict. As of today, the Sinai is Gaza's primary trade and access route.[23] It remains highly uncertain how Egypt will react to this new regional security vacuum.

Economic overview

The global economic crisis and the 2011 uprisings caused FDI to fall by 87% to USD$0.9bn between 2009 and 2011.[24] Egypt experienced real GDP growth of 1.2% in 2011, following an average of 4.5% per year over the past 20 years.[25] Despite a constant rise in GDP and FDI, GDP growth per capita sunk during the same period by 2 percentage points, unemployment rose, and income inequality increased.[26]

According to the Government's Statistics Office, in February 2012, the unemployment rate reached 12.4%.[27] The actual level of unemployment is likely much higher than official estimates.[28] At the same time, "informal" workers and those employed by businesses with less than ten employees are excluded from the new social security measures introduced in 2012. This affects a vast number of people given that the majority of Egypt's jobs are provided by small businesses and micro-enterprises.[29]

A more worrisome picture emerges when youth unemployment and gender differentials are considered. In 2009, when the unemployment rate was 3 percentage points lower than today, 58.5% of youth aged 18-29 (roughly 11.7 million people) were out of the labour force; 83% of them were women.[30] Given the overall rise in unemployment over the last three years, these numbers are likely to be higher in 2012. Another set of data shows that 95% of young people have successfully completed secondary education and many of them have obtained a university degree.[31] This means that the unemployment rate among graduates is staggeringly high.

Poverty is pervasive. In 2008, an estimated 22% of the population lived below the national poverty line;[32] and in 2011, some 40% of the Egyptian population, roughly 33 million people, lived on less than 2$ per day.[33]

Another persistent problem is high inflation. Given the higher proportion of income that the poor dedicate to food, energy and housing, they are particularly affected by the high inflation rate.[34] High inflation together with the privatisation of healthcare and education in the 1990s put public services out of reach for many and created income deficits among the poorest households.[35] Moreover, opening markets to international competition exerted further pressure on the wages of unskilled and low-skilled workers thus exacerbating their ability to access basic services.

Egypt is generally depicted as a favourable place for investments because of its large population, proximity to the European Union and the Middle East, large natural resources and consumer markets. The country offers several other advantages: the economy is relatively diversified; production costs are low; Egypt's highly subsidised energy favours investments in energy intensive industries; Egyptian labour is less

[23] Pelham, 2012
[24] WB, 2012b
[25] CIA, 2012; Kinninmont, 2012
[26] Hickel, 2012
[27] AMAY, 2012
[28] Kinninmont, 2012
[29] Ibid.
[30] EHDP, 2010
[31] Provost, 2011
[32] 'National poverty rate is the percentage of the population living below the national poverty line. National estimates are based on population-weighted subgroup estimates from household surveys'. Available at http://data.worldbank.org/indicator/SI.POV.NAHC
[33] Bednarz et al., 2011
[34] Kinninmont, 2012
[35] Hickel, 2012

expensive than in other countries in the region; and foreign companies benefit from established free trade zones which provide custom and tax exemptions, thereby considerably reducing costs.[36]

There are two clear investment trends. First, the energy sector attracts the vast majority of investment. In 2008 the oil and gas sector attracted 70% of Egypt's total FDIs thus largely benefitting the oil and gas industry.[37] Second, the BRICs, and China in particular, increasingly play a crucial role in Egypt. China has become the main foreign investor since 2009 with more than 1000 Chinese companies now established and incorporated in the country.[38]

Egypt's fiscal situation provides a further stumbling block on the road to stability. In December 2012, Egypt's Central Bank warned that foreign reserves had reached a "minimum and critical limit" of $15bn.[39] Foreign reserves are of crucial importance as they are needed to meet debt repayments and fund food and fuel imports. Since the beginning of the revolution, Egypt's central bank has spent more than $20bn of foreign reserves to prevent a sharp devaluation of the Pound.[40] Prospects of fiscal instability led Standard & Poor's to downgrade Egypt on par with Greece, thus fuelling public fear of collapse. The political turmoil and economic uncertainty set off a rush to convert Egyptian Pounds into US dollars, so the government is planning a new currency regime.[41] A further loan by the IMF of $14.5bn is being sought to help address the crisis but will likely come at the price of severe austerity measures.[42]

Egypt stability analysis: unstable but high state capacity and external support

As Figure 6 below shows, there are a number of critical internal and external risk factors that threaten stability in Egypt.

Beginning with the left side of the diagram, key internal risks include extremely high youth unemployment, a bloated public sector and lack of entrepreneurship, as well as high levels of corruption. External risks include the significant drop in income from tourism since the Arab Spring and tensions over water particularly in the Nile River Basin.

Moving to country capacity and resilience in the middle of the diagram, Egypt has a relatively high level of state capacity, particularly the security system and military, which works to mitigate some internal and external risk factors. Political institutions and civil society are weak but strengthening.

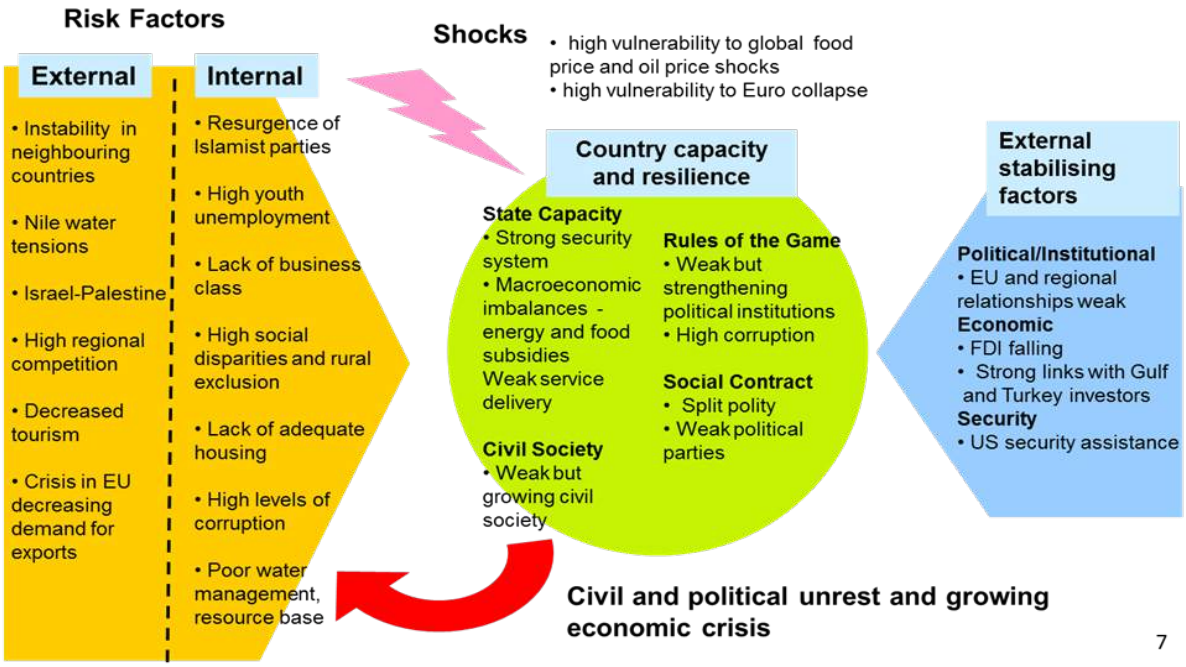
Moving to external stabilisers on the right side of the diagram, Egypt has strong security and economic ties with the U and growing investment from regional actors including Turkey and the Gulf states.

However Egypt also remains highly vulnerable to food price shocks and highly exposed to the Eurozone crisis which has lowered demand for exports.

Overall, Egypt in 2012 can be characterised as being vulnerable to a range of potential risks but with the potential to successfully manage them with deployment of domestic capacity and well-designed international support.

[36] AfDb, 2011
[37] Suding, 2010
[38] Castel et al., 2011
[39] Farouk and Werr, 2013; Saleh 2012
[40] Ibid.
[41] Ibid.
[42] Ibid.

Figure 6 Stability analysis for Egypt, 2012



Case Study: Tunisia

Political context

In the decades following independence from France in 1956, the country had been praised for its impressive record in terms of education, health, and women's rights. Since the 1990s, Tunisia has undertaken macro-economic and structural reforms aiming to transform the country into a market economy with a liberalised trade regime. Its macro-economic performance and stability improved considerably as a result.

Yet socio-economic "success" came at a high cost. President Ben Ali, who had been in power since 1987, was acutely concerned with maintaining political stability and public order in the country. The opposition, human rights activists and journalists were suppressed through the targeted use of surveillance, harassment, imprisonment, and torture.[43] Ben Ali's regime was tolerated due to the high level of education, social mobility, and socio-economic development in the country. The regime's generous social policies resulted in the emergence of a large middle class who accepted the absence of democratic rights and political freedom in return for welfare and benefits. With the severe deterioration of living standards during the regime of Ben Ali, however, the "tacit agreement" between the regime and its people unravelled.[44]

Hopes had been high when, only two weeks after the ousting of Ben Ali on 14 January 2011, a "national unity government" was formed. In late October 2011, the first post-revolutionary elections for the National Constituent Assembly were held and won by the moderately Islamist and previously banned en-Nahda party. En-Nahda, which is close to Egypt's Muslim Brotherhood, formed a coalition with the leftist Congress for the Republic and the centrist Ettakol. The Constituent Assembly was charged with appointing a new interim government, drafting a new constitution, and preparing for legislative and presidential elections. The outcome of the elections demonstrates the degree of democratic progress in the country. The new Prime Minister, Hamadi Jebali of the Congress for the Republic, is a former political prisoner, and the new President, Moncef Marzouki, is a human rights activist who spent 16 years in exile.

[43] Paciello, 2011
[44] Ibid. 4f

Two years after the ousting of Ben Ali it seems that the revolution got stuck half-way through. The coalition government is paralysed and the bureaucracy has ground to a halt in many areas because of a lack of political leadership and authority. The new constitution is scheduled to be ratified in February 2013, well in advance of the parliamentary and presidential elections in June.

Meanwhile, society is torn and political parties are reorganising and will run in new formations in the parliamentary elections. However, all parties are calling for the same objectives: freedom, dignity, and jobs. This includes Islamists of different orientation ranging from En-Nahda to the Salafists on the one hand and secularists of different shades on the other.

Economic overview

The true extent of the social and economic deterioration in Tunisia was only revealed after the revolution when national statistics became more transparent and hence more reliable. In September 2011, the National Statistics Institute published revised estimates on poverty: for 2005 alone, the national poverty rate was adjusted from 3.8% to 11.8%. Moreover, a regional breakdown in poverty rates revealed huge regional discrepancies ranging from 5 to 7% in the Centre-East and Grand Tunis areas to 20% in the Centre-West of the country.[45] Similar adjustments had to be made with regards to youth unemployment: between 1999 and 2009, the real increase in youth unemployment was from 22.1% to 44.9%.[46]

Years of socio-economic decline have had lasting effects. The economic situation poses severe challenges to Tunisia's new government and threatens to destabilise the political situation. The Government pledged to bring the country on track for economic growth and promised to create 800,000 jobs. It has set an ambitious reform agenda and committed to a number of major infrastructure projects.[47] Yet the peace remains fragile, the political transition complicated, and society's trust undermined. The cost of the revolution on the economy is estimated to be $8bn, which amounts to nearly 10% of the country's GDP.[48]

Problems within the government coalition, indecision over policy, and recent anti-Western protests further aggravate the situation. Unemployment is still severe and reached 18.1% or roughly 700,000 in the first quarter of 2012.[49] According to a study by the General Tunisian Labour Union (l'Union générale tunisienne du travail) the unemployment rate amongst young graduates under the age of 25 is 30%.[50]

Social inequalities as well as considerable regional disparities between the coastal region and the impoverished interior have remained. These are due to governance failures in the past decade when 65% of public investments were directed to the coastal areas.[51] Corruption is still rampant, especially in rural areas. This is a major problem in an economy where the public sector remains the largest employer and economic actor. About 40% of the workforce is employed by the state that accounts for well over 50% of GDP.[52]

However, since the central state has not managed to restore its authority in several regions, corruption will likely remain problematic in the near future. The informal economy is flourishing, the budget deficit is out of control, and investors are reconsidering their commitments. The economic and social causes that sparked the revolution remain largely unresolved.

One of the reasons for Tunisia's weak economy is its position at the low end of the value chain.[53] Yet, as the UN and the OECD suggested, Tunisia's strongest sectors (tourism, agriculture and ICT/services) "could be a

[45] WB, 2012b
[46] Paciello, 2011 quoting I. Haouari, "*Ces chiffres qu'on ne nous a jamais révélés*". La presse de Tunisie, 6 February 2011. http://www.lapresse.tn/06022011/21973/ces-chiffres-qu-on-ne-nous-a-jamais-reveles.html
[47] AfDB, 2012a
[48] http://english.alarabiya.net/articles/2012/09/18/238766.html
[49] http://www.tunisia-live.net/2012/05/19/unemployment-in-tunisia-drops-slightly-in-first-quarter-of-2012/
[50] Dubois, 2010
[51] AfDB, 2012a
[52] Erdle, 2011
[53] Ibid.

major boost for the overall development of the North African economy."[54] Thanks to a gradual rebound in tourism, FDI inflows in the first quarter of 2012, and increased public investment, the IMF expects Tunisia's GDP to grow by 2.7% in 2012.[55] The country has limited natural resources (gas and petroleum) but government policies in the areas of infrastructure and education in the past helped drive economic diversification.[56] This made Tunisia resilient enough to withstand the surge in energy prices in 2008 and simultaneous crop failure due to drought.

