Foreword

Low Carbon Development Strategy

The evolution towards a low carbon economy brings with it challenges and opportunities for all countries pursuing this ambitious goal not least Malta. As a member of the EU we have a series of obligations across a known timeline that constitute ambitious emissions reduction targets and which are set to chart the new low carbon economy reality. The targets that Malta has been assigned can only be met through the development and implementation of a comprehensive national policy that will gradually re-shape us into a Low Carbon Economy.

Malta is already committed to a reduction of its GHG emissions by up to 5% on 2005 levels by 2020. This, in line with the Effort-Sharing Decision, is already proving to be challenging and will increase significantly as Malta negotiates its 2030 targets at the EU level. The challenge is further augmented since the new reality will require Malta’s rate of economic to be maintained and decoupled from associated increases in emissions. Bottom line we need to adjust to the new reality now, one which both the private and public sectors embrace and commit themselves to.

As a Government we have shown our commitment to the cause by legislating, at a very early stage of our mandate, a Climate Change Act, the statutory requirements of which necessitates the treatment of this strategy with commitment and urgency. The impact of climate change, which is already unavoidable, obliges Malta to adapt to the uncertain, yet inevitable, physical and economic consequences.

A low carbon economy whilst requiring a shift from the ‘business as usual mindset, brings with it a number of potential opportunities for those who become first movers. Our commitment to transitioning towards a low carbon economy does not only stem from an environmental perspective but also from a social one in which,
we are convinced, that the quality of life of Maltese citizens will improve as a result of curbing emissions. This document which we augur will attract a wide public participation, is intended to guide the development of a national strategy containing specific goals, that need to be owned by identified stakeholders, that are measurable and attainable and which need to be delivered in order to avoid consequences which Malta does not merit. Whilst national climate legislation is largely in place, Malta needs to move a step further with a view towards integrate climate actions across all public and private sectors in order to produce positive outcomes of change based on clear evidence and measurable results.

In tandem with the development of this strategy, there is a need to augment the necessary supporting structures necessary to achieve tangible results in line with best practice adopted in other countries. This will need to be firstly achieved through the continued capacity development within the Ministry for Sustainable Development, the Environment and Climate Change who is the main policy driver for climate action as well as the main coordinating body for GHG emission data as collated by Malta’s Inventory body.

Together with the Climate Action Fund an important enabler for a transition towards a low carbon economy is the development of financial instruments that will support programmes and smart incentives directed towards the implementation of the low carbon economy. Such financial instruments need to be ring-fenced for dedicated climate action not least to serve to promote the uptake of climate action initiatives as well as to support Research and Innovation activities. The transition of Malta’s economy to create low carbon products and services that address both economic and environmental needs is essential. It brings with it the potential to further stimulate the economy with potential opportunities for expansion whilst dovetailing with the Ministry’s vision for a greener economy that we are trying to develop and subsequently permeate not least in the area of waste management. Success will rely on maintaining political will throughout the timeline covered by the Strategy whilst increasing the public’s level of awareness, engagement, and participation in positive climate action initiatives. Engagement with the business community and NGOs will further the chances of success. For this purpose private/public networks intended to explore opportunities to reduce GHG emissions and promote green economic growth. This cooperation will lead to knowledge sharing and best practices.

It is my view that we are yet at another ambitious cornerstone of this Government’s environmental agenda, one which is destined to further stimulate economic growth, improve the lifestyle of Maltese citizens whilst protecting the environment. Turning back is not an option. Neither is the delay in committing ourselves to the final goal of transiting to a low carbon economy. The opportunities are there to be reaped by all. For this to happen we need to embrace change. The absence of change leads to stagnation, something which Malta has managed to offset by re-inventing itself when it mattered. Once again this is the time to act!

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A LOW CARBON DEVELOPMENT VISION

With Malta’s economy in pole position in terms of growth in real terms, there is no greater opportunity to chart the road ahead for a greater effort to decarbonize our future development. In doing so Malta can capitalize upon the socio-economic prospects that result from decarbonisation and which in turn can offer greener employment prospects with a resultant improvement in our environment.

