

National Environment Policy

Scenarios Paper

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1 Introduction

- 1.1 The aim of this paper is to complement the publication of the consultation draft of the National Environment Policy by providing details of the policy scenarios that have been developed and tested in the second phase of developing the policy. Sustainability impact assessment has been used to evaluate the scenarios and assist with selecting the preferred scenario. The aim of the sustainability impact assessment is to test the scenarios against environmental, social and economic criteria, in order to identify the scenario that most closely satisfies sustainability concerns.
- 1.2 In March 2010, Government announced its commitment to prepare a National Environment Policy in order to provide direction, ensure integration in all policies relating to the environment, and to clearly articulate and communicate the national environmental commitments and priorities in a transparent manner. The National Environment Policy is comprehensive in scope, covering all environment sectors.¹ It lays down the principles upon which Government will manage Malta's environment, and which other non-environmental sectors must respect and adhere to. It takes into account all existing national, European and multinational obligations, but is not restricted to these matters. The policy integrates and prioritises the environmental activities of Government for the period 2011-2020, with a special focus on improving policy implementation in the environmental field and on the links between the environment and the economy. The latter provides social and economic currency to arguments levelled at environmental protection.
- 1.3 The formulation of the National Environment Policy was divided into three phases. In the initial phase, a list of issues for the National Environment Policy was drafted and consulted upon, in order to establish a set of issues to be addressed in the policy. The second phase of the National Environment Policy process consisted in developing and testing a set of policy scenarios, which is the subject of this paper. The scenarios were developed in order to facilitate structured thinking about the future, which is considered important for the environmental policy development process, given the rapidly changing socio-economic and environmental context. Phase three of the policy development process consisted in the formulating of, and consultation on, the policy.
- 1.4 On the basis of the issues and concerns emerging from the first phase of consultation, and the preferred scenario and vision, the following six objectives have been established for the National Environment Policy:
1. **Greening the economy** (addressing policy integration, the use of market-based instruments, environmental taxation, eco-innovation, green jobs, enabling the private sector to take a stronger role in environmental management, green public procurement and mobilising finance for the green economy)
 2. **Safeguarding environmental health** (addressing air quality, noise, chemicals, and radiation)
 3. **Using resources efficiently and sustainably** (addressing stone, fresh water, coastal and marine areas, soil, land and waste)

¹ On the basis of the definition of 'environment' that comes from the 2010 Environment and Planning Act (Article 2): "environment" means the whole of the elements and conditions, natural or man made, existing on earth, whether together or in isolation, and in particular: (a) the air, water and land; (b) all the layers of the atmosphere; (c) all organic and inorganic matter and all living organisms; (d) all ecosystems; and (e) the landscape.

4. **A pleasant place: Improving the local environment** (addressing urban and rural areas, and cultural heritage)
 5. **Greening Gozo** (addressing more sustainable forms of agriculture, transport and tourism, and improved resource management, within the framework of eco-Gozo)
 6. **Long-term sustainability issues** (addressing climate change, biodiversity and ecosystems, and environment-related emergencies).
- 1.5 This document is structured along the following lines. Section 2 provides background information about the policy context in terms of environmental and socio-economic issues and trends. It also summarises the work that was carried out to formulate the National Environment Policy scenarios. Section 3 establishes the sustainability impact assessment framework, which will be used to test the scenarios in next section, while Section 4 details the results of the impact assessment and the choice of preferred scenario.

2 Background and process

2.1 This section provides a description of the policy context in terms of environmental and socio-economic issues and trends. This background provides a useful context both for the development of the scenarios themselves and for the impact assessment. This section also summarises the work carried out to develop the environmental policy scenarios.

Policy Context

2.2 Malta's current environmental situation was detailed in the National Environment Policy Issues Paper, published during the first phase of the environmental policy formulation process. The Issues paper draws on issues arising from The Environment Report 2008, the 2010 parliamentary debate on this report, and the 2008 Public Attitude Survey results. The issues are divided into eight themes, and these are detailed in Table 1.

Themes	Issues
Air	<ul style="list-style-type: none"> • High levels of airborne dust • High levels of ground-level ozone in rural areas • High levels of nitrogen dioxide in traffic-prone areas • Sustaining improved air quality with respect to sulphur dioxide and benzene • Improving the environmental performance of the transport sector
Climate change	<ul style="list-style-type: none"> • GHG emissions • Impacts of climate change
Land	<ul style="list-style-type: none"> • Countryside quality and access • Malta's cultural landscapes under threat • High levels of vacant property • Malta's rich cultural heritage under threat • Declining soil quality • Making more efficient use of land and property • Further exploitation of the synergies between agriculture and environment • Enhanced provision of recreational space • Improving amenity in urban and peri-urban areas
Fresh Waters	<ul style="list-style-type: none"> • Groundwater over-abstraction • Nitrates in groundwater • Better use of run-off water • Use of treated sewage effluent (TSE)
Coastal and Marine Environment	<ul style="list-style-type: none"> • A sensitive area under pressure from various socio-economic activities • Coastal artificialisation • Integrating environmental and socio-economic objectives in beach management • A sustainable maritime economy
Resources and Waste	<ul style="list-style-type: none"> • High dependence on landfilling for solid waste management • High levels of littering in certain areas • Sustaining and improving on Malta's relatively low consumption of material resources • Achieving EU targets regarding preparation of waste for re-use, recycling and recovery • Better management of construction and demolition waste
Biodiversity	<ul style="list-style-type: none"> • Land development • Over-exploitation of species • Invasive alien species • Improving the knowledge-base on Maltese biodiversity • Enhancing the management of Natura 2000 sites
Other Emerging Issues	<ul style="list-style-type: none"> • Low level of awareness on radiation issues • Better regulation of environmental and domestic noise levels • Sustainable use of chemicals • Improving Malta's disaster preparedness

Table 1: Environmental issues identified in the National Environment Policy Scenarios Issues Paper

- 2.3 Malta's overall goal in the social sector is to provide social protection and support especially to those who are more vulnerable and in need of help.² This will entail working in line with three key overarching objectives:
- to promote access to multifaceted services, including social, financial, recreational services, in order to improve the quality of life and well-being of all, but paying particular attention to the most vulnerable in society;
 - to ensure adequate and quality services that address real priority needs within Malta's national context; and,
 - to secure sustainability to ensure continuity of services.
- 2.4 Malta's total 'at risk-of-poverty' rate in 2009 was 15.1 percent, compared to the EU average of 16.3 percent.³ The age cohort over 65 years of age registered a rate of 19 percent in that year. In terms of early school leavers, Malta's rate in 2009 was 36.89 percent⁴ in comparison with an EU average of 14.4 percent. In 2009 the share of persons aged 18-59 living in jobless households was 8.3 percent in Malta, less than the EU 27 figure of 10.1 percent. The share of children living in such households was also lower than that for EU 27, at 9.9 percent as opposed to the EU rate of 10.2 percent.
- 2.5 The National Reform Programme,⁵ published in April 2011, provides a useful summary of Malta's socio-economic context. Over the last decade the Maltese economy was characterised by a significant restructuring process. This has resulted in a significant re-orientation of the economy away from agriculture and the manufacturing sector towards the services sector. In fact, between 2000 and 2010, the share of manufacturing in total gross value added declined from 22.4 percent to 13.4 percent. The share of primary industries declined by one percent in this period. Correspondingly, the share of total gross value added of the services sector increased from 52.5 percent in 2000 to 58.8 percent in 2010, while the share of government, education, health and social work in total gross value added increased by 3.4 percent. During this period a process of economic diversification was also under way, whereby growth was registered in emerging sectors in chemicals, aircraft maintenance, business services, information technology and financial services. This process occurred in parallel with significant political and economic changes related to Malta's accession to the EU and the adoption of the Euro, and significant trade and economic liberalisation.
- 2.6 In terms of potential growth, structural impediments in the economy underlined a decline in Malta's average annual potential output growth from around 4.5 percent in the decade before 2000 to an annual average of around 2.4 percent in the last decade, due to a decline in capital deepening and total factor productivity. The quality of Malta's labour resources represents an area of concern in the Lisbon Assessment Framework, due to relatively low educational attainment and skill levels of the Maltese labour force. However many important and positive results have been registered in recent years, although improvements in skills and education are still required. Due to these developments, labour productivity has experienced only a moderate growth during the last decade, and a decline relative to the EU average.
- 2.7 In addition, competitiveness losses were also registered, with increases in unit labour costs particularly in 2001 and 2003 related to both national factors such as productivity, and international economic factors and trends. However when

² This section draws on MSP 2009.

³ Minister of Education, Employment and the Family, based on Eurostat figures.

⁴ Provisional figure.

⁵ MFEI 2011.

compared with the EU and with major competitors, per capita average annual compensation and hourly labour costs appear to be competitive. The main challenge for Malta's competitiveness is the ability of the Maltese economy to raise labour productivity back to its levels at the beginning of the decade. Furthermore labour market participation is still low, representing a major structural bottleneck: while productivity levels are estimated at 91 percent of the EU average, GDP per capita in purchasing power standards is estimated at around 81 percent of the EU average. The reason for this discrepancy is primarily explained by the low participatory rates in the female and old age categories.

- 2.8 In summary, the National Reform Programme notes that Malta's main economic challenges concern raising the quality of Malta's labour supply and addressing total factor productivity through improvements in market functioning, research and development and institutional development. In addition, raising per capita income levels will necessitate an additional focus on labour resources, primarily by addressing labour market participation rates.
- 2.9 In this context, the draft Vision 2015 has identified six priority sectors set to be the pillars of the country's continued growth: financial sector; information and communications technology; tourism, manufacturing sector and related services, health, education and Gozo.

Trends

- 2.10 Key socio-economic perspectives for Malta towards 2020 have been briefly described for the purposes of the national environment policy scenario-building process by Dr. Gordon Cordina.⁶ On the basis of continuation of past trends, it is forecasted that the next decade could feature a rapidly-ageing population and marked patterns of internal migration, together with dependence on international immigration for economic development. Based on natural increase, in 2020 the population aged 65+ will represent 9.2 percent of total population, up from 4.4 percent in 2010, while the dependency ratio⁷ in 2020 will be of 31.1 percent. The northern and south eastern districts will experience an influx of 9,400 and 15,600 people respectively, while the population of the harbour area will drop by 16,600 people.
- 2.11 In addition there will be pressures to increase jobs with higher productivity, accompanied by increased income inequalities. A shift towards the services economy is likely. Furthermore, in order for Malta to be able to adhere with EU living standards, GDP per capita will need to rise to 95 percent of the EU average by 2025, which requires a GDP growth in excess of four percent for the next decade. Total number of jobs would have to increase by 2.7 percent per annum, and the productivity of each job by 1.7 percent per annum.
- 2.12 Given these trends, during the coming decade a growth in consumption of housing, fuel and transport, as well as waste generation is envisaged.⁸ It is further estimated that by 2020 housing and fuels will absorb 20 percent of total consumption, while expenditure on transport will absorb 17 percent of total consumption. Household waste generation is expected to double by 2020 over a period of 20 years. There will also be greater pressure on health services and a need for a greater emphasis on lifelong learning in order to enable continuous re-skilling of the workforce.