Short term growth prospects in the country are contingent upon the political environment and the global economy. In the absence of a functional government and a constitution investors are deterred.[57] Continued low levels in revenue from tourism could hamper growth and job creation. Global economic developments, especially in the Euro zone, play a significant role. European countries account for about 90% of all FDI with most exports directed to France, Italy and Germany.[58] In 2010, the EU accounted for 74.1% of Tunisia's exports and 66.9% of its imports.[59] Thus, dependency on European export markets remains a potentially destabilising factor. Tunisia will also suffer from the economic slowdown in the Eurozone because of declining remittance inflows from Tunisian expats.

Tunisia stability analysis: fragile and unclear if improving

As the stability analysis for Tunisia in Figure 7 shows, the country faces a range of external risk factors, including migration from Sub-Saharan Africa, water stress, and decreasing tourism and demand in Europe for exports. Internal risks include high youth unemployment, social disparity, and currency devaluation.

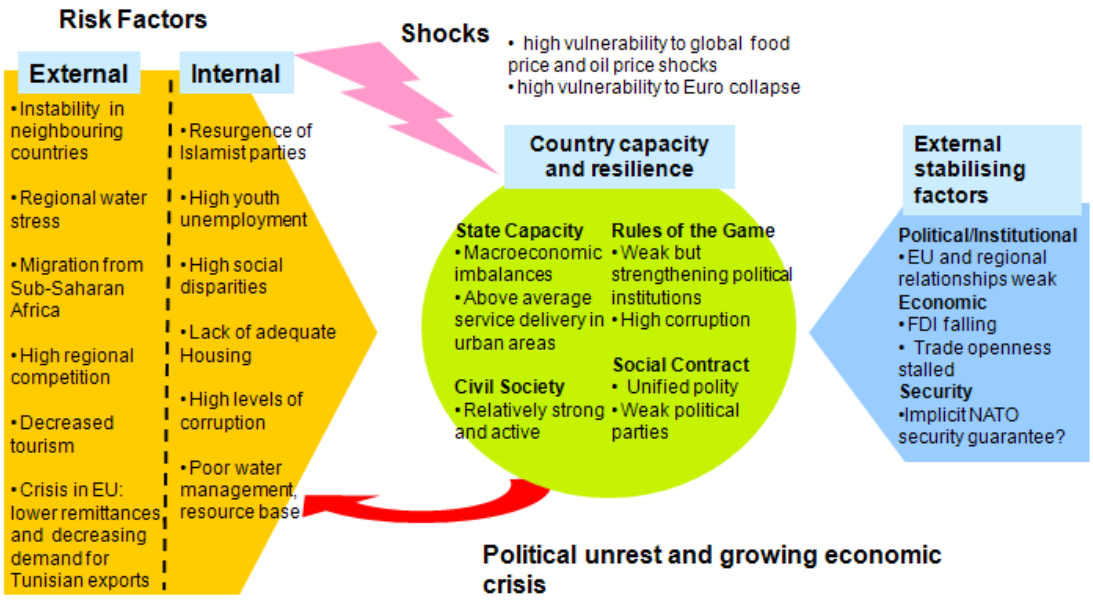
In terms of country capacity, while Tunisia has a relatively strong civil society, the government is hampered by macro-economic imbalances, high levels of corruption and weak political parties.

Although Tunisia is highly vulnerable to developments in the Euro area, it cannot rely on strong regional or European political ties as an external stabilising force.

In summary, Tunisia remains fragile both political and economically, but there is also potential for the new government to successfully manage this transition. Much will depend on economic developments in the Eurozone and regional politics, as well as the outcome of the constitutional process and the results of the parliamentary elections to be held on or before 20 March 2013. Current conflicts within the government coalition have resulted in indecision over policy. The government also has to come to terms with Salafist groups and address conflicts over the role of religion, artistic expression and women's rights in the formerly staunchly secular country. These factors can prove decisive for Tunisia's future development due to their direct impact on country capacity.

[54] OECD/UN, 2011
[55] IMF, 2012: 9
[56] Ibid.
[57] BBC News http://www.bbc.co.uk/news/business-20907979
[58] Erdle, 2011
[59] http://ec.europa.eu/trade/creating-opportunities/bilateral-relations/countries/tunisia/

Figure 7 Stability analysis for Tunisia, 2012



Current economic and political trends suggest that Egypt and Tunisia face considerable challenges in achieving long term stability. They must address severe problems including high unemployment, high rates of inflation, currency devaluation, and high levels of poverty; while at the same time dealing with structural economic issues including a declining share of production from high value added manufacturing, unequal economic growth and low levels of infrastructure investment. These challenges will only be exacerbated by the region's vulnerability to climate change, energy insecurity and resource scarcity.

3. How climate, energy and resource trends impact regional stability

Summary:

- MENA is already acutely vulnerable to shocks arising out of climate, energy, and resource-related risks, as evidenced by the role of food price rises in the Arab Spring. Urban agglomerations with their concentration of critical water and energy infrastructure are particularly vulnerable.
- Projections show that temperatures in the MENA region will rise faster than the global average, with impacts including increased water stress and major crops failures. Even modest sea level rise will impact a large percentage of GDP in Egypt and Tunisia.
- Projecting climate and resource trends in Egypt and Tunisia to 2025 offers a best and worst case scenario for country stability. A best case for Egypt shows economic growth and political developments reducing instability risks to manageable levels but continued vulnerability to external shocks. A worst case would see a lack of a balanced economic growth model and maladaptation in rural areas lead to high risk of instability and vulnerability.
- Even in a best case scenario for Tunisia economic growth and political developments are unlikely to dramatically reduce instability risks to normal levels, but economic openness and regional cooperation could maintain stability. A worst case scenario would see Tunisia increasingly unstable and isolated.

The Climate-Energy-Resource Nexus

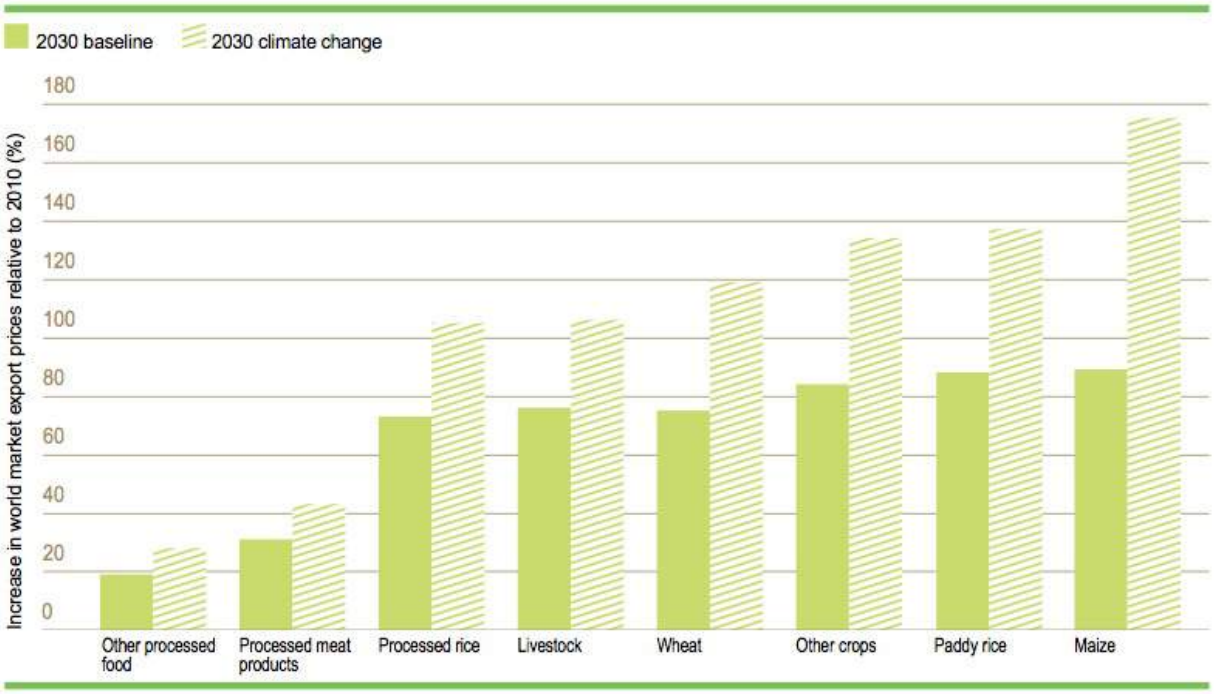
A climate, energy and resource security perspective on the MENA region makes particular sense given the nature of the spark that triggered the Arab Spring: it was essentially the intolerable increase of the price of bread combined with a lack of government action to absorb the food price shock that drove people to the streets. Thus, the events of the Arab Spring mirrored the earlier food crisis of 2008. Both crises are embedded in the same structural context: most Arab countries import half of their food supplies, making them acutely vulnerable to volatility in global food prices.[60] The region uses the equivalent of another Nile in "virtual water" each year embodied in food imports.[61] Agricultural policies in the past undermined food sovereignty since the agricultural sector was geared to the provision of food products for export in return for currency revenues and integration in the global market.[62]

These policies were proved lacking in both 2008 and 2010 when supplies of wheat dropped dramatically and prices for bread soared and could not be absorbed by government subsidies. The 2010 food price spike was due to a combination of factors, in particular crop failures in different parts of the world: droughts and wildfires in Russia had resulted in a ban on wheat exports, while flooding had destroyed much of Australia's wheat harvest. The compounded effects of growing demand from emerging markets, the increased use of fertile soils for the production of biofuels, and speculative bubbles in the agricultural market added to the situation.

[60] WB, 2009
[61] Allan, 1998
[62] Ayeb, 2012

There are indications that the unprecedented droughts in the US in 2012 will lead to shortages in global food supplies in 2013. This would produce a spike in commodity prices similar to that seen in 2008 and 2010; the US Department of Agriculture for example projects that food prices will increase by up to 4%.[63] These trends will worsen over time: as Figure 8 shows, modelling suggests that major import crops like wheat are likely to increase in price by up to 80% by 2030 due to growing global demand; climate change could increase prices by a further 40%.[64]

Figure 8 Real food price changes predicted over the next 20 years



Source: Oxfam, 2011

The failure by governments in the region to ensure their citizens' food security during the 2010 price spike undermined any residual legitimacy of regimes rife with corruption and unable to effectively address poverty and unemployment. Social grievances due to the increase of the cost of food by 30% within one year prior to January 2011 quickly translated into popular unrest and eventually the toppling of the regimes in Egypt and Tunisia.[65]

In addition to their vulnerability to global food price rises the countries in the MENA region are acutely vulnerable to other shocks arising out of the climate-energy-resource nexus. They are highly urbanised, arid, and (with the exception of those countries rich in oil and gas), resource-poor.[66] Given current projections of population growth over the next decades, resource pressures will increase significantly. Most of this growth will be concentrated in cities. By 2015, about 70% of the population in MENA will live in cities[67] but the provision of adequate infrastructure and public services has not yet matched the pressures arising from urban growth. Informal housing makes up 20 to 40% in many cities and creates considerable social disparities as well as vulnerability to risks emerging out of the climate-energy-resource nexus.

[63] USDA, 2012
[64] Oxfam, 2011
[65] For an analysis of the relationship between food price spikes and political unrest in the region see Lagi et al., 2011.
[66] Croitoru and Sarraf, 2010
[67] WB, 2008

The impacts of climate change will be particularly severe in urban agglomerations. Existing problems such as air and water pollution, waste management, and access to clean water, electricity, and food will be aggravated by the impacts of climate change. With their concentration of population and critical infrastructure cities are acutely vulnerable to these challenges. Moreover, many capital cities and commercial centres are located along the coastline, which puts them at severe risk from sea level rise. In the event of shocks – e.g. in the form of natural disasters such as flooding– a vast majority of people will likely be forced to self-organise in response to the event, especially given the fragile security sectors in many post-Arab Spring countries. The combination of socio-economic, security and environmental pressures provides fertile soil for a wide range of urban conflict.

The rural population is no better off. The situation is particularly severe in Egypt which is the least urbanised society in the region with only 43% of the population living in cities. Although Egypt's agriculture is one of the most developed and productive in the world, it "is supported by one of the poorest peasant classes in the world."[68] The situation in Tunisia is similar because the policy of "total irrigation" from the mid-1990s was to the detriment of many farmers who lacked the means and resources to access deep water reserves.[69] Thus, the situation of the rural population in many MENA countries is largely due to agricultural policies since the 1980s which emphasised economic liberalisation and structural adjustments. The weakening of traditional agriculture in favour of agribusiness led to the impoverishment of the rural population, to the exhaustion of the land as well as biodiversity, and it undermined countries' food sovereignty.[70]

Impacts from Climate Change

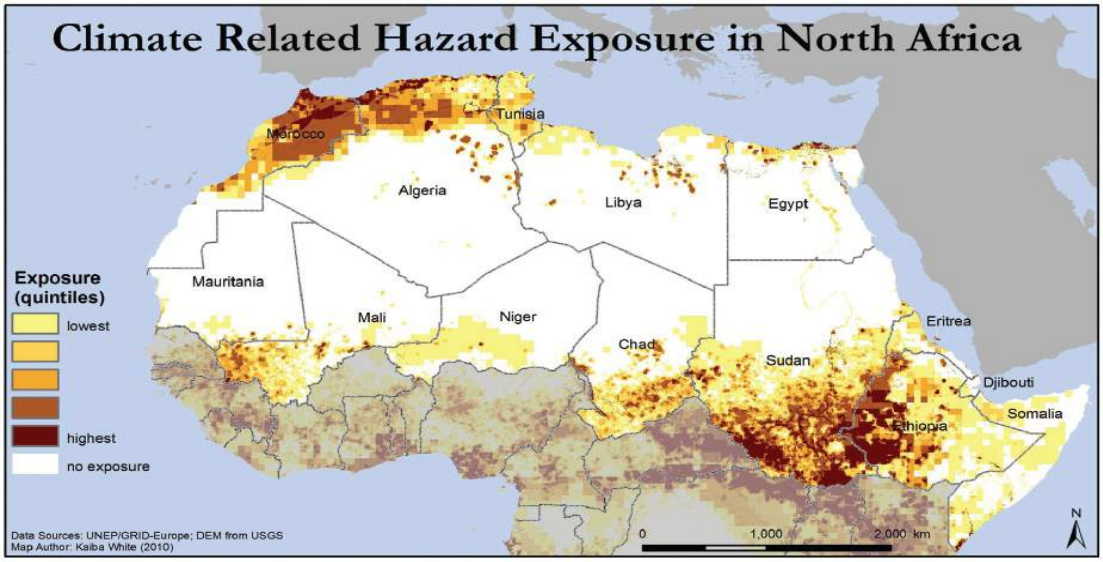
There is no in-depth climate impact assessment for the entire MENA region. However, some of the impacts can be extrapolated from several sources including the 2007 International Panel on Climate Change's report (IPCC).[71] It forecasts increases in average temperatures in the region by 2.2 to 5.1°C by the end of the century, higher than the global average. Given that more recent simulations show even higher average global temperature rise, the region could see a 4°C average temperature rise by mid-century and 6-8°C by 2100.[72]

Model simulations predict a drying trend along the Mediterranean coast as precipitation decreases in summertime.[73] The IPCC also estimates that an additional 80 to 100 million people will be exposed to water stress by 2025.[74,75] The impact on rainfall is more uncertain than temperature rise, but a general reduction of rainfall by up to 10-30% by mid-century is expected.[76] It is projected that climate change will reduce water runoff in the region by 10% by 2050.[77] This will have a major impact on agricultural productivity and hence food security in the region.[78]

Figure 9 shows that climate-related hazard exposure in North Africa is concentrated along the Mediterranean coastline and the Nile River Basin.