Legal Basis

The development of a Low Carbon Development Strategy is a requirement emerging from the following legal vehicles:

1. UN Framework Convention on Climate Change - Decision 1/CP.16 The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention;
2. The Paris Agreement ratified by Malta on 5th October 2016 and COP Decision 1/CP.21 ‘Adopting the Paris Agreement’.
3. Regulation (EU) No 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No 280/2004/EC and

In so far as greenhouse gas emissions (GHG) are concerned, the absolute majority of national emissions are already subject to mitigation commitments or schemes under EU climate action policy, at least for the short to medium term. EU climate action policy already provides for overall Union emission reduction efforts of:

- 20% compared to 1990 levels by 2020; and
- at least 40% compared to 1990 levels by 2030;

These commitments are in fact interim milestones on a journey towards moving to the ultimate aspirational goal of an overall reduction of between 80 to 95% at an EU level in emissions compared to 1990 levels by 2050. Malta is committed to remain in line with the Effort Sharing Decision (Decision No406/2009/EC of 23 April 2009) thereby conforming to a reduction of its GHG emission growth by no more than 5% on 2005 levels by 2020.

The Paris Agreement

The Paris Agreement of December 2015 was a historical moment in the world’s action to counteract the effects of climate change. 195 countries agreed to a legally binding global climate deal that would secure:

- keeping the increase in global average temperature to well below 2°C above pre-industrial levels;
- limiting the increase to 1.5°C as this would significantly reduce risks and the impacts of climate change;
- recognising the challenges faced by developing countries and the length of time required for them to achieve their targets within the context of the need for global emissions to peak as soon as possible;
- undertaking rapid reductions in accordance with the best available science.
OUR ASPIRATION

Government aspires for Malta’s social and economic development to occur in a low-carbon and climate resilient manner. In this context, the vision for Malta’s Low Carbon Development Strategy is to transform Malta into a low-carbon and climate resilient country through symbiotic societal and economic collective actions by 2050. In this way Malta will be in a position to mitigate against greenhouse gas emissions thereby reducing its vulnerability, and increasing its adaptive capacity, to climate change.

Low Carbon Governance

To achieve this vision, there is a need to create the appropriate governance framework through which Malta is able to react to anticipated climate change scenarios that are likely to test its resilience up to 2050.

Good governance may be equated to a process which protects the good from the bad whilst achieving sustainable development. In doing so it has to demonstrate coherence in adapting to and mitigating the effects of climate change with a view towards achieving economic, social and environmental resilience. Simply put, climate change governance is about the level of decarbonisation to be achieved by whom, and by when, and the entire set of systems and mechanisms that will control decision making. A robust governance framework is one which ensures that this Strategy is formulated in a manner which fortifies economic, social and environmental resilience and which is kept in a dynamic state of flux in order to respond towards the prevailing state of play. It is important to understand that this Strategy is a pathway for this and future generations to whom we have a responsibility to bequeath a more resilient country than we inherited.

Within the context of a governance framework, quantitative and, or, qualitative targets and objectives are set, both at an overall national level and at sectorial level. The achievement of the goals set out in the Low Carbon Development Strategy can in turn be guided and monitored through the existing national institutional structure which includes, among others, a Climate Action Board established by the Climate Action Act, 2015 (Chapter 543), an Inter-Ministerial Committee for Climate Change, and the policy and implementation functions of the Ministry for Sustainable Development, the Environment and Climate Change (MSDEC) and Malta’s GHG Emission Inventory Agency, with the active participation of other Ministries and entities across Government, and civil society.

Climate Resilience is defined as the capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation (IPCC, 2014)
The enabling governance framework to support the successful formulation and implementation of Malta’s Low Carbon Development Strategy are identified as follows:

a. Ensure coherence and synergies between existing and future national strategies and plans at sector level;
b. Adhering to legal obligations and commitments entered into at the national, EU and international context through a legislative framework;
c. Active participation of stakeholders at all levels of society for the purpose of enhancing data collection, information transformation and awareness raising with the aim of promoting climate related education;
d. Mobilization of financing tools to drive climate related investment and low carbon economic development in a cost effective manner; and
e. Embrace capacity building in the area of climate action with the aim of developing the necessary expertise, research and innovation in the area of low carbon development.

Figure 1 – Governance Framework Underpinning Malta’s Low Carbon Development Strategy

Adaptation to Climate Change

Adaptation to climate change requires actions taken to help communities and ecosystems cope with changing climate conditions (UNFCCC). It is an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC). It is about anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause, or taking advantage of opportunities that may arise (EU).

