UNITED NATIONS
ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA

POLICY GUIDELINES TO SUPPORT A TRANSITION TO THE GREEN ECONOMY IN THE ARAB REGION

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ABBREVIATIONS

CAMRE	Council of Arab Ministers Responsible for the Environment
EE	Energy Efficiency
EGS	Environmental Goods and Service
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GG	Green Growth
GHG	Greenhouse Gases
ICT	Information and communications technology
ILO	International Labour Organisation
ISO	International Organization for Standardization
IT	Information technologies
KSA	Kingdom of Saudi Arabia
MDG	Millennium Development Goals
MENA	Middle East and North Africa
MOE	Ministry of Environment
MW	Megawatt
NGO	Non Governmental Organisation
OECD	Organisation for Economic Cooperation and Development
R&D	Research and Development
SD	Sustainable Development
SME	Small and Medium Enterprises
UAE	United Arab Emirates
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

EXECUTIVE SUMMARY

In the context of human efforts to meet the challenge of Sustainability, technology holds the key. However, it can only do so with strong political will and long-term commitment. This requires that governments develop approaches that are consistent both across sectors and over time. As they develop those approaches, policy makers need to account for ever-evolving socio-economic considerations, and the inherent scientific and economic uncertainties. In addition, the specific technologies need to account for national interests and specificities, and to help advance social agendas that lie at the heart of sustainability.

The guidelines thus provided here are designed to be adapted to the specific needs of the ESCWA Region in ensuring a proper transition towards a Green Economy (GE). This requires not only consideration specific of specific problems, but also ensuring that the guidelines properly support the region's government in securing the appropriate technical assistance in their efforts in other areas, such as Climate Change adaptation. The guidelines are thus focused on measures to facilitate resource management, Technology Transfer and improved access to Education, as well as efforts to eradicate poverty, and promote youth employment and greater gender equity.

The guidelines also serve as a common tool towards enhancing regional integration, which would be the best insurance against the risk of "Green Protectionism". It will further help policy makers in their effort to coordinate regional cooperation, to better ensure that various international treaties now under consideration taken into account the social and environmental implications for the ESCWA Region.

The guidelines are therefore designed to address the cross-cutting issues raised by the transition towards the Green Economy, as policy makers strive to reconcile the dual goals of climate protection and enhanced economic development. Rather than a single focus on any specific issue such as environmental, social, or economic, the guidelines strives to offer a broad-based, integrated approach to policy formulation. To do so, the guidelines focus on four focus areas, (1) the enhancement of **Environmental sustainability** through the **adoption of new technologies**, and (2) the facilitation of **economic transformation** by allowing businesses to seizing the **opportunities for development of new green activities**, as well as the management of (3) **structural changes** in a way that accounts for human **Progress and well being**, and **(4) the reallocation of capital and labour resources** through appropriate **policy responses** and adequate **means of implementation**.

This will allow the transition towards the Green Economy to create a virtuous circle of mutually supportive policies that leverages both public and private funding towards an economic development that is both friendly to the environment and supportive of social issues and further economic development.

I. INTRODUCTION

Promoting a successful transition towards green economy requires governments to play a crucial role in driving this transition, setting a conducive regulatory framework, providing incentives to private players, but also engaging directly in the creation or strengthening of markets for energy efficient goods and services[1]. However, a poorly planned transition towards a Green Economy could perversely affect social outcomes by widening income gaps. In the run up to Rio+20, the regional commitment of ESCWA member countries to the Green Economy was outlined in the April 2012 "Arab Ministerial Declaration on the United Nations Conference on Sustainable Development (Rio+20)" of the Council of Arab Ministers Responsible for the Environment (CAMRE). The declaration considers that the transition towards a Green Economy be adapted for national priorities.

- Better resource management is a priority for the ESCWA region, a water-scarce region where about two-thirds of the freshwater originates form sources outside the borders of member countries[2].
- Technology Transfer and improved access to Education is vital for a successful transition towards a Green Economy. In the ESCWA region, industrial production systems are still characterized by inefficiencies in the use of materials, water and energy. This is not only due to their use of obsolete and inefficient technologies, but also to an inability to deploy proper engineering solutions or adopt proper management systems[3].
- There is consensus among ESCWA member countries that the Green Economy should not be used as an excuse for "Green Protectionism". Not only can such protectionism potentially exempt developed countries from honouring their commitments towards developing countries or create preconditions on aid, but it can also hinder local sustainable development by creating trade barriers through difficult to implement environmental standards, or restrictions on developing countries for the use of natural resources by based on their own development priorities[4].
- One key national priority is youth employment. Regional commitments to supporting youth employment objectives were already articulated as early as 2009 and 2010, at the First and Second Arab Economic and Social Development Summits, which ushered in the Arab Decade on Employment (2010-2020).

The transition towards a Green Economy will succeed by capitalizing on opportunities to develop new green industries, jobs and technologies, as well as managing the transition for greening the more traditional sectors and the associated employment and distributional effects. Regulation should focus on adopting new technologies; seizing the opportunities for development of new green activities; and managing the structural changes associated with the transition, in particular the reallocation of capital and labour resources within and across sectors, as well as across regions. This will require:

- Developing new products and supporting new patterns of demand from households, businesses (in both industry and agriculture) and governments[5].

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[1] OECD, 2011.

[2] ESCWA,

[3] UNIDO 2008a

[4] DOC

[5] OECD, forthcoming 2012

- Building up new competencies, upgrading skills, and transforming and creating jobs. This can help enhance gender equity, especially since the share of female students enrolled in university generally exceeds that of males,
- Promoting enterprises that are either engaged into green sectors or in greening their production have the potential to contribute to limiting waste, inefficiencies and pollution. However, care must be taken to ensure that this does not further widen gender gaps the creation of Green Jobs may prioritize sectors of renewable energy and green buildings, sectors where women have long been marginalized (in the energy sector they are less than 6 % of technical staff and below 1% of top managers and hold less than 9% of construction jobs.
- Enhanced waste management, and a promotion of recycling for solid waste and wastewater. This vital for industrial sectors, since they tends to be very resource-intensive, accounting worldwide for more than one third of the world's total consumption of delivered energy, nearly a third of all CO_2 emissions[6], and a fifth of global water use[7]. This is more acute in the developing world, where less than a quarter of industrial waste is recovered or recycled[8].

The governments of ESCWA member countries will need to take into account the various costs, risks, benefits and opportunities of different policy options in accordance with their national capacities and circumstances. They will need to consider policies that support poverty reduction, human well-being and job creation, whilst also driving resource and energy efficiency, technological innovation and environmental protection. Care must also be taken to ensure that the measures do exacerbate already existing discrepancies. This requires that policies be developed through an integrated decision-making process that considers all dimensions of sustainable development, is inclusive and transparent and is supported by effective institutions and regulations. This can be enhanced through regional cooperation, including the provision of means of implementation for developing countries through capacity building, finance and technology transfer that leverage the comparative advantages of the countries within the region.

[6] IEA, 2007.

[7] World Business Council for Sustainable Water Development, 2009

[8] Chalmin, C. and Gaillochet, C., 2009

II. RECOMMENDATION FOR REGULATIONS

The policy guidelines are not developed as a "one size fits all", but are based on the need to develop country-specific policies. The recommendations therefore do not offer a specific template for an inclusive green economy, but a set of guidelines towards developed adapted green economy approaches, each depending on specific national context. This approach also recognizes the fact that several countries are already pursuing inclusive green initiatives with or without the "green economy" label as a means to achieve sustainable development.

A GENERAL RECOMMENDATIONS FOR POLICY

There can be no single Policy instruments for the management of transition towards a Green Economy. Rather, such instruments need to be tailored to support strategies designed to maximize local and immediate benefits without hindering longer-term progress, and thus avoid "lock-in" into unsustainable policies and practices[9].

1 Priority Setting

The implications for priority setting requires a balance between emphasizing local and immediate benefits and urgency with the risk of created greater inertia or "lock-in" and irreversibility. As illustrated in Figure 1, this requires trade-offs, which shows that, while lower-carbon energy from renewable sources is highly desirable, it is often easier to build renewable plants later (even if this requires retiring thermal power plants) than to try and reverse poor land-use planning that has resulted in sprawling cities.