[68] Ayeb, 2012
[69] Ayeb, 2012
[70] Ayeb, 2012
[71] See also Goodess, 2011
[72] See for example IEA World Energy Outlook 2011
[73] NIC, 2009
[74] IPCC, 2007
[75] New et al., 2011
[76] Evans, 2009
[77] WB, 2012e
[78] http://www.menawater-2011-berlin.de/topic.html

Figure 9 Climate Related Hazard Exposure in North Africa

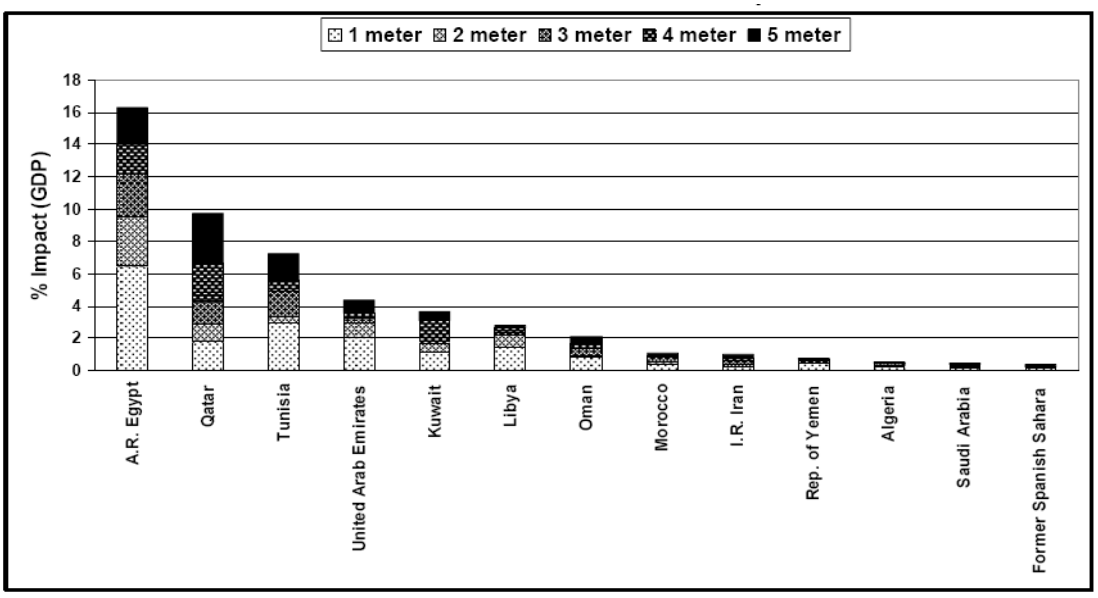


Source: GMF, 2010

Stress on dwindling water resources will increase and thereby threaten agricultural production which is already heavily reliant on irrigation. Diminishing amounts of rainfall will increase water salinity and lead to an overall deterioration of water quality. Poor water quality will also likely lead to an increase in water-borne diseases. At the same time, demand for water will peak in the hottest and driest seasons when supply is at the lowest. It will become more costly to provide freshwater for household consumption and the agricultural sector through the increased use of desalination plants. At the same time, less water also means less capacity for hydroelectricity production, which in turn is a condition for the use of desalination techniques.

MENA countries are also heavily exposed to the risks emerging from rising sea levels and severe weather events. Floods will exceed the capacity of protective infrastructure. Extreme rainfall will stretch the capacity of sewage systems resulting in overflow. Whether the result of drought or floods, the poor will suffer most, which is likely to lead to social unrest. As seen in the figure below a particularly large percentage of GDP in Egypt and Tunisia would be impacted by even a 1 meter of sea level rise.

Figure 10 Comparison among Arab countries of GDP impacted by various estimates of Sea Level Rise



Source: Dasgupta, 2007

Case Study: Egypt

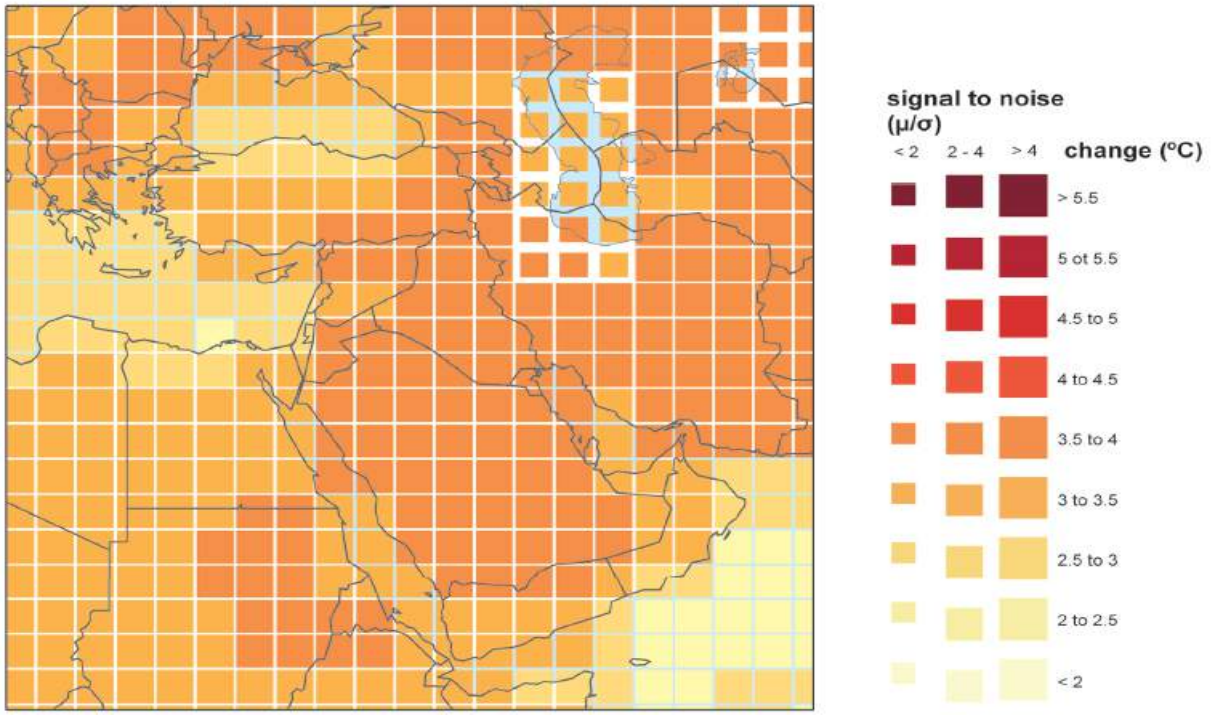
Climate trends

A recent assessment of local climate impacts in Egypt is the 2012 Climate Change, Hydro-Conflicts, and Human Security (CLICO) project, funded by the EU's Seventh Framework Programme.[79] Amongst other places in the MENA region, the CLICO project studied the Sinai and the city of Alexandria to determine their vulnerability to water-induced risks ("hydro hazards").[80] Both the city of Alexandria and the Sinai are exposed to climate impacts such as sea level rise, drought, and surface water pollution. The case study on Alexandria is particularly striking.

Greater Alexandria, located in the Nile river basin delta, is the largest city in the Mediterranean Coastal Zone with a population of about 4 million – expected to grow to 6.8 million by 2030 thereby considerably stretching the infrastructure of the city far beyond its limits.[81] Urban sprawl created through weak state administration and low investment in public infrastructure has led to vulnerability in the area of water security.[82] Alexandria hosts 40% of Egyptian industrial production and the largest harbour in the country. Climate models indicate that a rise in sea levels by 0.5m over the century is increasingly likely. This would inundate 30% of the city, resulting in the likely displacement of 1.5 million people and the loss of 195,000 jobs in the industrial, agricultural, fishery and tourism sectors. Property worth $30bn would be lost.[83]

Another recent study on climate impacts at the country level was conducted by the UK Met Office. The results of their modelling show projected temperature increases over Egypt are around 3-3.5°C by the end of the century.[84]

Figure 11 Percentage change in average annual temperature by 2100 from 1960-1990 baseline



Source: Met Office, 2012

[79] 'The CLICO project mobilizes 14 research teams and brings together for the first time some of the world's leading researchers in water resource, vulnerability, and peace and security studies'. Available at http://www.clico.org/
[80] CLICO, 2012
[81] Ibid.
[82] Ibid.
[83] Ibid.
[84] Met Office, 2012

A comprehensive review of existing global, regional and national studies by the Met Office also shows high likelihood of yield deficits for Egypt's major crops, increasing pressures on food security, and increasing water scarcity.[85] Given the concentration of industry and population in the Nile delta, Egypt is also the world's third most vulnerable developing country in the world to sea level rise.[86]

Energy trends and potential for RES

Oil and natural gas production play a significant role in Egypt's economy. Egypt's proved oil reserves[87] represent 0.3% of total world reserves and amount to 4.3bn barrels of crude oil.[88] However, the country's oil production reached its peak in the mid-1990s at 922,000 bbl/day and has declined since.[89] If the domestic production rate continues to diminish, crude oil imports will rise in order to satisfy the spiralling domestic demand for oil. Domestic consumption increased by about 30% between 2001 and 2010.[90] As a consequence, in 2010, Egypt experienced a negative oil balance of trade thus becoming a net oil importer for the first time.

Egypt enjoys large reserves of natural gas accounting for 1.1% of the world reserves or 2,200bn cubic metres.[91] Contrary to oil production, gas production has increased sharply in the last 10 years. However demand has also been increasing. The exploitation of natural gas reserves could become more difficult over time due to their location in the highly climate-vulnerable areas of the Mediterranean and Nile Delta.[92]

Thanks to remarkably high intensity of direct solar radiation and sunshine duration, Egypt is one of the most suitable places in the world to exploit solar power through the development of concentrated solar power (CSP) systems, the diffusion and installation of photovoltaic arrays (PV) as well as solar water heaters (SWH).[93] However, in 2010, only 0.07% of the total installed capacity for electricity generation consisted of solar energy.[94] Only one solar power project has been commissioned so far. This is a hybrid 140 MW solar thermal and combined cycle gas turbine power plant of which only 20 MW are solar thermal, i.e. only 14% of electricity generated is de facto renewable.[95]

Wind technology is playing an increasing role in Egypt's energy mix. The best areas for developing both on-shore and off-shore wind technology are located west of the Gulf of Suez, in the Owaynat and Sinai region, as well as on the north coast. In 2010, about 2% or 550 MW of total installed capacity for electricity generation consisted of wind technology.[96] This is the largest in Africa and the Middle East. Egypt's strategy is to increase electricity generation from wind to 12% by 2020, amounting to 7200 MW of installed capacity. A resolution adopted in 2008 set the target of 20% for electricity from renewable sources by 2020. Out of this, 12% should come from wind and the remaining 8% from solar and hydro.[97]

In 2010, energy subsidies amounted to 11.9% of total GDP or 73% of all subsidies equalling about one-quarter of the whole state budget.[98] About half of the energy subsidies were dedicated to petroleum products, one-third to natural gas and the rest to electricity.[99] The economic costs of energy subsidies are thus substantial. Since every household is subject to the same pricing scheme, a large portion of the

[85] Ibid.
[86] Dasgupta, 2007
[87] 'Generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions' BP, 2012
[88] BP, 2012
[89] GIZ, 2010
[90] EIA Country Analysis Briefs, 2012
[91] BP, 2012
[92] EIA Country Analysis Briefs, 2012
[93] Khalil et al., 2010
[94] NREA, 2012
[95] AfDB, 2012b
[96] NREA, 2012
[97] AfDB, 2012b
[98] Castel, 2012
[99] Ibid.

subsidies goes to those who consume more, i.e. the wealthy who own vehicles, air conditioning systems and larger living spaces. This results in a highly unequal distribution of subsidies whereby the richest third of the population receives 60% of the subsidies and the poorest third only 25%.[100] Thus there is a mismatch between the rationale for subsidies and the designed pricing system.