Mitigating Climate Change

Mitigation is the act of an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (IPPC). It therefore involves human interventions to reduce the emissions of greenhouse gases by sources or enhance their removal from the atmosphere by “sinks” (UNFCCC).
Defining the Vision

In achieving our aspiration, Government commits to:

a. Uphold national GHG emission reduction commitments in the EU up to 2020;

b. Commit to move towards a reduction of national GHG emissions as opposed to pursing a continued limited increase in emission level post 2020;

c. Progress to reduce national GHG emissions post- 2030 in full cognizance of Malta’s economic development and priorities of the time;

d. Set sector-specific GHG emission reduction targets post 2020 to contribute to meeting reduction commitment taken at the national level and

e. Identify and implement opportunities to enhance climate resilience in Malta.

Monitoring and Review

Given the Low Carbon Development Strategy will be forward looking up to 2050, it is evident that the goals set into the LCDS will need to be composed of short, medium and long term targets to guide implementation.

The LCDS will be presented in 2018, with 5 year intervals set for stocktaking on its implementation and the targets therein starting from 2020.

The LCDS will be reviewed/updated once every 4 years from its adoption in line with the Climate Action Act, 2015 (CAP543) on the basis of the stocktaking exercises undertaken in parallel which will allow for the assessment of the necessity of a review or otherwise.

AREAS FOR ACTION

Low carbon development and investment is needed in areas where there is high potential for decreasing carbon and where diversification is possible; the areas identified for action include energy, transport, waste, agriculture, water, enterprise, tourism, information and communication technologies (ICT), infrastructure (planning and monitoring of existence infrastructure), finance and expert knowledge.

Enterprise

Malta’s economy has experienced rapid growth over the past three years. This has meant that the economy has thrived thanks to the facilitation Government has provided coupled with the investment that enterprises have made across most sectors of the economy.

In recent years, enterprise in Malta has benefitted from support in order to source their energy requirements from renewable sources, notably solar. Recognising that greater challenges lie ahead, Government will see how best to encourage low carbon entrepreneurs to make Malta a seat for their business with a view not only to further strengthen and diversify our economy but also to encourage local entrepreneurs to migrate towards low carbon alternatives.

A low carbon marketplace can be a win-win situation for all those concerned. Enterprises take advantage of favourable economic policy towards low carbon investment which in turn shores up the competitiveness of the country and contributes to lower emissions and hence a better environment including human health.
Malta’s vision is to align itself with the pace that the European Union intends to take to make the EU economy a low-carbon economy. The European economy is foreseen to make drastic cuts in emissions which will see a reduction of up to 80% from 1990 levels by 2050. Such cuts will be progressive with interim reduction targets of 40% and 60% by 2030 and 2040 respectively. All sectors are envisaged to have to contribute to this goal and as such we need to ensure that a low carbon culture permeates throughout all strata of our enterprise. It is not our intention to fall short of our targets and continue to rely on the purchase on international credits. That will only lead to stagnation which is diametrically opposed to our vision of a dynamic and responsive economy that embraces the challenges it faces and turns them into opportunities.

Enterprise policy should be increasingly guided towards attracting foreign investment of a low carbon nature whilst migrating established enterprises to more low carbon alternatives. The status quo is not an option.

A shift towards low carbon modus operandi by other sectors, not least, energy, transport, buildings, industry and agriculture will serve to create the demand and the ensuing potential to move towards a more low carbon enterprise economy. The challenge of a further transition towards a more circular economy will also need to be supported and factored into Malta’s economic realities. Extending the life cycle of materials contributes to better resource management and in turn a lower emission economic landscape. Malta will, as far as possible, support initiatives that will lead to industrial symbiosis where the waste of one industry becomes the resource and feedstock of another.

The road ahead is a challenging yet exciting one. The future needs to be characterized by innovation and investment on the one side which would, in turn, reap returns in terms of lower fuel imports, reduced use of resources and improved health benefits.

Figure 2 - Possible 80% cut in greenhouse gas emissions in the EU (100%=1990).
Energy

During the past three years Malta has embarked upon a wholesome reform of the energy sector. This has meant improved policy making, more focused economic and environmental regulation as well as a reformed operational landscape. Infrastructural developments have not shied away at all with energy supply to be derived from gas being an important milestone in Malta’s transition to a more decarbonised energy sector.

Across the EU, the power sector has the highest potential for delivering a cut in emissions. In fact, it is considered possible that the sector could contribute towards the elimination of CO2 emissions by 2050. An impact assessment undertaken by the European Commission suggests that decarbonising the energy system is feasible. Thus we foresee a situation where higher capital expenditure in energy systems can be offset by lower fuel costs.