2 Policy Development

As they develop policies, policy makers should ensure that inconsistencies are avoided. One of the main aims of developing policies, procedures, and guidelines is to ensure consistency in governance and economic decision-making. It is therefore essential that policy makers ensure that, as they adapt policies to enable the transition towards a Green Economy, no inconsistencies remain. In order to avoid that any inconsistencies appear, care must be taken to following a systematic, iterative procedure that is centered on 5 broad steps:

1. **Identify the need**. This may require a fundamental review and redesign of public policies, with a view to identify those that stimulate shifts in production, consumption, purchasing, and investment patterns, and thus to assess policy trade-offs and identify policy synergies.
    a. Ideally, the transition towards the Green Economy would render irrelevant those incentives that distort economic activity, such as subsidies (particularly to fuel, electricity, and water).
    b. However, in practice, this process should be approached in the specific context of the country, focusing on focusing excessively broad subsidies that typically inadequately reach the poor,
2. **Consultation and drafting**. The key to the formulation of the green economy policies will need to focus on an integrated approach to policy formulation and implementation. Achieving this may involve establishing a working group to draft the document and consult with relevant stakeholders. This part of the process cannot be rushed, even in cases where there is a basic understanding of the potential gains across social, economic and environmental strands.

[9] World Bank, 2012.

Coordination is vital at this stage because the task of harnessing opportunities afforded by the transition towards a Green Economy can be challenging for policymakers and practitioners.

a. Such coordination needs to take places at all levels across traditionally compartmentalised institutions responsible for environment, energy, climate change, economic sectors, and social areas.

b. Stakeholders and major groups may require the inclusion civil society alongside the private sector. While this is necessary to allow the emergence of common elements, it places a burden on policymakers to reconcile potentially different outlooks and perspectives of those diverse stakeholders.

c. Policy makers also need to seek and obtain advice from experts and form other policy makers. Expert advice is necessary to obtain purely technical and scientific considerations, and can have little or no perspective of the needs of economic sectors or social actors. Input from other policy makers is vital to: (1) consider the implications of the policy, (2) determine any potential inconsistency with other strategies, policies or procedures, and (3) ascertain any organizational changes arising from the policy.

3. **Approval**, once the document is revised in the light of comments, and once policy makers
4. **Capacity Building** through communication and training, to ensure stakeholders understand and apply the policy properly.
5. **Review**, after Approval and Application of the policy. This is done both to ensure compliance and to ascertain the continuing validity of the strategies, policies or procedures that were decided.

The decisions on which policies to implement and in which order would be based on a balance between the “Inertia and/or risk of lock-in and irreversibility” on one hand, and the need to “local and immediate benefits and urgency”.

The policies are categorized depending on their impact (long-term, short-term), visibility (high, low), and cost (high, low) (Figure 1).

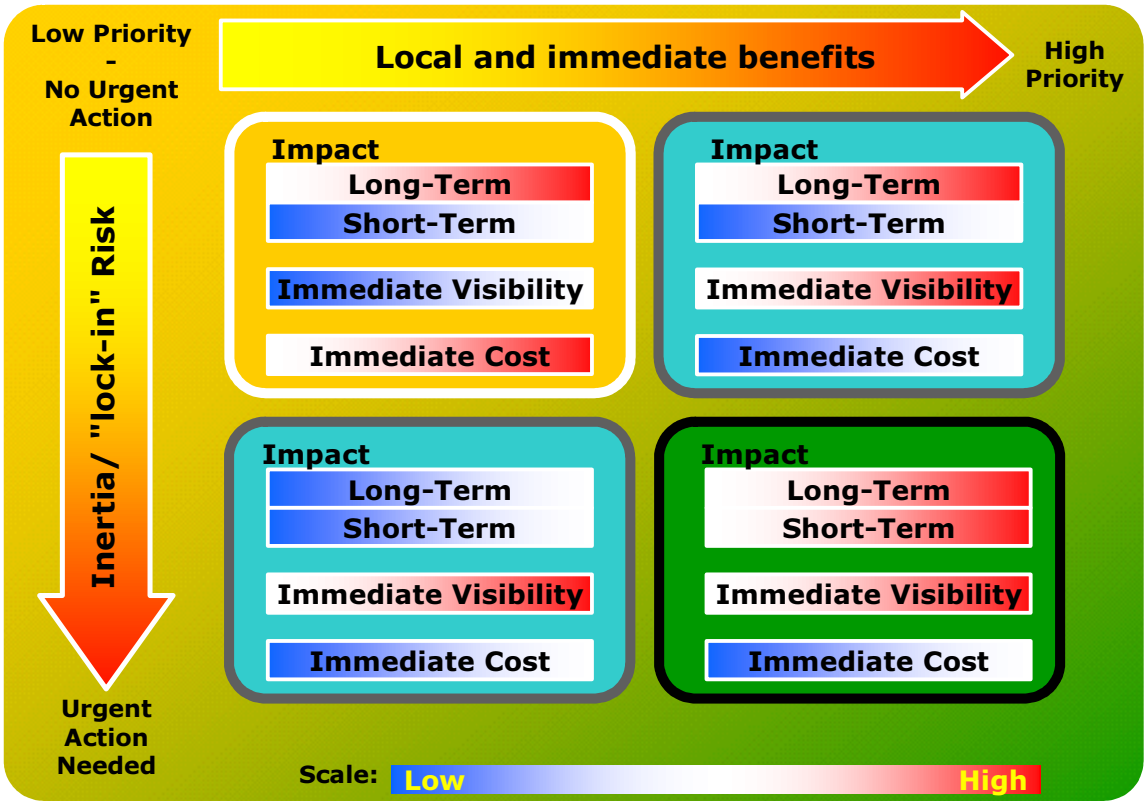


Figure 1. Some guiding principles for establishing green growth strategies[10].

3 Policy Validation and Performance Measures

Effective green growth policies are those that help the economy move away from "sub-optimal performance". The multi-dimensional nature of the Green Economy is such that single indicators are of limited use. Governments committed to a transition to Green Economy require a wider set of indicators and targets by which progress can be measured and validated. This measurement and validation is done through the use of measurable indicators of the performance of the sector of activity under consideration. This can be done in two ways (1) a "snapshot" of the current state of affairs, or (2) a "trend" analysis, or a measure of the improvement in actual economic output over a certain period of time.

Comparative Snapshot

The "snapshot" of the current state of affairs, done through comparison of different indicators, in any given year with international indicators such as MDGs, or with regional averages such as those identified through regional mapping.

Such mappings are based on indicators that are internationally comparable. These indicators need to be embedded in a conceptual framework and selected according to well-specified criteria[11], and designed in such a way as to track central elements of Green Economy. Those indicators selected were selected to represent key factors of Sustainable Development; the "Environment" where we live, the "Economy" that describes the system of activities that humans undertake, the "Standard of Living" that people strive to improve in the context of various "Policy Responses and Economic Opportunities

[10] After: World Bank, 2012, p.17

[11] OECD, 2011.

Table 1. OVERVIEW OF MAPPING INDICATORS

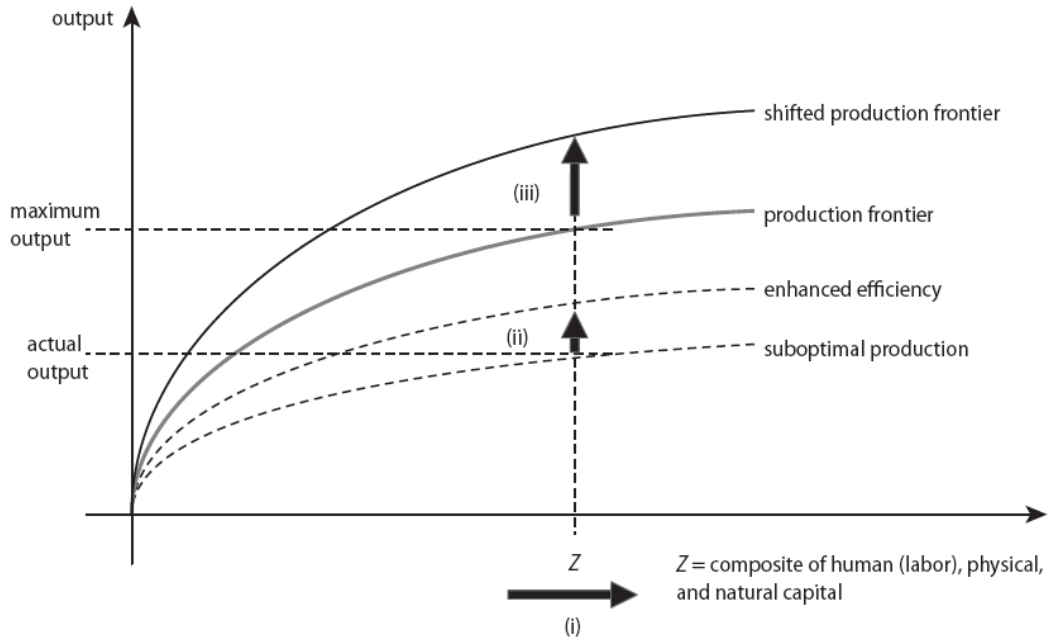
Category	Indicator	Description	Source
Environment	ESI	Environmental Sustainability Index	FAO-Aquastat
	EPI	Environmental Performance Index	FAO-Aquastat
Economic Transformation	Energy	Share of Renewable Energy as % of Total	ESCWA
	WealthWater	Wealth Generated by the Use of Water in Industry	Beaumont, 2000
	GDP-P	Domestic Credits to Private Sector as share of GDP (-)	World Bank
	GDP-SME	Contribution of SMEs to GDP (-)	Nicola, 2009
Progress and Well-Being	HDI	Human Development Index	UNDP
	Emp	Proportion of the Population Employed, 2008 Data (-)	ESCWA, 2011-a
	Emp-WM	Ratio of Women to Men Employment (-)	ESCWA, 2011-a
	Air-CO2	Air Quality: per Capita CO2 Emissions (Tonnes/Capita)	World Bank
	Air-CEC	Air Quality: per Capita Commercial Energy Consumption, in kg of oil equivalent per capita	World Bank
	W-Quantity	Per Capita Water Quantity (m^3/Person), normalized with respect to "Water Stress Index".	FAO-Aquastat
	W-Quality	Water Quality: BOD Emissions Per Worker (kg / Worker / Day)	World Bank
Policy Response and Means of Implementation	GreenP	Green Procurement: % of public procurement earmarked for Green Projects.	N/A
	ETax	Environmental Taxation: % of Taxes and fines collected specifically linked to pollution	N/A
	Incentive	Business Incentives: % of public incentives earmarked for Green Projects or Green SMEs	N/A
	GreenF	Green Financing: % of bank financing for Green Projects or Green SMEs	N/A

