ARAB INDUSTRIAL DEVELOPMENT AND MINING ORGANIZATION

UNITED NATIONS INDUSTRIAL DEVLOPMENT ORGANIZATION

Programme

Enhancing The Role of SMIs In The Economic and Social Development of the Arab States

Executive Summary

JANUARY 2011

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Introduction

Despite the efforts made by the Arab States towards the development of manufacturing industries, in particular SMIs, the contribution of the Arab manufacturing industry sector to the GDP does not exceed 10 percent. The sector does not yet satisfy the needs of the Arab region in terms of food, clothes and other industrial consumer goods, nor does it contributes effectively to bridging the gap between the Arab region and the developed regions in terms of economic and social development. In turn, the local private sector small- and medium-scale enterprises operating in the manufacturing sector (SMIs)[1] do not play an appropriate role as employment provider and more equitable income generator, with limited access for female population.

The Arab States are seeking support in their efforts to prop up SMIs as an important portal toward economic and social development, and more particularly, for job creation and a better involvement of women and the youth in the economic cycle. In this context, the Arab States, through the Executive Council of the Arab Industrial Development and Mining Organization (AIDMO), have requested that an Arab regional programme for the development of SMIs being prepared and implemented by the United Nations Industrial Development Organisation (UNIDO) in close cooperation and coordination with AIDMO. This request also complies with the recommendations of the Arab Round Table, held in December 2007 during the 12th Session of UNIDO General Conference.

Possessing a significant and successful experience in the development and implementation of similar regional programmes, UNIDO intends to work together with the Arab States, the AIDMO counterparts and regional financial institutions to establish an operational framework for industrial development and improving SMIs' development impact, and women and youth employment. The Programme is also to lead to an improvement in the overall industrial and socio-economic performance of the region. In particular, it is expected to improve key economic indicators such as volume and quality of industrial production, manufacturing and national value added, inward investment flows, employment rate, export generation and revenues, expertise and professional education, environmental performance, etc.

On the pilot basis, the Programme will focus on small- and medium-scale and export-oriented manufacturing enterprises operating in agro-food value chains, information and communication technologies (ICT), and green industries in 21 Arab countries – Member States of AIDMO, notably: Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestinian Territory, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen. In line with the specificities and needs of the Member States, the above three sectors of high export and job creation potential were defined by AIDMO and UNIDO as priority for the industrial development of the region.

[1] The term SMIs is used to account for the commonly used Arabic reference to manufacturing small and medium enterprises as small and medium industries.

A regional approach applied by this Programme constitutes an opportunity for the region in terms of economic complementarities, comparatives advantages and would undoubtedly render the region more competitive on the international market. At the same time the UNIDO proposal intends to respond to the changing needs and priorities of the Arab countries taking into consideration their extreme diversity, as well as building on UNIDO's programmes currently being implemented at the country level. The regional programme will be articulated in a way to avoid duplications dealing with transversal issues of relevance to the 21 countries of the region. The programme will have 4-year duration and its indicative budget is estimated at Euro 65.0 million.

A. Objectives of proposed Programme

A.1 Global objective

The global objective of the proposed programme is to contribute to the socio-economic growth, poverty reduction and regional economic and trade integration through enhancing regional and national capacities for employment creation, value-added generation, economic diversification and export promotion, and development of priority industrial sectors.

In particular, the Programme will help domestic manufacturing small and medium enterprises (referred to here as small and medium industries (SMIs) grow and upgrade to internationally competitive levels in order to compete effectively in the domestic and intra-Arab regional markets and take advantage of the opportunities afforded by the international trade liberalization and global economic integration as well as of development opportunities offered by the Arab and Islamic institutions.

A.2 Specific objectives

Under this global development framework and along with the Resolution on Industrial Development adopted by the Arab Economic Summit (2009, Kuwait), and taking into account the areas of intervention identified by AIDMO and UNIDO as priority in the development of SMIs and private sector, the proposed Programme will contribute to the **strengthening of supply-side and trade capacities of the private sector SMIs and promotion of the youth and women employment** by addressing some of the existing constraints to the private sector's growth, including SMI's access to technologies, innovation, FDI, financial and quality services, business information and environment, and regulatory framework favorable for expanding private sector productive and trade activities.

Accordingly, the programme proposal will pursue the following specific objectives:

i. To render macroeconomic, institutional and regulatory framework favorable and conducive to the development and improvement of competitiveness of the domestic small and medium-size producers.

ii. To establish/strengthen capacities of the national and regional technical support and business advisory infrastructure with special focus on SMI creation and development.

iii. To strengthen the quality infrastructure in the Arab world through enhancing the capacities of AIDMO in implementing the Arab Standardization Strategy 2009-2013 with focus on certain components.

iv. To develop and improve productivity and competitiveness of the local manufacturing enterprises through enhancing investment, export and employment opportunities of selected private sector enterprises operating along the pilot priority areas (agro Food-industries, ICT and green industries).

v. To facilitate scientific, technical and business transfer of modern technologies and product innovation practices and their industrial application in the Arab states, and to promote exchange, collaboration and partnerships in this area with emerging and developed industrialized countries.

B. Scope of Programme

B.1 Focus of interest

- Strengthening of SMIs in the Arab world, particularly small enterprises;
- Promotion of job creation particularly youth and women employment.

The two areas of focus are tightly linked because strengthening SMIs is a major vehicle for promoting employment.

B.2 Geographical focus

- Twenty one Arab States are to be benefit from the proposed Programme.
- The Programme divides the twenty one beneficiary Arab States into three groups each having maximum level of harmony in economic, social and cultural structures.
- While designed to focus technical interventions at country group level, the Programme aims to accommodate heterogeneity of individual country members within each group to the maximum extent possible.

B.3 Sectoral focus

The Programme is to focus on three sectors: **Agro-food value chains, ICT and Green Industries.** The relevance of each of the three sectors varies from one group of countries to another.

C. Rationale and justification

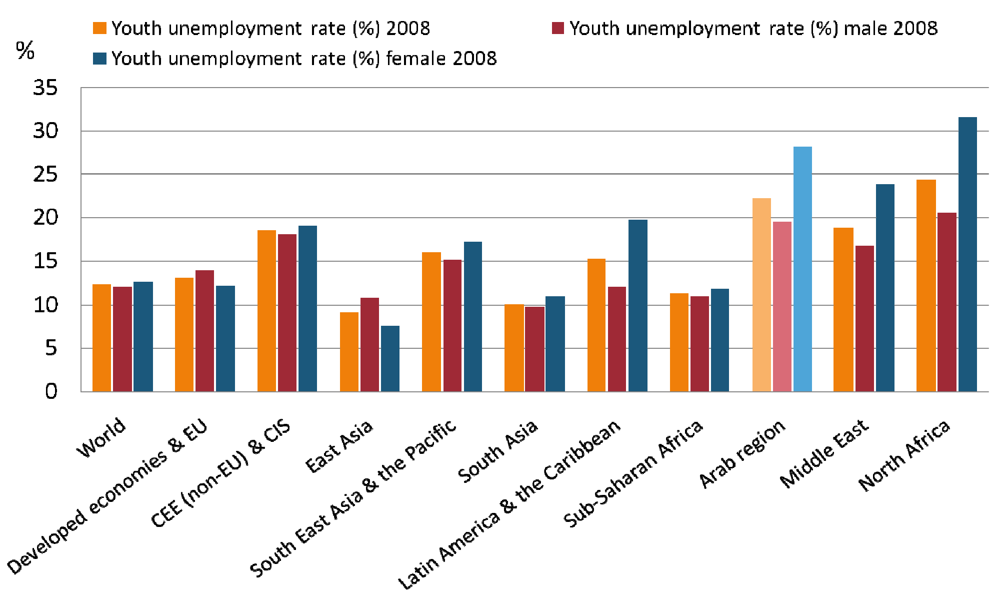
C.1 Why the focus on youth and women employment?

High population growth rates, high levels of youth unemployment and few opportunities for young women to participate in labour markets are all persisting characteristics even though youth populations are more educated than ever before. Despite country specificities and the intra-regional diversity within the Arab world, the above labour market outcomes are quite similar in the majority of economies in the region; and the majority of countries have not yet found solutions for the challenges.

The magnitude of the challenge becomes clear when comparing the situation of the Arab region with other regions in the world as seen in Figure 1 presenting the 2008 youth unemployment rates in the Arab world as being the highest in the world. With 22.1 per cent, the youth unemployment rate is very high in the Arab region (24.4 per cent in North Africa and 18.8 per cent in the Middle East). The North African rate is the highest in the world. This represents a huge waste of potential especially given that the unemployed are mostly educated.

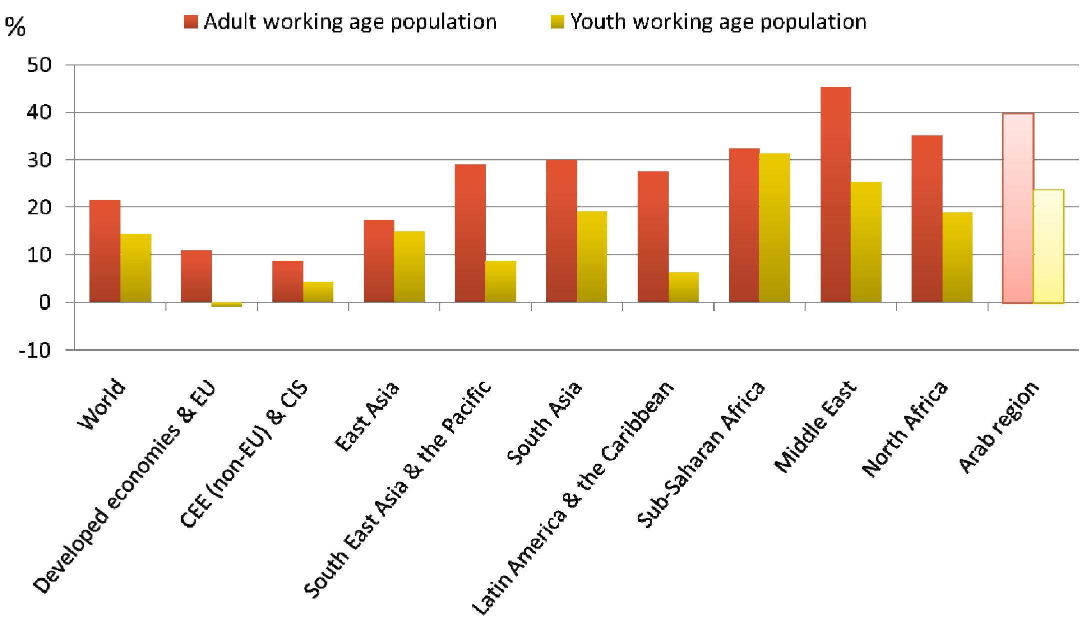
The seriousness of the problem is accentuated by the fact this it is not only a temporary problem but rather a permanent situation given past demographic trends (1998-2008) and (projections up 2050) and labor force participation rates in 2008, depicted in figures 2, 3 and 4 respectively. Rates of growth of adult working age and youth populations in the Arab region are higher than all regions in the world except sub-Saharan Africa. At the same time, youth participation in the labor force is the lowest in the world even in comparison to Sub-Saharan African. While the job creation challenge exists in all Arab countries the highest challenges seem to exist for Yemen, Sudan, Egypt, and Iraq.