Cognisant of the geo-economic constraints of a small island such as Malta, the path towards further decarbonisation needs to be planned to avoid sudden economic shocks. Such strategic planning needs to be a dynamic tool aimed to promote the transition to a low carbon energy sector rather than an attempt to stall such a transition.

Government recognises the likelihood that by 2050 electricity will play an increasing role in the country’s energy mix. This means that over the next three decades, investments which still embrace carbon intensive assets need to be wound discouraged. On the contrary our vision in 2050 is one where energy efficiency is permeated across all levels of society to the extent that spending power is characterised by a strong bias towards energy efficient goods and services. This should, with immediate effect, bring with it a paradigm shift in the way we plan. Sustainable development is intended to maximise economic, social and environmental goals. Land use planning is key to achieving this goal. Our limited land space needs to be planned in a manner which harnesses that potential Malta has to generate renewable sources of energy. Such planning is enshrined for the short/medium term into the revised Malta National Renewable energy Action Plan (NREAP) that has been launched for public consultation in November 2016. In the longer term technologies with a higher efficiency in term of space utilisation/peak power especially in solar energy harvesting need to be sought. Our development also needs to upscale itself to ensure that architecture and civil engineering is complemented by energy efficient solutions to our buildings. Drastic improvements are therefore expected to characterise our building stock where the energy performance of buildings is concerned. This may be done through passive design technologies, refurbishment of existing buildings to upscale their energy performance and relying more on electricity and renewable energy to power our needs in lieu of fossil fuels.

Such initiatives would be complemented by a drive to promote energy efficient appliances being placed on the market for local use. Efficiency is key to ensuring that we use that amount of energy that we really require without unnecessary leakages. Access to energy efficient products and services need to become the norm for all strata of society. Social assistance will be aimed at ensuring access to energy efficiency rather than at securing basic services at all costs.

Such a transition is ambitious but at the same time it is also envisaged to create tremendous opportunity for economic development. This 30 year timeline should be sufficient for those who would like to embark upon the journey of change. Sufficient warning is being given of the need to aspire to higher levels of energy efficiency. Those who embark upon the journey now will have the opportunity to shape the future of tomorrow’s markets.
Transport

Malta is at an advanced stage in preparing itself for the 2050 scenario. In fact earlier this year Government released its Transport Strategy and Plan. Government’s vision for this sector is underpinned by a commitment ‘to provide a sustainable transport system which is efficient, inclusive, safe, integrated and reliable for people and freight, and which supports attractive urban, rural and coastal environments and communities where people want to live and work: now and in the future’.

A sustainable development approach to transport is evident from the 6 main goals that characterise the Strategy. Transport is seen as being a means to:

- Support Economic Development by:
  - reducing congestion and the removal of traffic bottlenecks, improving travel times and thereby supporting competitiveness;
  - improving reliability and efficiency to allow for better journey planning;
  - strengthening transport links and connectivity, nationally and internationally, to increase access to markets;
  - reducing operational costs and improving seamless interconnectivity can contribute towards increased profitability and supports competitiveness;
  - improving the experience and ease of access for non-regular users with a view to contribute towards supporting the tourism product.

- Promote Environmental and Urban Sustainability by:
  - reducing and mitigating GHG emissions;
  - ensuring efficient and sustainable use and management of resources;
  - ensuring adaptation to climate change;
  - minimising the impact of transport to enhance landscapes and townscapes;
  - preserving natural habitats and biodiversity;
  - respecting historical and heritage resources.

- Provide Accessibility and Mobility through:
  - easy access to daily facilities;
  - convenient and reliable journey times;
  - equitable and sustainable approach to all transport modes;
  - managing freight and urban logistics.

- Support Social Development and Inclusion by:
  - ensuring that travel options and journey quality are suitable for all user groups;
  - ensuring affordability for targeted social groups;
  - increasing societal awareness on the need for sustainable travel choices;
  - reducing severance and adverse impacts on specific communities;
  - integrating isolated communities.

- Remain Safe and Secure through:
  - resilient critical infrastructure;
  - an extended lifetime of high quality infrastructure;
  - a reduction in injuries and loss of life from transport related accidents;
  - rapid response to emergencies and accidents;
  - protection against crime and terrorism.

- Improved Public Health through:
  - a clean and pleasant public realm;
  - active lifestyles;
  - reduced pollution (air, noise and light).
**Waste**

By 2050 Government envisions a radical transformation in the way waste is generated and managed. Throughout the next three decades, Government will foster a transition towards a more circular economy, the parameters of which would have been matured over the intended horizon.