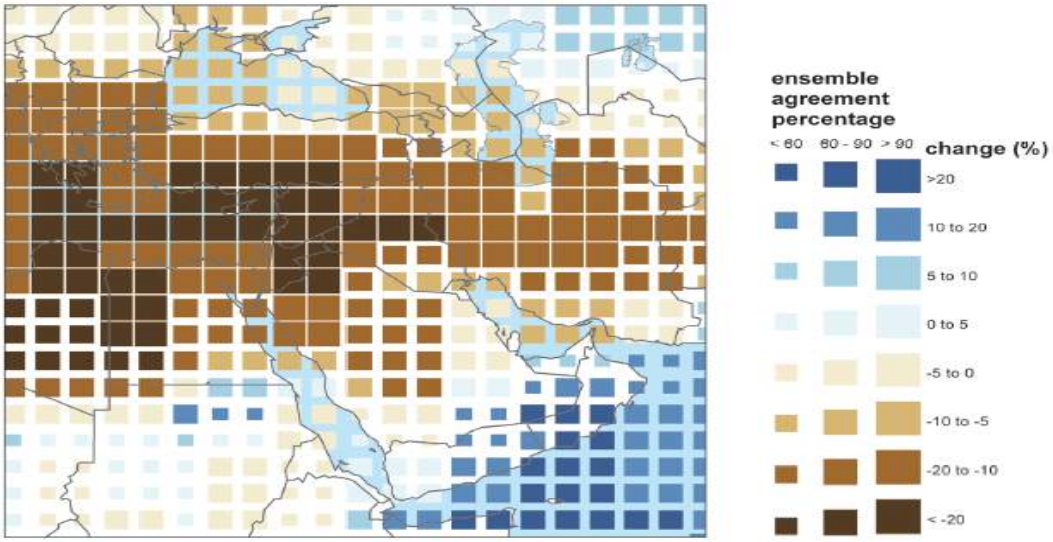
In addition, the domestic electricity price is among the lowest in the world and does not cover system costs.[101] Whilst beneficial for the poorest households, this represents a significant burden for the state budget and considerably distorts market mechanisms as well as the payback time of investment projects.

Water trends

Thanks to its highly productive wells and its shallow river basin, which makes it possible to use large quantities of water at low pumping costs, the Nile River provides 97% of the annual water resource.[102] At the same time, with less than an average of 4mm annual rainfall between 1990 and 2009 (in comparison, the UK received about 110mm annual rainfall on average in the same period), Egypt is one of the water-poorest countries in the world.

The distribution of rainfall also has an important impact on the distribution of the population. Accordingly, the northern part, where the vast majority of the people live, enjoys above average rainfalls. 95% of the population lives in the Nile Valley and the Delta; these areas amount to 5.5% of the country's total area. In the Sinai region and along the coastline of the Red Sea, rain is rare and comes in the form of short and violent rainstorms as often as once every three years causing disruptive floods.[103] Climate change will affect these trends. The UK Met Office study projects decreases in precipitation of over 20% in the west of the country.[104]

Figure 12 Percentage change in average annual precipitation by 2100 from 1960-1990 baseline



Source: Met Office, 2012

The agricultural sector has the highest demand for freshwater for irrigation. This accounts for about 84% of the total available water.[105] The rest is quite evenly shared between the industrial and the domestic sectors. Water is also extensively used for navigation and electricity generation whereby these sectors count as "in-stream" users, meaning that they are not actually net water consumers.

[100] Ibid.
[101] Suding, 2010
[102] WB, 2005
[103] Ibid.
[104] Met Office, 2012
[105] GIZ, 2012a

Given the substantial increase in water demand expected from a growing population and rising living standards for the years to come, water resource management represents a key issue for the stability of the country. Further pressure arises from factors such as distribution losses, water pollution, the availability of drinking water, and Delta erosion.[106]

Case Study: Tunisia

Climate trends

Tunisia is facing significant challenges from the impacts of climate change. Its coastal zones are particularly vulnerable because of accelerating sea level rise, impacting on the major parts of its population as well agricultural, industrial and touristic activities. Droughts and flooding will increase, which will have considerable economic consequences for agriculture and the tourist industry. Over the next 30-40 years climate change could lead to a cumulative reduction in household incomes of 7%.[107]

Public health will be affected through heat waves and the spread of water- and vector-borne diseases. The country is already experiencing extreme summer temperatures, a drop in precipitation and increasing periods of extreme drought as well as extreme precipitation.

Tunisia will see a decrease in water resources of 30% by 2030[108], increases in the likelihood of crop season failure of over 50% by 2050[109], and over 5% of its population would be impacted by even a 1m sea level rise.[110]

Energy trends and potential for RES

Tunisia itself has limited domestic energy resources and depends heavily on fossil fuels for its energy supply. According to the IEA, as of 2009 fossil fuels accounted for roughly 85% of Tunisia's total primary energy supply, and almost all of Tunisia's electricity was produced by natural gas.

Energy consumption in Tunisia is increasing. It is estimated that electricity demand will triple by 2030. This means that increasing portions of the electricity supply will have to be imported or substituted by other sources of production. Between 2004 and 2009, net energy imports had sunk from 20% to 15% but it is unclear whether this trend will continue.[111]

More recently, shale gas has been seen as a potential solution for the energy security problem. In 2012, the Tunisian government started negotiations with Shell on a planned investment of €10bn into the exploration of shale gas in the country. Tunisian unions and environmentalist groups have been organising protests against the endeavour, however, because the risk of environmental damage is perceived to be enormous given the severe water scarcity in the country.[112]

Food and fuel subsidies in Tunisia grew from 4.1% of government expenditure in 2002 to 11.6% in 2009.[113] The government almost doubled food and energy subsidies from 2010 to 2011 in order to offset higher international prices. Food subsidies exceed those on fuel, however, which is unusual for the region. In 2001, the government subsidised energy products with TND1.5bn (roughly USD$950m), and food subsidies increased by TND1.1bn (roughly USD$700m) increasing the budgetary deficit to -3.9%.[114]

[106] ICA, 2012; GIZ, 2012b; WB, 2005
[107] WB, 2012e
[108] GTZ, 2007
[109] Omrani, 2010
[110] Dasgupta, 2007
[111] World Development Indicators, http://data.worldbank.org/
[112] Mzioudet 2012; Tusa 2012
[113] Albers and Peeters, 2011
[114] Abderrahim and Castel, 2012

The potential for renewable energy systems (RES) and energy efficiency (EE) remains largely untapped although Tunisia has been pursuing a proactive energy policy in these areas, with an emphasis on solar and in particular wind power. Under Ben Ali's regime Tunisia was amongst the most advanced countries in the region as far as developments in RES and EE are concerned. In 2009, for instance, the Tunisian government launched the Tunisian Solar Plan (TSP). The TSP consists of 40 projects, some of which are focused on electricity production from solar and wind power. It was hoped that, by 2016, these projects would save approximately 660 ktoe per year, which amounts to 22% of total energy production by 2016.[115] It is highly unlikely, however, that this target will be reached. One of the reasons is that Tunisia's monopolist electricity producer, the Société tunisienne de l'éléctricité et du gaz (STEG), does not offer a guaranteed purchase price for electricity in the framework of a standard feed-in tariff. A range of financial mechanisms are available for the promotion of RES in the country but they remain far from sufficient.

Water trends

Tunisia has a semi-arid climate with limited rainfall particularly in the south of the country with only 150 millimetres annually.[116] Because of the salty types of rocks found within the country a natural deterioration of water quality is occurring. However, the country also has the lowest level of water resources in North Africa, and existing water resources are overexploited already. Water per capita endowment in Tunisia amounts to only around 470 cubic metres per person per year, which is less than 50% of the Middle East and North Africa region's average.[117] Available drinking water is projected to decrease by about a third by 2030.[118] These limited water resources are also restricting the further expansion of irrigated farming. Irrigation is by far the largest water consumer in the country, with a share of approximately 80%. It is highly inefficient, however, due to outdated and inefficient production and irrigation systems.[119]

Thus, there are considerable pressures on the supply and quality of water in Tunisia. Yet, according to the AfDB, water management in Tunisia can be expected to improve: "with a harnessing rate of 95% of available water, Tunisia's water policy is expected to shift towards better control of this resource as well as its distribution to users."[120]

[115] http://www.reegle.info/policy-and-regulatory-overviews/TN#regulatory_framework
[116] KfW, 2012
[117] WB, 2010b
[118] GIZ, http://www.giz.de/en/worldwide/326.html
[119] Ibid.
[120] AfDB, 2012a

4. Scenario Analysis to 2025: Best and Worst Case Scenarios

In this section the Instability Framework is used to evaluate a 'best' and 'worst' case scenario for both Tunisia and Egypt in 2025. [121] The data discussed in sections 2 and 3 of this report serve as the baseline case for the projections. Each scenario was generated by mapping key demographic, economic, geo-political, resource and climate trends, and projecting them forward over the next twelve years. Assumptions have been made concerning how these complex drivers could interact to result in a plausible 'best' or 'worst' case future scenarios. This analysis was informed by workshops held in Berlin, Brussels, and Washington, DC involving regional and issue experts from the security, development and investment communities. These discussions were immensely helpful in testing assumptions, identifying key uncertainties, and assessing future risks of instability in the region.

A summary analysis of both scenarios is presented at the end of this section.

Prospects for Egypt in 2025

One of the most important determinants of Egypt's political and economic situation in 2025 will be access to Gulf and BRIC investment and remittances, as these would have a positive impact on economic growth and political developments thus bringing instability risks to manageable levels. However, the possible decline in gas export revenues will expose the country to an imbalanced economic growth model. Egypt's current high carbon development path seems unlikely to succeed given intense regional competition. Despite the country's high state capacity, its economy and social systems are increasingly vulnerable to climate, energy and food shocks, even in a best case scenario. The combination of maladaptation in rural areas, e.g. due to the exclusion of rural populations from scarce resources, new security concerns in the Sinai region, and possible regional conflicts arising with Israel and Saudi Arabia, mean the threat of violent political tensions will likely remain high over the next decade.

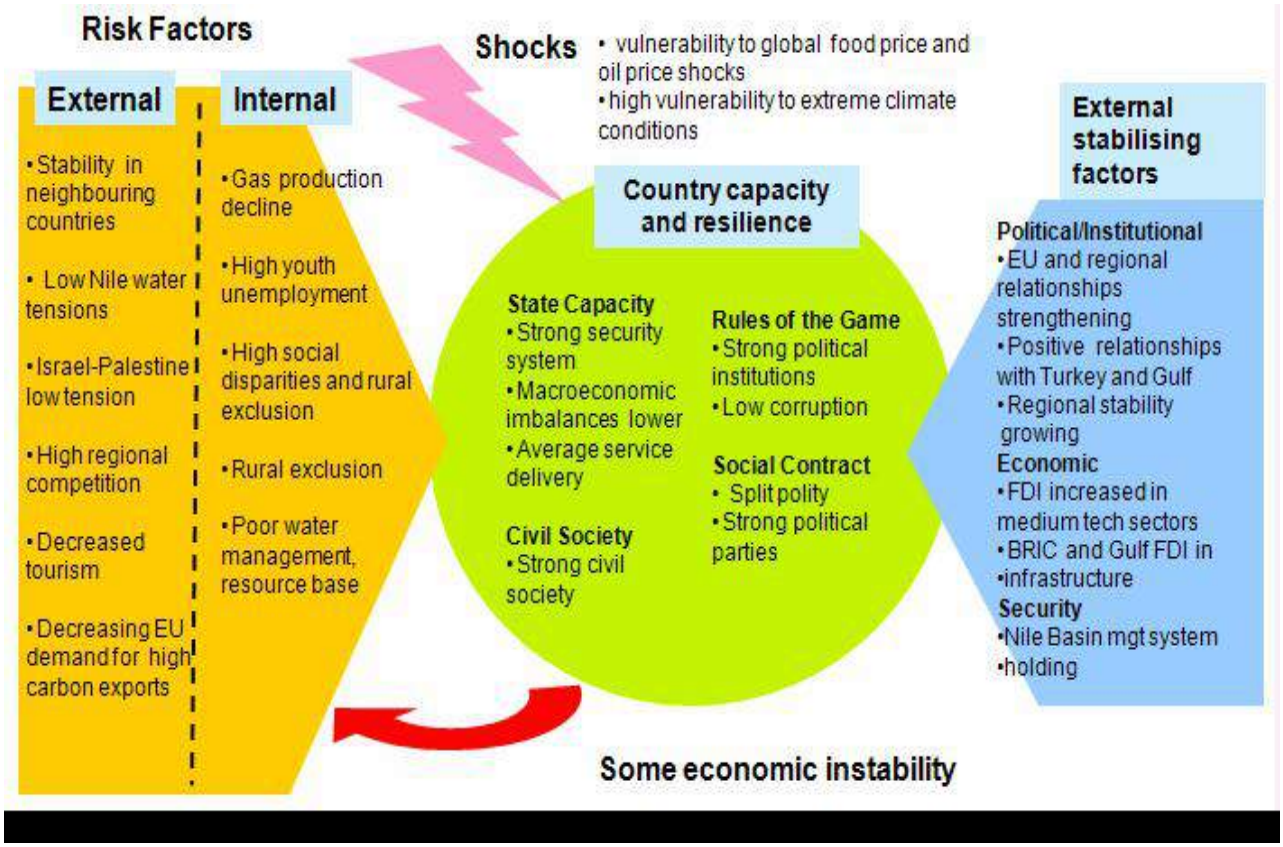
Egypt 2025: Best Case Scenario

In a best case scenario, a number of internal and external risk factors are mitigated and absorbed by improved country capacity and resilience (green circle) as well as effective external stabilising factors (blue arrow). This scenario assumes improved overall political stability in the region; a moderately successful settlement of conflicts over the Nile river basin; and lower tension between Israel and Palestine. Political regional competition in this scenario is high; revenue from tourism decreased; and the EU lowers its demand for high carbon imports from Egypt. Internal risks comprise a decline in gas production; continued high youth unemployment; high social disparities and the continued marginalisation of the rural population; and growth of the business class due to business-friendly legislation and policies. Poor water management and a poor resource base are a further source of instability.