⁶ This overview draws on the presentation delivered by Gordon Cordina entitled 'Socio-Economic Perspectives over the Coming Decade', during the Scenarios Workshop on 25th January 2011. For more information see www.tsdu.gov.mt/environment-nep-phase2.

⁷ Dependency ratio is age-population ratio of those typically not in the labour force.

⁸ These trends assume current consumption and production patterns.

International trends

- 2.13 In order to complement these national issues and trends, and better inform the process of scenario building, it is also useful to review some international trends. The European Environment Agency (EEA) has provided an overview of current European environmental trends, as well as global megatrends.⁹ In the area of climate change the EEA highlights that the EU remains a major emitter of greenhouse gas emissions, as well as the important links between climate change, poverty and political and security risks. It also notes that biodiversity has continued to decline worldwide and that critical ecosystems are globally under great pressure. Global food, energy and water systems appear more fragile and vulnerable due to increased demand, decreased supply, and supply instabilities, often resulting from over-exploitation, degradation and soil loss. In fact, Europe is facing increasing supply risks in these areas. In addition, the EEA estimates that Europe will probably be faced with increased emergence or re-emergence of certain infectious diseases that are critically influenced by temperature or precipitation, habitat loss and ecological destruction.
- 2.14 The EEA also points out key global megatrends, which include population ageing, growing and migration, together with spreading cities and spiralling consumption. The EEA also highlights changing patterns of global disease burdens and the risk of new pandemics. In addition the global economy is characterised by accelerating technologies, continued economic growth, shifting global power blocks and intensified global competition for resources. Global megatrends also indicate decreasing stocks of natural resources, growing severity of the consequences of climate change, and increasingly unsustainable environmental pollution loads. Finally, there is increasing fragmentation of global regulation and governance, however with converging outcomes.
- 2.15 These national and international issues and trends provide the backdrop to the development of the environment policy scenarios, as well as to the sustainability impact assessment. The next section provides information about how the policy scenarios were developed.

Development of environmental policy scenarios

- 2.16 Methods for building policy scenarios have been briefly described for the purposes of the National Environment Policy scenarios process by Dr Jennifer Cassingena Harper.¹⁰ Scenarios are stories based on an analysis of drivers of change that describe how the world might look in the future, helping policymakers imagine and better manage the future.¹¹ Scenario-building is a systematic approach for collectively understanding, shaping and creating future outcomes. In addition, it is a capacity-building process for embedding future culture, skills and approaches; and a participatory process for engaging and empowering stakeholders to take action.
- 2.17 The scenarios related to the national environmental policy were formulated on the basis of input from two streams:
- A scenarios working group, involving experts from various government ministries and entities;
 - A scenarios workshop, which involved policymakers and experts from across government, as well as key stakeholders.

⁹ This draws on EEA 2010.

¹⁰ For more information see www.tsdu.gov.mt/environment-nep-phase2.

¹¹ This draws on the presentation delivered by Jennifer Cassingena Harper entitled 'From Scenarios to Vision: Our agenda for today', during the Scenarios Workshop on 25th January 2011.

The next sections provide details of this process.

Scenarios working group

- 2.18 In order to develop scenarios for the National Environment Policy, an inter-ministerial Scenarios Working Group was set up, with the aim of proposing policy scenarios for discussion. The working group was set up in August 2010, and was composed of officials from the National Statistics Office, the Economic Policy Division, the Malta Environment and Planning Authority and the Tourism and Sustainable Development Unit. The working group proposed three scenarios, based on different levels of ambition in environmental policymaking, which are listed below:
1. Business as usual
 2. 'Europe' - implementation of all national and EU obligations in a timely manner
 3. 'Europe' + ambition also in non-EU sectors

Scenarios workshop

- 2.19 In order to further develop the scenarios developed by the working group, and to involve more actors in Phase 2 of the policy formulation process, a scenarios workshop was held on 25th January 2011. The workshop was attended by some 50 persons including key players from ministries and government departments and entities, eNGOs, business organisations, and political parties. Members of the National Environment Policy Advisory Group also attended the meeting. The workshop programme is included in Figure 1.
- 2.20 The event began with three presentations, which covered environmental and social trends and outlooks as well as a talk on scenario-building, which provided participants with an understanding of scenario-building and its role in policymaking. The next part of the event concerned a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. Participants were then asked to propose alternative environmental scenarios, based on results of the SWOT analysis. Finally participants were asked to provide ideas for an environmental vision for the year 2020. The results of the workshop are discussed below.

9:00	Welcome Dr. Marie Louise Mangion - <i>Head, Tourism and Sustainable Development Unit, Office of the Prime Minister</i>
9:05	Opening speech Hon. Dr. Mario de Marco - <i>Parliamentary Secretary for Tourism, the Environment and Culture</i>
9:15	Global and regional trends Dr. Marguerite Camilleri - <i>National Environment Policy Coordinator, Tourism and Sustainable Development Unit, Office of the Prime Minister</i>
9:30	Socio-economic perspectives for the next 10 years Dr. Gordon Cordina - <i>Head, Economics Department, University of Malta</i>
10:00	Discussion
10:15	From Scenarios to Vision: Our agenda for today Dr. Jennifer Cassingena Harper - <i>Director, Policy, Strategy, FP7 and International, Malta Council for Science and Technology</i>
10:30	<i>Coffee break</i>
11:00	Breakout groups: SWOT analysis of Malta's environmental situation
11:45	Breakout groups: Discussion on alternative future scenarios
12:45	Plenary session
13:15	Ideas for future environmental vision for 2020
13:30	Close <i>Standing Lunch</i>

Figure 1: Programme of the National Environment Policy Scenarios Workshop on 25th January 2011

- 2.21 The SWOT analysis of Malta's environmental sector was carried out by the participants in four breakout groups. The SWOT highlighted some of the important characteristics of the Maltese environmental policy context, which then fed into the process of identifying driving forces on which to build the policy scenarios. The results of the SWOT are briefly summarised below, and a full summary of the results may be viewed at Appendix 1.
- 2.22 The first part of the SWOT indicated that the Maltese environment is not exposed to highly-polluting activities due to its isolation from major centres of pollution and the fact that its economy is not characterised by major pollution risks or heavy industry. During this part of the SWOT, participants also highlighted that there is increasing awareness about the environment, and that the environment has now risen on the political agenda. The important role of the EU in raising the profile of environmental issues and in providing Malta with a comprehensive environmental policy framework addressing a wide range of issues was also highlighted. Finally, participants noted that Malta already has a well-developed legal framework and a set of institutions in the environmental field to take this agenda forward.
- 2.23 The SWOT also identified a number of weaknesses facing the environmental policy sector. These include the dense population of the Islands and the associated intensity of pressures on the environment, the large number of competing activities therein, and the fact that some aspects of environmental infrastructure were still not fully in place. In terms of economic structure, the distance from major centres of innovation, and the lack of economies of scale, does not help with developing the green economy. Participants indicated that institutions in the environmental field still need to be strengthened to the level where they can fully implement the environmental *acquis*, and there needs to be greater integration of environmental objectives into the policies and operations of the various economic sectors. The SWOT also highlighted the lack of public awareness of the relationship between environment and health, and lack of basic environmental information in important areas that need regulation.

- 2.24 The key opportunities identified in the environmental field include improving the links between the environment and the economy. This is needed first at a conceptual level, in terms of raising awareness about the role of the environment as the basic resource-base for economic development. Better links between the environment and the economic sectors are also needed to internalise environmental costs into economic transactions, to assess policies as to their environmental impact, to account for environmental degradation, and to direct development into sectors that involve less environmental damage. Economic instruments play a key tool in facilitating this link. Another key opportunity relates to creativity and innovation. There is much scope to use human creativity to generate ideas that reduce the environmental footprint of consumption and production patterns. The scope for fostering environmental responsibility through the promotion of core social values is also strong. Finally, there is also a great opportunity offered by the international political field on the environment. It was considered that Malta could participate more actively in the international political field on the environment, in terms of more active participation in negotiations, exchange of experience, and better use of international funding opportunities.
- 2.25 The main threats facing the Maltese environmental policy context include: pressures related to demographic change; political instability in neighbouring countries; impact of economic activity and over-consumption; economic fluctuations and the effects of global economic crisis; natural, biological, technological and industrial risks; and, food, water and fuel security. There is also the threat that gains achieved through greater resource-efficiency will be outweighed by increased consumption (the 'rebound effect'). Finally, there is concern that resources such as water are depleted to levels at which resource prices engender new forms of poverty.
- 2.26 In the next part of the event, participants worked on the development of a set of alternative environmental policy scenarios. Divided into four workshops, and drawing on the strengths and weaknesses, as well as the opportunities and threats, identified during the SWOT analysis, participants discussed possible futures for the Islands. Each participant was asked to think of two possible scenarios. Following group discussion, the moderators noted the key elements of the scenarios under four general headings based on level of (environmental policy) ambition: 'Doom and gloom', Business-as-usual, Moderately ambitious, and Utopian.
- 2.27 The key factors in the various scenarios proposed by participants were subsequently analysed, in order to tease out the driving forces for the various scenarios. These driving forces were then used to build the final scenarios for the national environmental policy. Appendix 2 provides a summary of the driving forces in the various scenarios proposed by the workshop participants. Economic factors were most mentioned (26 mentions), followed by energy (13 mentions) and institutions (11 mentions).
- 2.28 In the last part of the workshop, participants were also asked to write concise statements describing environmental futures that the country should strive to achieve in 10 years' time. Unlike in the previous sessions, the vision statement had to be positive. The aim was to identify the participant's expectations from the policy. In all, 23 written vision statements were collected from participants. Most of these statements were of a general nature, and showed moderate or high levels of ambition. These statements mostly called for achieving greater environmental quality well above legal requirements, improved quality of life and individual satisfaction, recognition of Malta as a model for sustainability and complete integration of environmental objectives into every aspect of socio-economic

development. The results of the vision exercise fed into development of a vision for the national environment policy.

Finalisation of policy scenarios for the National Environment Policy

- 2.29 Drawing together the work of the Scenarios Working Group and the Workshop, five scenarios were developed to guide the formulation of the environment policy. Through a sustainability impact assessment, a preferred scenario was chosen. This section describes the process in more detail.
- 2.30 The five scenarios were again based on level of ambition, and brought together the scenarios developed by the working group and the ones emerging from the workshop, as follows: Low environmental priority, Medium environmental commitment, 'Europe', 'Europe' + local environmental quality and Green Utopia. The scenarios are described briefly below:

Scenario 1: Low environmental priority

The key driver for this scenario is the low priority given to the environment. Coupled with the multiple crises related to climate change, shortages in the resources of fuel, food and water, and external shocks related to disasters including a volcanic eruption and an oil spill, there are negative environmental impacts. Due to Government's low environmental commitment and lack of disaster preparedness, as well as these events, environmental quality worsens, particularly in inner urban areas, which become hotspots of poverty, pollution and dilapidation. There is a collapse in the property market, which leaves a banking and debt crisis. Unemployment is rife and all public efforts focus on short-term economic recovery at the cost of the environment, except where related to clean-ups of the environment-related to the disasters.