Figure 1. Youth unemployment rates in the Arab world in comparison to other regions



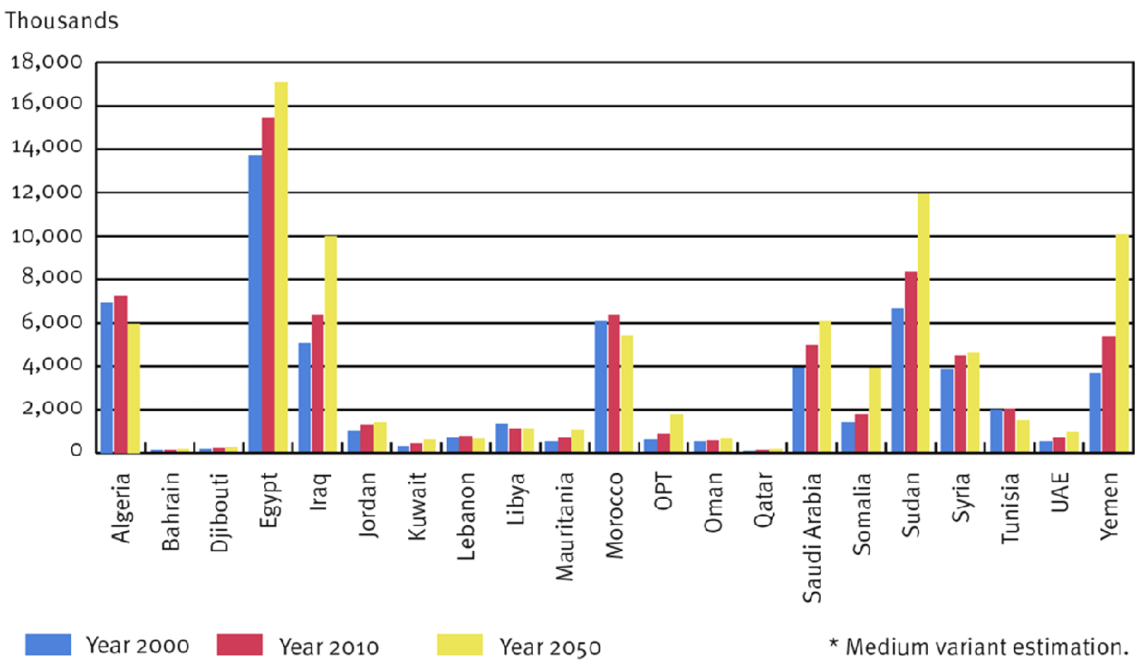
Source: Conference on youth employment, Arab Labour Organization, Algiers, 15-17 November 2009

Figure 2. Growth of total working age population and youth population 1998-2008



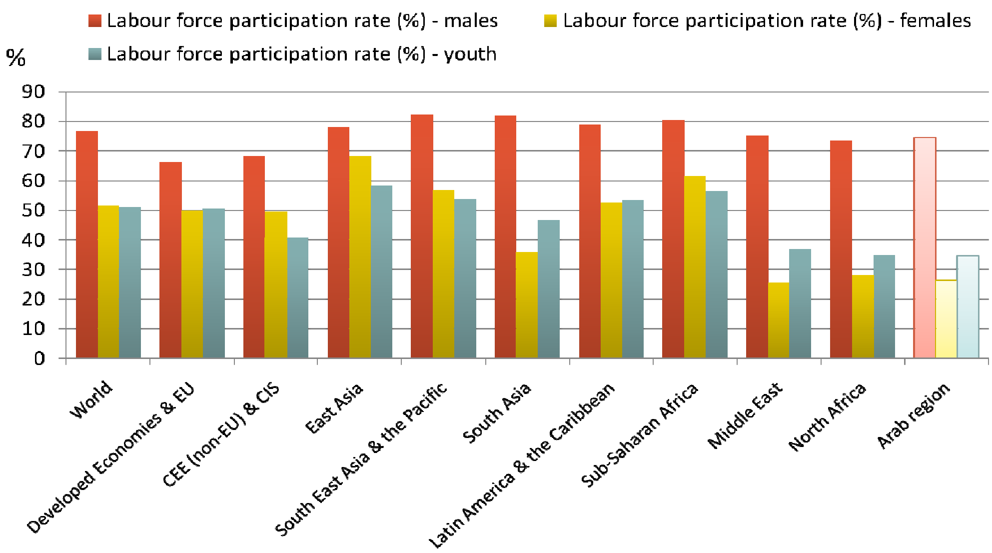
Source: Conference on youth employment, Arab Labour Organization, Algiers,15-17 November 2009

Figure 3. Projected Arab Youth population (aged 15-24) up to 2050



Source: United Nations Population Division 2008

Figure 4. Labour force participation rates in the Arab world in comparison to other regions, 2008

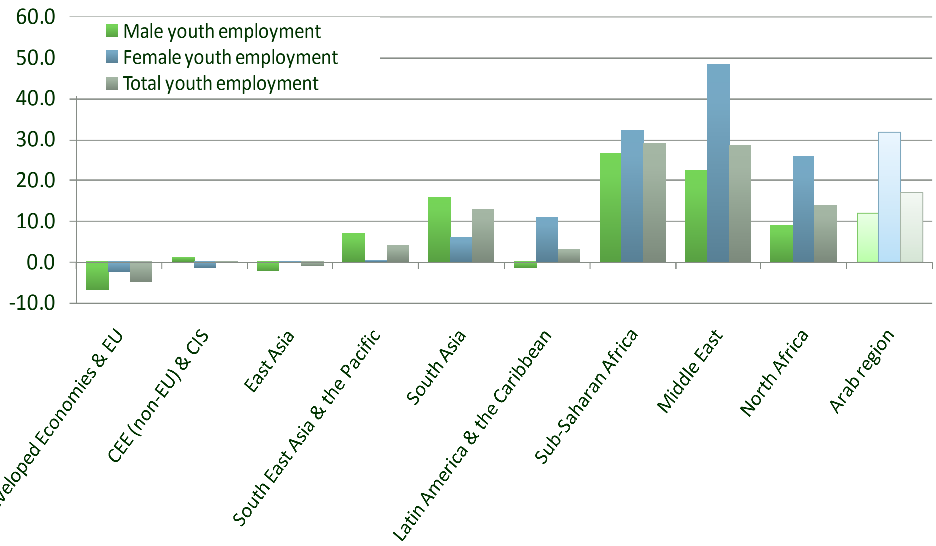


Source: Conference on youth employment, Arab Labour Organization, Algiers, 15-17 November 2009

As for the case of women, the lowest rate of participation in the labor force and highest unemployment rates exist in the case of the Arab world as seen in figures 1 and 4 above. Unemployment rates for women are also significantly higher than those for men. Female employment-to-population ratio continues to be the lowest in the world: out of 10 young women in the Arab region only 1.5 have a job compared to 4 out of every 10 young men. There have been serious efforts to boost youth employment in the Arab world as seen in Figure 5.

In fact, percentage change in youth, and particularly female youth, employment between 1998 and 2008 has exceeded most regions in the world yet the efforts are not enough to keep up with demand as reflected in 2008 unemployment rates.

Figure 5. Percentage changes in youth employment between 1998 and 2008



Source: Conference on youth employment, Arab Labour Organization, Algiers, 15-17 November 2009

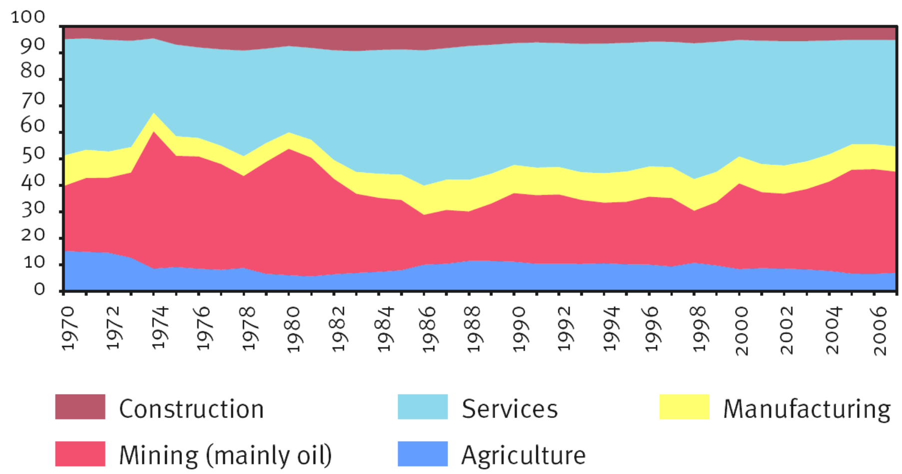
C.2 Why the focus on SMIs?

The Arab World has an abundance of resources – natural, human and economic. The region has been implementing a wide range of initiatives that are enhancing competitiveness and strengthening prospects for sustainable development at the same time. The initiatives at country level vary from policy, economic, social, innovation, environmental protection, business climate improvements among others.

At the regional level indicators of improved performance exist such as the observed increase in the share of Arab foreign trade in global trade from 4.4% in 2004 to 6.7% in 2008 with impressively high annual rates of growth exceeding global trade average. Also impressive is the recent creation of a functional Arab free trade area (GAFTA) and many other indicators.

In spite of the above efforts and achievements, the Arab world doesn't live to its full potential in comparison to many other regions in the world especially in the area of manufacturing industries, which have proven to be a significant vehicle for achieving growth and creating jobs such as in East Asia and Latin America and even in individual countries such as China, India, Turkey and many others. The Arab world has a natural bias towards extractive industries due to its wealth in natural resources as seen in Figure 6. Productive sectors namely agriculture and manufacturing represent small shares of the structure of the Arab region as a whole. The period from 1970 to 2006 captured in the figure shows very little change, if any, in the weight of manufacturing.