Trend Analysis

The "trend" analysis shows evolution of the economic sector of activity. It is based on measures of the change in actual economic output of the sector of activity under consideration.

In general, this actual economic output depends on two key factors; (1) the "production frontier", or the maximum production level possible with the maximum efficiency in the application of technology towards the use of physical capital, labour, and environmental resources, (2) the "efficiency", or how close the real-world production system actually is to the production frontier[12].

[12] World Bank, 2012.



Note: Arrow (i) represents increase in factors of production. Arrow (ii) represents enhanced efficiency and stimulus effect. Arrow (iii) represents shift in production frontier.

Figure 2. Green policies hold the potential to sharply boost output[13].

This dual approach would allow to ascertain the effect of how Green growth policies are effectively moving away from "suboptimalities" and towards increased efficiency, and thus to contribute to growth while ensuring protection of the environment.

Dealing with Inconsistencies

Any lack of coordination risks leading to policy inconsistencies. This will defeat the main aim of developing policies, which is to ensure consistency in governance and economic decision-making. It is therefore essential that policy makers ensure that, as they adapt policies to enable the transition towards a Green Economy, no inconsistencies remain. Such inconsistencies can arise in three cases;

1. The outcome of a given policy is inconsistent with the purpose and intent for which a policy has been approved;
2. The procedure requires actions that are inconsistent with the purpose and intent of the policy;
3. A given policy is inconsistent with another policy that applies to the same activity, or impose different requirements.

In order to avoid such inconsistencies, care must be taken so that any proposed amendments should only be developed after a thorough review of existing policies, procedures, and guidelines, and the wording used must be clear and precise.

4 Capacity for Policy Development

In policy development, significant challenges remain in the development of baselines and the measurement of impacts of their green economy strategies and policies. In general, there are three gaps in measuring the effects of a transition towards a green economy;

[13] World Bank, 2012, p.37

1. A scarcity of data and indicators that capture the economic transformation in terms of investments, outputs and jobs in environmental sectors (renewable energy technologies, public transport, waste management and recycling, etc.). There is increasing attention in the investment community, especially in the areas of environmental finance and impact investing that may provide for innovative partnerships in this area.
2. Many of the existing indicators related to sustainable development appear to play a secondary role in policy-making relative to key economic indicators such as GDP. A key challenge is to understand better the constraints to taking a more integrated approach, which may require further elaborating how changes in different indicators are related to each other.
3. A general lack of ability to collect and report on proposed, or even standard, indicators and make them widely available. This shortcoming is compounded by the fact that data sources and responsibilities for data production are typically scattered across ministries and agencies (horizontal) and across levels of government (vertical). This leads to many actors are involved in producing, financing and disseminating the various types of information that are needed.

It is therefore vital that the "Capacity for Policy Development" be addressed as part of the formulation of policies to enhance the transition to a Green Economy. This is carried out in three steps:

1. Establish a formal co-ordination mechanism among ministries and agencies (horizontal) and across levels of government (vertical).
    a. This may also require the establishment of national commission to coordinate work carried out by several ministries or agencies. The commission could be under the auspices of the country's national statistical offices.
    b. The specific details of this coordination setup depend on the institutional set-up and the level and type of co-operation that exists among the various actors::
        - National ministries responsible for the environment, the economy, finance, trade, agriculture, energy, transport or industry,
        - Research institutions and universities, either of which can play an important role in environmental monitoring, and in environmental and economic accounting, modelling and forecasting,
        - When applicable, private firms that may be involved in environmental monitoring, or Chambers of commerce and business associations.
2. Ensure that the indicators are representative, which will be achieved through a multi-stakeholder consultation process involving the government, businesses and other stakeholders,
3. Implement mechanisms to bring the relevant information together in a coherent format and in a timely manner.

B SPECIFIC POLICY RECOMMENDATIONS

Specifically, the implemented green economy policies can be divided into policy instruments, analytical tools, and measurement frameworks[14]:

1. Policy instruments to encourage an inclusive, green economy. Those include fiscal policies (such as environmental fiscal reforms), , public private partnerships and provision of decent

[14] UNDESA, 2012.

and "green" employment and trade policies to promote social or environmental objectives. Those policy instruments tools can be as diverse as[15]:

- Capacity building initiatives, such as inclusive green economy/green growth strategies and related consultations, workshops and assessments; valuation of ecosystems and social-economic-environmental analysis;
- Fiscal instruments, both on the large scale and small scale:
  - Large scale fiscal instruments are such tools as fiscal policies, pricing, taxes, revenue collection, and market based instruments; green accounting and measurement frameworks; legislation, and removal of barriers.
  - Small scale instruments focus on social protection and livelihood promotion, and thus include such programs as micro-credit, adaptive social protection. Public works programmes can also be considered in this category, as well as conditional cash transfers for social objectives and environmental objectives.
- Business Incentives, such as clean production and greening of value chains; win-win-win thematic approaches, including for energy and water. However, in the context of the Water-scarce ESCWA region, regulation should focus on ensuring that resources such as water are not allocated across sectors.
- Both fiscal and business incentives should take into account the need to focusing more explicitly on equity and social aspects and improving livelihoods and safeguarding vulnerable groups. Those aspects are such as poverty-environment links, green jobs, youth employment, gender equity, and benefit sharing.

2. Decision-making tools to assess options for an inclusive, green economy. Such decision-making tools include macro-economic modelling of economic, social and environment trade-offs and synergies, for modelling labour market effects of selected policies and assessment tools such as poverty social impact assessment and strategic environmental assessment of selected policies.
3. Measurement frameworks to track progress towards the social and environmental outcomes of an inclusive, green economy.
   - This can include MDG assessments, State of Environment Reports, green accounting, Human Development Reporting and poverty or climate and environment public expenditure reviews to assess expenditure on social and environmental objectives. Such national indicators are linked to the international debate on Sustainable Development Goals and indicators for the post-2015 Millennium Development Goal targets.
   - In addition to the MDGs, other indicators can be used that reflect specific policy interventions, as they would highlight the potential cost and performance of various policy options, and therefore their adequacy. Those indicators would then represent the costs related to investment needed to achieve desired targets and their allocation across key sectors in the economy. They would thus evaluate the required investment under any given investment strategy, a particularly useful tool when capital investments are involved and governments are actively pursuing private investments through subsidies or regulatory mandates.

[15] UNDESA, 2012.

As a key policy instrument, regulation should be designed to ensure the that the transition towards a Green Economy allows countries to meet two strategic objectives;

(1) "greening the brown" by managing the transition for greening the more traditional sectors, while preserving the associated employment and distributional effects,

(2) "growing the green", by helping businesses to capitalize on opportunities offered by the new green industries, jobs and technologies.

This is carried out through a regulatory process, with a focus on implementing policies that are complementary with other priorities. This is because the transition towards a Green Economy can be addressed in the context of other policies, not least because of its cross-cutting objectives. For example, the Green Economy can be addressed in the context of progress towards achieving the Millennium Development Goals (MDG). Indeed, the social dimension underpins many of the dimensions of Green Economy initiatives, not least the need to "Ensure Environment Sustainability" (MDG 7). In this respect, progress on the MDG indicators is therefore also part of the progress towards the transition towards the Green Economy. Any indicators that show progress in MDG would also reflect greater progress towards the Green Economy, and will further sustain the transition towards a Green Economy, it is important to consolidate a "constituency" of stakeholders with a stake in its success.