Scenario 2: Moderate environmental commitment

This scenario is based on moderate environmental commitment, which results in delayed implementation of national, EU and multilateral environmental commitments. The environment improves slowly, but there are still insufficient resources allocated to environment. Malta continues to suffer from its emblematic environmental issues related to land-use, air quality and waste. Overall, quality of life is relatively good, but this is increasingly becoming compromised, particularly in urban areas, by poor quality, stressful environments. In addition, resource scarcity, both nationally and globally, has given rise to price hikes that are engendering new forms of poverty.

Scenario 3: 'Europe'

The main driver in this scenario is the timely implementation of national, EU and multilateral policy commitments. The use of new environmental policy instruments such as economic and voluntary measures has become more widespread. The emphasis on better implementation has resulted in important progress in integrating environmental objectives into other sectors, but only where EU policy drives the integration. Due to the medium level of commitment to address environmental issues other than where EU priorities are concerned, some key issues remain unaddressed. Institutions responsible for the environment have been strengthened, but there is still a weakness regarding enforcement, which remains very fragmented. There are no more infringements relating to EU environmental policy.

Scenario 4: Europe + local environmental quality

This scenario is driven by the commitment to address a set of environmental issues which are either regulated at an international or EU level, or are of a national importance, such as land use. Key issues include local environmental quality (e.g. in urban centres) and long-term sustainability-related issues such as groundwater supply and climate change. In this scenario, by 2020 economic growth is beginning to be seen as dependent on environmental quality, with high significance given to environmental constraints in economic planning. This has prompted an emphasis on the green economy, eco-innovation, financial and voluntary instruments, producer responsibility, and integrating environmental considerations into economic planning. Legal measures and additional resources have strengthened capacity for implementation and enforcement. There is better managed access to the countryside and coast. Environmental quality improves, particularly in town centres, and many previously-vacant properties are being renovated, encouraged by financial instruments. This significantly improves quality of life for most people, especially vulnerable groups.

Scenario 5: Green Utopia

This scenario is utopian; positive environmental policies and education have ensured that there is no longer any conceptual separation between the economy and the environment. Environmental funding is no longer an issue. International policies on environment have also been very successful, averting major environmental disasters. Malta has made great strides in its environmental policy, and there is a high quality of life which is used as a selling point for foreign investment. At the same time it is recognised that environmental policy changes need to be phased in slowly to avoid negative socio-economic impacts, so improvements in some areas are still in the pipeline. Malta scores high in the happiness index.

- 2.31 Drawing on the results from the workshop, the five scenarios were elaborated in more detail such that driving forces and key outcomes were described for each scenario. The scenarios were elaborated in tabular form on the basis of 32 driving forces and six environmental outcomes, and this detailed table may be viewed at Appendix 3. A summary of the scenarios table is presented in Figure 2. The detailed scenarios development exercise proved to be very helpful both for the sustainability impact assessment of each scenario, as well as at the detailed policy formulation stage.

		Title of scenario*	1. Low environmental priority	2. Medium environmental commitment	3. 'Europe'	4. 'Europe' + local environmental quality	5. 'Green utopia'
		* All scenarios refer to situation in 2020					
A	Drivers						
1	Soc	Demography	slow growth	slow growth	slow growth	slow growth	slightly faster growth
2	Soc	Internal migration out of urban cores	high	high	medium	low	low
3	Soc	Migration	highly significant	Significant	Significant	Significant	reduced immigration
4	Soc	Employment	Low	medium	medium	medium high	high
5	Soc	Education/life-long education	Low	medium	medium high	medium high	high
6	Soc	Social inclusion/environmental justice	low	medium low	medium low	medium	medium high
7	Env	Climate change	vulnerability and low adaptation	vulnerability & medium adaptation - Continued uncertainty regarding meeting mitigation targets	vulnerability and medium adaptation. Mitigation targets met	vulnerability & increased adaptation actions. Mitigation targets met	Decreasing impacts due to Malta's adaptation actions and international policies. Malta achieves carbon neutrality.
8	Env	External shocks /disasters	low preparedness and resilience	low preparedness and resilience	medium preparedness and resilience	medium to high preparedness and resilience	high preparedness, strong resilience, international cooperation
9	Econ	Economic primacy	economic growth seen as the major direction for recovery	economic growth still seen as the major factor in ensuring quality of life	economic growth is still seen as the major factor in ensuring quality of life	economic growth is beginning to be seen as dependent on environmental quality.	economic growth is now seen as dependent on env. quality.
10	Econ	Technology/research/Innovation/niche markets/using location	low	low	medium	medium high	high
11	Econ	Economic restructuring to improve environmental performance	Economic development planning while disaster recovery in progress	low	medium	high	high
12	Econ	Producer responsibility	Very low	low	medium	medium	high
13	Econ	Use of well-designed economic instruments to improve the environment	instruments re-designed in line with short-term goals	Weak	Less weaker	strong	strong
14	Econ	Conservation of resources: Energy/Water/Stone/Soil	Crises lead to resource scarcity except for soil and stone	low	medium to low	medium to high	high
15-20	Econ	Environmental policy integration in transport, industry, construction, maritime and tourism/recreation sectors	very low	low	medium	medium high	high
21	Inst	Environmental funding and investment	low	medium	increased	Increased with new funding streams	No longer a concern - env. now horizontal priority in all sectors
22	Inst	Legislative framework	generally adequate but not well integrated	generally adequate	streamlining has taken place	medium strong with better regulation & SD Act	strong
23	Inst	Institutional capacity	weakened by crises	weak	medium weak	medium strong	strong
24	Inst	Information and communication	Availability and dissemination decreases	weak	medium	medium strong	strong
25	Inst	Implementation	very low priority	weak	medium strong	medium strong	strong
26	Inst	Policy/policy integration	low priority except where crises necessitate cooperation	weak	medium strong	medium strong	strong
27	Inst	Enforcement	Negatively affected except where crises necessitates	remains weak	medium	medium strong	strong
28	Inst	Takeup of tools like GPP/LCA/green accounting	very minor	so far few concrete results	potential not fully exploited	medium to high	strong
29	Inst	Land use planning	aimed at responding to crises not protecting environment	seeks to balance land development with social and environmental criteria	seeks to balance land development with social and environmental criteria	begins to prioritise environmental and social concerns	impossible to develop any more undeveloped land.
30	Inst	Style of Governance	state takes a major role in crisis management	State remains the central player,	new partners slowly being brought in through EU policies	includes new partners in management and self-regulation	highly participatory
31	Inst	Compliance with EU aquis	infringements increase	medium improvement	No infringements, but Malta still policy-taker	No infringements. More attention to negotiations and funding.	no infringements. High attention to negotiations and funding.
32	Inst	International field	low priority	low priority	low priority	medium priority	high priority
B	Outcomes						
1	Env	Environment in general	negatively affected by crises	still facing emblematic environmental issues: land, air quality and waste	better but still poor where EU policy does not address issues	highly improved in all areas	high quality.
2	Env	Environmental health	negative issues exacerbated by disasters	high levels of respiratory disease, noise and lack of safety persist	situation somewhat improved	air pollution and noise addressed	high
3	Env	Urban cores/urban greening	increasingly poor environmental quality	poor environmental quality	slightly improved	highly improved	highly improved
4	Env	Rural areas	over-exploited for resources	marred by issues such as ag abandonment	Progress registered by not sufficient	Rural areas given new lease of life	rural areas become showplace for environmental management
5	Env	Resource consumption	scarcity with certain resources in danger of running out	scarcity makes prices rise	stronger policy but prices still rise	approaching sustainable consumption patterns	non-renewables recycled and renewables exploited within sust. Yield
6	Env	Quality of life	negatively affected by climate change and other events.	overall relatively good	overall relatively good	overall good	high

Figure 2: Summary of policy scenarios table

3 Sustainability Impact Assessment framework

3.1 In order to select a preferred scenario, the five scenarios were subjected to a sustainability impact assessment, with the aim of selecting the scenario that best fit within the criteria of the sustainability assessment. In order to formulate a set of criteria for the sustainability impact assessment, two key documents were used:

- The EU's Impact Assessment Guidelines;¹²
- The National Sustainable Development Strategy.¹³

3.2 The themes associated with the 20 key targets of the National Sustainable Development Strategy were checked against the 37 criteria in the Impact Assessment Guidelines. It emerged that all the target themes from the National Sustainable Development Strategy were reflected in the 37 in the EU Impact Assessment Guidelines (see Table 3), with the exception of operational targets, related to matters such as the institutional framework for implementing the National sustainable Development Strategy, were concerned. It was decided to use all the criteria in the EU Impact Assessment Guidelines, in order to be consistent with international good practice.

Eu Impact Assessment Guidelines Criteria	NSSD target area
<i>Environmental Impacts</i>	
The Climate	Climate Change
Transport and the use of energy	Transport
Air Quality	Air Quality
Biodiversity, flora, fauna and landscapes	Nature and Biodiversity
Water quality and resources	Freshwater / Seawater
Soil quality or resources	
Land use	Landuse
Renewable or non-renewable resources	
The environmental consequences of firms and consumers	
Waste production / generation / recycling	Wastes
The likelihood or scale of environmental risks	
Animal welfare	
International environmental impacts	
<i>Economic Impacts</i>	
Functioning of the internal market and competition	
Competitiveness, trade and investment flows	
Operating costs and conduct of business/Small and Medium Enterprises	
Administrative burdens on businesses	
Public authorities	
Property Rights	
Innovation and research	
Consumers and households	
Specific regions or sectors	
Third countries and international relations	
Macroeconomic environment	Economic Growth

¹² CEC 2009.
¹³ NCSD 2006.

<i>Social Impacts</i>	
Employment and labour markets	Employment / Labour Productivity
Standards and rights related to job quality	
Social inclusion and protection of particular groups	Poverty Reduction
Gender equality, equality treatment and opportunities, non - discrimination	Labour force participation of women
Individuals, private and family life, personal data	
Governance, participation, good administration, access to justice, media and ethics	
Public health and safety	Health
Crime, Terrorism and Security	
Access to and effects on social protection, health and educational systems	Education
Culture	
Social impacts in third countries	

Table 3: Criteria used for the Sustainability Impact Assessment

- 3.2 The EU Impact Assessment Guidelines also contain questions to help users in their evaluations, some of which needed to be adapted to a national rather than EU context to allow the Guidelines to be used on a national policy. This was done, such that EU regional issues, for example, were translated into national regional issues, such as those related to Gozo's double insularity. The questions that were not applicable to a national context and had to be discarded or modified are included in Table 4.