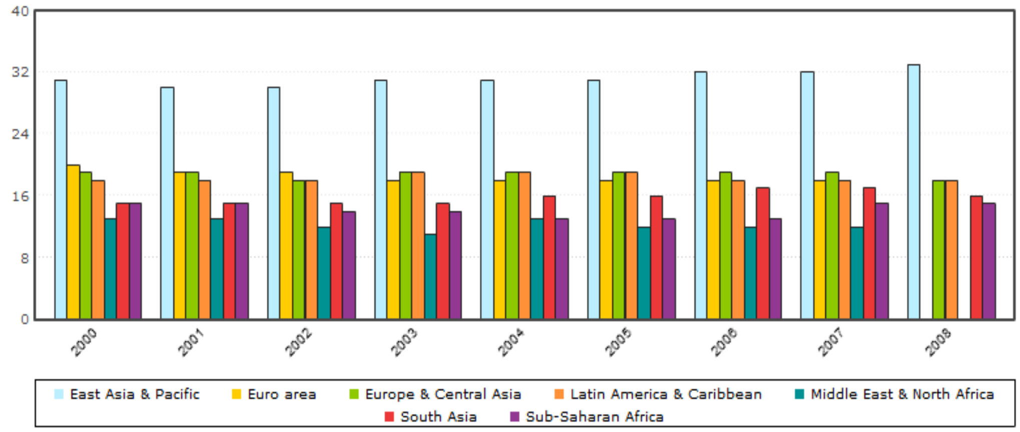
Figure 6. The evolution of the economic structure of the Arab world, 1970-2006



Source: Arab Human Development Report, 2009

The Arab world is benchmarked against other regions in the areas of: MVA as percentage of GDP, Manufactured exports as percentage of total merchandise exports, high technology as a percentage of total manufactured exports in figures 7 through 10 respectively. They all clearly show that the Arab world is still very far from reaching its potential in the domain of manufacturing industries measured against its richness in natural resources.

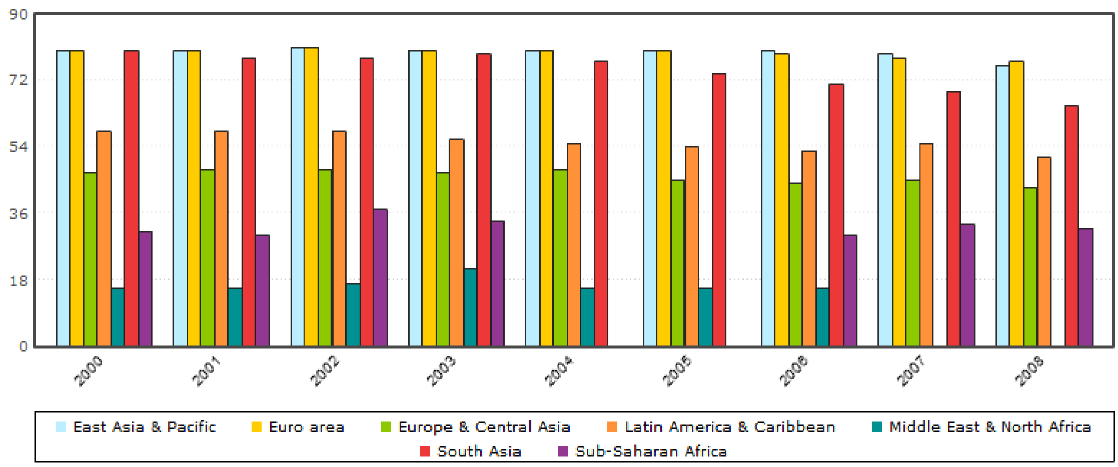
Figure 7. Manufacturing value added as % of GDP for all world regions, 2000-2008



Source: World Bank
*Arab world is approximately represented by the Middle East and North Africa region.
**Non-Arab countries in North Africa and Middle East are: Iran, Malta and Israel; Arab African countries are included in Sub-Sahara Africa but since they represent a small weight in its present contribution to Arab economic status, thus the focus on North Africa and the Middle East.

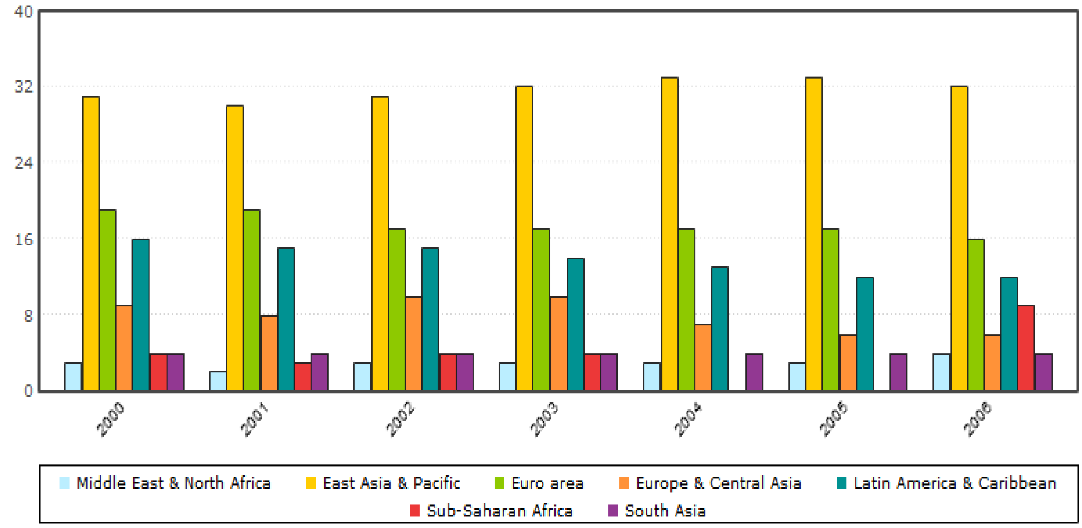
The Middle East and North Africa of which most of the Arab world is part has the lowest MVA as percentage of GDP in the whole world all through the period 2000-2008 including Sub-Saharan African (South Africa included). The same argument applies to the cases of manufactured exports as percentage of total merchandise exports shown in Figure 8, as well as in the cases of high technology manufactured exports as percentage of total manufactured exports shown in figures 9 and 10.

Figure 8. Manufactured exports as percentage of total merchandise exports, 2000-2008



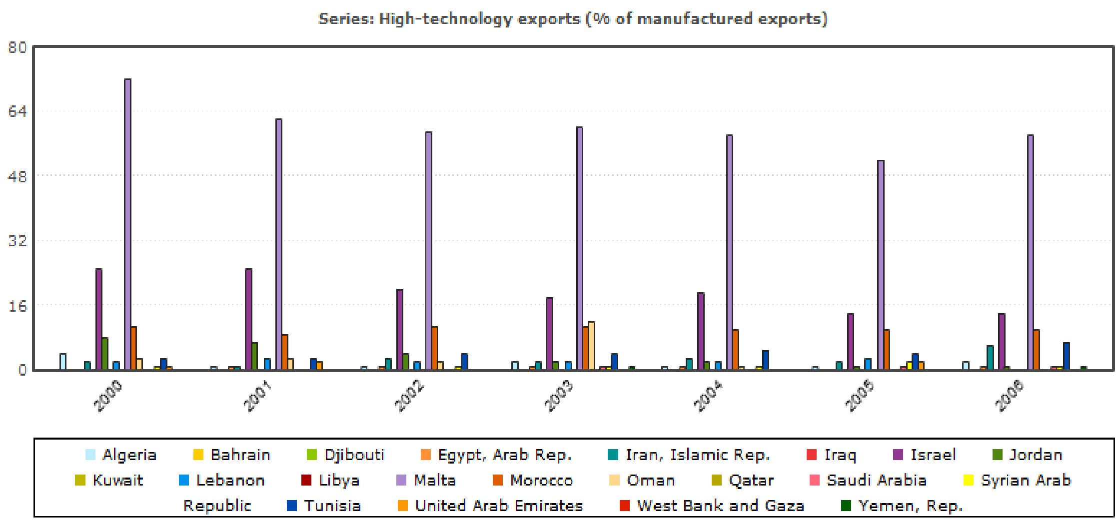
Source: World Bank
*Arab world is approximately represented by the Middle East and North Africa region.
**Some missing values in 2008

Figure 9. High technology exports as percentage of total manufactured exports in all regions of the world, 2000-2008



Source: World Bank
* Arab world captured as most of North Africa and the Middle East.

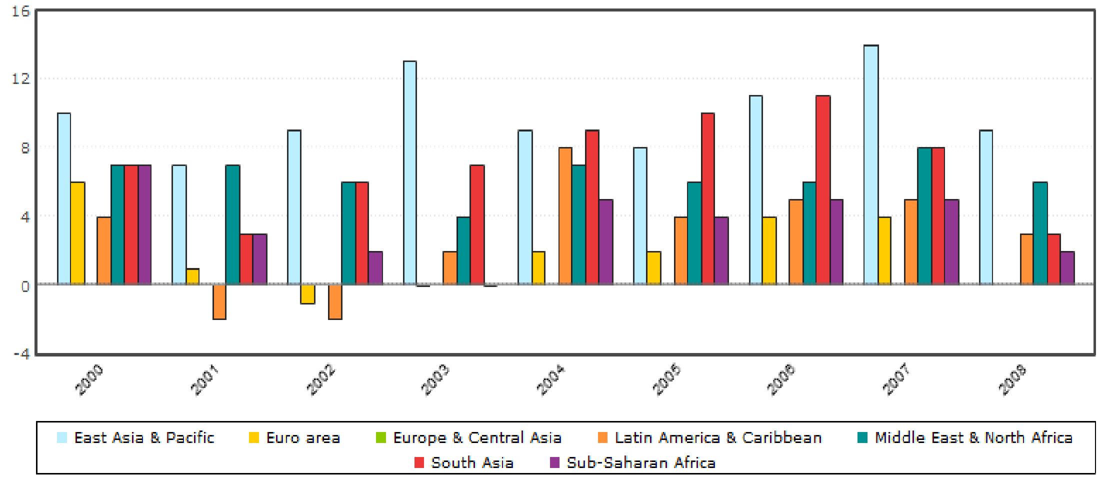
Figure 10. High technology exports as percentage of total manufactured in individual countries of the Middle East and North Africa Region



Source: World Bank

The above analysis implies that manufacturing industries in the Arab world are weak and poor in high technology. Figure 11 below, however, indicates that the rate of growth of manufacturing value added in the Middle East and North Africa has been growing at rates even higher than the Euro region and Latin America. This reflects the efforts within the Arab world for increasing value added and deepening manufacturing.

Figure 11. The annual rate of growth of manufacturing value added in all regions of the world, 2000-2008



Source: World Bank
* Arab world captured as most of North Africa and the Middle East

The Arab countries' efforts in promoting and deepening manufacturing are constrained, however, by weak SMIs that aren't equipped or have the enabling environment to lead growth in the manufacturing sector and create jobs.

Table 1 below, presents the contribution of SMIs to employment and manufacturing output in the Arab world benchmarked against SMIs in other regions of the world. It is clearly observed that in spite of its high representation in the manufacturing community (82.7%) their contribution to employment and output d not exceed 33% each which is very low in comparison to other regions of the world. The comparison becomes even less favorable to the Arab world when comparisons take place with individual countries such as Turkey where 98% of exports emerged from SMIs in 2006 or SMIs in China, India, South Korea, Brazil and Chile among many others.