[121] See Annex for more details.

At the same time, Egypt is able to adequately manage these risks through strong political institutions, civil society and political parties. A strong security sector enhances stability in the country whereby the military and the Government peacefully reach a compromise that provides a stable governance model. Some economic instability remains and impacts on both external and internal risk factors. Sources of external stabilisation include good relationships with the EU, Turkey, and the Gulf States. An increase in FDI in medium technology sectors further contributes to mid- and long-term sustainable development projects. Vulnerability to shocks from global food and oil price shocks remains, as well as high vulnerability from extreme climate conditions.

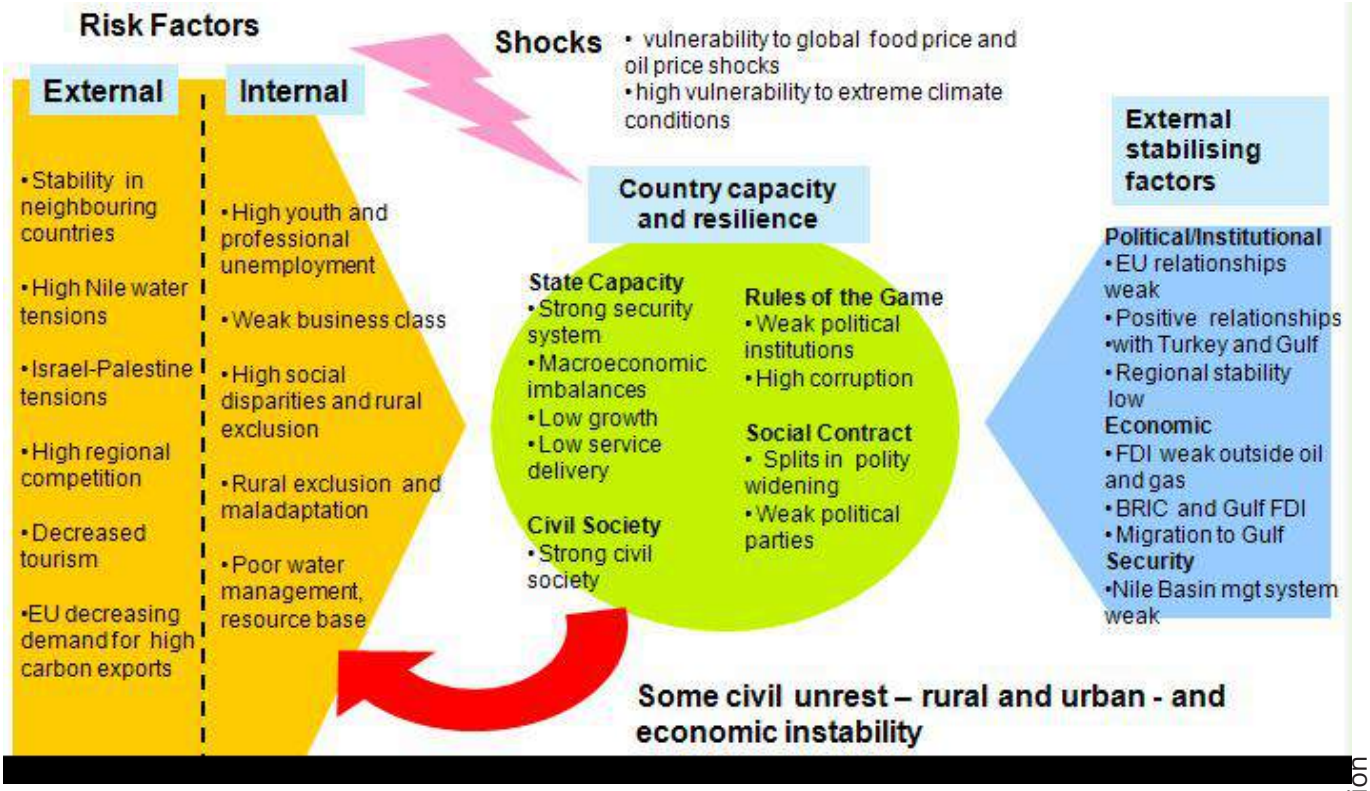
Figure 13 Best case scenario for Egypt, 2025. Instability risks falling but continued vulnerability to shocks



Egypt 2025: Worst Case Scenario

In the worst case scenario, internal and external instability factors are similar to the best case scenario. However, state capacity is assumed to be lower so it will be more challenging for the country to deal with drivers of instability. Both country capacity and resilience are considerably weaker. Factors such as weak political institutions and political parties, a societal rift over the basic methods of governance, high corruption, and low growth and service delivery will make it more difficult for the state to successfully address external and internal risks. Vulnerability to extreme climate conditions and to shocks from global food and oil price shocks remain. The consequences, such as civil unrest, economic instability, and violent regional conflicts, in turn fuel existing external and internal risk factors. External stabilising factors are diminished: relationships with the EU are weak; regional stability is low; FDI outside the oil and gas sectors negligible; and migration to Gulf countries and tensions over water control of the Nile further destabilise the country.

Figure 14 Worst case scenario for Egypt, 2025. Instability risks high and vulnerability increasing



Prospects Tunisia 2025

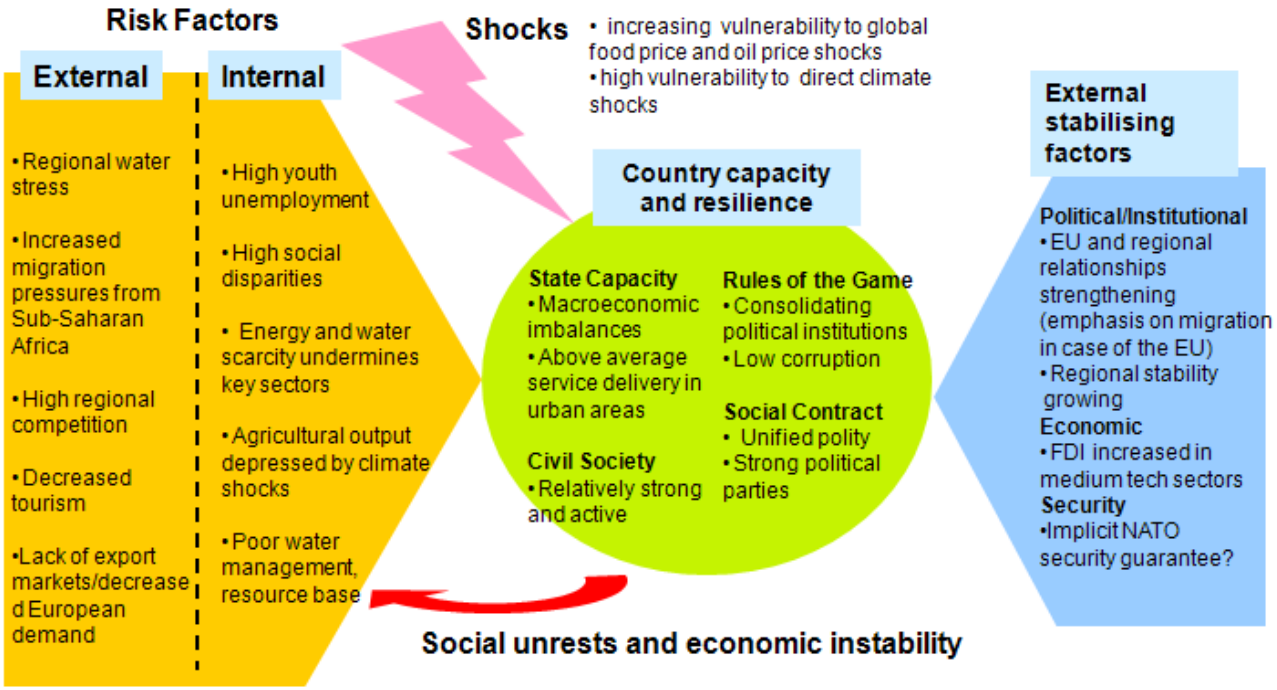
With regards to the situation in Tunisia, even 'best' case economic growth and political developments won't reduce instability risks to pre-crisis levels. The key to maintaining stability will be external economic openness and regional cooperation. Economic structures will still be unbalanced and lack development focus in almost every imaginable scenario. As the figures below show, there is significant value in focused investments to increase social resilience to climate, energy and food shocks.

Tunisia 2025: Best Case Scenario

The best case scenario sees Tunisia as fragile but integrated in 2025. However, external and internal risk factors would contribute significantly to a deterioration of stability in the country. External risk factors include regional water stress; increased migration pressures from Sub-Saharan Africa; high political competition in the region; and decreased revenue from tourism. Domestic risk factors comprise high youth unemployment; high social disparities; energy and water scarcity undermining key sectors of the economy; agricultural output depressed by climate shocks; poor water management; and a poor resource base. Also of concern is the country's increasing vulnerability to global food price increases and oil price shocks as well as direct climate shocks, for instance through shifting patters in rainfall and resulting drought.

In a best case scenario Tunisia is able to deal with these challenges through the strength of the political system, consolidated political institutions, and a strong and developed civil society. The biggest stabilising factors will be external and consist of strong relationships with the EU as well as within the region, and increased FDI in medium tech sectors. These external stabilisers help compensate for low country capacity and resilience, which will produce continued economic problems and shocks and thereby increase risk factors through feedback mechanisms.

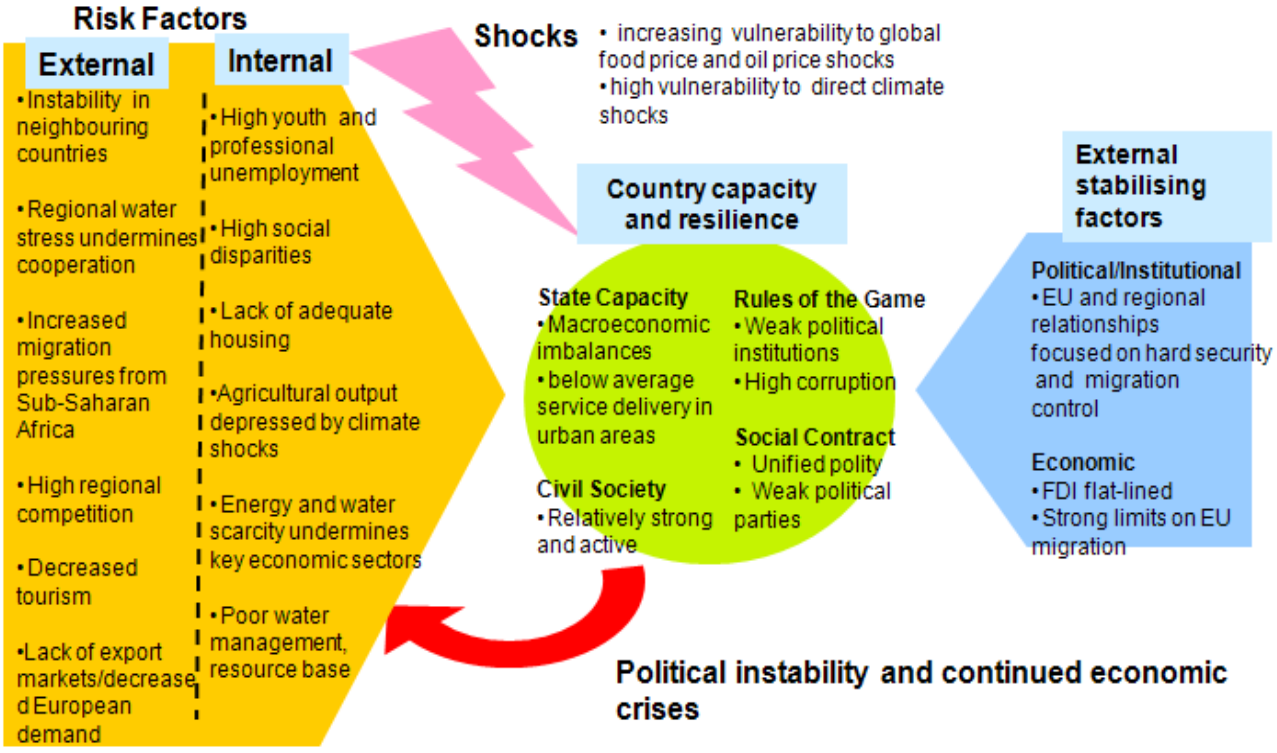
Figure 15 Best case scenario for Tunisia, 2025. Fragile but integrated



Tunisia 2025: Worst Case Scenario

The worst case scenario sees Tunisia unstable and isolated by 2025. Both external and internal risk factors worsen over time. Unstable and violent neighbouring countries undermine the prospects of stronger economic and political integration in the region. Shortages of freshwater and electricity increase the risk of internal tensions by unleashing a chain of critical events: agricultural outputs diminishes, and rural families are displaced and forced to move to cities thus increasing tensions between a disenfranchised urban population and a jobless rural population. This pushes the limits of Tunisia's coping capacity. Youth unemployment remains high due to a difficult economic situation as regional competition increases whilst exports to Europe are decreasing further. Although civil society remains in this scenario strong, this will not be sufficient to bring about political reforms that eradicate corruption and provide the conditions for a more stable political system supported by strong institutions. Short-term shocks, such as high food and oil prices and extreme weather events, would not only act as risk-multipliers but would also fundamentally undermine prospects for mid- and long-term development. External support is reduced to a minimum and Europe shifts its external policies from cooperation and sustainable development to hard security regional policy and migration control.