Environmental Impacts	Key Questions in the EU Impact Assessment Guidelines	Key Questions as adapted for the Sustainability Impact Assessment
Specific regions or sectors	<p>Does the option have significant effects on certain sectors? Will it have a specific impact on certain regions, for instance in terms of jobs created or lost? Is there a single Member State, region or sector which is disproportionately affected (so-called 'outlier' impact)?</p>	<p>Does the option have significant effects on certain sectors? Will it have a specific impact on certain regions, for instance in terms of jobs created or lost? Will the option have a negative impact on Gozo? Is there a single Member State, region or sector which is disproportionately affected (so-called 'outlier' impact)?</p>
Third countries and international relations	<p>How does the option affect trade or investment flows between the EU and third countries? How does it affect EU trade policy and its international obligations, including in the WTO? Does the option affect specific groups (foreign and domestic businesses and consumers) and if so in what way? Does the option concern an area in which international standards, common regulatory approaches or international regulatory dialogues exist? Does it affect EU foreign policy and EU/EC development policy? What are the impacts on third countries with which the EU has preferential trade arrangements? Does it affect developing countries at different stages of development (least developed and other low-income and middle income countries) in a different manner? Does the option impose adjustment costs on developing countries? Does the option affect goods or services that are produced or consumed by developing countries?</p>	<p>How does the option affect trade or investment flows between the EU and third countries? Does the option affect specific groups (foreign and domestic businesses and consumers) and if so in what way? Does the option concern an area in which international standards, common regulatory approaches or international regulatory dialogues exist? Does it affect developing countries at different stages of development (least developed and other low-income and middle income countries) in a different manner? Does the option impose adjustment costs on developing countries? Does the option affect goods or services that are produced or consumed by developing countries?</p>
Standards and rights related to job quality	<p>Does the option impact on job quality? Does the option affect the access of workers or job-seekers to vocational or continuous training? Will it affect workers' health, safety and dignity? Does the option directly or indirectly affect workers' existing rights and obligations, in particular as regards information and consultation within their undertaking and protection against dismissal? Does it affect the protection of young people at work? Does it directly or indirectly affect employers' existing rights and obligations? Does it bring about minimum employment standards across the EU? Does the option facilitate or restrict restructuring, adaptation to change and the use of technological innovations in the workplace?</p>	<p>Does the option impact on job quality? Does the option affect the access of workers or job-seekers to vocational or continuous training? Will it affect workers' health, safety and dignity? Does the option directly or indirectly affect workers' existing rights and obligations, in particular as regards information and consultation within their undertaking and protection against dismissal? Does it affect the protection of young people at work? Does it directly or indirectly affect employers' existing rights and obligations? Does the option facilitate or restrict restructuring, adaptation to change and the use of technological innovations in the workplace?</p>
Social impacts in third countries	<p>Does the option have a social impact on third countries that would be relevant for overarching EU policies, such as development policy? Does it affect international obligations and commitments of the EU arising from e.g. the ACP-EC Partnership Agreement or the Millennium Development Goals? Does it increase poverty in developing countries or have an impact on income of the poorest populations?</p>	<p>Does it increase poverty in developing countries or have an impact on income of the poorest populations?</p>

Table 4: Questions in the EU Impact Assessment Guidelines as adapted for the Sustainability Impact Assessment

3.3 The sustainability impact assessment framework developed consisted in a matrix including the environmental, economic and social impacts, and the five policy scenarios. The assessment was carried out by awarding scores of between -2 and 2, on the basis of the detailed questions in the EU Impact Assessment Guidelines, drawing on the detailed scenario description (Appendix 3). The outcome of the sustainability impact assessment is detailed in the next section.

4 Sustainability Impact Assessment

- 4.1 The five scenarios were subjected to a sustainability impact assessment as described in Section 3 above. The assessment was carried out iteratively in order to assist with improving the internal consistency and logic of the scenarios. Figure 3 illustrates the scores graphically, while the scores for the five scenarios are as described in Table 5. As the graph and table indicate scenario 4 is the only option that does not entail negative impacts, and therefore has the highest overall score. Table 6 provides the full details of the assessment.

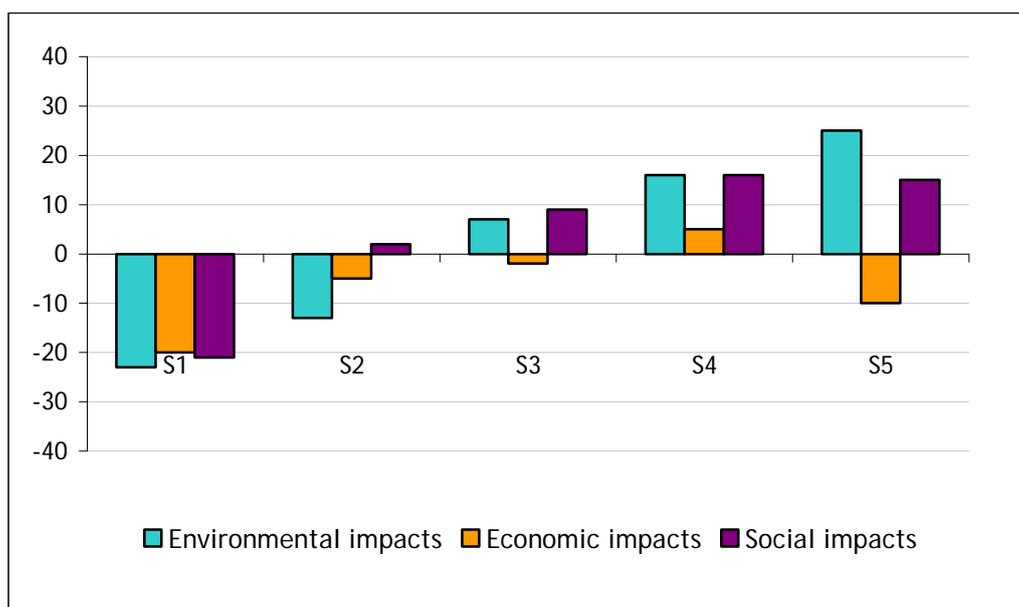


Figure 3: Results of Sustainability Impact Assessment

Score\Scenario	S1	S2	S3	S4	S5
Environment	-23	-13	7	16	25
Economic	-20	-5	-2	5	-10
Social	-21	2	9	16	15
Total	-64	-16	14	37	30

Table 5: Summary of Sustainability Impact Assessment scores by scenario

- 4.2 The 'low environmental priority and disruption' scenario scored negatively in all three areas: environmental, economic and social, reflecting the fact that by placing the environment low on the agenda, even the economy and society will suffer. The scenario entitled medium environmental commitment was also generally negative, although to a lesser extent than the previous scenario described above. In this scenario only society scored positively albeit still faring quite low. The 'Europe' scenario, based on the timely implementation of national, European Union and multilateral policy commitments was positive in both environmental and social aspects, but was slightly negative for the economy. The fourth scenario, that envisages going beyond European Union and multilateral commitments resulted to be beneficial to the environment, society and the

economy, in this order, and is in fact the only scenario that scored positively in all areas, and the only scenario with a positive outcome for the economy. The scenario aiming for green utopia is evidently the most beneficial to the environment from the five scenarios tested, and also scored positively in terms of benefit to society. However, it resulted that this scenario would damage the economy, as in economic terms it would be relatively demanding to reach green utopia by 2020.

- 4.3 The scenario that scored best on sustainability grounds, since it scored positively in all areas, was the fourth scenario: 'Europe + local environmental quality'. This scenario therefore was chosen to guide the formulation of the National Environment Policy.
- 4.4 In conclusion, it was found that the development and testing of policy scenarios was highly beneficial for the process of formulating the National Environment Policy. It helped focus attention on the key factors that would drive environmental change over the next 10 years, as well as on the level of ambition at which the policy should be pitched. It also helped us evaluate the impacts of a policy aimed at environmental improvement on socio-economic factors, and thus formulate a policy that was at once ambitious yet realistic.

Key Questions		S 1	S 2	S 3	S 4	S 5
Environmental Impacts						
The Climate	Does the option affect the emission of greenhouse gases (e.g. carbon dioxide, methane etc.) into the atmosphere? Does the option affect the emission of ozone-depleting substances (CFCs, HCFCs)? Does the option affect our ability to adapt to climate change?	-2	-1	0	1	2
Transport and the use of energy	Will the option increase/decrease energy and fuel needs/consumption? Does the option affect the energy intensity of the economy? Does the option affect the fuel mix (between coal, gas, nuclear, renewables etc.) used in energy production? Will it increase or decrease the demand for transport (passenger or freight), or influence its modal split? Does it increase or decrease vehicle emissions?	-1	-2	1	1	2
Air Quality	Does the option have an effect on emissions of acidifying, eutrophying, photochemical or harmful air pollutants that might affect human health, damage crops or buildings or lead to deterioration in the environment (soil or rivers etc.)?	-1	-2	0	1	2
Biodiversity, flora, fauna and landscapes	Does the option reduce the number of species/varieties/races in any area (i.e. reduce biological diversity) or increase the range of species (e.g. by promoting conservation)? Does it affect protected or endangered species or their habitats or ecologically sensitive areas? Does it split the landscape into smaller areas or in other ways affect migration routes, ecological corridors or buffer zones? Does the option affect the scenic value of protected landscape?	-2	-2	1	1	2

Water quality and resources	Does the option decrease or increase the quality or quantity of freshwater and groundwater? Does it raise or lower the quality of waters in coastal and marine areas (e.g. through discharges of sewage, nutrients, oil, heavy metals, and other pollutants)? Does it affect drinking water resources?	-2	-1	1	2	2
Soil quality or resources	Does the option affect the acidification, contamination or salinity of soil, and soil erosion rates? Does it lead to loss of available soil (e.g. through building or construction works) or increase the amount of usable soil (e.g. through land decontamination)?	-2	-1	0	1	2
Land use	Does the option have the effect of bringing new areas of land ('greenfields') into use for the first time? Does it affect land designated as sensitive for ecological reasons? Does it lead to a change in land use (for example, the divide between rural and urban, or change in type of agriculture)?	-2	0	0	1	2
Renewable or non-renewable resources	Does the option affect the use of renewable resources (fish etc.) and lead to their use being faster than they can regenerate? Does it reduce or increase use of non-renewable resources (groundwater, minerals etc.)?	-2	-1	1	2	2
The environmental consequences of firms and consumers	Does the option lead to more sustainable production and consumption? Does the option change the relative prices of environmental friendly and unfriendly products? Does the option promote or restrict environmentally un/friendly goods and services through changes in the rules on capital investments, loans, insurance services etc.? Will it lead to businesses becoming more or less polluting through changes in the way in which they operate?	-2	0	1	2	2
Waste production / generation / recycling	Does the option affect waste production (solid, urban, agricultural, industrial, mining, radioactive or toxic waste) or how waste is treated, disposed of or recycled?	-2	0	1	2	2
The likelihood or scale of environmental risks	Does the option affect the likelihood or prevention of fire, explosions, breakdowns, accidents and accidental emissions? Does it affect the risk of unauthorised or unintentional dissemination of environmentally alien or genetically modified organisms?	-2	-2	0	1	2
Animal welfare	Does the option have an impact on health of animals? Does the option affect animal welfare (i.e. humane treatment of animals)? Does the option affect the safety of food and feed?	-2	-1	1	1	2
International environmental impacts	Does the option have an impact on the environment in third countries that would be relevant for overarching EU policies, such as development policy?	-1	0	0	0	1
	Sub-total	-23	-13	7	16	25
Economic Impacts						
Functioning of the internal market and competition	What impact (positive or negative) does the option have on the free movement of goods, services, capital and workers? Will it lead to a reduction in consumer choice, higher prices due to less competition, the creation of barriers for new suppliers and service providers, the facilitation of anti-competitive behaviour or emergence of monopolies, market segmentation, etc.?	-2	-1	1	1	-1