Therefore, In order to meet this dual objective and contribute further to the Millennium Development Goals, no single regulatory "silver bullet" can apply. Rather, regulations need to be conceived so as to focus on various related issues, and progress on the transition towards Green Economy along will be carried out incrementally. The transition towards a Green Economy will be carried out along four different major steps;

1. **Environmental sustainability** will be enhanced by the **adoption of new technologies** that are less polluting and more resources efficient.
    - This is clearly reflected in MDG 7; Enhancing Environmental sustainability
2. This will facilitate **economic transformation** by allowing businesses to seizing the **opportunities for development of new green activities**.
    - This bring about the need for an skilled and healthy workforce, which means that "Achieving Universal Primary Education" (MDG 2) and "Combating HIV/AIDS and Other Diseases" (MDG 6) are both complementary with this goal. In addition, the need to empower green businesses and SMEs would be reflected in enhanced "Gender Equality and Women Empowerment" (MDG 3).
3. This transition will create changes that need to be managed properly. The **management of the structural changes associated with the transition** will need to take into account the need to ensure that existing gains in **Progress and well being** are maintained and enhanced.
    - This will further sustain the transition towards a Green Economy by consolidating a "constituency" of stakeholders with a stake in its success. In this respect, any "Improvements of Maternal Health" (MDG 5) and "Reduction of Child Mortality" (MDG 4) would go a long way to reinforcing any associated beneficial economic trends. This goal will also be promoted by enhanced "Gender Equality and Women Empowerment" (MDG 3).
4. As the economy moves towards Green Economy patterns of production and consumption, it policy makers should care to carefully **manage the reallocation of capital and labour resources** within and across sectors, by developing appropriate **policy responses** and adequate **means of implementation**.

- However, since no stable capital markets can function in times of extreme crisis, the need to Eliminate Extreme Poverty and Hunger (MDG 1) is a necessary prerequisite.
- A stable economic and policy environment is also enhanced by greater women involvement, as shown y the successful example of micro-credit programs. Therefore enhancement in "Gender Equality and Women Empowerment" (MDG 3) is a prerequisite for this goal.

1 Environmental Sustainability and the Adoption of New Technologies

In the adoption of new technologies, it is not clear that the adoption of new technologies can derive from planning processes, because technical progress is generally hard to forecast. However, it is necessary to ensure that:

- The adopted technologies not only serve to maintain the healthy functioning of Earth's ecosystems, but also help promote inclusive economic growth and create opportunities for employment, and thus help in reducing poverty and supporting more sustainable development.
- the adoption of technologies is promoted through integrated planning processes, enabling environments, and effective institutions at all levels, and is supported by the UN and partners upon request through capacity development and technical assistance.

However, the focus of technology adoption does not necessarily have to be limited to purely economic considerations, but needs also to take into account human social capital. Indeed, technology is socially and ecologically embedded, and so the adoption of new technologies should move beyond simple technology transfer, to consider that technology and investment in science must be approached as a social transformation process. There is much "evidence that human capital is an important determinant of economic growth", and both human and social capital "can be mutually reinforcing[16]".

In general, endogenous economic growth models give a high importance to this Human and social capital. However, in the context of the transition towards a Green Economy, consideration should be given to factors that go beyond physical and visible benefits, because of the difficulty of "forecasting ahead" what may be relevant. For this reason, policies to promote the adoption of new Green Technologies can follow two key axes; (1) for lack of a better terminology, an "economic" axis focused on improving resource utilization, and a (2) "social" axis to better account for human and social capital.

- Economic Axis:
  1. Renewable energy sources and increased efficiency of energy generation systems.
  2. Low-impact mining and efficient resource extraction, as well as efficient use of natural capital.
  3. Efficient transportation and enhanced mobility, leading to enhanced air quality, reduced emissions and noise.
  4. Efficient energy usage in industry and reduced waste generation, supported by a framework for Corporate Social Responsibility (CSR) and environmental reporting.
- Social Axis:
  1. Technology adoption to enhance the wide range of non-economic benefits of the combined effect of human and social capital, including improvements in health and a greater sense of well-being.

[16] OECD, 2001, p.65.

2. Mechanisms to preserve traditional knowledge to help sustain local livelihood. In addition, this can lead to the possible application of the benefits of such knowledge to other sectors of activities.

Table 2. KEY POLICY GUIDELINES FOR THE ADOPTION OF NEW TECHNOLOGIES.

Guideline	Description
Policy Instrument	• Investments in human capital, focusing on education and training assisted by community-based networks • Strengthening social capital • Treat ICT as a "commodity" rather than a simple "profit-center"; in today's knowledge-base economy, some aspects of ICT are similar to essential utilities. • linking social services such as health care to communities
Measurement Framework	• Measure beyond traditional metrics of numeracy and literacy, to reflect competencies such as teamwork, problem-solving and ICT skills. • Develop measures for patterns of technology adoption. An example is measure that reflect ICT technology penetration. • Suggested Indicators; Environmental Sustainability Index, Environmental Performance Index, Share of Renewable Energy as % of Total, Human Development Index, per Capita CO2 Emissions (Tonnes/Capita), Per Capita Water Quantity (m3/Person), normalized with respect to "Water Stress Index", BOD Emissions Per Worker (kg / Worker / Day), Wealth Generated by the Use of Water in Industry.

Policy Focus and Relevant Instruments

The role of government in sustaining innovation is not clear-cut, because of the unpredictable nature of this innovation. In this respect, governments may tend to play the role of facilitator, rather than main actor. Government can best exert its diffuse yet powerful influence by creating the conditions that promote the adoption of new technologies through a "bottom-up" approach. Regulation can promote this adoption either directly or indirectly.

The indirect adoption of new technologies is carried out by the country's human capital, which can be encouraged by policies that take into account human capital. In general, policies that take into account human capital need to be set in context, and recognise the effect of economic change, the variety of learning environments, the importance of partnership and dialogue, and the necessity for long-time scales. In the context of the transition towards a Green economy, the increased knowledge-intensity of economic activity is a key driver of economic change, and may be changing the demand for the type of human capital needed, not least because of its increased emphasis on "non-cognitive" skills such as teamwork and innovation. This widens the range of learning environments beyond traditional schooling to include family, the social fabric, and the workplace. In addition, it places increased necessity on partnership and dialogue among private, public and voluntary sectors. In this respect, policies should focus on:

1. Investments in human capital generate significant private and social benefits. There is much evidence of significant non-economic benefits flowing from investment in human capital – better health, improved well-being, better parenting, and more social and political engagement. While not all investment in education is desirable, targeted investment in human capital formation can be made such as:
    a. Education and training assisted by community-based networks, by encouraging greater cooperation between universities and industry. This may lead to curricula and

teaching methods that give greater weight to inter-personal and other non-cognitive skills, alongside the traditional promotion of cognitive skills.

b. Incentives for continual learning, with a focus on those most vulnerable to exclusion, such as those who have been long-term unemployed, or are stuck in "poverty trap" of low paying work.

2. Strengthening social capital through community support. those are measures such as:

a. Childcare, to help support working families.

b. Continuing education for educators, and innovation through networking between established research centres, the private sector, vocational education, and schools.

c. Support for voluntary initiatives, with a focus on encouraging greater employers involvement in community activities.

Decision-Making Tools

Because of the "bottom-up" nature of technology adoption, decision-making needs to ensure that people have greater involvement in the decision-making process. This can be greatly mediated through Information and Communication Technology (ICT), particularly the new forms of ICT that are available alongside more traditional media.

1. Governments need to consider ICT as a "commodity" rather than a simple "profit-center", with a particular focus on the new forms of ICT that are available alongside more traditional media. Those are the forms that:

a. Offers new opportunities for government to consult and communicate with citizens, and not only open up its own actions to public scrutiny.

b. Enhance access of disadvantaged groups to ICT. This will help connect people beyond local neighbourhoods to more distant communities. This information communication can enhance knowledge exchange and market transactions. Knowledge exchange is increasingly promoted through informal learning, including distance learning, and regulations should provide a mean to "validate" these diverse, demand-led and individualised forms of learning. The efficiency of market transactions is greatly enhanced, particularly in cases where matching information is lacking.

c. Electronic networks can also generate greater opportunities for informal learning, including distance learning, are opened up by new media. It is important that disadvantaged groups have greater access to new media so that they can take fuller advantage of new information highways and networks. Informal environments are becoming increasingly important as countries move towards diverse, demand-led and individualised forms of learning.

2. By linking social services such as health care to communities, governments can increase the feedback they obtain from the local community level, in addition to enhancing the strength of social ties and the positive health benefits the community derives from this, which will in turn promote better local decision making.

The decisions on which policies to implement and in which order would be based on a balance between the "Inertia and/or risk of lock-in and irreversibility" on one hand, and the need to "local and immediate benefits and urgency". The policies are categorized depending on their impact (long-term, short-term), visibility (high, low), and cost (high, low) (Figure 3).