This sector is yet another that will demonstrate the business and economic opportunities that a transformation towards a low carbon society could bring with it. Protection against scarcity of resources and the volatility of prices of raw materials will stabilise the economic outlook, contributing towards the creation of new and innovative business opportunities complemented with more efficient production and consumption patterns.

Economic actors – businesses and consumers – are expected to be the driving force behind this transition towards circularity. This would in turn lead to unlock the growth and jobs potential vested within the circular economy.

Ecodesign, the development of strategic approaches on plastics and chemicals, EU funding for innovative projects, targeted action on areas such as food waste, construction, critical raw materials, industrial waste, consumption and public procurement could underpin unprecedented growth in the green economy and green jobs. What till today drove the attitude towards waste as being one of ‘out of sight, out of mind’ will result in the ‘bread and butter’ of the many.

Government sees itself as a catalyst of such a transition. However it will be up to the private sector and society to take this approach further. The amount of waste Malta will generate in 2050 should be drastically lower than that generated today. Civic duty coupled with regulatory measures will progressively shape waste management towards the higher levels of the hierarchy. As of today, we are already feeling the pressure for additional waste management facilities, the need for which results from a carefree attitude towards waste management, an attitude which more often than not has been fostered by the pampering offered by the State. Materials need to be seen in a new perspective – that of the resource value that is embedded within them. Our outlook to production has to change to one which is characterised by improved design concepts that make products more durable or easier to repair, upgradable or facilitating remanufacture. In a world which is becoming increasingly dependent on technology, such a vision is critical. This approach can help recyclers to disassemble products in order to recover valuable materials and components to save precious resources. This needs to be complemented by on the ground measures that create the market for these products. Increasingly, fiscal policy will seek to reward those moving in this direction such that they may have the market advantage that complements Malta’s vision as also already set out in Malta’s Waste Management Plan 2014-2020 and beyond.

With business being at the core of this vision, it is imperative that they themselves set their own correct mindset. Improving the efficiency and uptake of environmental management systems is key towards securing operations that contribute towards the decarbonisation of the waste sector. At the same time, industry needs to move to an enhanced stage of symbiosis where business to business approaches embrace also the transformation of an entity’s waste into the resource of another. A laissez faire attitude that results in a high rate of waste generation can no longer prevail.

By 2050, green public procurement would have taken on a dimension which would strongly favour products with a low carbon footprint. Public entities, taken collectively, have an enormous purchasing power. Through centralised procurement policies favouring green public procurement, the notion of waste will be increasingly forgotten and replaced by the concept of a resource.

More ambitious long-term recycling targets for municipal waste and packaging waste are already on our horizon through the new targets underpinning the new Waste Package. Destined to reduce the amount of waste going to landfill, these can only become more ambitious particularly in the case of Malta with its limited land area. As in other sectors, Government will be progressively developing provisions to promote the greater use of economic instruments to drive this vision including the valorisation of the role for extended producer responsibility schemes.

Indeed the waste sector can demonstrate that a low carbon approach in waste management will bring out considerable socio-economic potential. Government expects an extended metamorphosis of the economic opportunities offered by the waste sector today.
Water

Malta has, to date, suffered from significant water stress. To put it bluntly, Malta’s natural freshwater resources continue to be insufficient to meet demand. Consequently, for decades, Malta has relied significantly on desalination technology in order to augment its freshwater supplies. To date, over half of the Water Services Corporation’s water supply is derived from three reverse osmosis plants. Naturally, the cost of water from desalination is higher both financially as well as in terms of its carbon footprint.

“Specific power consumption of RO facilities is a measure of operational efficiency and a major component of the cost of desalinated water. It also reflects the carbon footprint of desalinated water and as such it bears on the quantity of emissions of greenhouse gases” (Malta’s 2nd Water Catchment Management Plan, 2016). Thus, the process of water production will continue to endeavour to be undertaken at the minimum energy cost possible through investments that secure the most efficient operation of the water infrastructure. At the same time, investments in the water infrastructure will be sustained where it is demonstrated that these will lead to the sustainable elimination of leakages, thereby further maximising the efficiency of the water network.