Competitiveness, trade and investment flows	What impact does the option have on the global competitive position of firms? Does it impact on productivity? What impact does the option have on trade barriers? Does it provoke cross-border investment flows (including relocation of economic activity)?	-2	-1	-1	0	-1
Operating costs and conduct of business/Small and Medium Enterprises	Will it impose additional adjustment, compliance or transaction costs on businesses? How does the option affect the cost or availability of essential inputs (raw materials, machinery, labour, energy, etc.)? Does it affect access to finance? Does it impact on the investment cycle? Will it entail the withdrawal of certain products from the market? Is the marketing of products limited or prohibited? Will it entail stricter regulation of the conduct of a particular business? Will it lead to new or the closing down of businesses? Are some products or businesses treated differently from others in a comparable situation?	-2	0	-1	0	-2
Administrative burdens on businesses	Does it affect the nature of information obligations placed on businesses (for example, the type of data required, reporting frequency, the complexity of submission process)? What is the impact of these burdens on SMEs in particular?	0	0	-1	-1	-2
Public authorities	Does the option have budgetary consequences for public authorities at different levels of government (national, regional, local), both immediately and in the long run? Does it bring additional governmental administrative burden? Does the option require the creation of new or restructuring of existing public authorities?	-2	0	-1	-1	-2
Property Rights	Are property rights affected (land, movable property, tangible/intangible assets)? Is acquisition, sale or use of property rights limited? Or will there be a complete loss of property?	-2	0	0	0	-1
Innovation and research	Does the option stimulate or hinder research and development? Does it facilitate the introduction and dissemination of new production methods, technologies and products? Does it affect intellectual property rights (patents, trademarks, copyright, other know-how rights)? Does it promote or limit academic or industrial research? Does it promote greater productivity/resource efficiency?	-2	1	1	2	2
Consumers and households	Does the option affect the prices consumers pay? Does it impact on consumers' ability to benefit from the internal market? Does it have an impact on the quality and availability of the goods/services they buy, on consumer choice and confidence? Does it affect consumer information and protection? Does it have significant consequences for the financial situation of individuals / households, both immediately and in the long run? Does it affect the economic protection of the family and of children?	-2	-1	-1	1	-2
Specific regions or sectors	Does the option have significant effects on certain sectors? Will it have a specific impact on certain regions, for instance in terms of jobs created or lost? Will the option have a negative impact on Gozo? Is there a single region, region or sector which is disproportionately affected (so-called 'outlier' impact)?	-2	-1	0	1	1

Third countries and international relations	How does the option affect trade or investment flows between the EU and third countries? Does the option affect specific groups (foreign and domestic businesses and consumers) and if so in what way? Does the option concern an area in which international standards, common regulatory approaches or international regulatory dialogues exist? Does it affect developing countries at different stages of development (least developed and other low-income and middle income countries) in a different manner? Does the option impose adjustment costs on developing countries? Does the option affect goods or services that are produced or consumed by developing countries?	-2	-1	1	1	-1
Macroeconomic environment	Does the option have overall consequences for economic growth and employment? How does the option contribute to improving the conditions for investment and the proper functioning of markets? Does the option have direct impacts on macro-economic stabilisation?	-2	-1	0	1	-1
	Sub-total	-20	-5	-2	5	-1
Social Impacts						
Employment and labour markets	Does the option facilitate new job creation? Does it lead directly or indirectly to a loss of jobs? Does it have specific negative consequences for particular professions, groups of workers, or self-employed persons? Does it affect particular age groups? Does it affect the demand for labour? Does it have an impact on the functioning of the labour market? Does it have an impact on the reconciliation between private, family and professional life?	-2	-1	-1	1	-1
Standards and rights related to job quality	Does the option impact on job quality? Does the option affect the access of workers or job-seekers to vocational or continuous training? Will it affect workers' health, safety and dignity? Does the option directly or indirectly affect workers' existing rights and obligations, in particular as regards information and consultation within their undertaking and protection against dismissal? Does it affect the protection of young people at work? Does it directly or indirectly affect employers' existing rights and obligations? Does the option facilitate or restrict restructuring, adaptation to change and the use of technological innovations in the workplace?	-2	-1/1	1	1	2
Social inclusion and protection of particular groups	Does the option affect access to the labour market or transitions into/out of the labour market? Does it lead directly or indirectly to greater equality or inequality? Does it affect equal access to services and goods? Does it affect access to placement services or to services of general economic interest? Does the option make the public better informed about a particular issue? Does the option affect specific groups of individuals (for example the most vulnerable or the most at risk of poverty, children, women, elderly, the disabled, unemployed or ethnic, linguistic and religious minorities, asylum seekers), firms or other organisations (for example churches) or localities more than others? Does the option significantly affect third country nationals?	-2	0	1	2	1

Gender equality, equality treatment and opportunities, non - discrimination	Does the option affect the principle of non-discrimination, equal treatment and equal opportunities for all? Does the option have a different impact on women and men? Does the option promote equality between women and men? Does the option entail any different treatment of groups or individuals directly on grounds of sex, racial or ethnic origin, religion or belief, disability, age, and sexual orientation? Or could it lead to indirect discrimination?	-1	-1	1	1	1
Individuals, private and family life, personal data	Does the option impose additional administrative requirements on individuals or increase administrative complexity? Does the option affect the privacy, of individuals (including their home and communications)? Does it affect the right to liberty of individuals? Does it affect their right to move freely within the EU? Does it affect family life or the legal, economic or social protection of the family? Does it affect the rights of the child? Does the option involve the processing of personal data or the concerned individual's right of access to personal data ?	-2	1	1	1	1
Governance, participation, good administration, access to justice, media and ethics	Does the option affect the involvement of stakeholders in issues of governance as provided for in the Treaty and the new governance approach? Are all actors and stakeholders treated on an equal footing, with due respect for their diversity? Does the option impact on cultural and linguistic diversity? Does it affect the autonomy of the social partners in the areas for which they are competent? Does it, for example, affect the right of collective bargaining at any level or the right to take collective action? Does the implementation of the proposed measures affect public institutions and administrations, for example in regard to their responsibilities? Will the option affect the individual's rights and relations with the public administration? Does it affect the individual's access to justice? Does it foresee the right to an effective remedy before a tribunal? Does the option make the public better informed about a particular issue? Does it affect the public's access to information? Does the option affect political parties or civic organisations? Does the option affect the media, media pluralism and freedom of expression? Does the option raise (bio) ethical issues (cloning, use of human body or its parts for financial gain, genetic research/testing, use of genetic information)?	-2	1	1	2	2
Public health and safety	Does the option affect the health and safety of individuals/populations, including life expectancy, mortality and morbidity, through impacts on the socio-economic environment (working environment, income, education, occupation, nutrition)? Does the option increase or decrease the likelihood of health risks due to substances harmful to the natural environment? Does it affect health due to changes in the amount of noise, air, water or soil quality? Will it affect health due to changes energy use and/or waste disposal? Does the option affect lifestyle-related determinants of health such as diet, physical activity or use of tobacco, alcohol, or drugs?	-2	-1	1	2	2

	Are there specific effects on particular risk groups (determined by age, gender, disability, social group, mobility, region, etc.)?					
Crime, Terrorism and Security	Does the option have an effect on security, crime or terrorism? Does the option affect the criminal's chances of detection or his/her potential gain from the crime? Is the option likely to increase the number of criminal acts? Does it affect law enforcement capacity? Will it have an impact on security interests? Will it have an impact on the right to liberty and security, right to fair trial and the right of defence? Does it affect the rights of victims of crime and witnesses?	-2	1	1	2	1
Access to and effects on social protection, health and educational systems	Does the option have an impact on services in terms of quality/access for all? Does it have an effect on the education and mobility of workers (health, education, etc.)? Does the option affect the access of individuals to public/private education or vocational and continuing training? Does it affect the cross-border provision of services, referrals across borders and co-operation in border regions? Does the option affect the financing / organisation / access to social, health and care services? Does it affect universities and academic freedom / self-governance?	-2	1	1	1	2
Culture	Does the proposal have an impact on the preservation of cultural heritage? Does the proposal have an impact on cultural diversity? Does the proposal have an impact on citizens' participation in cultural manifestations, or their access to cultural resources?	-2	1	1	2	2
Social impacts in third countries	Does it increase poverty in developing countries or have an impact on income of the poorest populations?	-2	0	1	1	2
	Sub-total	-21	2	9	16	15
	Total	-64	-16	14	37	30

Table 6: Sustainability Impact Assessment of the National Environment Policy Scenarios

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Appendix 1: Strengths, Weaknesses, Opportunities and Threats associated with the Maltese environmental policy field identified by workshop participants during the National Environment Policy Stakeholder Workshop on 25th January 2011

Strengths

- Small archipelago, geographically- isolated from major industrial centres, Malta is generally buffered from high levels of pollution
- Favourable climate, relatively rich biodiversity, and remarkable cultural heritage contribute significantly to relatively high quality of life and health standards
- Economy not characterised by major pollution risks
- Political stability and democratic institutions
- Relatively high level of environmental awareness have been translated into political expectations and political priorities
- Awareness becoming economic pull factor, translating into increasing demand for environmentally-friendly goods
- Malta's membership in the European Union has helped make the environment a higher political priority
- EU has provided an important source of funding in the environmental field
- Culture of adaptability and resilience
- Institutions already staffed with professional and often multidisciplinary personnel
- EU environmental *acquis* provides a comprehensive framework addressing a wide range of policy issues in a systematic manner
- Enforcement process attached to the EU *acquis* strongly encourages compliance
- Malta's legal framework and institutions in the environmental field in place
- Relatively high level of access to information about the environment held by institutions
- Smallness of Malta permits the fast spread of ideas and facilitates informal communication

Weaknesses

- Small, densely-populated archipelago, with few natural resources and a peripheral location relative to major centres of production and innovation
- Large number of competing economic and social activities, generating high intensity environmental pressures
- Lack of economies of scale, for example in recycling,
- Low level of influence on international policy
- High level of fragmentation in land ownership
- Environment is still not seen as a fundamental cornerstone for the nation's economy
- With notable exceptions, some sectors view the environment as resource to be exploited rather than conserved
- Infrastructure required to maintain environmental quality still being put into place
- Use of environment-related economic instruments to achieve environmental objectives still not widespread.
- Institutions responsible for environmental protection are still being strengthened
- Environmental competencies spread across government, with some overlaps that are not yet addressed
- Administrative burden of EU *acquis*
- Medium- to low- level of formal networking between institutions on environmental field.
- Challenges related to implementation of EU *acquis* over a short period of time.
- Lack of awareness about the relationship between the environment and human health, for example related to air pollution and respiratory disease.
- A textbook approach to education in the environment-related sciences;
- Low level of education and low levels of environment-related innovation
- Lack of key specialised skills and fundamental knowledge in some areas such as biodiversity and marine areas;
- Cases of data hoarding;
- Environmental issues have traditionally become politicised;
- Environment not historically a major political priority.