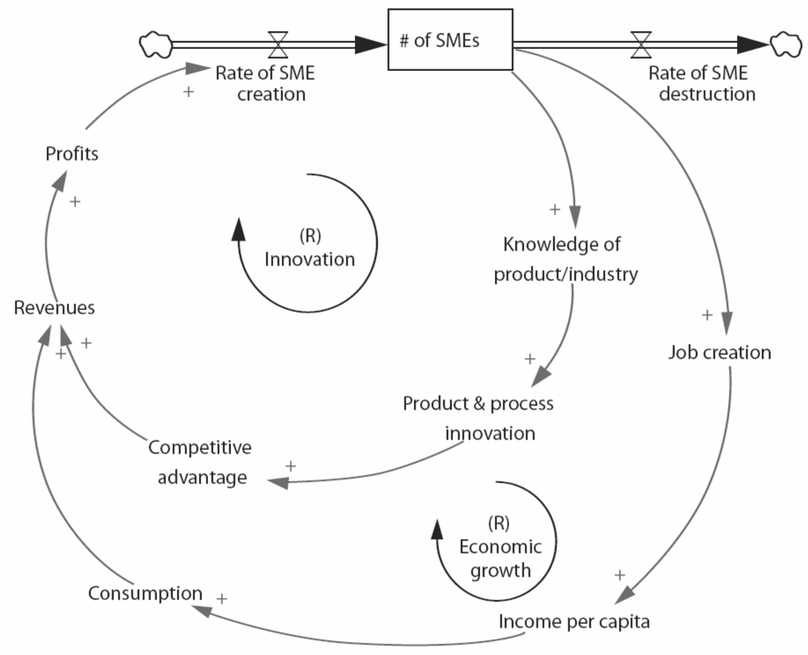
Table 1. Contribution of SMEs to employment and manufacturing output, average of selected countries in every region for the years 2006, 2007, 2008

Contribution to the manufacturing output	Employment in SMEs (of total labour force)	Share of SMEs in total industrial units	Region/Economy
49.4%	61.2%	99.1%	OECD
47.7%	79.2%	94.0%	East Asia and the pacific
27.8%	41.3%	92.3%	Latin America and the Caribbean
33.0%	**33.0%**	**82.7%**	**Arab States**
60.0%	73.0%	99.0%	China
40.0%	80.0%	95.0%	India
47.5%	71.0%	99.7%	South Korea
60.8%	66.8%	99.2%	Brazil
73.1%	52.7%	99.1%	Chile

Source: UN country statistic

Figure 12 illustrates how SMIs are the driver of economic growth and innovation. The total number of SMIs in the economy depends on the rate of SMI creation and rate of SMI destruction. Profitable market opportunities increase the rate of SMI creation. This increases the total number of SMIs in the country, which increases job creation and income per capita. As people become wealthier, they will increase their consumption, which in turn will open up new market opportunities that will entice the creation of more SMIs. Contrary to multinational corporations, the growth of SMIs directly benefits the country because most SMIs are domestic firms. This reinforcing dynamic generates economic growth. The reinforcing loop of innovation also drives economic growth by upgrading existing SMIs and guaranteeing their sustainability and survival, not to mention encouraging new ones thus reinforcing the wheel of growth and job creation.

Figure 12. SMIs as drivers of economic growth and innovation



Source: UNDP Asia-Pacific Development Information Programme (UNDP-APDIP)

What the proposed programme is trying to do is to create an enabling environment for SMIs, support them with technical, advisory and quality infrastructures, facilitate the transfer of technology and innovation knowledge to them, and equip them with the tools needed to stir the wheel of growth, job creation and higher standard of living. These are the ultimate goals for any development program.

C.3 Problem and solution trees

Figure 13. Problem analysis

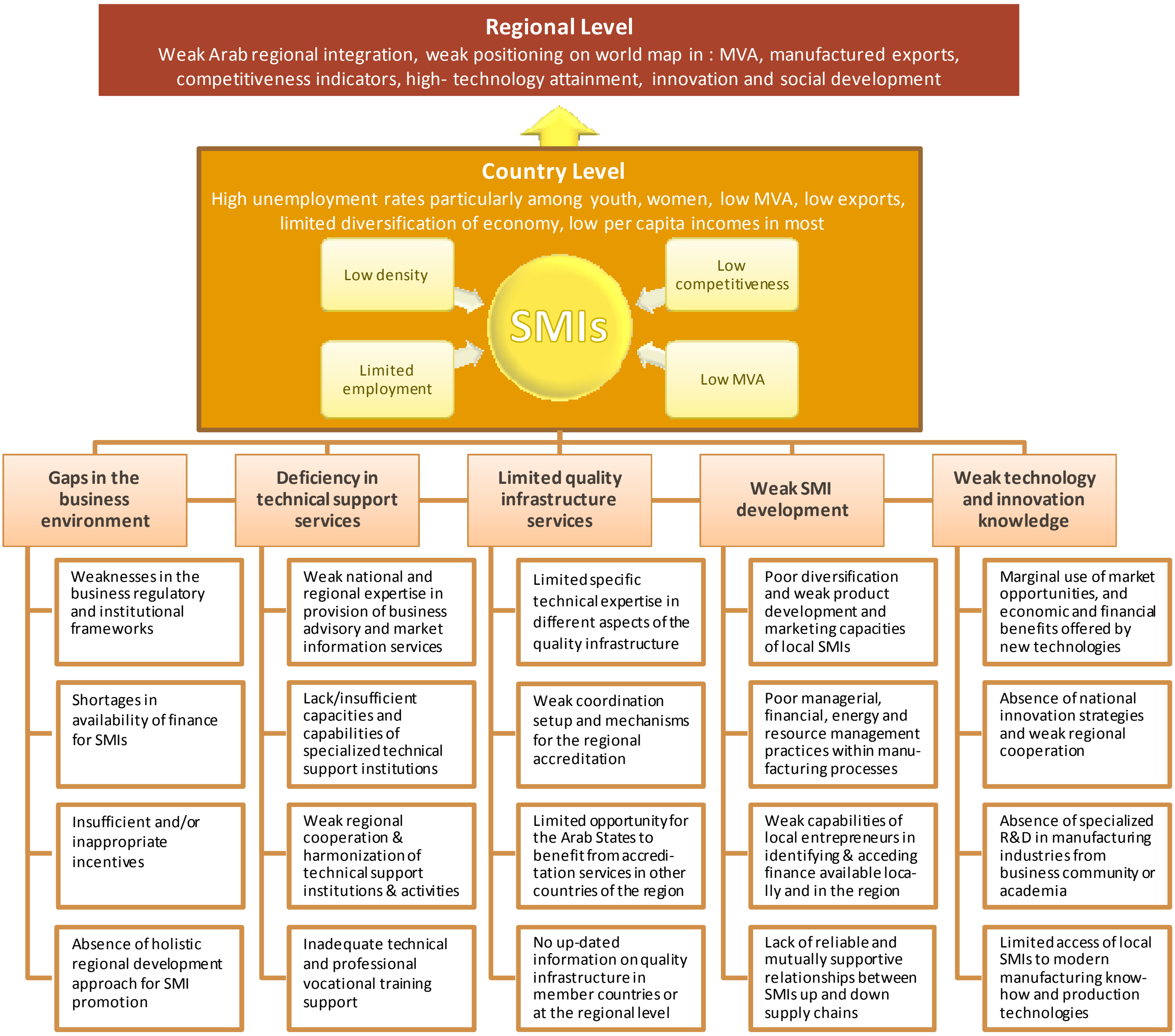
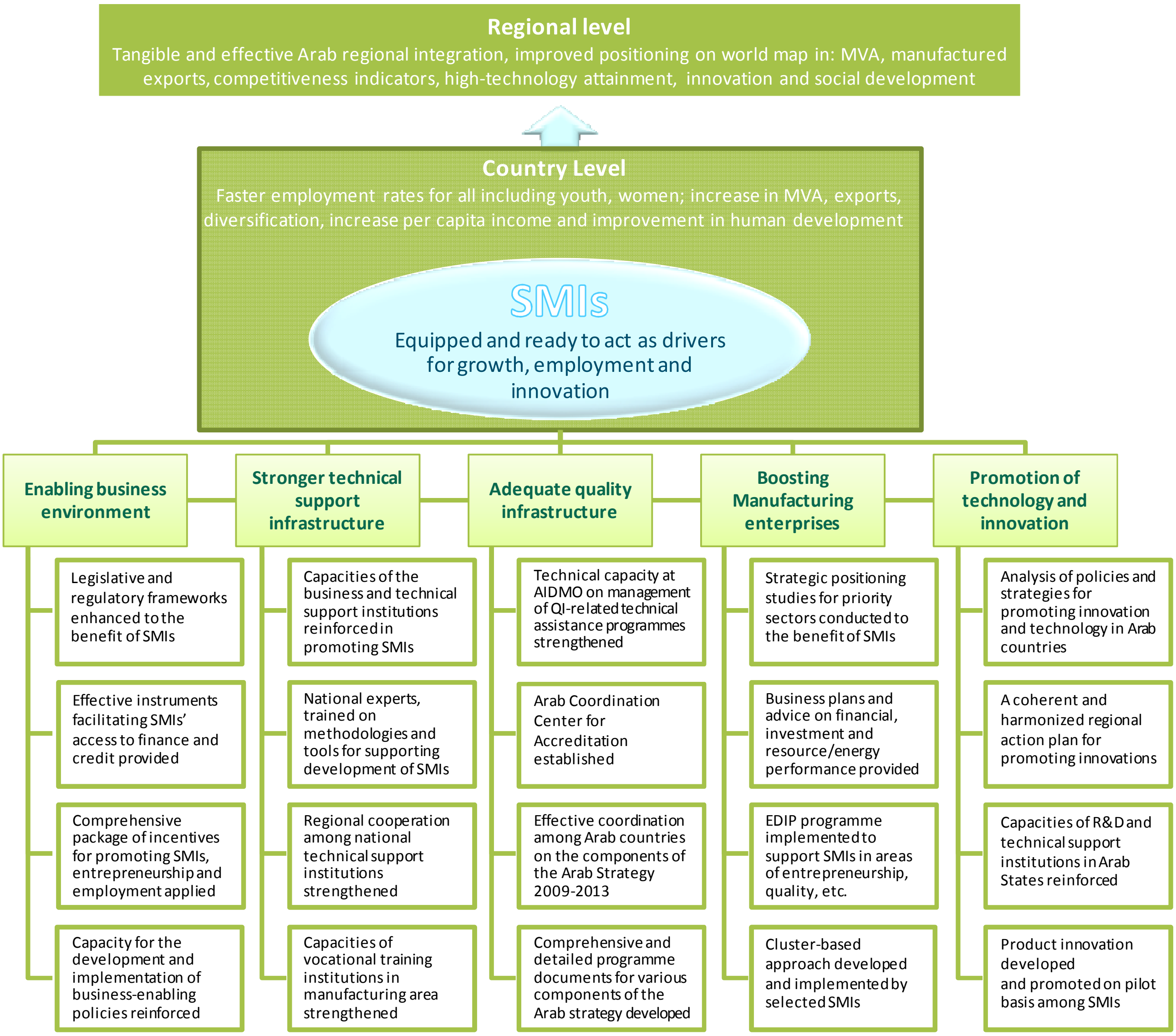


Figure 14. Tree of solutions



C.4 Methodology and rationale for country groupings

For pragmatic and efficiency in implementation reasons, the proposed programme is to group the 21 Arab States into three sub-groups. The grouping is based on a UNIDO calculated index involving five economic and social indicators namely: (GDP, Extraction as % of GDP, MVA as % of GDP, Human Development index, and rate of unemployment).