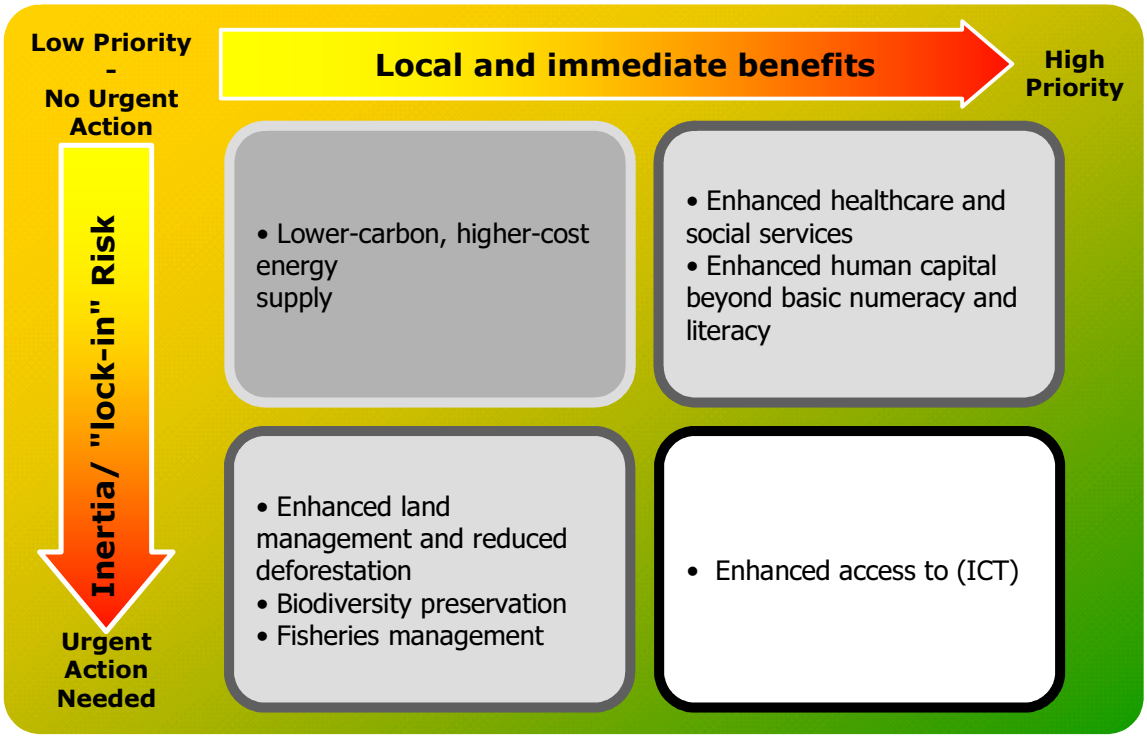


Figure 3. Strategies for Environmental Sustainability and the Adoption of New Technologies[17].

Measurement Frameworks

The current measurement tools remain insufficient for this aspect of the transition towards a Green Economy. Because gaps remain in our current understanding, the measurement framework needs to be flexible enough to account for measures of human and social capital, in addition of traditional measures of education and technology adoption.

Measurement frameworks need to be extended to include the following areas;

1. Extending the measurement of human capital beyond the areas of numeracy and literacy into competencies fields such as teamwork, problem-solving and ICT skills. This could be done within the context of wider efforts related to the International Adult Literacy Survey (IALS).
2. Developing better measures for patterns of technology adoption to reflect both formal and informal networks. For example, Measures that reflect ICT technology penetration, such as the extent of adoption of cell-phones, access to and availability of communication networks. This will be critical in training initiatives and enhanced access to market.

At the present stage of knowledge, measurable indicators for Environmental Sustainability and the adoption of new technologies are such as:

- Environmental Sustainability Index,
- Environmental Performance Index,
- Share of Renewable Energy as % of Total,
- Human Development Index,

[17] After: World Bank, 2012, p.17

- per Capita CO2 Emissions (Tonnes/Capita),
- Per Capita Water Quantity (m3/Person), normalized with respect to "Water Stress Index".
- BOD Emissions Per Worker (kg / Worker / Day),
- Wealth Generated by the Use of Water in Industry. It should be noted that this specific indicator may over-represent the efficiencies of some industries or regions relative to one another. This is especially the case since, in addition to large differences in water intensity amongst various industrial sectors, the industrial structure may differs greatly among various regions.

Additional indicators of the facilitation of economic transformation are clearly reflected in MDG 7; Enhancing Environmental sustainability.

2 Economic Transformation to Seize Green development Opportunities

Economic development is largely dependent on policy making to create the right environment for the growth and business innovation. The role of the public sector is indispensable for helping this transition along. Policy making can enhance the transition towards a Green Economy in two key ways;

1. Actively promoting Green Economy both in the public and private sectors.
    a. In the public sector, resources should not attempt to compete with private businesses, but primarily focus on enhancing and protecting specific public goods, such as access to water and sanitation, biodiversity promotion and poverty eradication.
    b. In the private sector, policy would focus on the development of businesses in Green Growth areas. The focus would promote those industries where "green skills" and human capital need development, with a focus on youth entrepreneurship, a key need of the ESCWA Region.
2. Maintaining regulatory focus. In this respect, policy making would strive for two objectives
    a. Ensuring "regulatory stability". Indeed, one of the main aims of developing policies is to ensure consistency in governance and economic decision-making. It is therefore essential that policy makers ensure that:
        - The approach proposed is consistent and does not contradict an existing policy.
        - If existing policies need to be changed, it should be done in a way to ensure that new policies are "eased in" and not simply driven through.
    b. Policy should take care to ensure that Green Development excludes "Green Protectionism", and thus avoids unwarranted any conditionality on official development assistance and finance. This will ensure that the Green Economy is not used as arbitrary, nor leads to unjustifiable discrimination or disguised restriction on international trade.

Table 3. KEY POLICY GUIDELINES FOR SEIZING GREEN DEVELOPMENT OPPORTUNITIES

Guideline	Description
Policy Instrument	• Improving access to markets while avoiding distortive effects to competition and trade. • Regulatory reforms to reduce burdens on the private and the public sector and SMEs while enhancing environmental compliance • The focus on Broad subsidies should be replaced with targeted

		subsidies
Measurement Framework	•	Suggested Indicators; Human Development Index, Proportion of the Population Employed, Share of Renewable Energy as % of Total, per Capita CO2 Emissions (Tonnes/Capita), Per Capita Water Quantity (m3/Person), normalized with respect to "Water Stress Index", Domestic Credits to Private Sector as share of GDP, Contribution of SMEs to GDP, Wealth Generated by the Use of Water in Industry, Per Capita Commercial Energy Consumption, in kg of oil equivalent per capita

Policy Focus and Relevant Instruments

The focus here is on promoting Green Investment strategies within the private sector. This will not come through direct action as much as indirect action towards improving governance by facilitation business starts and reducing "red tape", while still developing adequate environmental protection rules and regulations and ensuring they are followed.

In practical terms, the policy focus in this area would be on:

1. Improving access to markets while avoiding distortive effects to competition and trade. Oriented policies at removing barriers to SME's participation in expanding global green markets and value chains, through:
    a. Standards and public procurements to strengthen emerging green markets and open new ones.
    b. Demand side measures, such as information campaigns and eco-labeling.
2. Regulatory reforms to reduce burdens on the private and the public sector and SMEs while enhancing environmental compliance. This will require enhance access to finance and the availability of green financing schemes, with a particular focus on promoting green SMEs. This is done through:
    a. Prioritize policies to support existing structures such as the Arab Environment Facility (AEF).
    b. Policies to help correct market failures and help entrepreneurial start-ups by not "penalizing failure", and promote venture or risk capital funds. One example is the recently introduced "Green Sukuk", introduced in Saudi Arabia and the United Arab Emirates.
    c. Simplify administrative procedures, notably for Green Investments, such as those that help reduce waste or boost energy efficiency.
    d. The establishment of an "SME Authority", an independent public sector body to coordinate closely with ministries responsible for the economy, finance, trade for the purposes of policy formulation and enforcement.
3. The focus on Broad subsidies should be replaced with targeted subsidies to those who are most in need for assistance.
    a. As much as possible, policies formulations would steer away from cost-ineffective conventional supply management measures,
    b. The primary focus of targeted subsidies would be to support the transition in this sector would focus on enhancing local industrial competitiveness, income diversification, and job creation. Low-carbon industrial development strategies should be conceived as means to this end.

c. The secondary focus on targeted subsidies would be to promote industrial development strategies that aim to turn the economy into an energy-efficient economy.