Figure 16 Worst case scenario for Tunisia, 2025. Unstable and isolated



Overview of Scenario Analysis

The scenario analysis undertaken for Egypt and Tunisia suggests that risks of instability will remain high into the 2020s. These risks are driven by enduring economic factors such as high youth unemployment, weak economic governance, regional and social inequalities, resource constraints, and a dependence on low-value and underperforming export sectors such as textiles and tourism. In Egypt, fossil fuel exports may partially mask these weaknesses but this positive effect will weaken in the 2020s without significant new resource discoveries. Internal weaknesses and stresses are exacerbated by damaging exposure to global energy and food markets, a lack of intra-regional economic integration, and strong competition from emerging economies.

A number of competing economies within and beyond the MENA region have aggressive export-led manufacturing strategies often based on access to cheap gas; for example, Turkey, Russia, Qatar and Ukraine. Their emergence as diversified industrial exporters will exacerbate competition for weakly growing European markets to the disadvantage of Egypt and Tunisia, however successful their political reform programmes may be. European markets in the post-economic crisis environment are unlikely to open significantly for exports of goods or additional immigration. Conversely, growing investment into MENA from countries such as China, India, Russia and Turkey could act as a stabilising force if it contributes to diversified growth. Areas like the Gulf could also provide more dynamic export markets and opportunities for short term labour migration. However, as 75% of current FDI in the region flows into fossil fuel exporting countries the pattern and scale of both investment and trade would have to change markedly to offset negative impacts on stability.[122]

The role of external markets and investment are critical for stability in both cases. Best case prospects for Egypt are supported by its attractiveness as a destination for investment from emerging economies. Egypt also receives a far larger proportion of its remittances from emigrants to Gulf countries and so is less exposed to stagnating growth rates in the EU. In contrast, Tunisia faces higher economic risks despite its human capital base and political situation because it is highly dependent on the EU economies. Tunisia also lacks the scale of domestic markets and regional connections which make Egypt an attractive destination for non-EU investment.

Given this challenging economic context, growth rates are unlikely to be high enough to generate the resources needed to manage critical risks without significantly more focus on investment in resilience. There is no automatic mechanism by which GDP growth will offset the rising stress from persistent unemployment, water scarcity, climate change and energy pressures without significant governance reforms and a rebalancing of investment priorities. Under the more pessimistic scenarios there will be significant challenges to democratic governments and a high risk of political extremism emerging.

Development strategies in the region need to focus more strongly on building economic and social resilience alongside broader-based economic growth. Strategies need to explicitly define risk management processes to keep critical vulnerabilities at manageable levels. Given the scale of intrinsic risks in many countries effective external support will remain a vital pillar of stability over the coming decades.

[122] OECD, 2010

5. Investment challenges and opportunities

Summary:

- Developed countries have a strategic interest in successful democratic transitions. MENA is one of the most important regions strategically for Europe and other developed countries in respect to global political, security and economic stability.
- External assistance from the EU and US is not systematically targeted on building resilience against critical resource risks, and in some cases may increase them. Improved access to European markets for goods, labour or energy could significantly increase stability but this seems unlikely in the next decades without stronger leadership.
- As one of the most energy intensive regions of the world there is significant potential for efficiency improvements that would help address growing energy demand. MENA has abundant sunshine and strong winds on the Mediterranean coastline giving it a natural advantage in renewable energy. Investments in these sectors represent economic opportunities and would also improve resilience to internal and external risk factors.
- Too often investments in resource efficiency and low carbon infrastructure are wrongly seen as a luxury that these countries cannot afford, and as detracting from faster economic growth. More resilient economic infrastructure does generally require greater upfront investment of capital and more complex governance systems, but also delivers greater longer term economic value and stability.

Investment challenges and opportunities

Developed countries have a strategic interest in successful democratic transitions. To Europe, MENA matters greatly because of political and economic ties, but also because instability in the region could spill over to Europe. This is why, in the wake of the Arab Spring, G8 countries and other nations, MDBs and BDBs and other IFIs have pledged major sums to stabilise the region. These financial and economic support packages have the potential to be critical elements of delivering regional stability and resilience – yet so far they have not had the impact they could.

The cornerstone of the political, economic and financial support packages pledged to the MENA region post-Arab Spring is the Deauville Partnership[123], launched at the May 2011 G8 Finance Ministers meeting. The group initially pledged USD$20bn to Egypt and Tunisia to support reform efforts in 2011-2013.[124] Specifically, the G8 ministers encouraged the development of "joint facilities to support micro-enterprises and SMEs, joint infrastructure funds, and multi-donor partnerships for regional integration notably on cross-border trade facilitation and solar power development".[125]

In September 2011 the Partnership was extended to include Morocco, Jordan, and Libya. The total pledge was raised to USD$38bn,[126] with the possibility of additional resources from the IMF and the strengthening of bilateral assistance. A Joint Action Plan was promised from the IFI members of the Partnership, including the World Bank, the African Development Bank, EIB, EBRD and Islamic Development Bank. Following the G8

[123] The Partnership includes Canada, Egypt, the European Union, France, Germany, Italy, Japan, Jordan, Libya, Kuwait, Morocco, Qatar, Russia, Saudi Arabia, Tunisia, Turkey, the United Arab Emirates, the United Kingdom and the United States.
[124] Declaration of the G8 on the Arab Spring. May 26-27 2011.
[125] Ibid.
[126] Auswärtiges Amt, 2012

meeting in May 2011 the IMF pledged up to $35bn in support and estimated that the external "financing needs of the region's oil importers [will] exceed USD$160bn during 2011-13".[127]

Despite high-level political support disbursement of pledged resources has been slower than expected. This is partly due to continuing political instability in major recipients such as Egypt, and partly due to a lack of clarity among donors as to priority areas. At the same time, however, there is a sharp increase in interest by private investors, in particular in the area of infrastructure investment. Support by development banks, such as World Bank, EIB, and KfW, for the construction of up to 20 GW of new renewable energy supply in the coming decade will likely not be sufficient.[128]

Bilateral Economic and Financial Support Agreements

The majority of the financial support to transitional countries is expected to come directly from IFIs. Support from the individual countries involved in the Deauville Partnership (including the EU) is largely built around creating or strengthening political partnerships and other initiatives to engage civil society groups and facilitate a democratic transition.

The EU for example has pledged an additional EUR1.2bn on top of its existing commitments as part of a review of its European Neighbourhood Policy (ENP), the instrument by which it conducts relations with states to its east and south, including Tunisia, Egypt and Libya. The EIB committed an additional EUR1bn for economic development in the region, and the EBRD's mandate was extended to the Southern Mediterranean.

France alone committed EUR2.7bn and recently announced that EUR1.1bn of its pledge was disbursed on January 31, 2012, representing 40% of the total earmarked for the period.[129] The UK has launched the Arab Partnership Economic Facility and Participation Fund with total support of GBP110m over four years.[130] As part of its larger Deauville commitment the German Foreign Ministry has promised EUR240m in debt swaps to support democratic reform efforts in Egypt.[131] A similar commitment worth EUR60m was made to Tunisia with which Germany is building a "transformation partnership".[132] It involves, amongst other things, EUR30m to build democracy, the rule of law, and civil society. Similarly, the USA has called for the launch of a comprehensive Trade and Investment Partnership Initiative to facilitate more trade within the region, which would build on existing free trade and other agreements with regional partners. The USA has also forgiven US$1bn in Egyptian debt and committed USD$1bn in loan guarantees to Egypt[133] and USD$100m in debt aid to Tunisia.[134]

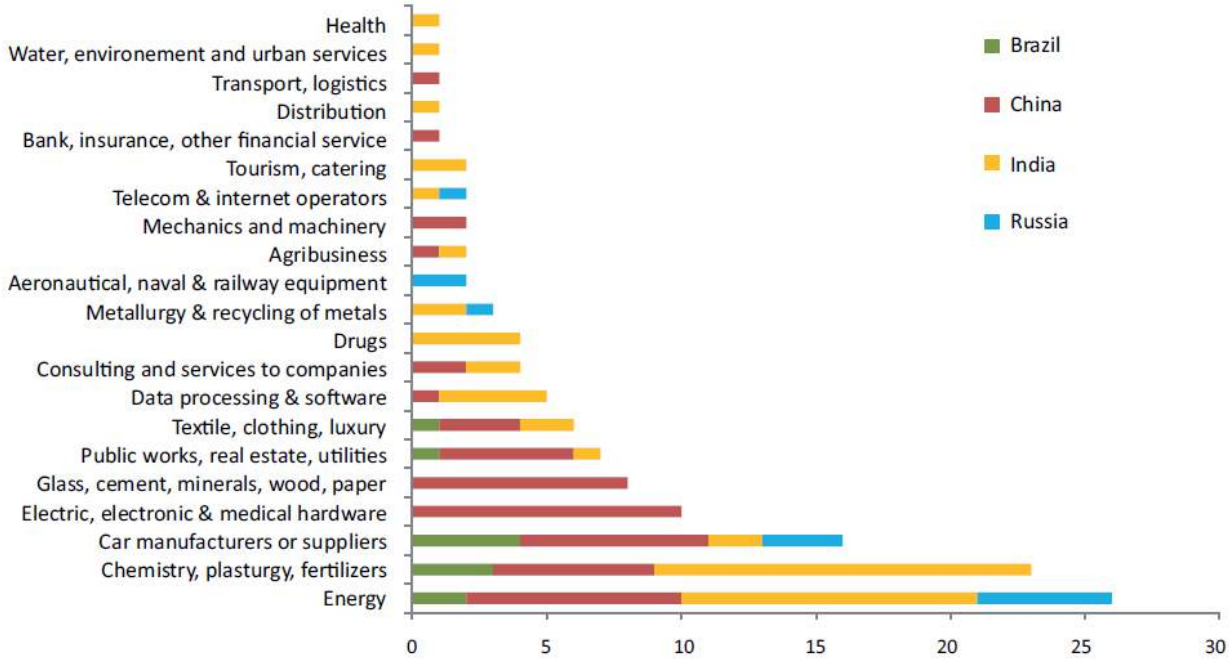
Several states in the Gulf are involved in the Deauville Partnership and have announced financial pledges. Saudi Arabia has pledged US$4bn to Egypt, while Qatar has pledged US$10bn.[135] The United Arab Emirates recently announced that it would provide $3bn of aid to Egypt, with US$1.5bn allocated for creating job opportunities for young men, the remaining half divided evenly between infrastructure and housing projects for youth and soft loans.[136] Turkey has been increasing ties to the region as well, and in September 2012 pledged $2bn in support to Egypt, including initial approval of $1bn loan.[137]

The BRIC countries have dramatically increased their presence as trading partners and investors in the MENA region, with China and India as the leading investors. Their investments are largely concentrated on

[127] Ibid.
[128] EuroMed (2010)
[129] France Diplomatie, 2012
[130] UK Department for International Development, 2012
[131] G8 Research Group, 2012
[132] Auswärtiges Amt 2012
[133] Palmer, 2012
[134] US State Department, 2012
[135] Roubini Global Economics, 2011
[136] Abdelatti and Carvalho, 2011
[137] Masriya, 2012

the extraction industry, including oil, gas, iron, phosphates and fertilizers. But other sectors such as tourism, telecommunications, construction, cars and electronics are on the rise.[138]

Figure 17 BRICs investment in North Africa by sector (number of projects finances, 2005-2010



Source: AfDB, 2011

Investments in the region are seen as particularly advantageous because they allow access to North African consumer markets, greater political access to the Middle East and better entry into the Eurozone through more preferential trade agreements between North African countries and the EU.[139]

International Financial Institutions

Last year the IFIs established a dedicated Coordination Platform to better leverage the collective resources of the 10 IFIs that work in the region. The focus of the Partnership is in the areas of job creation and SME development. Most support so far includes development policy loans to Tunisia, Jordan and Morocco, focused on private sector reforms and strengthening domestic markets, encouraging good governance practices, credit lines for SMEs, and the development of education skills.

There is a relatively strong focus of the MDBs and BDBs in the water and energy sectors, including renewable energy. For example, the MENA region is KfW's largest renewable energy programme outside of Europe. Projects tend to be sovereign guaranteed loans, which are commonly directed onto state-owned utilities and occasionally to financial intermediaries.

Current support packages do not address critical economic and resource challenges

Current assistance packages are broadly focused on providing incentives for continued democratic reforms, building civil society institutions and providing immediate jobs for young people. These are all important areas. However, there is a failure to systematically address other vital areas for medium term stability such as exposure to energy and water shocks.

[138] AfDB, 2011
[139] AfDB, 2012c

A lack of comprehensive strategic focus means that support packages for MENA countries are unlikely to have the maximum impact they could have on regional stability. In the worst case some interventions could increase instability over both the short and medium term.

The current focus of external actors on reducing energy subsidies in the region (which consume over 10% of GDP in Tunisia and Egypt), aims primarily at improving fiscal stability. There is scope for redistribution as most subsidies flow to the richest consumers, but fiscal measures alone will be insufficient to reduce the structural vulnerability of poor consumers, industries, and thus jobs to high global energy prices due to years of underinvestment in efficient processes. However, a shortage of upfront finance prevents investment in cost-effective energy efficiency measures. A policy of recycling some subsidy reduction into targeted EE programmes would improve social and economic stability and support stronger fiscal consolidation. Similar issues affect water subsidies. In Egypt, for example, 75% of subsidies go to the richest 50% of households and similarly drive inefficient usage.[140]

Resilience investments in MENA will be challenging

If poorly managed, policy responses to climate change and resource scarcity could raise social tensions. For example, increased use of large-scale infrastructure for water control could undermine community access to traditional water sources and fishing grounds. Such problems could be especially severe in rural Egypt where the vast majority of the population depends on irrigated agriculture for their livelihoods.

MENA faces significant energy shortages – particularly in electricity – and needs an estimated $30 billion each year to 2030 in new energy investment.[141] At 3% of regional GDP this is three times the global average investment rate. This represents a significant challenge given that FDI has dropped by over 50% since 2010 due to political risks in the region and post-financial crisis caution among traditional FDI sources.[142] A rush to meet short term energy needs through conventional, fossil-fuel based energy solutions could risk leaving behind longer term vulnerabilities. This was seen in the Western Balkans where post-conflict support for expanded lignite power generation has proved to be incompatible with the on-going decarbonisation of the region and its integration into the European Union.