Economic and social indicators are equally weighed (50% each) to reflect the social and economic dimensions of the proposed programme. The 50% share of economic indicators is divided into: 15% for GDP, 15% for extracting as % of GDP, and 20% manufacturing as % of GDP. The 50% share of social indicators is divided into: 20% for HDI, and 30% for the rate of unemployment.

The index is meant to allow grouping in a way that captures maximum harmony among members within each sub-group. The weighted average formula used for index calculation is presented below followed by Table 2 which shows the three sub-group titles, members, main common characteristics as well as sources of heterogeneity within sub-groups.

Equation 1: Weighted average formula

$$WA = (0.15*GDP) + (0.15*EVA) + (0.20*MVA) + (0.20*HDI) + (0.30*UE)$$

*Where **WA** = weighted average, **GDP** = gross domestic product at current prices, **EVA** = share of extractive value added in GDP, **MVA** = share of manufacturing value added in GDP, **HDI** = UNDP's Human Development Index, and **UE** = unemployment rate.*

Table 2. The main characteristics of the three sub-groups

	Share in GDP of the whole Arab region (2007)	**Group members**	**Development stage (based on competitiveness report 2009)**	**Main common characteristics within each group**	**Sources of heterogeneity within groups**
Group 1: GCC/Oil economies	42.8%	Bahrain, Kuwait, Oman, Saudi Arabia, Qatar, UAE	Mostly innovation-driven*	- sectoral focus - political and economic systems - typology of natural resources - sociological, demographical and historical backgrounds	- level of development for each country - level of diversification of economy - geographical size - extent of involvement in manufacturing - degree of richness in natural resources - extent of global integration (manufactured exports)
Group 2: Diversified economies	50.9%	Algeria, Egypt, Iraq, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia	Ranging between factor driven and efficiency driven**		
Group 3: Primary product export economies	6.3%	Djibouti, Mauritania, Somalia, Sudan, Palestine, Yemen	All factor driven***		

* Innovation Driven Economies: Innovation sophistication factors: Business sophistication, innovation
** Efficiency Driven Economies: Efficiency enhancers: Higher education and training, goods market efficiency, labour market efficiency, financial market sophistication, technological readiness and market size
*** Factor Driven Economies: Basic requirements: Institutions, infrastructure, macro- economic stability, health and primary education

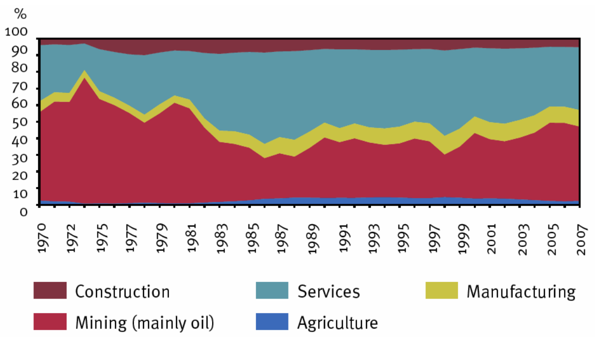
Two outliers to our grouping are Iraq and Palestine. Iraq's economic and social indicators as reflected by index place it in group (3). Iraq has however been moved to group (2) because its weak economic and social indicators are more a reflection of temporary instability due to war than a reflection of Iraq's original economic structure. Moreover, Iraq's economic characteristics fit more group (2) than group (3).Finally, since this proposed program is future oriented it cannot be based on temporary conditions.

Palestine placing in sub-group (3) is meant to reflect the difficult challenges faced by the occupied territories particularly in creating jobs for Palestinians. Therefore in spite of differences in geography, topography, demographics and historical roots of most sub-group (3) countries, Palestine has the need for heavier scale intervention, to enhance the social and economic roles of SMIs, in common with the other members in the sub-group.

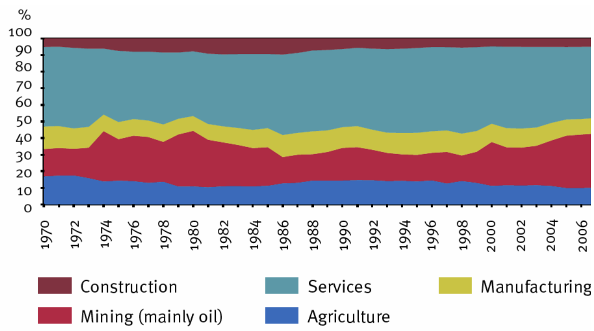
Figure 15 a,b,c presents the structure of the three groups of countries: oil economies, diversified economies, and primary product exporters, respectively. Oil economies in (15.a) have a huge extraction sector and limited manufacturing and almost agriculture because of their desert climate and topography. Figure 15.b has a tangible agricultural sector and less tangible though still visible emphasis on extractive industries. Figure 15.c representing the primary product export group (the least developed group) has agriculture as the main productive sector, very limited extractive industries and a modest manufacturing share that is primitive in nature. The sectoral structure has implications on the design of the proposed programme so as to conform to the specific characteristics and needs of each group. In fact it is these differences that triggered the need for country division in the first place. Addressing all the needs of the 21 countries without such division is impossible.

Figure 15. Structure of Arab economies

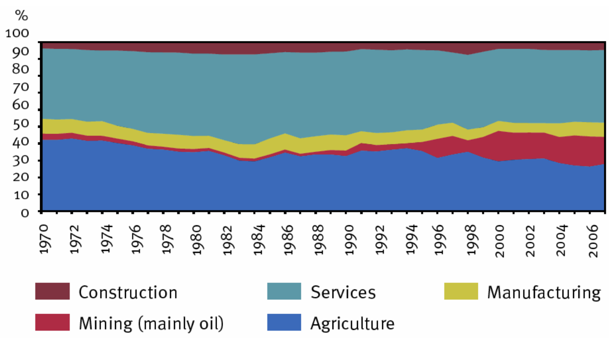
15.a Group 1: GCC oil economies



15.b Diversified economies



15.c Primary product export economies



Source: Arab Human Development Report, 2009

Table 3 below presents the main characteristics of SMIs in each group of countries. The programme design has to accommodate the very special nature of SMIs in group (1), the wide spectrum of semi-developed SMIs in group 2, and the more primitive ones in group 3 with different tools and levels of interference so as to tackle their problems at the core and achieve tangible improvements in their performance, and job creation potential.

Table 3. SMEs in the three country groups

Group 1: GCC/Oil economies	GCC region is known for strong entrepreneurial traditions and has a large size of small and medium enterprises. The sectoral structure of Gulf SMEs is skewed towards simple contracting and trading operations, other sectors particularly manufacturing (SMIs) tend to be under-represented (no more than 12%). SMIs of interest in this programme have not yet fully lived up to their potential of sustainable diversification and job creation, as they often focus on low-margin activities and employ a disproportionate share of expatriate labour.
Group 2: Diversified economies	Have a large population of SMIs with large involved in specific sectors such as agro industries and chemicals. They tend to contribute a low value added contribution to industry and limited employment. Small enterprises prevail more than medium ones and there is a huge informal sector. SMIs have very high potential with the right support as some are already exporting agro food and textiles and garments to demanding western markets.
Group 3: Primary product export economies	They have more micro enterprises than actual SMIs and need a lot of support at all levels to be upgraded to serious producing enterprises that can achieve tangible contribution to the economy especially in the creation of job opportunities.

C.5 Rationale for the choice of sectors & relevance to the 3 country groups

The program is to focus on three specific sectors: agro-food value chains, ICT and green industries. The choice of sectors is meant to achieve three objectives for the three groups of Arab countries:

1) To combine existing and most promising ***manufacturing potential*** for all Arab States (agro-food value chains), with ***future aspirations*** (ICT as high technology both as an industry in itself and as an enhancer to manufacturing industries) and ***sustainable development*** concerns (protecting the environment through green industries)
2) To cover a wide spectrum of manufacturing industries of relevance to Arab States beyond agro-industries such as chemicals, construction, metals, and autos among others.
3) To achieve multiple impact and deeper results from the overlap of the three sectors.

The rationale behind sectoral choice is further analyzed in the following focus on each of the three sectors, their overlap and relevance to each group of countries.

C.5.1 Agro-food value chains

The choice of agro-food value chains has a special significance in relation to the proposed program for the following reasons:

1) The agro-industries sector is the biggest direct employer of all manufacturing industries. Within agro industries food industries -particularly processed fruits and vegetables- have the highest job creation potential. The textile and clothing industries -particularly clothing industry- also part of agro industries have a very high potential for job creation particularly for women.
2) If indirect employment in agriculture, through backward linkages, and services supporting agro-industries, through forward linkages, are taken into account the employment creation boost to the Arab world from focusing on agro-industries has a significant multiplier effect. It's been estimated that for each direct job in agro industries at least 10 indirect jobs are created. If accounting for the whole value chain the number could easily double.
3) The importance of agro-food value chains also extends to macro level social impact. There is a positive correlation between improvements in human development index for the whole country and the agro- business/agriculture ratio. The relation is even stronger with agro industries as job creation potential at both the direct and indirect levels.
4) Collaboration and cooperation within the Arab region is to positively contribute to achieving food self- sufficiency in the Arab region.

C.5.2 Green industries

The future of SMIs in any region cannot be seen in the absence of environmental protection. The problem of environmental degradation is critical for the case of the Arab countries and is soon to become a serious burden if not controlled. The economic costs of unchecked environmental degradation in the Arab world in water, land, air, waste, coastal zone and global environment have been estimated and measured by the World Bank[2] as percentages loss in GDP. Based on the 2010 World Bank estimation, the highest loss in GDP in the Arab World exists in the case of Egypt (4.8%). Morocco, Algeria, Syria, Lebanon, Jordan and Tunisia follow with 3.7%, 3.6%, 3.5%, 3.4%, 3.1%, and 2.1% respectively. Ignoring the problem would make it worse over time, thus the interest is in green industries.