To date we have mainly considered groundwater, desalinated water and, to an extent surface water, as the only water resources available on the island. Government’s investment in polishing plants to further improve the quality of treated sewage effluent will secure a considerable addition to Malta’s water resource budget. Termed New Water, this resource is envisaged to serve as a platform to replace non potable uses of water particularly in industry and agriculture. Given Malta’s overabstraction, and hence the salinisation of the aquifer, coupled by natural leakages from the aquifer to the sea, New Water may also be used for creating a barrier to prevent further salinisation of the mean sea level aquifer. Government’s vision in this respect is to continue with additional research and development of this type of water in order to maximise its use and value for money such that, water scarcity issues in Malta will be a thing of the past.

By 2050, it is Government’s vision that the appreciation of water as a resource would have grown exponentially and that technology would have developed to an extent that it would permit its affordable adoption. Wastewater is today divisible into its grey and black components. The market already offers greywater treatment solutions but, because of their cost, their relatively unknown performance as well as the absence of tighter standards for water use in buildings, this resource remains relatively untapped. Similarly, the long standing provision of collection of stormwater runoff from buildings for local use has fallen by the wayside. We aspire that, by 2050, buildings and urban areas would have become both water efficient as well as water friendly. In this respect we envisage that buildings will be more sensitive to their water use as well as to the water resource value they can generate. To this effect we view developments in the water sector as being heavily geared towards ensuring that all runoff is collected and utilised at source together with the separation of grey from black water for secondary, non potable use. During this period the uptake capacity of the tourism and commercial sectors of membrane based water treatment technology, and development of support schemes to attain this capacity will continue in earnest.

Malta has over recent years invested heavily in a stormwater infrastructure primarily aimed to mitigate against flooding. Cognisant of the fact that, during the next three decades, a considerable part of our urban area will
remain unchanged, it is worth looking at the potential Sustainable Urban Drainage Systems and Natural Water Retention Systems offer for the development of a ‘greener’ infrastructure aimed at optimising the upstream management of stormwater thereby relieving the downstream reaches of the catchments. Urban development, particular public areas, have to be seen as leading our cause at becoming as water efficient as possible particularly in the light of the carbon footprint of our water production. At the same time the status of existing rainwater harvesting infrastructure needs to be assessed with a view to determine whether they have sufficient potential to serve identified potential users of rainwater from such infrastructure and if so to undertake rehabilitation works and development of a management framework to ensure the effective use of harvested rainwater.

The rural dimension can offer its contribution towards a more efficient use of water resources. Valleys are important geographical characteristics which serve different ecosystem services. It is therefore important to embark on integrated valley management approaches in order to maximise the contribution that such features can provide to the ecological, hydrological and geological capital of the Maltese Islands.

Agriculture is a significant user of water. Over the years it has relied extensively on the use of groundwater. New Water should over the course of the coming years make an immense difference to this sector as well as to the sustainable yield of the aquifer itself. Whilst agriculture would benefit from this new resource, Malta’s aquifers can be restored to both good qualitative and quantitative status. Malta therefore aspires to an agricultural sector which is underpinned by a crop selection which satisfies both the potential for socio-economic growth of the sector but which also moderates the demand for water. The sector has already a high irrigation efficiency but this will not deter from the piloting of other initiatives aimed to reduce the demand of water whilst creating niche markets which are at the same time water sensitive.
Agriculture

The food-water nexus has already been referred to in the previous section on Water. However the agricultural sector also extends to animal husbandry. Today the sector is under a number of pressures not least the environmental dimension that characterises its operation.

One of the main problems related to emissions from this sector arises from the management of manure. Government recognises that the system today remains largely rudimental with limited enforcement. Whilst Government has and will continue to support this sector, the same sector needs to realise that it must take more responsibility for its pollutant load on society.

Manure, which today is seen as a pollutant and a problem, needs to be transformed into an opportunity and a bio-resource with a view towards ensuring that manure management limits GHG emissions whilst offsetting costs to combat pollution with revenues from bio-resources.

Consolidation within the sector remains critical not only in terms of the size of herd but also in terms of the location of such farms. Government will strive to create agricultural parks which would be served by modern infrastructure that will allow better management of manure. At the same time it will vacate those farms which have been hemmed in by urban development and which cannot modernise and meet regulatory requirements.

Support will also be afforded to niche agricultural products that have a low carbon footprint. Maltese agriculture is already under significant pressure from parallel imports. Whilst the dynamics of the open market cannot be challenges, the response is a more niche product coupled with incentives for organic farming communities to develop thereby reducing the emissions related to pesticides and fertilisers.