Opportunities

- Use the economy better to signal more sustainable development paths, for example in the energy and transport sectors, and where there are synergies, such as in sustainable tourism.
- Build on the advantages of smallness, for example in a fast transition to a sustainable transport system
- Cater for niche markets where Malta's uniqueness can make a difference.
- Build on the strengths of geographical location. Develop the maritime economy sustainably.
- Significantly strengthen institutions, using modern management techniques, and targeting enforcement and networking between institutions. Green public procurement. Use new forms of governance that involve other actors, such as town centre management.
- Improve the management of key resources such as water and stone.
- Take climate change adaptation as an opportunity to develop a culture of increased resilience
- Further develop the Gozo eco-island concept as a model for sustainable development
- Encourage research and creativity related to the environment. Encourage multidisciplinary. Use new technologies and improve utilities infrastructure
- Improve communications related to the environment, using positive messages and new communication technologies
- Foster a new attitude of responsibility, building on core social values
- Participate more actively in the international political field on the environment, both for negotiating EU positions and obtaining international funding. Use EU membership and the 2017 Presidency to focus on key national issues

Threats

- Demographic change, whether it relates to population ageing, population growth, significantly increased migration flows (either in- or out-) and the 'brain drain'
- Political instability in neighbouring countries
- Likelihood of drive to enforce legislation and address social justice in environmental policy
- Economic fluctuations
- Impact of economic activity and over-consumption
- Rebound effect whereby resource-efficiency gains are outweighed by increased consumption
- Depletion of resources such as water, stone, (as well as land) beyond key sustainability limits, at which level prices begin to engender new forms of poverty
- Natural, biological, technological and industrial risks
- Food, water and fuel security
- EU approach sometimes not suited to Malta's unique circumstances as a small island state
- Education system (both formal and informal) is not flexible enough to meet country's needs.
- Reluctance to change behaviour
- Legal challenges to environmental legislation, such as precedent

Appendix 2: Factors influencing scenarios discussed during Scenarios Workshop by type of scenario (with number of mentions)

Factors	'Doom & gloom'	Business as usual	Moderately ambitious	Utopian	Total
Agriculture		1			1
Air		1			1
Awareness and education			6		6
Biodiversity		2		1	3
Climate Change	1	1			2
Communications			1		1
Construction			3		3
Corporate Social Responsibility	1		1		2
Demography	1	3			4
Disasters	2				2
Economic	14	3	9		26
Education		1	1		2
Employment		1			1
Energy	1	4	8		13
Enforcement		1			1
Environmental financing				1	1
Environmental limitations				1	1
Environmental quality				1	1
Environmental threats		1			1
EU			2	1	3
Governance			3		3
GPP			1		1
Health	5	1			6
Implementation		2			2
Industry	1		2		3
Information	1			1	2
Infrastructure		1			1
Innovation			1		1
Institutions		1	7	3	11
Life Cycle Assessment			1		1
Location				1	1
Maritime			1		1
Migration				1	1
Planning			1	2	3
Policy		3	2	4	9
Policy Integration	2		2		4
Political		2			2
Recreation			1		1
Regulatory			1		1

Factors	'Doom & gloom'	Business as usual	Moderately ambitious	Utopian	Total
Resources	1	7			8
Social		1		1	2
Technology		1		2	3
Transport	1	3			4
Transport/Waste		1			1
Urban core depopulation		1			1
Urban greening				1	1
Various				1	1
Vulnerability		1			1
Waste	5	2			7
Water	5	3			8

Appendix 3: Detailed scenario description

		Title of scenario*	1. Low environmental priority	2. Medium environmental commitment	3. 'Europe'	4. 'Europe' + local environmental quality	5. 'Green utopia'
* All scenarios refer to situation in 2020							
A Drivers							
1	Soc	Demography	population continues to grow slowly due to increased longevity and immigration, despite the decline in birth rate and increase in emigration.	population continues to grow due to increased longevity and immigration, despite the decline in birth rate	population continues to grow due to increased longevity and immigration, despite the decline in birth rate	population continues to grow due to increased longevity and immigration, despite the decline in birth rate	population continues to grow, but faster, due to increased longevity due to improved health and increased immigration due to high quality of life, despite the decline in birth rate
2	Soc	Internal migration out of urban cores	high level of out-migration from urban cores due to poor quality urban environment. Poverty in older urban areas increases due to economic downturn.	high level of out-migration from urban cores due to poor quality urban environment	medium level of out-migration from urban cores due to certain measures to improve urban environmental quality	low level of out-migration from urban cores due to strong measures to improve urban environmental quality	low level of out-migration from cores due to strong measures to improve urban environmental quality coupled with stringent measures against greenfield development
3	Soc	Migration	Highly significant immigration from economic, political and environmental migrants, particularly due to economic downturn, climate change, and other unforeseen events	Significant immigration from economic, political and environmental migrants	Significant immigration from economic, political and environmental migrants	Significant immigration from economic, political and environmental migrants	Reduced immigration from economic and political migrants due to international cooperation on environment and development issues
4	Soc	Employment	low employment levels reflecting the international economic climate, the shift in production towards Asia, and impact of unforeseen events	medium employment levels reflecting the international economic climate and the shift in production towards Asia	medium employment levels reflecting the international economic climate and the shift in production towards Asia	medium high employment levels reflecting the international economic climate and the shift in production towards Asia, countered to some extent by the emphasis on encouraging green jobs	high employment levels reflecting the emphasis on green jobs, eco-innovation and strategic location of Malta in the spread of green technologies, as well as more women taking up employment
5	Soc	Education/life-long education	low standard of education due to high level of young school leavers and low overall literacy rates. Low numbers of science graduates and low innovation scores due to impacts of economic and other crises. Cost of adjusting to crises also reduces finances available for education/lifelong learning.	medium standard of education due to high level of young school leavers and low overall literacy rates. Relatively low numbers of science graduates and low innovation scores. However the people trained in green technologies is increasing due to specialised courses.	medium high standard of education due to reduced level of young school leavers and improved literacy rates, in the light of EU policy in this regard. The relatively low numbers of science graduates and low innovation scores persist. However the people trained in green technologies is increasing due to specialised courses.	medium high standard of education due to reduced level of young school leavers and improved literacy rates, in the light of EU policy in this regard. The relatively low numbers of science graduates and low innovation scores persist, however the people trained in green technologies is increasing significantly due to coordinated specialised courses.	High standard of education with significantly reduced level of young school leavers and much improved literacy rates, in the light of EU policy and strong investment in this sector. The high numbers of science graduates often specialise in green technologies, which are the subject of coordinated and systematic training courses.
6	Soc	Social inclusion/environmental justice	Low level of social inclusion due to emphasis on economic development and impacts of economic and other crises and their aftermath on government budgets.	medium low level of social inclusion due to emphasis on economic development and impacts of economic crisis and its aftermath. Drive to improve GDP to EU average and EU pressure to balance budget leaves certain vulnerable groups more at risk of poverty.	medium low level of social inclusion due to emphasis on economic development and impacts of economic crisis and its aftermath. Drive to improve GDP to EU average and EU pressure to balance budget leaves certain vulnerable groups more at risk of poverty.	medium level of social inclusion due to emphasis on economic development and impacts of economic crisis and its aftermath. Drive to improve GDP to EU average and EU pressure to balance budget leaves certain vulnerable groups more at risk of poverty. However emphasis on improving local environmental quality makes great difference to quality of life of many vulnerable groups.	medium high level of social inclusion due to realisation of inter-connectedness of the pillars of sustainable development. Pockets of pollution with poor living conditions have been addressed and environmental health standards much improved. Economic development related to green jobs and new technologies has enabled high job creation rates.
7	Env	Climate change	Climate-change related events affecting water supplies and coastal areas take place. Due to its vulnerability and low level of adaptation, Malta's population and economy are badly impacted. Malta finds it very difficult to recover from them. Malta does not meet its mitigation targets.	Climate-change related extreme events take place and due its vulnerability and medium level of adaptation Malta finds it hard to recover from them in the short term. There is continued uncertainty as to whether Malta will meet its mitigation targets.	Climate-change related extreme events take place and due to its vulnerability and medium level of adaptation Malta finds it hard to recover from them in the short term. Malta meets its mitigation targets.	Climate-change related extreme events take place but, despite its vulnerability, due to its increased adaptation actions Malta does not find it hard to recover from them in the short term. Malta meets its mitigation targets.	Climate-change-related extreme events take place but with decreasing impacts due respectively to Malta's adaptation actions and international policies, which have stalled much of the projected climate change effects. Malta easily recovers from such events in the short term. Malta becomes carbon neutral through emissions trading and use of clean development mechanisms.