Decisions made now on energy infrastructure will determine vulnerability to energy price shocks and climate change impacts on energy infrastructure for the next three to four decades; for example, high temperatures disabling thermal power generators. Lock-in effects could make it more difficult and expensive to switch to more sustainable energy systems at a later stage. Given the limits on domestic and foreign private finance the future role of OECD development banks and new investors from BRICs and the Gulf region in particular will be critical in determining the focus of investment in regional infrastructure.

The region is currently ill-fitted to compete in the growing low-carbon goods markets of their major export market, the EU. Where explicit development strategies do exist there is an intention to industrialise through a movement up the value chain into more energy intensive industries. This would cause tensions with a Europe which is undertaking major cuts in carbon emissions and is pondering to impose border taxes if it sees high carbon industries relocating abroad. It is unlikely that the more developed countries in the region will escape the imposition of carbon constraints from 2020.

Too often investments in resource efficiency and low carbon infrastructure are wrongly seen as a luxury that these countries cannot afford, and as detracting from faster economic growth. **More resilient economic infrastructure does generally require greater upfront investment of capital and more complex governance systems, but also delivers greater longer term economic value and stability.** There is a need to move beyond perceptions of short term trade-offs and identify how investment in resource efficient and climate resilient infrastructure can help reduce multiple risks. Given the growing impacts of climate change and resource scarcities, national development strategies must directly address vulnerabilities across a full

[140] UNDP, 2011
[141] WB, 2010a
[142] WB, 2012d

range of future scenarios to identify best value development paths and shape long term infrastructure investment priorities.

Turning risks into opportunities

Investments addressing the constraints arising out of the climate-energy-resource-nexus could help MENA countries build resilience against multiple future shocks and deliver economic dividends. For example, climate resilient investments that address vulnerability to drought and rising sea levels can mitigate the economic, social and security impacts of climate change. Energy and water are key components of economic development and growth. They are also decisive for agricultural production and hence food security. Investments in the areas of renewable energy systems, energy efficiency, water infrastructure, desalination and irrigation systems, etc. therefore address some of the most pressing issues in the region, such as energy poverty, economic development and public health.

The shifting global energy context is also opening new opportunities for the region. Action to tackle climate change has massively increased investment in renewable energy and dramatically lowered the costs of wind and solar power in the last 5 years. This price reduction has delivered a large increase in available domestic energy solutions for countries in the region all of which have high potential in a range of renewable energy sources. Accelerating immediate deployment of available energy and water efficient end-use technologies in lighting, air conditioning, agriculture and industry would allow current resource shortages to be eliminated at a positive national economic benefit.

Renewable energy is beginning to make a significant impact on solving regional energy security problems in countries like Morocco. In others, like Egypt, electricity from renewable sources only makes up less than 1% of generation despite the huge potential of wind and solar power and despite the significant disruption caused by power shortages.

A series of high profile initiatives have been proposed to greatly increase renewable energy investment in North Africa and build interconnectors which can export this to Europe: MedGrid, Desertec, and Western Mediterranean Ring. These are driving some short term investment into North Africa for domestic use, but it is highly unlikely that these projects will lead to significant exports to the EU before 2030-40. Bulk European demand for renewables from North Africa is unclear even then; flows of renewable energy through the current limited interconnection from Spain are North to South not visa-versa. Current experience of European renewables development is that countries are privileging domestic renewables capacity even if this raises consumer costs. Projections suggest that Europe could meet all its low carbon electricity needs to at least 2040 with domestic supplies of renewables.[143]

While clean energy exports from MENA could be a major source of income and stability this is unlikely to be an important revenue factor in the medium term without an active policy to drive this development from Europe. The relatively small size of domestic energy markets means that positive industrial and employment spillover effects from renewables investments are likely to be limited given the dominance of global markets by large industrial players in Europe, China and India. Thus, it is important that investment decisions in resource efficient infrastructure are made based on realistic analysis.

Industrial opportunities are more likely to be captured in resource efficiency and installation services but active national industrial policy will be needed to drive supply-chain development in these areas. A focus on these longer term power export opportunities has detracted from the more immediate need to improve regional electricity market integration which would improve the investment environment for renewable energy far more dramatically in the short term.

[143] See for example: Roadmap 2050: a practical guide to a prosperous, low carbon Europe. http://www.roadmap2050.eu/

Energy efficiency

MENA is one of the most energy intensive regions in the world, with both overall consumption and intensity rising in most countries in recent years. This is a particularly challenging problem in Egypt, where energy intensity is almost twice as high as Morocco and Tunisia. Most industrial processes, equipment and consumer appliances in Egypt have 20% or higher energy consumption than international best practices. The Egyptian Government has estimated that Egypt can reduce energy consumption by 5% to 20% without compromising output.

The World Bank has estimated that energy efficiency is the lowest-cost option to meet energy demand and that Egypt's economy has a 20% energy saving potential. EE has the potential to play a central role in Egypt's energy strategy to address future challenges in that it would contribute to "reducing energy infrastructure investment needs; enhancing energy supply security; helping mitigate local air pollution which is becoming serious; reducing the growth of carbon dioxide emissions globally; spurring new economic activities; and creating new job opportunities".[144]

There has been some recognition of the potential for efficiency improvements in the past decade; however, the impact of these initiatives appears to be limited. This is due to a combination of factors, including weak legal, regulatory and institutional frameworks to promote EE; the absence of policies and incentives; financial constraints; and underutilisation of utilities to promote and implement EE initiatives.[145]

Renewable energy development

Most renewable energy projects in MENA are large-scale in nature and tend to rely on loans and grants from donor institutions such as MDBs, rather than being driven by the national regulatory environment. Non-hydro renewable resource development in the region is concentrated in Egypt, Morocco, and Tunisia but also Israel.

Solar Energy

CSP is one area that has attracted attention from Governments within the MENA region as well as from IFIs. MENA has some of the world's best conditions for CSP: abundant sunshine, low precipitation, and large unused areas of flat land that are accessible to road and power transmission infrastructure. A World Bank Energy Sector Management Assistance Program (ESMAP) report has identified the transformational opportunity that could arise from local manufacturing of CSP in MENA countries. It notes that an active MENA approach to CSP could:

- Benefit from the massive scale-up of concessional climate financing available;
- Make solar energy trade a fundamental pillar of the MENA-EU relationship;
- Further economic integration in the region;

The combination of these factors is thought to uniquely advantage MENA as a global location of choice for CSP production both creating demand for installed capacity and driving local manufacturing. However, strengthening local manufacturing of CSP will require national strategies that coordinate industrial development and energy policy and that provide clear targets for market diffusion of CSP, a focus on R&D, the creation of targeted funds for the development of CSP industry sectors, and stronger regional integration of policies. Technology clusters and regional innovation platforms would help ensure participation of SMEs in the innovation process. International cooperation agreements in the form of joint ventures and licensing will also help drive innovation. Skills development will also be required to develop a qualified work force.

[144] WB, 2010
[145] Ibid.

The Clean Technology Fund's regional MENA Investment Plan (MENA IP) highlights the policy, regulatory and institutional reforms that are required for scaling up investment in renewable energy. Primarily these are for:

- Phasing out fossil fuel subsidies to create price signals for consumers that incentivise EE measures on the demand side and create a level playing field for renewable energy investment;
- Measures for reducing demand which is growing at around 6 – 9% per annum partly as a result of inefficient use of electricity;
- Creating a transitional incentive scheme until CSP costs decline, an export market is developed, and fossil fuel subsidies phased out.

Wind Energy

The vast North African and Mediterranean coastlines make MENA one of the world's most attractive destinations for the development of wind energy. There is also abundant land area with low economic value for most other activities. According to the EIB, the majority of mature renewable energy project proposals in MENA are for onshore wind – up to 1.7GW currently with an additional 2.3GW identified up to 2020. Morocco, Egypt and Tunisia currently lead the region in wind energy capacity and each has ambitious targets: Morocco plans to have 2GW of wind capacity by 2016 and 2.7GW by 2030; Egypt is targeting 7.2GW of wind energy by 2020 (12% of total electricity production); and Tunisia has recently doubled its installed wind capacity with a target of 505MW by 2016 and 2.7GW by 2030.

Egypt has the largest installed wind capacity in the region, and also saw the largest addition of new capacity in 2010 (120 MW), bringing the total up to 550 MW.[146] Feasibility studies have shown that Egypt has enormous potential to develop wind energy – up to 20 GW.[147] This would not only help the country meet its electricity needs but could also lead to Egypt becoming a net renewable energy exporter. Like most renewable energy projects in the region Egypt relies on tendering processes for large-scale wind farms as well as support from donors and other partners including KfW, the European Commission and the EIB. Existing wind capacity is state-owned but a plan is in place to encourage private ownership. Tunisia also has significant potential for wind, adding 60 MW of new capacity in 2010 for a total up to 114 MW – that makes Tunisia third in the region behind Egypt and Morocco.[148]

Various legislative, regulatory and financial barriers hinder the development of MENA wind potential. Financially, there remains a gap in the production costs of wind farms versus gas plants. There is also a lack of competition in electricity markets and access for Third Party Providers. A number of reforms have been proposed and/or are being developed by various actors[149]:

- Introduction of a Feed-in Tariff (FIT) scheme;
- Renewable Portfolio Standard specifying minimum percentage of energy to be produced by renewable sources;
- Advanced tools for the design and operation of electricity system and grid design;
- Extended regional interconnections.

[146] AFDB, 2012
[147] Kfw, 2011
[148] GWEC, 2010
[149] Interviews with representatives of development banks.

The water sector

Most MENA countries have responded to water scarcity with significant investment in infrastructure. Public spending on water accounts for between 1% and 5% of GDP in the region, and as much as one quarter of public capital expenditure.[150] In recent years, investment in water has represented between 20 and 30% of GDP in Algeria, Egypt and Yemen.[151] Conditions have improved markedly in terms of access to clean water, storage infrastructure and irrigation systems. The region also boasts some of the world's top hydrological engineers and is a leader in non-traditional water technologies such as desalination and wastewater recycling.[152]

Despite these improvements, many challenges remain as relatively little effort has been devoted to policy and institutional reform. In particular, policies targeted at other sectors have led to inefficiencies in water use and management. According to the World Bank, agricultural policies designed to improve food security and promote rural employment encourage inefficient water use. Farmers are often given incentives to over-irrigate or grow crops with low value added per drop of water such as wheat: higher-value crops would be fruits and vegetables.[153] Energy subsidies have also encouraged unsustainable pumping of groundwater – making it attractive even when water has to be pumped over long distances from aquifer to surface.[154]

The high rate of urbanisation in the region causes its own problems. Providing highly subsidised water supplies to urban communities has become increasingly burdensome on public budgets because urban populations have grown and become wealthier but still do not pay for costs of services, with a few exceptions. There is an under-investment in maintenance in the MENA water sector, with utilities not covering their operational and management (O&M) costs in most countries.

[150] WB, 2012c
[151] WB, 2012c
[152] OECD, 2009
[153] WB, 2009
[154] WB, 2012c

6. Strategic assessment and policy recommendations

Summary:

Successfully managing the wide range of risks in the MENA region will require directly addressing vulnerabilities in order to turn what will be a low carbon and resource constrained future from a risk into an opportunity. **External support is critical to managing instability risks but it is currently not well targeted.** Four strategic priorities emerge from this analysis on how international financial and economic support packages could help put the region on a more sustainable and stable development path.

- **Improve resilience to shocks:** refocus investment to address immediate resilience challenges over food, water and energy.
- **Economic diversification into resource efficient industries:** support new industries which are sustainable under future resource stresses and climate policy contexts.
- **Build resilient infrastructure:** in the national resource and social context – including shifting from hard to soft infrastructure and developing more flexible resource management solutions.
- **Rationalise external support on resource pressures:** focus current disparate avenues of external support and engagement on a few high impact stability and development objectives

Strategic assessment and policy recommendations

Delivering the potential economic and stability benefits in these areas will not be easy. Global experience shows that driving resource efficiency and resilience at scale requires stronger and more sophisticated governance and regulatory systems than traditional infrastructure. Given the multiple stresses on transitional governments it is unsurprising that there is a bias toward using more mature models of infrastructure and economic development. However, given rising vulnerabilities this is a false choice. Failing to invest in preventive measures now will generate future risks that require additional government capacity to manage. **Targeted external support can provide one way to bridge this apparent tension between addressing the immediate and the important.**

External support needs to be programmed and disbursed differently. Reducing instability and managing resources stresses is not the same as generic development in any country. It is critical that scarce external public funds flow to the best value investments and creative use is not hampered by rigid disbursement criteria.

Country-led development is vital but given the immaturity of national plans in these areas donors need to work with countries to ensure investment programmes have been rigorously assessed against future resource challenges. Dedicated resources should be provided to develop alternative solutions based on resource efficient approaches which may have higher stability benefits. This will require innovation and new actors; donors should work with countries to provide pipeline support for innovative projects to emerge via multiple routes and give bottom-up incentives for new initiatives from non-governmental actors and communities. Donors and governments generally find it easier to manage large projects, particularly when developing public-private infrastructure partnerships. This can exclude more cost-effective and resilient approaches that require community resource management or growth in SME supply chains. For example, using trust fund mechanisms to provide long term, small scale support to non-government

supported community water management initiatives or meso-credit facilities for local energy efficiency suppliers.

Significant new public funds are becoming available in Europe for funding international climate mitigation and adaptation activities. It is important that administrative rules on the monitoring and verification of climate finance allow these to be blended with other forms of development and stability-focused finance. Current rules for monitoring climate finance as "new and additional" to existing development assistance risk impeding creative use of funds and will result in lower value investments.