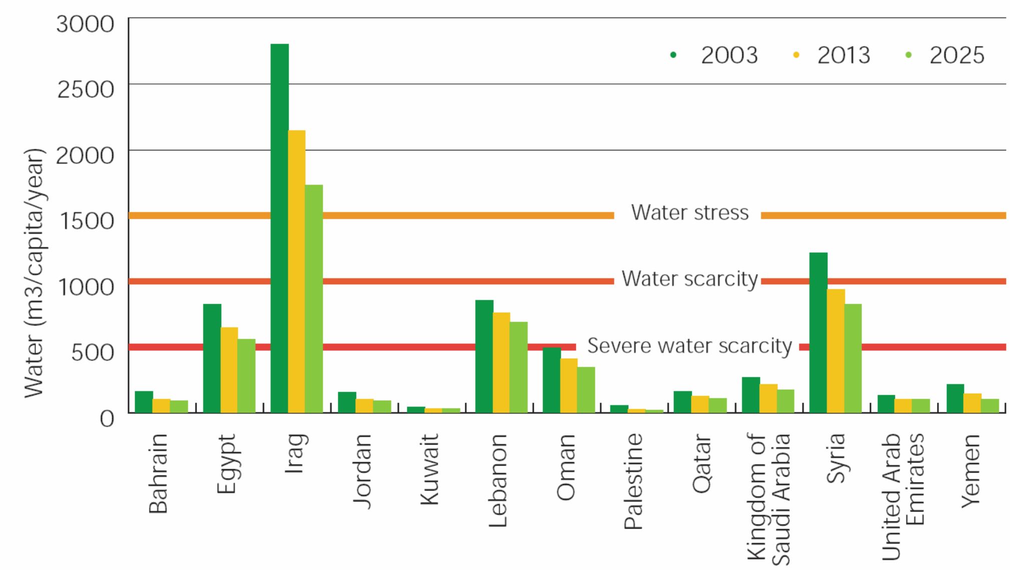
Green industries involve cleaner production processes, and the use of renewable energy in manufacturing industries. The latter requires huge initial investments but results in low operational costs and sustainability of energy sources. Given that the use of renewable energy is still new in the Arab world and is mostly associated with larger sized enterprises and foreign investments, in this programme the focus is on cleaner production processes only. This is the area most relevant to Arab domestic investments and to SMIs.

Cleaner production processes, tend to save on water use, reduce water pollution and carbon dioxide. In the Arab World, these benefits gain special significance due to two specific environmental problems: water scarcity and air pollution. The water scarcity problem is building up as a strategic threat and serious constraint to development if not survival in the Arab world. The per capita share of water is currently 1100 m^3 compared to the world average of 8000 m^3. It is expected to decrease to 550 m^3 by 2025[3]. The per capita share is already as low as 500 m^3 in a number of Arab countries

[2] Arab Environment Watch (www.arabenvironment.net)
[3] Source: Responsible competitiveness in the Arab world report 2009

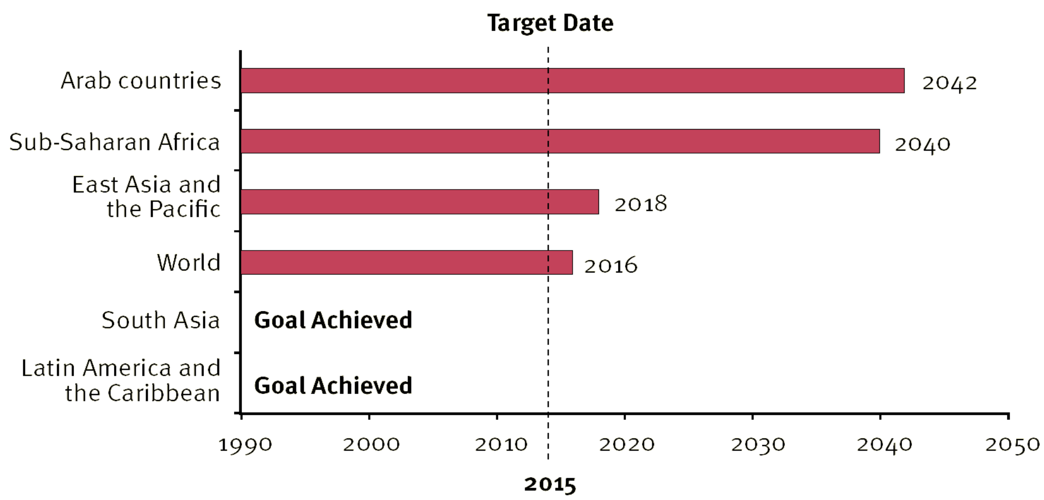
as early as 2005 as seen in Figure 16. The social repercussions of the problem are significant. Figure 17 features one aspect and that is missing the 2015 MDG target for access to safe drinking water by at least 27 years if it is to be achieved at all.

Figure 16. Water stress in selected Arab countries



Source: Responsible Competitiveness in the Arab World Report, 2009

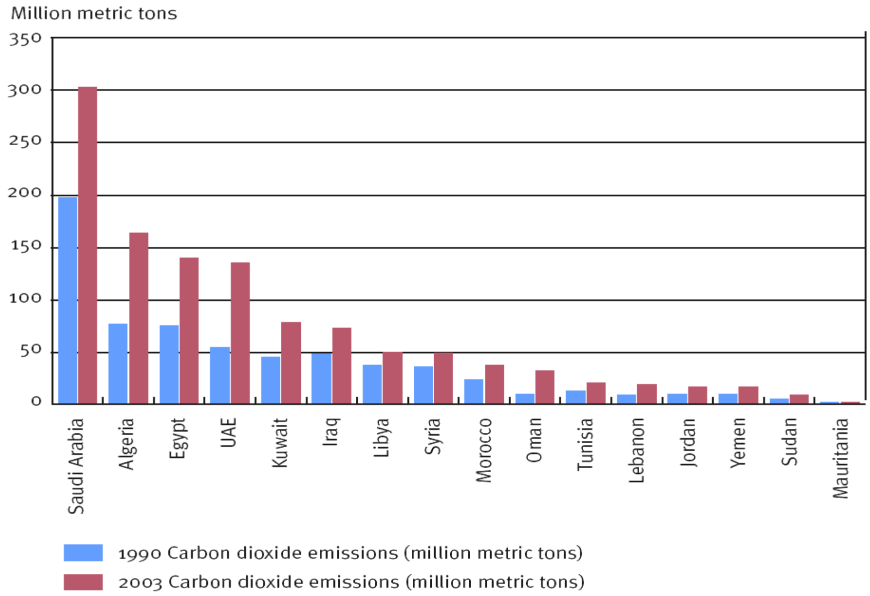
Figure 17. Repercussions for water scarcity



Source: UNDP, 2006

Of less serious survival concerns, in spite of its importance, is air pollution with rising carbon dioxide emissions as seen in Figure 18. The fast increase in emissions between 1990 and 2003 is an indicator for the rapid build-up of the problem. The issue is receiving more attention in the Arab world at the present time given the progressive migration of European polluting industries particularly chemical and construction industries.

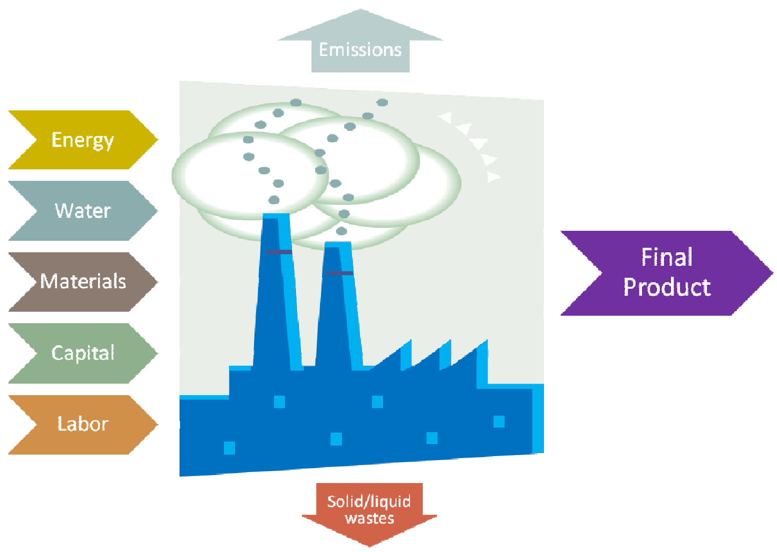
Figure 18. Rising carbon dioxide emissions in Arab countries 1990 and 2003



Source: World Bank, 2008

In addition to the improvement/preservation of the environmental condition, cleaner production is also best business practice that reduces manufacturing cost. It is an integrated strategy that aims for maximization of profits by making more efficient use of natural resources (materials, energy or water) in manufacturing industries, while minimizing the waste and emissions at source. As Figure 19 below shows, a manufacturing process uses materials, energy, water and other inputs to make the final product. All of the manufacturing inputs are either incorporated into the product or are lost as expensive and polluting process waste or emissions. When better conversion efficiency reduces manufacturing waste, the consumption of utilities, raw materials and other manufacturing inputs falls. Cost savings result. All else being equal, a manufacturer using Clean Production is likely to be more profitable than a rival who does not.

Figure 19. Cleaner production leads to a reduction in emissions and solid and liquid wastes



Given that cleaner production is of relevance to all types of manufacturing, the choice of green industries as a sector of focus in this project allows for a wider coverage of manufacturing industries beyond agro-food value chains. Given the huge spectrum of manufacturing industries, however, there is a need to specify the extra industries to be covered by this technical programme. Light chemicals, and textiles and garments are chosen as the two extra manufacturing industries of focus under the green industries umbrella. The choice of the two sectors is based on their importance and prevalence in the Arab World.

C.5.3 ICT Sector

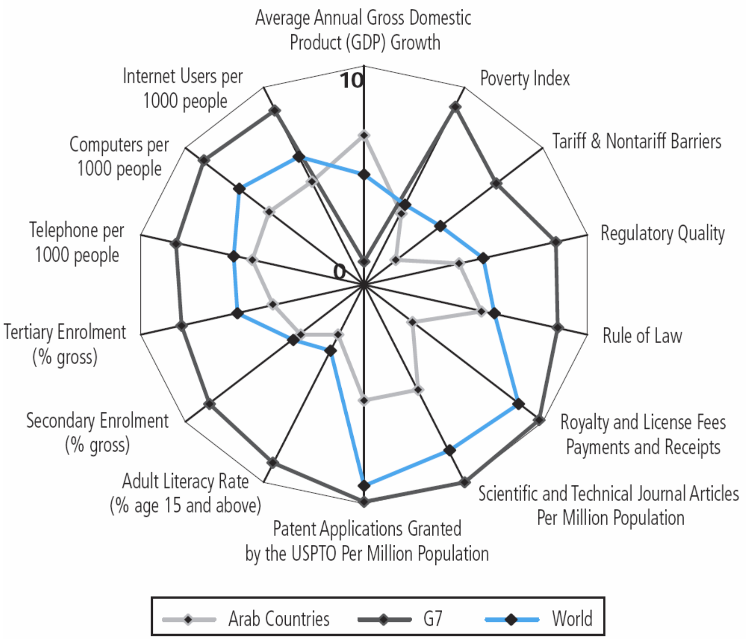
Considering the large number of benefits that ICT can bring to SMIs, it is observed that only few SMIs in the Arab world have adopted ICT. A similar situation exists in most of the developing countries. Their counterparts in developed countries, however, are using advanced ICTs. One of the main reasons behind this limited adoption is the lack of dynamism between ICT firms and SMIs outside the ICT sector. In the past, ICT firms have not provided goods and services tailored to SMIs needs because demand from SMIs has been low. However, their demand is low in part because ICT products available in the market are too complex and expensive. The result is a vicious cycle of limited supply and limited demand that ultimately excludes SMIs from the benefits of ICT. The focus on the ICT sector in this project addresses supply and demand problems that caused this situation.