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8	Env	External shocks /disasters	There is continued instability in the Mediterranean region due to political turbulence, leading to oil price spikes and economic and social impacts. The ongoing economic, energy, food and water crises, coupled with a series of pollution and volcanic incidents, gives rise to further socio-economic impacts. Due to low preparedness and resilience Malta finds it hard to recover from these external shocks and regional disasters.	Due to low preparedness and resilience Malta finds it hard to recover from external shocks and regional disasters in the short term	Due to medium preparedness and resilience Malta finds it hard to recover from external shocks and regional disasters in the short term	Due to medium to high preparedness and resilience Malta finds easier to recover from external shocks and regional disasters in the short term	Malta easily recovers from such events in the short term due to its high level of preparedness, strong resilience, as well as international cooperation policies, particularly on a regional level.
9	Econ	Economic primacy	Economic growth is seen as the major direction for recovery from the multiple crises that have affected Malta, with little attention paid to environmental or social goals. Sectors such as construction, energy, transport, tourism and agriculture gain importance and have increased environmental impacts.	Economic growth is still seen as the major factor in ensuring quality of life, particularly in view of the global economic crisis and its aftermath. Key sectors such as construction, energy, transport, tourism and agriculture still have significant environmental impacts.	Economic growth is still seen as the major factor in ensuring quality of life, particularly in view of the global economic crisis and its aftermath. Key sectors such as construction, energy, transport, tourism and agriculture still have significant environmental impacts, although these are tempered by EU-driven policies for more sustainable housing, transport, energy and agricultural production and use systems.	Economic growth is beginning to be seen as dependent on environmental quality. Key sectors such as construction, energy, transport, tourism and agriculture are adopting sustainable development actions plans.	Economic growth is now seen as dependent on environmental quality. There is no more perceived difference between economic, social and environmental objectives. Green accounting has indicated best performing sectors environmentally and these are developed further to guarantee sustainable livelihoods.
10	Econ	Research/Innovation/Technology/niche markets/capitalising on location	Low level of investment in technological innovation, research and its links to the economy. The situation worsens due to budgetary constraints related to the economic climate.	Low level of investment in technological innovation, research and its links to the economy	Medium level of investment in technological innovation, research and its links to the economy	High level of investment in technological innovation, research and its links to the economy. This becomes a horizontal priority that is found in all government policy and programmes.	High level of investment in technological innovation, research and its links to the economy. Research and innovation become a horizontal priority that is found in all government policy and programmes.
11	Econ	Economic restructuring to improve environmental performance	Economic development planning suspended while disaster recovery in progress.	Low level of attention in economic development planning to environmental and resource constraints	Medium level of attention in economic development planning to environmental and resource constraints	High level of attention in economic development planning to environmental and resource constraints	High level of attention in economic development planning to environmental and resource constraints
12	Econ	Producer responsibility	Very low level of implementation of producer responsibility. Environmental costs are borne by the public.	Low level of implementation of producer responsibility. Environmental costs are still being borne by the public.	Medium level of implementation of producer responsibility. Environmental costs are being borne by the producer.	Medium high level of implementation of producer responsibility. Producers are beginning to improve their performance voluntarily.	High level of implementation of producer responsibility. Environmental costs are being borne by companies and the products on the market already show that this is changing production and consumption patterns.
13	Econ	Use of well-designed economic instruments to improve the environment	Economic instruments are redesigned in line with short-term goals related to overcoming the present crisis.	Although a substantial number of economic instruments with an environmental impact are in use, they are not coordinated and do not always bring about an environmentally-optimal outcome.	A substantial number of economic instruments with an environmental impact are in use, but their coordination and environmental impact remains not optimal. EU directives and expert groups have helped to bring up discussion surrounding the design and implementation of the instruments.	Many economic instruments are now being designed and implemented in accordance with national policy objectives	Economic instruments are all now being designed and implemented in accordance with national policy objectives

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14	Econ	Conservation of resources: Energy/Water/Stone/Soil	Due to food, climate and energy crises, there is increased resource scarcity, which drives prices up, with economic and social impacts. Building stone and soil continue to be used without any resource conservation measures in place.	low level of conservation of resources. Energy and water prices unaffordable. Water quality deteriorates to level where aquifer system is unusable. Private water suppliers unregulated. Use of virgin natural stone continues as stocks are depleted and recycling levels low	medium to low level of conservation of resources. Some conservation of energy and water has taken place due to EU targets but prices remain unaffordable. Water table quality has improved but quantitative status remains significant challenge. Private water suppliers mostly remain unregulated. Use of virgin natural stone continues as stocks are depleted although recycling levels are stepping up due to waste directives.	medium to high level of conservation of resources. Specific actions have been taken to bring resource use to sustainable levels. Water status and prices are more sustainable. Energy conservation has been promoted and little virgin stone resources are now being quarried due to extensive recycling practices. There is new protection for soil resources.	High level of conservation of resources. Water and stone recycling is now mainstreamed, and soil is also strictly protected. Renewable sources now make up the mainstay of energy supply, and this has also meant that Malta has more security in this area.
15	Econ	Agriculture	Agriculture sector feeling the effects of climate change and other events. Environmental priorities are afforded very low priority. Due to food crisis, sector is under pressure to increase production irrespective of environmental considerations.	Low level of integration of environment into agricultural practices on the ground, despite EU-driven rural development funding. There is low security of food supply and the sector is in decline.	Medium level environmental integration due to continued pressure to meet EU standards with regard to water, soil, biodiversity, waste and other environmental media.	Medium high level environmental integration due to continued pressure to meet EU standards with regard to water, soil, biodiversity, waste and other environmental media, as well as local pressure to protect Malta's strategic water resources in form of the aquifers and the soil (the latter related to food security).	High level of policy integration. Agriculture supported actively as steward of countryside quality and strategic resources such as water and soil. Very positive synergies have been found with protected areas management, and farmers are closely involved in the management of such areas. Sectoral decline has been reversed.
16	Econ	Transport	very low env integration of environment into transport policy. However due to fuel crisis and related price hikes people use less energy for personal transport.	low env integration of environment into transport planning. Due to the relative unattractiveness of the public transport network, most people use the car for work and other important journeys.	due to the timely implementation of EU policy there is a medium level of environmental integration into transport systems. Transport emissions have been brought in line through greater use of public transport, bus priority on roads and low emission zones.	there is medium to high environmental integration in the transport sector, due to the recognition of the effect of transport emissions on human health. Transport emissions have been reduced through greater use of public transport, bus priority on roads and low emission zones, together with charging for road use in peak times	there is high environmental integration in the transport sector, Malta uses the state-of-the-art technologies in public transport, and using public transport has become a pleasant part of daily life for Maltese and visitors. Teleworking as also become a common form of work practice.
17	Econ	Manufacturing industry	The manufacturing sector has not weathered the multiple crises well. Where it survives, environmental criteria are a very low priority.	There is a low level of environmental integration in the industrial sector. Environmental permits have been used with large enterprises, but enforcement lags behind and the large majority of enterprises have not changed their approach.	There is a medium level of environmental integration in the industrial sector. Environmental permits have been used with large enterprises, but the large majority of enterprises have not changed their approach. However enforcement has been strengthened due to well publicised breaches in IPPC permits.	There is a medium to high level of environmental integration in the industrial sector. Voluntary schemes for compliance have become more widespread. Environmental permits have been made more onerous, particularly for the larger operators. Enforcement, particularly for operators of small businesses causing environmental nuisance, and IPPC permit holders endangering public health, has been considerably strengthened.	There is a high level of environmental integration in the industrial sector. Voluntary compliance schemes are widespread. Environmental permits and general binding rules, which are carefully enforced, ensure little risk of public health scares or nuisance problems with neighbours. Over time, the use of environmental accounting has served to indicate the best performing sectors, environmentally, and the worst performing sectors are gradually being wound down.

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18	Econ	Construction	There is a very low level of environmental integration in the construction sector, due to the urgent need for reconstruction. The sector is seen as a major driver of economic recovery.	There is a low level of environmental integration in the construction sector, which is responsible for significant land development and soil sealing, as well as air pollution and noise problems. Construction remains, at least conceptually, a major driver of the economy.	There is a medium level of environmental integration in the construction sector, which is responsible for significant land development and soil sealing, as well as air pollution and noise problems. Construction remains, at least conceptually, a major driver of the economy. Energy policy has addressed the environmental performance of buildings.	There is a medium level of environmental integration in the construction sector, which is responsible for significant land development and soil sealing, as well as air pollution and noise problems. Construction remains, at least conceptually, a major driver of the economy. Energy policy has addressed the environmental performance of buildings. All new buildings are now carbon neutral, while all significant renovations must bring buildings up to standard. Vacant properties are now being brought into the market through major investments in renovation and legal and fiscal measures. The planning regime has taken the issues of crowdedness, safety and design on board.	There is a high level of environmental integration in the construction sector. All new buildings are now carbon neutral, while all significant renovations must bring buildings up to standard. Contractors are all certified with an environmental management body, and the much smaller industry now focuses on renovations and retrofitting of old properties. Malta's architectural heritage is now complemented by fine new buildings and excellent restoration and adaptations of historical buildings, many of which were previously vacant, but now provide for most of the need for new supply of homes and work-places.
19	Econ	Tourism and recreation	Tourism is negatively affected by climate change as Malta is mostly too hot to accommodate tourists, and its water and energy supplies too costly. Environment is a very low priority for the industry.	There is medium level of environmental integration in this sector, with sustainability reflected in tourism policy. There are still issues related to coastal and rural uses, as well as noise and congestion, which need to be addressed. There is still an emphasis on numbers and minimal efforts to change tourist behaviour.	There is medium level of environmental integration in this sector, with sustainability reflected in tourism policy. There are still issues related to coastal and rural uses, as well as noise, which need to be addressed. EU policy has helped to highlight the need to protect the environmental and heritage backdrop for sustainable tourism. The drive for quality has also helped reduce the impact of tourism on sensitive areas.	There is medium level of environmental integration in this sector, with sustainability reflected in tourism policy. EU policy has helped to highlight the need to protect the environmental and heritage backdrop for sustainable tourism. Environmental policy has helped to focus attention on the need to manage coastal, rural and historic areas better, and this is being done with sustainable, quality tourism in mind. The provision of safe family recreational areas through creative use of space has improved. The emphasis on forward planning using capacity concepts, on operator responsibility, and consumer education has borne fruit to reduce much of the social and environmental impact of tourism.	The recognition that Malta cannot afford support poor quality tourism had led to a high level of environmental policy integration in this sector. Accommodation establishments are now all certified for their compliance, new projects assessed against stringent environmental criteria, and the emphasis on quality has reduced the pressure of tourism in coastal and historic areas. Tourism is now a major funder of environmental improvements, and serves to raise awareness about environmental issues.
20	Econ	Maritime activities	The maritime sector has been strongly involved in mitigating the effects of disasters, however it is negatively affected by fuel price hikes. Despite the decrease in shipping and yachting activities, environment is very low on its agenda.	There is a low level of environmental integration in the maritime sector. Shipping and fisheries remain major sources of environmental degradation, and yachting creates significant pressure on coastal waters for additional moorings.	Due to the EU emphasis on integrated maritime policy, there have been important improvements in policy integration, but in areas not covered by EU legislation major issues remain.	Due to the recognition of clean seas as integral to the sustainable development of the Maltese Islands, Malta has taken important steps to improve policy integration in the maritime sector, based on marine spatial planning, and leading to medium strong policy integration. As strategic sector, maritime is well regulated via EU and multilateral agreements. Malta maintains and takes forward its proactive stance in international maritime issues related to environment.	There is a high level of policy integration in the maritime sector, with high disaster preparedness, highly organised shipping activities, sustainable fisheries and aquaculture activities, and strong international cooperation based on marine spatial planning and international cooperation.