Agricultural land reform also needs to be tackled in order to make parcels of land more productive and efficient at the lowest carbon cost possible. To this effect, co-operatives working to cultivate larger tracts of agricultural land and who demonstrate operations that are in line with a decarbonised long term vision will find the support from Government.
Tourism

Tourism is envisaged to remain a major contributor to the Maltese economy. Cognisant of the investment being undertaken by rival destinations, Malta also aspires to take the tourism experience to a new level in terms of its environmental performance.

Investment in tourism product development will continue to be supported. This can range from the enhancement of the existing product, the addition of new experiences but also in respect of the environmental dimension. As is the case with buildings, tourism accommodation needs to adopt the highest standards of energy performance both for their building envelope as well as for the operation of their enterprise. The carbon footprint of the tourism sector needs to be reduced not only in order to provide an enhanced environmentally friendly environment but also as such standards will contribute to lower operational recurrent expenditure whilst boosting the industry's competitiveness.

The development of sectors that are underpinned by the attractiveness of our cultural, natural and marine capital require that ecosystem services are at their healthiest. Similarly, the country's infrastructure which serves the sector has to bear strong environmental credentials for it forms part of the value chain of the same tourism sector. To this effect, Government's vision is to continue to invest in its central infrastructure to make it more resilient whilst at the same time supporting the sector to enhance its resilience to climate change.

Government's aspiration is that sector representatives will formulate a vision consonant with that being foreseen in this document such that the sector itself can become the beacon of stewardship to more climate resilient development within the sector. The level of ambition that Government is showing in the redevelopment of Paceville is indicative of the lengths to which we aspire to achieve. This could be the pilot for similar developments to occur in zones which support the tourism sector today.

The eco-certification of tourism accommodation is today well established. However it is unfortunate that it is mainly sought by the larger accommodation establishments. Our vision is one of inclusion and we aspire to ensure that all tourism accommodation, new or refurbished, will not only meet current eco-certification criteria but will also demonstrate further ambition to shore up their own as well as the sector's resilience to climate change. We need a paradigm shift in our thinking which so far has seen environmental regulation as a burden rather than realising the economic worth that such ambitions bring with them.

One can never divorce local aspirations from those we offer to our visitors. Hence the energy and resource priorities hold for both the local and visiting population. We envision the benefits that may accrue from a decarbonised Maltese landscape and how this may serve to showcase our achievements. In doing so the road will need to be covered by both Government and the private sector for there can be no unison in vision without a shared commitment. As much as we have recognised the contribution of our cultural and natural capital to the tourism sector we must now face a common challenge to demonstrate how a decarbonised economy can itself be yet another asset that contributes towards the sector's competitiveness. Government envisaged to continue to invest in Malta's natural capital. Natura 2000 sites will form a cornerstone of Malta's tourism product in order not only to showcase our natural capital but also to demonstrate how the environment is in itself a potential driver of the economy. Anthropogenic pressures such as pollution, land development and over-exploitation as well as consumer choices need to be re-dimensioned to dovetail within a decarbonised society.
Information and Communication Technologies (ICT)

ICT can play a determining role in reducing the energy intensity of the economy thereby increasing its efficiency by reducing emissions and contributing to sustainable growth. It is a horizontal enabler which cuts across a number of sectors and which can dovetail in each and every sector in order to deliver these efficiency gains.

It is encouraging that Malta has reacted very positively to ICT as evidenced in the leading position it has established for itself across EU Member States. This permits Government to aspire towards a point of equilibrium where technology and society become so attuned to emerging needs that innovation therein will continue to create new opportunities whilst contributing to the overall decarbonisation of Malta’s socio-economic development.

Government’s vision hinges upon public-private partnership models focusing on research and experimental developments across the building’s life cycle – from its design to its operational stage – in order to optimise energy demands and exports whilst at the same time creating a favourable environment for business to business models among energy utilities, communication operators and building management companies. A responsive building is an efficient building.

Government aspires to see increased ICT permeation in the following areas:

- smart energy grids;
- systems for energy efficiency;
- efficient water resources management;
- energy-positive urban and public areas;
- energy efficient mobility;
- smart logistics.