ICT and the ICT sector is crucial for all economies not only because it belongs to high technology and enables higher efficiency at all stages of the value chain in the future, but also because the sector itself represents high potential for employment, particularly for the youth. Therefore, it is particularly significant for the Arab World. The potential for job creation exists at more than one level: (1) small IT companies that support SMIs by providing local high tech solutions to improve production and managerial processes; and/or (2) companies that train youth on ICT applications thus improving their entrepreneurial abilities and their chances for employment. In addition to the above ICT sector linkages with SMIs, all ICT applications in SMIs are of high relevance to this project because they increase efficiency, thus contributing to enhanced competitiveness and sustainability of the enterprise.

Needs, and hence problems with regard to ICT, of the countries in each sub group are different. Focused attention on the ICT sector in this project allows for technical support to SMIs to solve supply and demand problems associated with weak ICT penetration. Specifically, higher penetration of ICT allows SMEs to create business opportunities and increase competitiveness. Appropriate ICT can help SMEs cut costs for internal processes, improve their product through access to information on technology, markets, enhance communication with customers, and better promote and distribute their products through online presence. In fact, ICT has the potential to improve the core business of SMEs in every step of the business process.

Focus on ICT would also enable the Arab countries move towards being knowledge-based economies. As illustrated in Figure 20 which benchmarks the Arab world against the G7 countries and the whole world with respect to knowledge-economy indicators, the Arab countries have yet to reach this target. In spite of GCC known achievements in that domain the Arab world still needs a lot of support in this area.

Figure 20. Benchmarking the Arab world against the G-7 countries and the whole world in Knowledge Economy Indicators

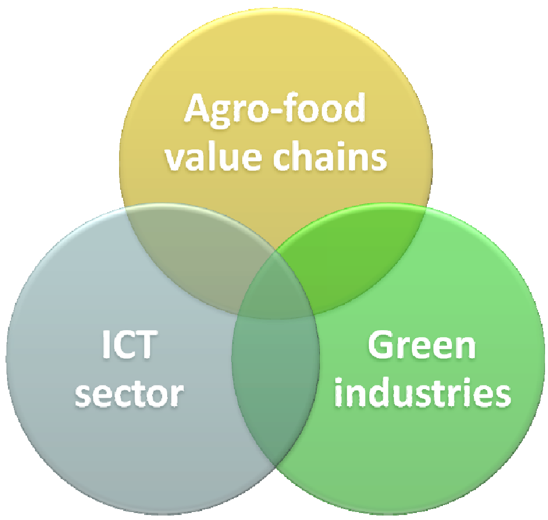


Source: World Bank (Knowledge Assessment Methodology)

C.5.4 Overlap between the three sectors

As shown in Figure 21 there are overlaps between the three sectors. For example, green industries directly overlap with organic food processing under agro-industries. Green industries also overlap with all ICT activities being environmentally friendly by definition. Agro-industries adopting ICT overlap with ICT sector and green industries. The overlap is due to the horizontal nature of both ICT and green industries. It is intentional in this project as it allows for focused intervention with multiple impact and deep results.

Figure 21. Overlap between the three sectors



C.5.5 The three sectors' relevance to the three sub-groups of Arab States

Table 4 below presents the degree of relevance of the three sectors to the three groups of countries. For maximum benefits UNIDO's technical intervention is to be tailored to the needs of each sub-group. These differ between sectors and within sectors as well.

Table 4. Relevance of the three sectors to country groups

Groups	Agro-food value chains	Green Industries	ICT sector
Group 1: GCC/Oil economies	Limited relevance to the group as a whole Food industries relevant to some countries (mainly Saudi Arabia) with a limited commodities list of juices and dairy products	High relevance particularly chemical industries	High relevance with room for excelling because the group already possesses advanced ICT infrastructure
Group 2: Diversified Economies	High relevance to all countries in the group Food industries particularly processed fruits and vegetables are highly relevant to all countries within the group except Libya and Algeria	Cleaner production processes are of high relevance to all countries and all manufacturing industries especially chemicals (on-going UNIDO efforts in some countries namely Egypt, Jordan, Lebanon, Morocco, and Tunisia)	High relevance to all countries because of poor ICT adoption in SMIs Countries within group differ in sophistication of infrastructure
Group 3: Primary product export economies	High relevance to country groups because of focus on agriculture and limited processing particularly Sudan which has the highest potential	High relevance to all country groups to protect environment as manufacturing value added increases protection of environment in parallel with deepening industry efforts	High relevance to all countries, but compared to groups 1 and 2, ICT requirement is rather elementary

D. Programme design: components and expected outcomes

The proposed programme will have the following five integrated components with specific focus on the agro-food value chain, ICT and green industries:

Component I: Enabling business environment

Reform of the institutional framework, the business environment and financial instruments related to the development of small- and medium-size manufacturing enterprises.

Component II: Technical and advisory support infrastructure

Strengthen capacities and capabilities of technical and advisory support institutions providing assistance to SMI development, job creation and investment promotion in Arab States.

Component III: Strengthening quality infrastructure
Strengthen the quality infrastructure in the Arab world through enhancing AIDMO's capacities in coordinating the regional implementation of the Arab Standardization Strategy 2009-2013 and respond to the immediate needs identified by the Member States
Component IV: Boosting industrial enterprises
Support the process of SMI development, investment promotion and enhancing productive and trade capacities of the manufacturing enterprises operating in the agro-food value chain, ICT and green industries of the Arab States.
Component V: Promotion of technology and innovation
Increase the absorptive capacity of SMIs for technology and innovation, reduce the constraints they face on technology supply internally and externally, and facilitate transfer of industrial technologies and best product innovation practices to the private sector SMIs operating in agro-food value chains, ICT sector and green industries.

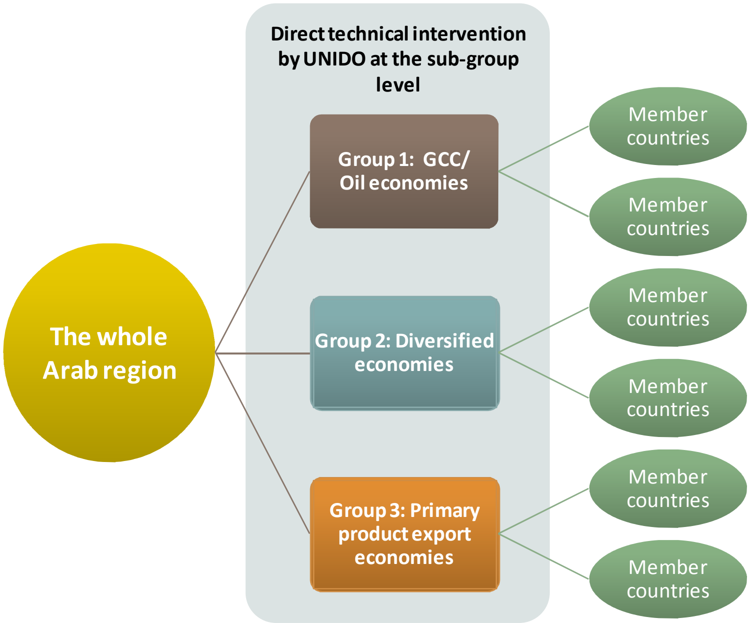
The proposal will build on UNIDO's programmes implemented over the years in the region, integrating their different components so as to conduct a thorough assessment of the current business situation and industrial trends in the region, and base thereupon, to address in a comprehensive and articulated manner most of the existing constraints to SMI growth at the macro-economic, business environment-related, and direct enterprise-oriented levels. The programme will ultimately aim at improving SMIs' access to technologies and product innovation practices, financial services and information, and at contributing to the building of a regional pro-private business/regulatory framework. The programme will also encourage intraregional cooperation in the concerned areas.

The proposed programme intervention framework takes into account the results and recommendations of data surveys, studies, information reports, assessment and project evaluation studies previously conducted by AIDMO in the Arab region and by UNIDO in the North-African, Middle-East and the Gulf countries as well as in the South European region.

E. UNIDO's approach for technical intervention

Given the wide spectrum of program coverage, the main challenge in UNIDO's technical intervention is to manage a systemic intervention that combines detailed custom-made direct intervention at the level of the three sub-groups of countries with outreach and linkages to the region as a whole and outreach and linkages to member countries within each sub-group as presented in the figure below.

Figure 22. Intervention approach



The UNIDO classical approach on strengthening productive and trade capacities requires intervention at three levels:

a. regulatory and policy development (or macro-) level,

b. the business environment (or meso-) level; and

c. the enterprise (micro-) level.

The benefits to the region as a whole will be through encouraging intraregional cooperation throughout the implementation of different programme components. That to individual countries will be first through the accommodation of their most important specificities in the designed programs for sub-groups and second through establishing linkages between sub-group regional institutions and their national counterparts.

UNIDO's approach aims to build a comprehensive and well-integrated system for enhancing the economic and social roles of SMIs at the regional, sub-group and country levels; a system that can continue to function beyond the four years of the proposed Programme.

F. Programme implementation modalities

F.1 Programme design and duration

The draft proposal has been prepared by UNIDO at the request of the AIDMO Secretariat in close cooperation with the UNIDO representatives in the region, representatives of AIDMO and the Member States. Following approval of the current proposal, the detailed programming phase will explore options to ensure broad-based technical and institutional support to the proposed interventions.

An integrated work-plan will be established, detailing outcomes and their activities, contributions and roles of each stakeholder in the achievement of the stated objectives. The activities would focus on developing the capacities SMI sector-based industrial support institutions and manufacturing SMEs in areas relevant to their respective roles. The programme has a four-year duration divided into three phases as indicated in the following table:

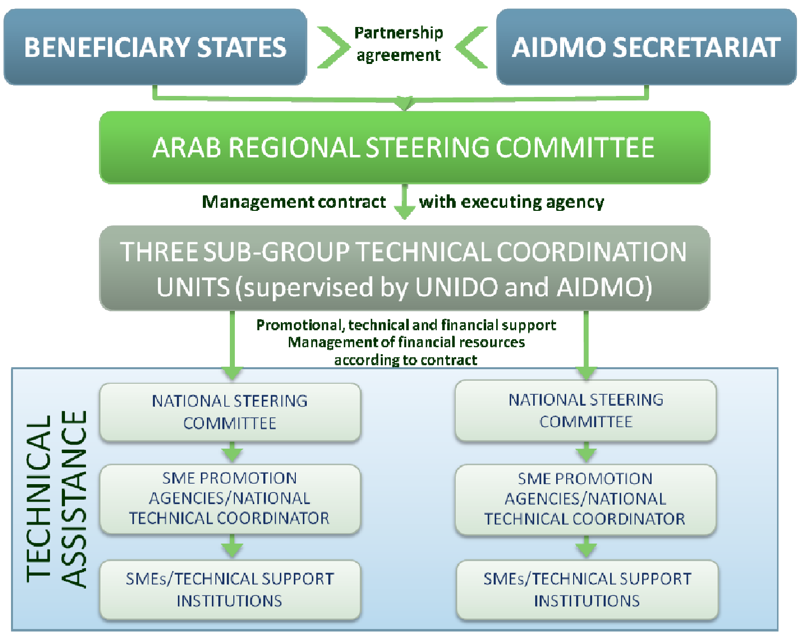
Table 5. Programme phasing

Phase	Phase title	Duration
One	Preparation for take-off	6 months
Two	Pilot implementation of technical Programme	21 months
Three	Advanced implementation of technical Programme	21 months
All phases	**Completed Programme**	**48 months**

F.2 Management and coordination mechanism

The Programme will establish permanent capacities within the regional, sub-regional and country levels in charge of the management and implementation of this Programme. The management and coordination (M&C) framework proposed for the proposed regional programme is based on a clear identification of implementation arms, effective decentralization and delegation of authorities, with a strong and direct support from UNIDO field offices in the Arab region. The institutional mechanisms will be established in a progressive way ensuring an overall support from the national level to the regional extent. The institutional mechanisms are composed by the steering structures described in the following figure.