Those actions would be undertaken within the context of institutional arrangements and multilateral environmental agreements, possibly reflected through environmental performance reviews.

Decision-Making Tools

Any decision making tools that are implemented need to focus on integrative collaboration across various stakeholders. The transition toward the Green Economy will not be driven by both direct government action as well as private action. Decision making would therefore need to support and monitor the capacity of the private sector to seize new Green Development opportunities, while allowing for the government to intervene to address "market failures".

It is therefore important that policies promote the strengthening of coordination among different stakeholders involved with developing tools and methodologies for planning inclusive green economy. The decisions on which policies to implement and in which order would be based on a balance between the "Inertia and/or risk of lock-in and irreversibility" on one hand, and the need to "local and immediate benefits and urgency". The policies are categorized depending on their impact (long-term, short-term), visibility (high, low), and cost (high, low) (Figure 4).

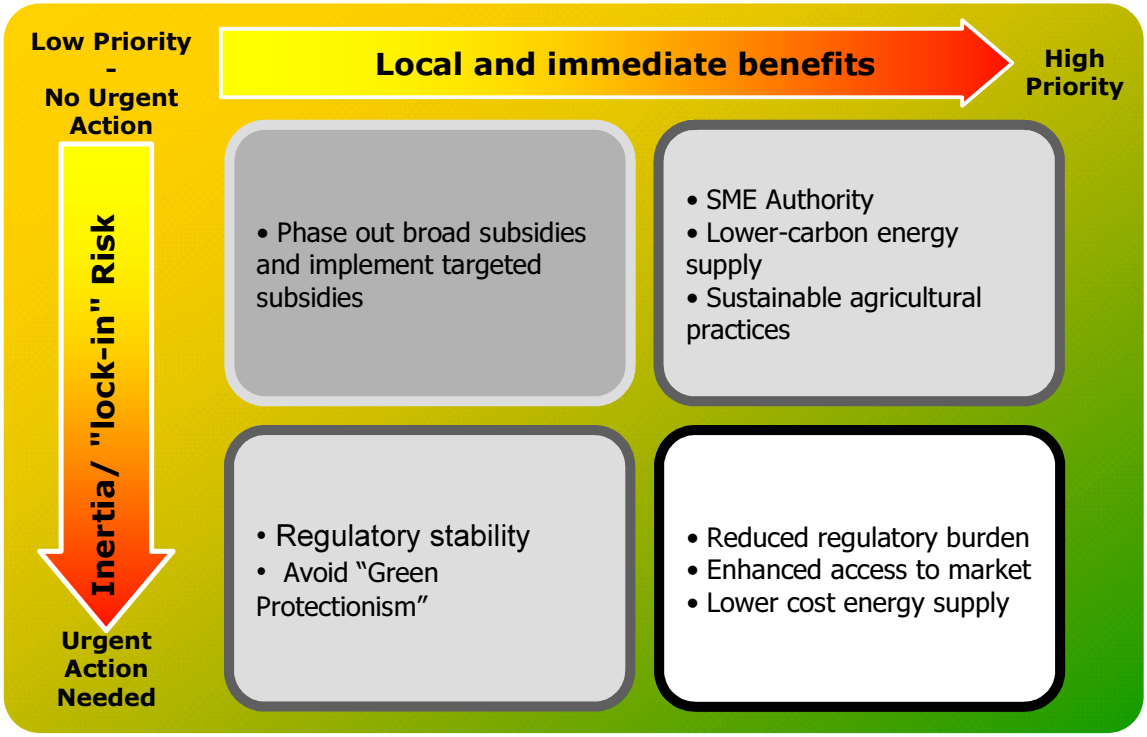


Figure 4. Strategies for Economic Transformation to Seize Green development Opportunities[18].

Measurement Frameworks

For the economic transformation to seize the opportunities for development of new green activities, a series of key criteria need to be met. Those key criteria are reflected by the following parameters:

[18] After: World Bank, 2012, p.17

- Human Development Index,
- Proportion of the Population Employed,
- Share of Renewable Energy as % of Total
- per Capita CO2 Emissions (Tonnes/Capita)
- Per Capita Water Quantity (m3/Person), normalized with respect to “Water Stress Index”.
- Domestic Credits to Private Sector as share of GDP
- Contribution of SMEs to GDP
- Wealth Generated by the Use of Water in Industry
- Per Capita Commercial Energy Consumption, in kg of oil equivalent per capita

Additional indicators of the facilitation of economic transformation are reflected in those MDG indicators that reflect greater ability of businesses to seize the opportunities for development of new green activities. Those are:

- The need for an skilled and healthy workforce, which means that “Achieving Universal Primary Education” (MDG 2) and “Combating HIV/AIDS and Other Diseases” (MDG 6)
- The need to empower green businesses and SMEs would be reflected in enhanced “Gender Equality and Women Empowerment” (MDG 3).

3 Managing Structural Changes and Enhancing Progress and Well Being

The transition towards a Green Economy requires the mainstreaming of green economy into national development strategies and the involvement of planning authorities and financial institutions. The management of structural changes should therefore be strengthened with respect to governance and integrated planning and implementation across sectors, institutions, and stakeholders at all levels. This approach is necessary because "empirical and theoretical evidence on how inclusive green economy or green growth can be planned, implemented and evaluated in different contexts remains limited[19]".

Table 4. KEY POLICY GUIDELINES FOR MANAGING STRUCTURAL CHANGES

Guideline	Description
Policy Instrument	• Tax breaks for Green re-equipment, • Energy pricing to encourage the use of all renewable energies, • Implement environmental laws that prohibit open disposal of solid and liquid wastes from industrial facilities of all types and facilitate waste recycling across industrial sectors. • Raise awareness and promote the creation of knowledge networks
Measurement Framework	• Suggested Indicators; Environmental Sustainability Index, Environmental Performance Index, Human Development Index, per Capita CO2 Emissions (Tonnes/Capita),Per Capita Water Quantity (m3/Person), normalized with respect to "Water Stress Index", Proportion of the Population Employed, Ratio of Women to Men Employment.

Policy Focus and Relevant Instruments

National consensus should be reached on the set of acceptable "low carbon" Green Growth development policies, with a view to develop a comprehensive toolbox of acceptable policies. The transition towards a Green Economy implies an increased role for the comparatively dynamic private sector, notably the Small and Medium Enterprises (SME). For this reason, SMEs would benefit from the following set of policies[20]:

1. Tax breaks for Green re-equipment. This could include equipment imported and manufactured for purposes of decreasing waste production through recycling such as biogas plants or organic waste digesters.
2. Energy pricing to encourage the use of all renewable energies. This can be done by:
    a. Reduce uncertainty by providing guaranteed minimum electricity purchase prices to renewable energy producers. Provisions for phasing the guaranteed minimum prices should be incorporated in the policy.
    b. Ensure energy subsidies are designed to target small earners,
    c. Develop a "phase out" of most advantages, to encourage private businesses to become more self-reliant.
3. Implement environmental laws that:

[19] UNDESA, 2012, p.15.

[20] SMEs, resource efficiency and green markets, flash Euro Barometer 342", a business to business survey co-ordinated by the Directorate-General for Communication ("Research and Speechwriting" Unit) of the European Union

a. Prohibit open disposal of solid and liquid wastes from industrial facilities of all types,

b. Facilitate waste recycling across industrial sectors. This will encourage the develop of businesses that rely on the by-products of others. For example, second-generation bio-fuel makers that recycle agricultural waste products.

4. Raising awareness, notably for SMEs' and entrepreneurs' awareness, and promoting the creation of knowledge networks that enhance their active role in the low-carbon economy, as producers, users, integrators of skills and technologies, innovators and trainers.

Decision-Making Tools

Because of the need for inter-sector coordination, the policies would need to be conceived within the context of a national level master plan. Such a plan would action within sectors, define land use and urban planning, thus outlining the development for various regions, in terms of infrastructure and economic activity. The effect of planning decisions are then reflected in Environmental Impact Assessment (EIA) and Strategic Impact Assessment (SIA).

The decisions on which policies to implement and in which order would be based on a balance between the "Inertia and/or risk of lock-in and irreversibility" on one hand, and the need to "local and immediate benefits and urgency". The policies are categorized depending on their impact (long-term, short-term), visibility (high, low), and cost (high, low) (Figure 5).