Many MENA countries are also excluded from adaptation finance from European countries and from the use of the Clean Development Mechanism because they are not Least Developed Countries. While these rules are intended to focus European development assistance and climate support on the poorest countries they can have the perverse effect of preventing investment in improving the resilience of poor and vulnerable communities in these unstable parts of the European Neighbourhood.

European governments should review their development and climate finance prioritisation in the MENA region to ensure that energy, resource, and climate change drivers of instability can be effectively tackled.

International donors should work closely with national government to immediately improve resilience through the following actions:

1. **Improve resilience to shocks: refocus investment to address immediate resilience challenges over food, water, and energy.**
   - > Address energy price vulnerability and energy subsidy reform through integrated packages of price reform, social support, and energy efficiency. Draw on international climate finance to smooth transition to more market price–based regimes and provide up front financing for investment in energy efficiency.
   - > Assess the sustainability of food and agriculture policy in the region under the full range of global demand, climate change and local water scarcity driven scenarios of food prices and their volatility. Reassess focus of export agriculture vs. national food security based policies and impacts of current trade policy on resilience of local food supplies.
   - > Develop holistic packages of water management reforms based on efficiency, community management, and targeted investment in areas of high potential water and social stress.

2. **Economic diversification into resource efficient industries: support new industries which are sustainable under future resource stresses and climate policy contexts.**
   - > Stress test country and regional development plans against a range of resource, trade, energy policy, and climate change scenarios. Develop alternative industrial and development policy paths which provide more resilient development opportunities.
   - > Carry out scoping studies for Low Carbon Zones (LCZs) as potential drivers of economic diversification. Egypt already has experience with special economic and trade zones. There is potential to build on existing China LCZs as an example and link to EU trade preferences[155].
   - > Link existing flows of RES and other investment to the development of local supply chains in new industries including through LCZs.

[155] For background on Low Carbon Zones see http://www.e3g.org/programmes/europe-articles/feasibility-study-on-eu-china-low-carbon-technology-and-investment-demonstr/

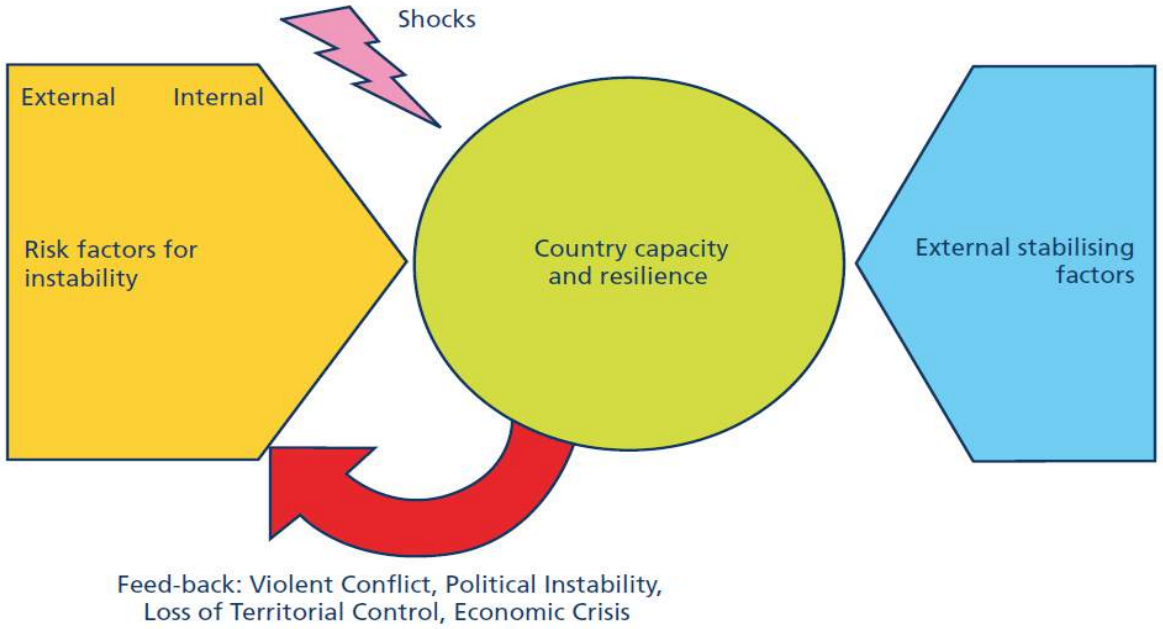
- Explore the potential of capturing competitive advantage in clean energy exports – either in commodity markets or directly through interconnectors.

3. **Build resilient infrastructure: in the national resource and social context – including shifting from hard to soft solutions.**
   - Develop infrastructure planning assumptions and assessment methodologies for a range of resource scarcity, low carbon trajectory, and temperature increase scenarios.
   - Require external public investors (MDBs etc.) to assess resilience of their investments under different scenarios and put forward demand reduction alternatives for new supply side investments in energy and water.
   - Assess how "soft infrastructure" such as community control, natural barriers etc. could provide alternative more resilient investment options.
4. **Rationalise external support on resource pressures: focus current disparate avenues of external support and engagement on a few high impact stability and development objectives.**
   - The EU needs to carry out strategic assessment of how its related trade, migration, energy, and aid policies impact stability in the region and assess where progress can be made to increase external support.
   - Assess aid delivery structures to ensure they can support long term community resilience building – especially around water management – not just hard infrastructure projects.
   - A strategic approach is needed by EU governments to define the objectives and potential impacts in 2020/2030/2040 of MedGrid, DESERTEC, Western Ring and similar projects. The European External Action Service should convene European and regional governments to identify a common view on the highest priority areas for international support to regional electricity interconnection projects, including better assessment of their potential ability to benefit regional stability.
   - If seen as priorities, then framework conditions and local regulations for DESERTEC and similar projects must become a European priority.
   - EU countries and the US should pro-actively reach out to regional and BRIC investors to build a dialogue which frames competition for commercial opportunities within a better understanding of the stability needs of the region – especially in terms of FDI and infrastructure design.

Annex – The Instability Framework

This basic framework was developed to understand the risk of instability in a given country. Instability results from the relative balance between a country's internal capacity and resilience, internal and external risk factors, and external stabilisers. The figure below illustrates the links between these dimensions.

The Instability Framework[156]

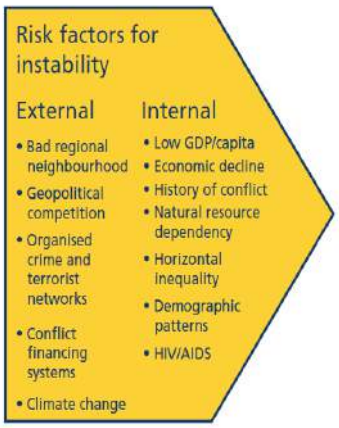


The Instability Framework is particularly useful in helping to visualise, detect and highlight the underlying patterns of complex domains, such as climate and energy systems. This framework provides a tool for recognising instability patterns; at the same time, it highlights desirable patterns that contribute to increasing country stability by creating attraction points.

Country capacity and resilience

Country capacity and resilience are two distinct and yet complementary concepts. The first is intended to reflect the "extent to which a country can absorb or manage a risk factor and take advantage of external stabilisation"; the second reflects "how flexibly this capacity can be redeployed in response to new or increased risks or opportunities."[157] Country capacity and resilience are therefore the key dimensions of stability.

[156] PMSU, 2005
[157] Ibid.



Risk factors of instability

Risk factors can both emerge from internal processes, such as economic decline or depletion of natural resources, and from circumstances that are better understood in a regional context. For example, if a country receives its water supply from outside its borders, the scarcity of and competition over water resources might potentially threaten its water supply.[158] This would in turn affect those activities directly dependent on the availability of water, such as electricity generation and agricultural production. Not only could this spark a food crisis, but it could also have a disruptive impact on the domestic economy.

External stabilising factors

External stabilising factors help enhance country capacity and resilience. Three domains provide particular support for the management of instability. These are the guarantee of security, strong political relationships with other countries, and the international economic associations, including FDI, remittances, and the relationships with IFIs.

Shocks

Low probability/high impact events, such as global financial crisis and natural disasters, can have a disruptive impact on a country's capacity and its ability to manage the consequences of such events.

Feedbacks

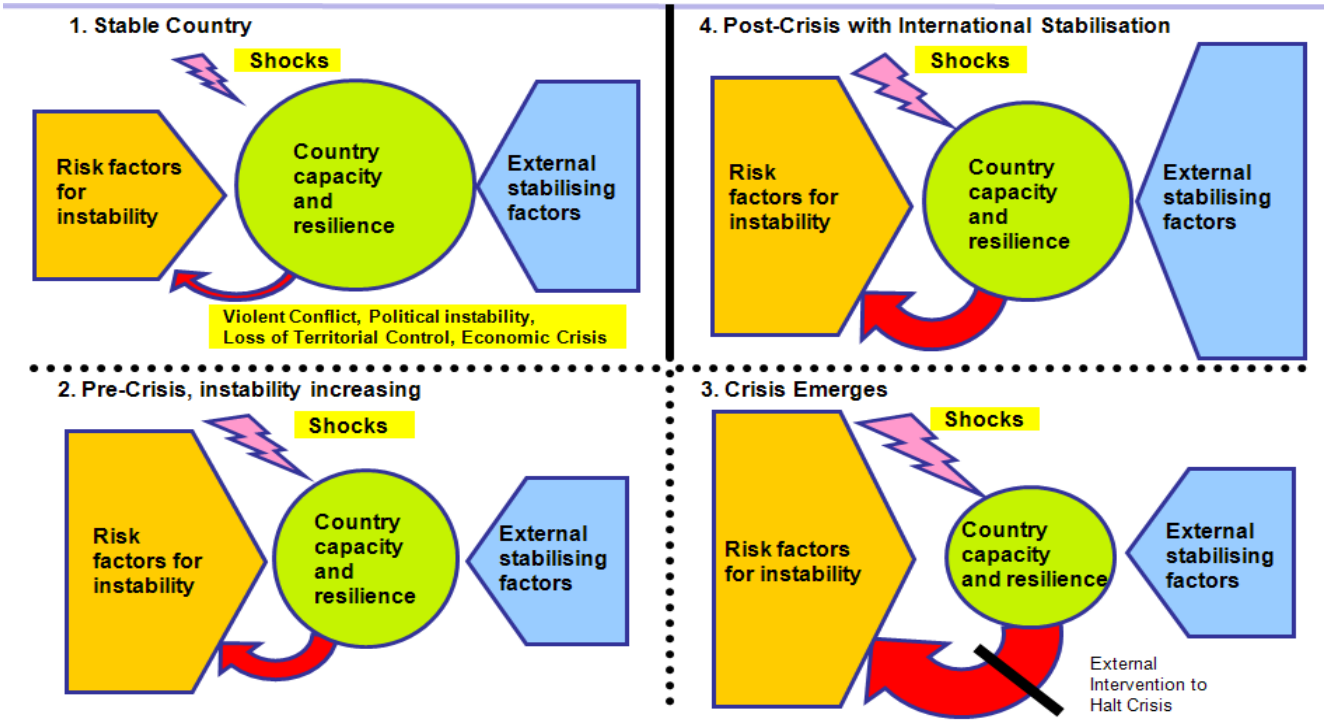
Once instability has emerged violent conflicts or economic crises might weaken a country's capacity to respond and thereby increase existing risk factors of instability. The feedback arrow captures the relationship between country capacity and external/internal risk factors.

[158] Ibid.

The dynamics of instability

Since stability is a dynamic outcome the shape of each instability dimension changes over time as depicted in the figure below.

The changing Instability Framework[159]



A stable country is defined by a strong country capacity; risk factors and negative feedbacks are relatively small since the country is able to absorb and manage the manifestations of instability (top-left graph). An unstable country, however, is highly vulnerable to shocks and risk factors, and once instability emerges risk factors are exacerbated by negative feedbacks (bottom-left graph). When a crisis erupts (bottom-right graph) an unstable country fails to manage the crisis and external interventions are required to manage the consequences and re-establish stability. In a post-crisis scenario (top-right graph), external stabilising factors increase country stability and resilience and risk factors are reduced.

The risk management approach offered by the Instability Framework provides no absolute answers as it "depends on the values, vulnerabilities, interests, perceptions and risk appetites of specific decision makers. Risk management is as much about who manages a risk as what a risk is, and must always consider who is best placed to actually influence outcomes."[160] The Instability Framework clearly concentrates on risk and threats and emphasises the long-term, which does not usually fit policy-makers' need of short-term operational responses. Nevertheless, the model captures uncertainties and incorporates them in a structured framework that enables the delivery of more informed judgements.

[159] UK Strategy Unit, 2005.
[160] Mabey *et al.*, 2011.

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Existing Government investment support is broadly focused on providing incentives for continued democratic reforms, building civil society institutions and providing immediate jobs for young people. While these are important, there is a failure to systematically address other vital areas for stability such as exposure to energy and water shocks, and no clear approach to medium term stability. These risks are unlikely to be mitigated merely through stronger GDP growth and greater focus will be needed on directly building national resilience.

Climate models consistently estimate that warming will occur much faster in this region than the global average. A reduction in rainfall is also expected by mid-century. This will accentuate the growing scarcity of water driven by population growth, industrialisation and depletion of aquifers which is already acute across the region. Food prices will likely increase as a major cause of economic shocks in the region: major import crops, such as wheat, are likely to increase in price by up to 80% by 2030 due to growing global demand, and climate change could increase prices by a further 40%. Food price volatility will increase even more rapidly as climate change drives extreme weather events in producer countries, such as the US, Russia and Australia.

The report recommends that donor countries and regional partners work together to focus on four strategic priorities:

1. Improving resilience to shocks;
2. Economic diversification into resource efficient industries;
3. Building resilient infrastructure,
4. Focusing support on a few high impact stability and development objectives.