Figure 23. Programme implementation mechanism



F.3 Monitoring, reporting and evaluation

Monitoring and evaluation of this programme will be conducted in accordance with the UNIDO monitoring and evaluation plan and will also be subject to the relevant regular internal evaluation procedures of the AIDMO Secretariat and donors. Monitoring, reporting and evaluation will be conducted in a participatory and systematic way that maximizes chances for early detection of implementation problems. For effective and efficient interventions within the programme, internal and external monitoring will take place. UNIDO's Evaluation Group, together with appropriate services of the AIDMO Secretariat and donors, will participate in the annual reviews and evaluations of the Programme.

G. Indicative budget

First budget estimations for the proposed programme set out the figures for the indicative budget by Programme component, and management, coordination and follow-up costs. Estimation of the programme budget takes into account UNIDO's experience in implementing technical assistance programmes on the promotion and development of the private sector industrial SMEs in other developing and emerging countries.

The indicative budget of the 4-year Programme is estimated at **€65.0 million** including management costs. The following breakdown sets out the figures for the indicative budget by Programme component and management costs, as well as by regional and national shares under each sub-regional country group.

Table 6. Estimated indicative budget of the Programme, in Euro

# of outcome	OUTCOMES	TOTAL BUDGET IN EURO	BUDGET BREAK-DOWN: REGIONAL AND NATIONAL SHARES IN THE PROGRAMME'S TOTAL							
			TOTAL REGIONAL BUDGET	TOTAL NATIONAL BUDGET	Sub-Group 1: GCC oil economies		Sub-Group 2: Diversified economies		Sub-Group 3: Primary product export ec.	
					Sub-total regional SG1	Sub-total national SG1	Sub-total regional SG2	Sub-total national SG2	Sub-total regional SG3	Sub-total national SG3
	SUBTOTAL FOR COMPONENT I	2,500,000.00	650,000.00	1,850,000.00	187,166.67	532,000.00	275,666.67	786,000.00	187,166.67	532,000.00
	SUBTOTAL FOR COMPONENT II	15,000,000.00	900,000.00	14,100,000.00	257,000.00	4,028,000.00	386,000.00	6,044,000.00	257,000.00	4,028,000.00
	SUBTOTAL FOR COMPONENT III	5,000,000.00	2,000,000.00	3,000,000.00	572,000.00	858,000.00	856,000.00	1,284,000.00	572,000.00	858,000.00
	SUBTOTAL FOR COMPONENT IV	18,275,000.00	3,982,500.00	14,292,500.00	1,140,000.00	4,085,000.00	1,702,500.00	6,122,500.00	1,140,000.00	4,085,000.00
	SUBTOTAL FOR COMPONENT V	10,575,000.00	2,115,000.00	8,460,000.00	604,000.00	2,416,000.00	907,000.00	3,628,000.00	604,000.00	2,416,000.00
PROGRAMME MANAGEMENT COSTS										
	3 Regional Technical Coordination Units	4,800,000.00	4,800,000.00	0.00	1,370,000.00	0.00	2,060,000.00	0.00	1,370,000.00	0.00
	Contribution to national project management units inc. costs of National Technical Coordinators	2,835,000.00	0.00	2,835,000.00	0.00	810,000.00	0.00	1,215,000.00	0.00	810,000.00
	Technical Expertise	1,200,000.00	0.00	1,200,000.00	0.00	340,000.00	0.00	520,000.00	0.00	340,000.00
	Monitoring and Follow-up	600,000.00	240,000.00	360,000.00	68,000.00	102,000.00	104,000.00	156,000.00	68,000.00	102,000.00
	SUBTOTAL PROGRAMME MANAGEMENT COSTS	9,435,000.00	5,040,000.00	4,395,000.00	1,438,000.00	1,252,000.00	2,164,000.00	1,891,000.00	1,438,000.00	1,252,000.00
	TOTAL	60,785,000.00	14,687,500.00	46,097,500.00	4,198,166.67	13,171,000.00	6,291,166.67	19,755,500.00	4,198,166.67	13,171,000.00
	UNIDO management costs (7%)	4,254,950.00								
		65,039,950.00								

The detailed breakdown of the indicative budget by year of implementation, Programme component, outcomes and the management, coordination and follow-up costs to be provided in the full-fledged Programme Document. In addition to the above depicted programme budget, UNIDO would bring its co-financing with ongoing activities and pipeline activities already negotiated (technical assistance, data-base, information, analyses, inputs from governments (as member states), etc.).

The proposed programme also considers an in-kind contribution of each beneficiary country into the total budget funding. Such contribution usually includes delivery by the national counterpart of the office premises, office furniture and basic equipment, recruitment of the national focal point in charge of the national programme monitoring, an assistant and a driver, as well as communication, office and office vehicle maintenance costs, fuel, and other operation and local travel costs. The national contribution to the global programme costs is roughly estimated at €300 000 per country.

H. Expected impact of the programme

The examples of developing countries, which have already implemented similar programmes allow the following estimations of the Programme’s potential impact to the economies of Arab States and to their SMI sector, in particular. It is important to note, however, that the timing of this programme, following the world wide recession due to the global financial crisis, renders its impact even stronger and more critical to the future of the Arab States than any previously implemented similar programmes.

The Programme on Enhancing the Role of SMIs in the Economic and Social Development of the Arab States will have a significant impact on the SMI sector and overall industrial and economic performance of the region. More specifically, the Programme will contribute to the regional development by:

- Increased diversification of industrial value-added and of the export pattern;
- Improved competitiveness of SMIs and national economies as a whole;
- Intraregional and international trade increased in volume and streamlined socio-economic integration of the Arab region;
- Harmonisation of policies, strategies and business climate regarding SMI activities and employment in the Arab region;
- Improving investment and overall business environment;
- Strengthening institutional and policy management capacities of the major stakeholders;
- Development and strengthening of the local expertise in order to extend its services to other sectors not directly addressed by the Programme (target: 1000 trainers and engineers);
- Building capacities of the technical support institutions, business advice and consultancy centers (target: 84 in the region);

- Strengthening capacities of the existing SMIs and encouraged emergence of new small- and medium-scale manufacturing units operating in agro-food, ICT and green industries (target 300 pilot SMIs);
- Increasing employment opportunities for young graduates directly in the SMI sector and related services (target: 2100);
- Investment project portfolio formulated and scouted for around 300 SMIs in the region;
- Mastering the resource and energy efficiency and cutting down the production costs;
- Regional and national policies and strategies promoting product innovation and advanced technologies formulated and implemented in partnership with the world's leaders in these sectors.

I. Potential Beneficiaries

The proposed technical assistance will have two levels of beneficiaries:

- On the one hand, it targets domestic private sector SMIs operating in the three selected sectors with the comprehensive objective of providing effective instruments to grow and expand trade in a regional context and to generate jobs with special focus on youth and women employment.
- At the institutional level, it aims at supporting local and regional agencies, quality and technical support infrastructure and financial institutions dealing with SMIs of the three selected sectors and employment creation, so as to enable them to provide better services to local SMIs and particularly to attract foreign investment and technology.

J. Main risks and assumptions

Potential risks to achieving Programme objectives relate to both internal and external economic and geopolitical factors that may partly divert the attention of policy- and decision-makers from the private sector development issues. Political changes, staff turnover and slowdown of economic growth may also affect the implementation of the Programme. It is expected that the Member States will ensure job tenure of civil servants, particularly those involved in the implementation of the regional programme.

Thus, the success of the current Programme is largely dependent on:

- the political goodwill of AIDMO, partner institutions, donors and the Member States and their commitment to finance the Programme;
- moral and financial commitment of companies' management to upgrade their productive capacities and thereby to improve their competitiveness;

- commitments of the regional and local banking sector institutions to contribute, in particular, to financing 'hard' investments activities;
- commitment of individual countries to improve business climate and infrastructures;
- the implementation of the Programme as a comprehensive package and in a coordinated manner for best results;
- maximum collaboration between countries and UNIDO and AIDMO the implementing agencies for the Programme.

The major risks are:

- ➢ Needed funds for implementation of proposed programme are not available, or not enough. In such case expected outcomes will not be achieved or will be subject to delays. This applies particularly in the case of funding 'hard' investment activities, proposed by this Programme.
- ➢ One or more countries do not succeed in contributing to the establishment of operational national institutions for Programme implementation (NTCs, etc.);
- ➢ Member Arab States are not willing to adopt measures for improvement of business environment relevant to SMIs. In such case, expected outcomes from other components of the program might not be realized.
- ➢ Individual countries do not actively collaborate with UNIDO and AIDMO through the different stages of the Programme.

The above-listed are few important risks for accomplishing the expected results notably related to the implementation of 'soft' and 'hard' investments activities.

These assumptions and risks are unlikely due to the strong commitments and interest shown by the AIDMO Secretariat and the Member States. Various actors of the region, including the Islamic Development Bank (IDB) and the Arab Fund for Economic and Social Development (The Arab Fund), have expressed their interest in contributing to the Programme's success in close cooperation with UNIDO and AIDMO.

In order to minimize these risks, it is important to ensure the strong ownership of the Member States to the envisaged outcomes and activities as primary means to achieve sustainability. The commitment to advance reforms is central to the overall success of the Programme. In addition, the capacity building strategy of the Programme requires a commitment of central and local government to a) make human resources available to implement the Programme, and b) take the necessary steps to minimize civil servants turnover in the short and medium term.

Finally, it is of the utmost importance that the Programme is implemented in a transparent manner and on the basis of pre-established criteria that are developed through consensus of all parties involved in or affected by the Programme. Finally, sustainability will be enhanced by linking the Programme to other initiatives being implemented by UNIDO and other development partners in the private sector development.