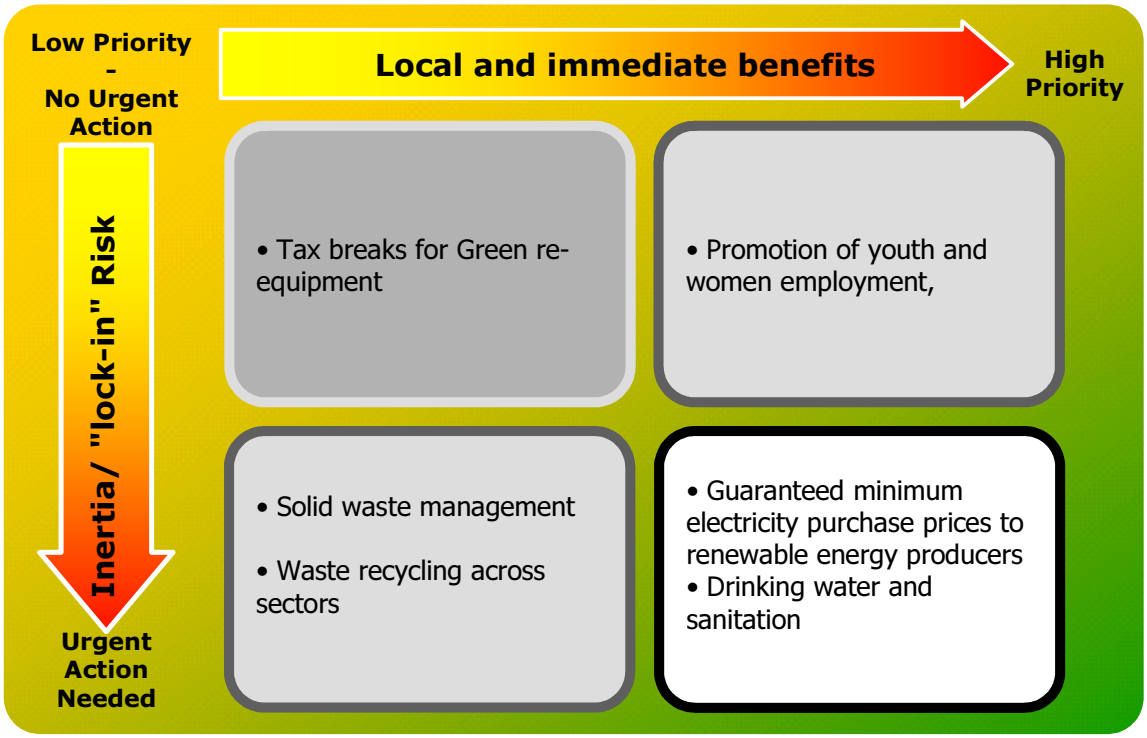


Figure 5. Strategies for Managing Structural Changes and Enhancing Progress and Well Being[21].

[21] After: World Bank, 2012, p.17

Measurement Frameworks

The structural changes should focus on a promoting the "shift" of a "production frontier", where greater output can be generated for the same amount of "input". Measurements indicators can easily reflect such a shift, in addition to Green Accounting, a variety of indicators can be relied upon.

Green Accounting Green extends national accounts to include the value of the damage and depletion of the natural assets that underpin production and human well-being. Net saving, adjusted for the depreciation of produced assets and the depletion and degradation of the environment, indicates whether well-being can be sustained.

In addition, other measurable indicators for managing the structural changes associated with the transition and enhancing progress and well being,

- Environmental Sustainability Index,
- Environmental Performance Index,
- Human Development Index,
- per Capita CO2 Emissions (Tonnes/Capita)
- Per Capita Water Quantity (m3/Person), normalized with respect to "Water Stress Index".
- Proportion of the Population Employed,
- Ratio of Women to Men Employment.

Additional indicators of the facilitation of economic transformation are reflected in those MDG indicators that maintain and enhance Progress and well being, not least by consolidating a "constituency" of stakeholders with a stake in the success of the transition towards a Green Economy. Those are:

- Any "Improvements of Maternal Health" (MDG 5)
- Progress towards "Reduction of Child Mortality" (MDG 4),
- Enhanced "Gender Equality and Women Empowerment" (MDG 3).

4 Policy Response and Management of the Reallocation of Resources across Sectors

A key necessity for the transition towards a Green Economy is the promotion of better use of resources as a prelude of an increase in resource-use efficiency. However, this is not sufficient in itself, and efficiency gains must be used to build the productive base of countries, through investments in natural, social and human capital across sectors. The main source of such investments would most likely be the private sector, since public resources can be significantly smaller than those of private markets. However, the role of the public sector is still indispensable for helping this transition along by;

1. Enhancing and protecting specific public goods by. The reallocation of resources needs to take into account biodiversity hotspots in the ESCWA region, and ensure that more efficient use is made of their unique ecosystem services. In this context, it should be noted that, in the context of the ESCWA region, some sectors cannot be prioritized merely based on efficiency considerations.
    a. In the management and reallocation of resources, the ESCWA region has a key specificity; because of water-scarcity, regulation should focus on ensuring that water resources are allocated within sectors and not across sectors.
    b. In addition, any tradeoffs for different groups over time should take into account the need to safeguard livelihoods and rural communities, in addition to preserving a measure of food security.

2. Promoting the Green Industries through a variety of incentives and policy measures, by striving to earmark funds for environment-related projects in their national budgets, in addition to setting up legal and institutional frameworks for encouraging investments in new technologies. In parallel with efforts to promote the economic transformation to seize green development opportunities, actions maybe undertaken where the government may take a more active role, to compensate for some market failures. The risk of "lock in", however, would be high.

Governments would then tailor a mix of policies and measures to their own country's specific needs and priorities, such as; regulatory, economic and fiscal instruments, investment in green infrastructure, financial incentives, subsidy reform, sustainable public procurement, information disclosure, and voluntary partnerships.

Table 5. KEY POLICY GUIDELINES FOR THE REALLOCATION OF RESOURCES ACROSS SECTORS.

Guideline	Description
Policy Instrument	• Enhancing and protecting specific public goods () • Promoting the Green Industries through a variety of incentives and policy measures • Resource-use efficiency • Agricultural rural development; regulation should take into account the need to safeguard livelihoods and rural communities • Water sector development; regulation should focus on ensuring that water resources are allocated within sectors and not across sectors. • The "greening" of the urban landscape along 4 focus areas; (1) reining in demand, (2) promoting public transportation, (3) reforming building codes and guidelines, and (4) promoting waste management
Measurement Framework	• Suggested Indicators; Wealth Generated by the Use of Water in Industry, Domestic Credits to Private Sector as share of GDP, Contribution of SMEs to GDP, Green Procurement: % of public procurement earmarked for Green Projects, Environmental Taxation: % of Taxes and fines collected specifically linked to pollution, Business Incentives: % of public incentives earmarked for Green Projects or Green SMEs, Green Financing: % of bank financing for Green Projects or Green SMEs.

Policy Focus and Relevant Instruments

Policy focus remains on resource-use efficiency, and leads to policy instruments that assess policy trade-offs and identify policy synergies not only across the dimensions of sustainable development, but also across sectors. This is a critical issue in the ESCWA Region, given the fact that the rapidly cities increase energy and water consumption for domestic use, in addition to generating more waste and increasing energy demand for transportation. Policies would focus on:

1. Resource-use efficiency would be pursued in industrial, urban, and rural areas, with a focus on ensuring that resource re-allocation is first made within sectors of activity. This is particularly the case of water, which can potentially be substituted in industrial applications, but can not be substituted in agricultural applications. For this reason, water re-allocation would be made within agricultural sector. In this respect;
    a. The Energy sector is essential to the Green Economy, and will largely define any overall economic improvements. The transition in this sector would focus on enhancing local industrial competitiveness, income diversification, and job creation. It

would be achieved in 3 phases, through a mix of sustained investments, regulatory standards, and economic incentives;

- Increase the Energy efficiency of existing energy production methods.
- Promote renewable energy sources in the context of low-carbon industrial development strategies. This can be done through incentives such as feed-in tariffs and tax exemptions to early adopters.
- Increase the proportion of renewable energy as part of the total energy mix. The final "goal" depends on each country's actual economic condition. This can be done through a mix of regulatory standards and economic "phased" incentives that target Energy efficiency investments in buildings, manufacturing, and transportation.

b. Agricultural rural development is a strategic policy objective that will not only help enhance both the quality of life and livelihoods, but will also go a long way to eradicate rural poverty. This would have wider benefits, as it would help the agricultural sector by increasing its share in the productive labour force, improving living standards, and limiting rural exodus. The focus would be:

- Develop well-designed extension services that would help farmers by enabling them to improve seeds, irrigation efficiency, soil conservation, agricultural yields, and sustainable practices.
- Leverage "traditional knowledge" of local farmers in order to help them develop or adapt new eco-agricultural methods that would be protective of soils, land, and water resources. Those could be such methods as organic and conservation farming method.

c. Water sector development should be designed in coordination with both the energy transition and agricultural rural development. It would be promoted through policies to promote water demand management. Such policies would be more cost-effective than conventional supply management measures, and in order to:

- Promote irrigation efficiency in agriculture and prevent water pollution,
- Establish water and environmental protection mechanisms,.
- Provide economic incentives and institute enforceable penalties to reward water use efficiency in industry and domestic usage, in addition to preventing water pollution,

d. Because of the rapid rise of urbanization, the "greening" of the urban landscape is vital. There are relative simple policy interventions that have been demonstrated to have a relatively low cost while yielding high economic, social, and environmental dividends within a short period of time. Those policies have three focus areas; (1) reining in demand, (2) promoting public transportation, (3) reforming building codes and guidelines, and (4) promoting waste management.