Finance

A shift to low-carbon infrastructure will have an impact on public and private financing requirements. This transition, however, cannot be seen solely from the additional capital outlay that would be required but, more importantly, from the operational savings that would result and their resultant payback period. As a result of our vision, fossil fuel investments will generally experience a decline in their net asset value. It is in this context that Government is stating its long term vision for the decarbonisation of the Maltese economy so as to nudge short, medium and long term investment prospects to align themselves with such a vision. Government will have a dual role to play – that of investing directly in a decarbonised infrastructure to facilitate the transition to low-carbon economy and that of influencing private investment through its policy and regulation regime as well as through the incentives designed to support such a vision. Taking into account Malta’s reputation in the financial services industry, government envisions the adoption of new financial instruments aimed at facilitating the transition to a low carbon economy. Given the high upfront investment required, servicing the financial implications is crucial. Financial instruments such as infrastructure and green bonds can attract institutional investors in servicing the capital requirements for the manifestation of our vision. This is currently particularly attractive in the context of the global regime of low interest rates.

A positive investor sentiment for supporting the decarbonisation of Malta’s economy will be derived from:

- long-term policy signals possibly including regulation;
- explore the nature of investment vehicles destined to provide investors with access to low-carbon investments;
- develop transitional provisions for carbon intensive investments;

In this respect Government will not be deterred by the additional investment required for its investments to be of a low carbon nature so long as the resultant financial savings offset such incremental investment within an acceptable payback period.
Expert knowledge

Malta’s previous strategies have all recognised knowledge as a key success factor for the delivery of that programme. In this case Government does not only recognise this but attached considerable importance. This is because, with a horizon of over thirty years, we can afford to design and plan for the future. We are looking at a period of time that exceeds a generation and as such we have the opportunity to reap the fruits of our toils.

Malta’s educational standing speaks for itself. Yet we cannot afford to rest on our laurels if we are to perform at the ambitious level that our vision sets its sights upon.

Recognising the importance of a transition to a low carbon economy requires the permeating of its understanding across all levels of education, formal, informal and non-formal. It is only in this way, and across the various specialisations that we can ensure that our vision is entrenched across the entire spectrum of society. Government intends to valorise this vision by ensuring that society’s mindset is one where each member feels that he or she is an important cog in the wheel that transforms Malta into a low carbon socio-economic performer. Complacency is not an option and all educational institutions and educational stakeholders are invited to embrace this vision so as to achieve one of the major historical transformations that Maltese society would have ever registered.
PUBLIC PARTICIPATION

Society’s involvement in sharing Government’s vision begins today. Through this document this administration wishes to set a vision that gathers political and societal support such that, irrespective of which administration governs Malta, the vision remains unaltered in terms of its final goal. This will create stability and a positive climate for investment. It will mitigate against free riders for whom the status quo is the most comfortable position. To this effect we are launching the following questions to stimulate the consultation process that will eventually lead to the development of Malta’s first ever low carbon development strategy and which will set Malta on the irreversible road to decarbonisation.

Q1. Do you agree with this vision? Can it be further refined?

Q2. What aspects do you retain to be crucial to secure a transition to a decarbonised economy by 2050?

Q3. What developments would you expect to see in Malta’s economic policy to further support and possibly accelerate a transition to a low carbon economy?

Q4. Which aspects of energy policy, regulation and infrastructure should Malta focus upon to ensure that decarbonisation truly occurs?

Q5. Does Malta’s transport strategy and plan sufficiently address the decarbonisation challenge for 2050?

Q6. How can buildings contribute towards lower GHG emissions and hence act as a catalyst to a decarbonised socio-economic state of affairs?

Q7. In what ways can we value resources such as water and waste in order to maximise their potential to serve as vehicles towards decarbonising our economy?

Q8. How can the agricultural sector support a decarbonised economy?

Q9. What financial instruments could complement this vision for a low carbon economy?

Q10. At what stages should Malta’s educational system be reinforced to be able to produce the next cadre of professionals, technicians, administrators and workforce that will secure a seamless transition to a decarbonised economy?
NEXT STEPS

The Ministry for Sustainable Development, the Environment and Climate Change wishes to invite public entities, private sector organisations, constituted bodies, civil society and individuals to assist the development of Malta’s Low Carbon Development Strategy by providing feedback in the form of answers to the 10 questions put forward in this document. Additional suggestions may also be put forward.

The Ministry wishes to emphasise that this document is shaping the future of present and future generations. As such it is in everybody’s interest to assist government in shaping the vision which will characterise our future and that of our loved ones.

This consultation is open up till the 30th June 2017. Electronic submissions should be addressed to consultations@msdec.gov.mt.

Postal submission should be mailed to the Directorate General for Sustainable Development, the Environment and Climate Change Division, 6 Qormi Road, Santa Venera SVR 1302.