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21	Econ	Environmental funding and investment	low level of environmental funding	medium low level of environmental funding. Regional policy includes environment as horizontal and thematic priority.	Increased level of environmental funding due to pressure to meet EU commitments. Regional policy includes environment as horizontal and thematic priority.	Increased level of environmental funding due to pressure to meet EU commitments. Regional policy includes environment as horizontal and thematic priority. New funding streams are brought on line to address new areas such as town centre management.	Environmental funding incorporated into other forms of funding so that environment becomes a key concern in all funding mechanisms. The high priority given to environment means funding no longer a concern. ODA has also been greened.
22	Inst	Political commitment to environment	There is very low political to environment	There is a medium level of political commitment to environment	There is a medium level of political commitment to environment	There is a medium to high level of political commitment to environment	There is a high level of political commitment to environmental protection in Malta. It is seen as one of the Islands' unique selling points, and serves to attract foreign investment.
23	Inst	Legislative framework	The legislative framework for environment is generally adequate, but not well integrated.	The legislative framework for environment is generally adequate, but there remains scope for consolidation and simplification.	Through the EU emphasis on better regulation, significant streamlining of legislation and responsibilities has taken place.	Better regulation, coupled with the 2011 sustainable development act, which placed an onus on every government body to promote sustainable development, providing medium strong legislative framework for the environment	The legislative framework ensures that environment is integrated into the remit of every government ministry or agency, providing a strong and streamlined legislative support framework for the environment.
24	Inst	Institutional capacity	Malta's institutional capacity in the environmental field has been weakened by the multiple crises as government resources have been deployed to avert the worst impacts of the crises.	Malta's institutional capacity in the environmental field remains weak. The institutional framework still suffers from fragmentation, lack of resources and insufficient staff.	Due to pressure to improve implementation of EU-related obligations, government has increased resources in the environmental field. However institutions still suffer from lack of legal and financial strength.	Due to pressure to improve implementation of EU-related obligations, government has increased resources in the environmental field. Action has also been taken with regard to strengthening institutional remits and powers. There has also been a shift from command and control to self-regulation.	Environmental institutions are now seen as the guardians on Malta's high quality environment. They are well-resourced, staffed by qualified and experienced personnel and equipped with the legal remits and powers they need to ensure high levels of environmental quality. The emphasis on self-regulation, which gradually becomes the norm, as also borne fruit, improving compliance and reducing administrative burdens.
25	Inst	Information and communication	Availability and dissemination of environmental information decreases due to emphasis on crisis recovery.	There is weak availability of environmental information, both due to lack of resources to gather data, as well as insufficient attempts to publish and disseminate environmental information.	Due to timely and accurate implementation of EU policy, there is more emphasis on gathering and disseminating environmental information, leading to medium availability & dissemination.	Due to the emphasis on EU policy implementation and stronger institutions, there is medium strong availability & dissemination of environmental information. Communications has been overhauled completely and the effects of environmental policy on human lives is now routinely highlighted.	Malta's environmental institutions take pride in disseminating their state-of-the-art information on the environment, leading to strong availability & dissemination of environmental information.
26	Inst	Implementation	Implementation of environmental policy becomes a very low priority due to the multiple crises.	Overall there is a relatively weak approach to implementation. Environmental policy priorities are rarely reflected in the business plans of other organisations.	The impact of timely implementation of EU policy translates into a medium strong approach to implementing policy where it is linked to EU obligations.	Due to timely implementation of EU policy and a policy emphasis on implementation, there is a medium strong approach to implementing policy based on the cascading of policy priorities into all relevant business plans.	Strong approach to implementation. Government has addressed the implementation gap very seriously, ensuring that all its bodies and agencies tie their business plans to agreed policy obligations.

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27	Inst	Policy/policy integration	Due to the crises, policy integration tends to improve in key areas such as food, energy and water conservation, health and land use. Other than where related to immediate environmental health concerns, however, environmental integration remains a low priority.	Policy integration still often depends on individual convictions and factors rather than being a stated policy objective, with political, legal and administrative structures in place. EU policy in key sectors such as agriculture, fisheries, energy and transport has brought progress in this area, but needs better implementation on the ground.	Policy integration depends less on individual convictions and factors but the greater importance given to EU policy in key sectors such as agriculture, fisheries, energy and transport has brought about important progress in this area.	Policy integration is now a stated policy objective, with political, legal and administrative structures starting to be put in place. Coupled with the drive given to EU policy in key sectors such as agriculture, fisheries, energy and transport there has been much greater progress in this area.	strong - political will present, legal obligations in place, use of instruments varied, public participation and monitoring and follow-up all in place	
28	Inst	Enforcement	Enforcement improves where major environmental health issues arise. Otherwise environmental enforcement is negatively affected due to reduced governmental resources.	Remains weak. Entities collaborate only in the exception	medium. Enforcement agencies are being strengthened but model is still distributed across many agencies rather than cooperative.	medium strong. Strongly networked agencies take action on key issues such as land, noise, air quality, etc and closer consolidation is being studied.	strong. One coordinated structure closely linked to the police force takes action on key concerns like construction, transport, industry, entertainment, etc	
29	Inst	Take-up of tools like GPP/LCA/green accounting	There is very minor take-up of such tools.	These tools have started to be discussed but so far few concrete results have been achieved.	Through the EU, some of these tools like GPP and LCA have been mainstreamed, but their potential has not been fully exploited.	Due to the emphasis on improved implementation, there is medium to high use of such policy tools.	All these tools are used to full capacity in order to achieve maximum implementation of environmental policy.	
30	Inst	Land-use planning	The land use planning system seek to respond to the crises by allocating land for temporary housing, and to allow for the impacts of climate change. Environmental protection remains a low priority other than where key resources/public health issues are at stake.	The land use planning system continues to seek to balance land development priorities with social and environmental criteria, but this continues to eat away at critical natural and cultural heritage features.	The land use planning system continues to seek to balance land development priorities with social and environmental criteria, but this continues to eat away at critical natural and cultural heritage features.	The land use planning system begins to prioritise environmental and social concerns where these concern critical environmental features and social factors. This reduces pressure on areas outside the development zone and conservation areas.	The land use planning system takes a strong stance against any development outside development zone, where it is impossible to develop any more undeveloped land. Eyesores and abusive developments are removed, particularly on the coasts and in conservation areas.	
31	Inst	Governance	The state takes a major role in crisis management. Public participation and access to environmental justice take a minor role in the face of the multiple crisis facing the country.	Relatively top down, where the state remains the central player, and there is little empowerment of other players. There is a moderate level of provision of environmental information, and access to justice. Public Participation takes place but approaches are not streamlined across government.	top down approach continues but new partners are slowly being brought in through implementation of EU policies requiring public participation, access to justice and joint management. Participation takes place but approaches are not streamlined across government.	Includes new partners in management of towns and countryside and in self regulation. Increased emphasis on voluntary schemes and their relationship to permitting. Strong policies to promote access to information, public participation and access to justice.	Highly participatory, with key areas of environmental management 'delegated' to external bodies, such as protected sites/area management, beach management, and town centre management. Industry self-regulation associated with environmental permitting, voluntary schemes, certification and corporate social responsibility. High level of access to environmental justice and information.	
32	Inst	Compliance with EU aquis	the number of infringements increases.	medium improvement in number of infringements, mostly a policy-taker attitude at EU negotiations	no infringements, but Malta still adopting using a policy-taker approach at EU negotiations	no infringements plus more attention given to EU negotiations that affect the national interest, and the obtaining of EU funds	No infringements. High level of attention given to EU environmental legislation, and high success rate at obtaining and using EU funds	
33	Inst	International field	low priority given to international environmental activities, except where immediate crisis management issues are at stake (eg related to water shortages, refugees, etc).	low priority given to international environmental activities	low priority given to international environmental activities	medium priority given to international environmental activities, which high emphasis on key issues for Malta, such as maritime activities and climate change	high priority given to international environmental activities due to recognition that only through international cooperation can a high level of environmental quality be achieved nationally	
B		Outcomes						
1	Env	Environment in general	The environment is negatively affected by climate change and other disasters, particularly in the water and coastal fields.	Malta still suffers from its emblematic environmental issues related to land use, air quality and waste management.	Better but still poor where EU policy does not address issues eg local air quality, noise, dust, land use, etc	Highly improved in all areas, particularly where environmental health is concerned	High quality. Malta becomes a showcase for its environmental quality.	

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2	Env	Environmental health	Negative environmental health issues exacerbated by climate change impacts related safety, water-and vector-borne and diseases, as well as poor sanitation following emergencies. However since reduced use of fuels related to economic downturn and resource scarcity leads to slight overall improvement in air quality, respiratory problems decrease.	high levels of respiratory disease, noise and lack of safety persist. Air quality of concern in town centres.	situation somewhat improved. Air quality remains of concern in town centres.	Reduced incidence of environment-related morbidity and mortality. Safety also improved. Air quality in town centres addressed through controlled emission zones and town centre management.	Highly reduced incidence of environment-related morbidity and mortality. Safety highly improved. High level of air quality all over islands. Global policy has also reduced transboundary pollution.
3	Env	Urban cores/urban greening	increasingly poor urban environmental quality due to crowdedness, housing crises, noise, traffic and construction.	poor urban environmental quality, due to crowdedness, noise, traffic and construction	slightly improved but still noisy, crowded and disturbed by construction	highly improved due to participatory management practices to improve town centres	highly improved due to participatory management practices to improve town centres
4	Env	Rural areas	The countryside is being over-exploited for its natural resources. While agricultural production has been negatively affected by climate change, food crises have given rise to increased cultivation and previously abandoned land is being brought back into use, however with little regard to long term conservation goals.	Countryside areas continue to be marred by agricultural abandonment, sporadic inappropriate development and illegal hunting and trapping practices. Area management has begun but is slow to take root.	Due to EU policy, agriculture and rural development continue to be supported, as well as land management, but these policies have not had the level of success required to turn around the problems of agricultural abandonment, sporadic inappropriate development and illegal hunting and trapping practices	With a combination of EU policy, strong support for the agricultural sector, also linked to rural tourism, as well as a new approach to area management, rural areas have been give a new lease of life. Rural recreation has increased, but special areas reserved for family recreation has taken the pressure of threatened ecosystems.	Malta's rural areas are a showpiece of area management at a regional level, a treasured lung for the population and an important asset for tourism. Important rural areas are managed and all development takes place in tune with agricultural, conservation, including landscape conservation, and touristic/recreational goals. Inappropriate developments, including unsightly edge-of-town and coastal developments, are being converted or removed.
5	Env	Resource consumption	Resource scarcity relating to oil, water, soil and stone has made prices rise, and new forms of poverty are becoming increasingly apparent. Certain resources like water and stone, which have been over-exploited due to the crisis, are in danger of running out.	Resource scarcity relating to oil, water, soil and stone has made prices rise, and new forms of poverty are becoming apparent.	The emphasis on resource conservation as part of the Lisbon 2020 policy direction has led to stronger policy to conserve water, energy and soil. Nevertheless global trends continue to give rise to price hikes that threatened jobs.	Based on EU policy on sustainable resource management, and stronger national policy to protect key resources due to security constraints, Malta is approaching sustainable consumption patterns in key areas such as water and stone.	Strong sustainable resource management policies ensure a cradle to cradle approach. Non-renewable resources are all recycled and renewable resources are used within their maximum sustainable yield.
6	Env	Quality of life	Quality of life has been negatively affected by climate change and other events. Towns have become hotspots for poverty and dilapidation. The countryside is being over-exploited for its natural resources.	Overall relatively good, but stressful in urban areas, due to traffic, noise and land development. Countryside and coastal access not easy.	Overall relatively good, but stressful in urban areas, due to traffic, noise and land development. Countryside and coastal access not easy.	Overall good as town centres have improved and there is more access to countryside and coast.	High level of quality of life in urban areas, and better access to high quality rural and coastal areas. High level of quality of life used as selling point for foreign investment. Malta scores very high in happiness index.