- A first step is to rein in demand growth for transport fuel by mandating vehicle fuel economy standards. Since it may not be possible to restrict fleet size in a first phase, this will ensure that new vehicles do not add to the already large share of energy consumption in the transport sector of the region
- The transportation sector would greatly benefit from Green Transport initiatives. In conjunction with fuel-efficiency mandates, design and

implement policies to favour mass public transit systems, as well as promote administrative decentralization to help diminish overall commute distances.

- In conjunction with those two focus areas, long term benefits can be obtained through the incorporation of environmental principles in construction, with a view to yield high energy-efficiency gains by setting set minimum requirements to reduce energy use and carbon emissions over the lifetime of the building.
- Policies should aim to involve households and industrial sectors to reach a form of waste "pre-sorting". In the ESCWA Region, indiscriminate dumping of waste is a relatively recent tradition, and there is now an urgent need for a fundamental shift in the approach to municipal solid waste from waste dumping, burning, and/or land filling to a resource management approach that seeks to capture value from waste materials through reduction, reuse, recycling, and recovery.

Decision-Making Tools

In the context of the transition towards and Green Economy, decision-making tools should be dynamic in order to monitor and track the policy responses and the management of the resource allocations across sectors. They would allow governments to establish policies and tailor them to their own country's specific needs and priorities. In general, those decision-making tools focus on two aspects;

1. The "green Transformation" of key sectors and the economy,
2. The "decoupling and Efficiency", through decoupling economic activity from resource use and related environmental impacts.

Information disclosure through such Public Climate and Environmental Expenditure Reviews (PEER) to examine government resource allocations within and among sectors, and/or at national and sub-national levels of government, and assesses the efficiency and effectiveness of those allocations in the context of environmental and social priorities. The instruments can be:

- "Passive" decision-making tools such as: traditional regulatory, economic (financial incentives) and fiscal instruments,
- "Active" decision-making tools from subsidy reform, to investment in green infrastructure and "Green" procurement, and finally to voluntary partnerships.

The decisions on which policies to implement and in which order would be based on a balance between the "Inertia and/or risk of lock-in and irreversibility" on one hand, and the need to "local and immediate benefits and urgency". The policies are categorized depending on their impact (long-term, short-term), visibility (high, low), and cost (high, low) (Figure 6).

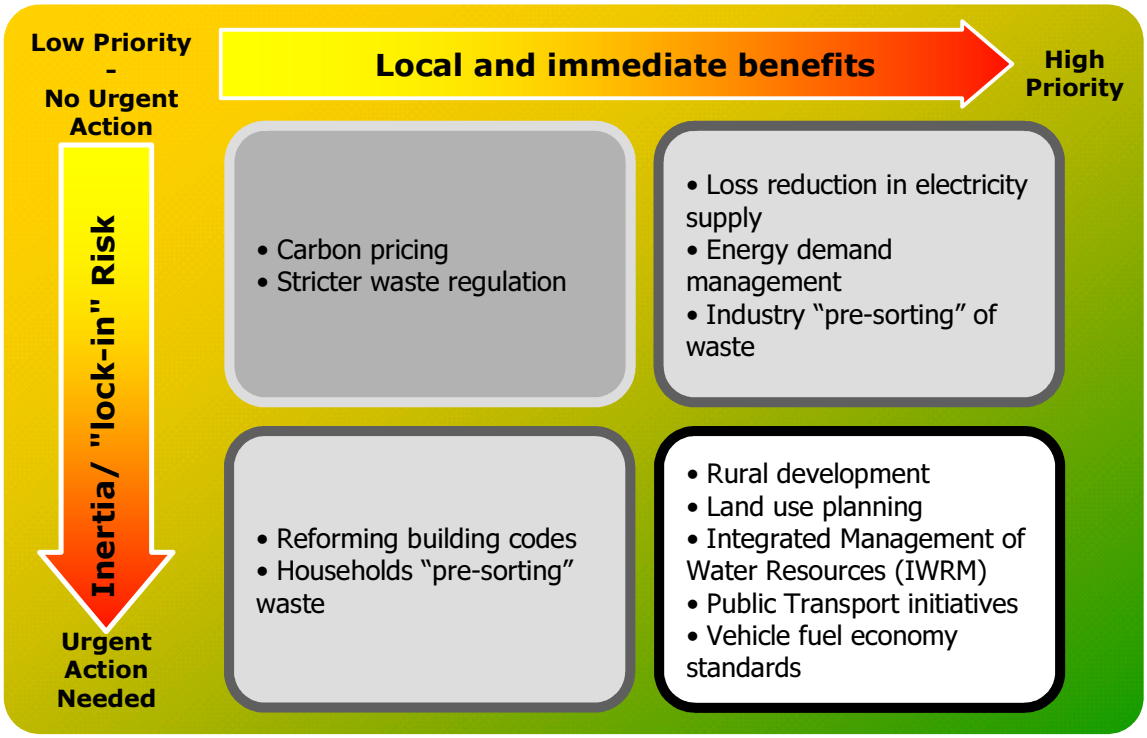


Figure 6. Strategies for Policy Response and Management of the Reallocation of Resources[22].

Measurement Frameworks

At the present stage of knowledge, measurable indicators for the managing the reallocation of capital and labour resources within and across sectors and the effectiveness of policy responses and the means of implementation:

- Wealth Generated by the Use of Water in Industry,
- Domestic Credits to Private Sector as share of GDP,
- Contribution of SMEs to GDP,
- Green Procurement: % of public procurement earmarked for Green Projects,
- Environmental Taxation: % of Taxes and fines collected specifically linked to pollution,
- Business Incentives: % of public incentives earmarked for Green Projects or Green SMEs,
- Green Financing: % of bank financing for Green Projects or Green SMEs.

In order to ensure a stable social environment for appropriate policy responses and adequate means of implementation, progress towards MDGs also needs to be achieved. Those are:

- The need to Eliminate Extreme Poverty and Hunger (MDG 1), since no stable capital markets can function in times of extreme crisis.
- Any enhancement in "Gender Equality and Women Empowerment" (MDG 3) would also help stabilize the implementation environment, as shown by the successful example of micro-credit that heavily rely on women involvement.

[22] After: World Bank, 2012, p.17

III. CONCLUSION AND GENERAL RECOMMENDATIONS

The main priorities regarding green economy are focused on resource efficiency from the perspective of both energy generation and consumption and the use and allocation of capital. Green Economy activities would be carried out in:

1. Recognize that technology is socially and ecologically embedded. This creates a necessary focus on increased innovation and the transfer of adapted technologies, considering that technology and investment in science must be approached as a social transformation process, and move beyond the adoption of new technologies and simple technology Transfer. Mechanisms will be necessary in order to preserve traditional knowledge, and possibly apply, whenever possible, the benefits of such knowledge to other sectors of activities.
2. Promotion of resource efficiency within sectors of activity, and not across sectors, with a greater focus on renewable energy sources and increased efficiency of energy generation systems. In resource-extractive regions, the promotion of efficient use of natural capital, as well as low-impact mining and efficient resource extraction,
3. Enhanced economic well-being through efficient transportation and enhanced mobility, leading to enhanced air quality, reduced emissions and noise, efficient energy usage in industry and reduced waste generation, supported by a framework for Corporate Social Responsibility (CSR) and environmental reporting,

In addition, this Green Economy activity would be supported by

1. Improved governance, including institutional arrangements and multilateral environmental agreements, possibly reflected through environmental performance reviews.
2. Water efficiency in industrial, rural and urban areas, with a focus on ensuring that water re-allocation is made within sectors of activity in order to preserver rural livelihoods and help promote a measure of agricultural self-sufficiency
3. Decision making supported through Life-cycle analysis, environmental accounting, and Sustainable consumption and production patterns.

An important limitation of decision making tools should be taken into consideration. Indeed, it should be noted that indicators of policy making should be used with caution, as they may not apply “across the board”, and are more likely specific to each country. An example is the key role played by such subsidies on fuel in poverty alleviation, particularly in ESCWA countries.

Furthermore, For purposes of policy making, the use of indicators require sophistication in their implementation, particularly since they make it necessary to actively and carefully monitor the performance of the investment, taking into account the “potential to deliver”, or the savings brought about by any Green technology and potential “market uptake”. Such a sophistication would require the use of financial models for integrated analysis, which carries risks of its own, especially since those models remain ill designed to account for unexpected impacts and quantify such risks.

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