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Introduction

The Go Green Europe project is a collaborative development between four partners: the London borough of Wandsworth, the Centre of European Studies and Initiatives (Palermo, Italy), The Association of Young Entrepreneurs of Zaragoza (Spain) and the South Denmark European Office. Throughout the project the partnership aims to share knowledge and experience of successful approaches for supporting Small to Medium Enterprises (SMEs) to identify and implement green business measures. Go Green Europe focuses on how SMEs can be encouraged to invest time and resources in environmental efficiency improvement measures and can be best supported in doing so.

This report focuses on existing good practice in the city of Palermo, and looks at how SMEs in Sicily address their environmental performance and the reasons for doing so. The report examines the ways in which national environmental policy, employment policy and the current economic climate shapes the activities of SMEs in the region. The report also considers the support structures which exist for SMEs in Italy and Sicily, and how these affect the ability of SMEs to respond. Examples of good practice are presented in the form of case studies, intended to highlight what can be achieved by businesses and to inspire others to follow suit.
National profile
Italy is one of the wealthiest countries in the world, with an economy driven by the manufacture of high-quality consumer goods by a wide array of SMEs. Significant industries include tourism, fashion, engineering, chemicals, motor vehicles and food. The country has a skilled workforce and high literacy levels, a very large internal market and well-developed SME business clusters.¹

The Italian economy is divided between developed northern regions and less developed southern regions. The northern regions are characterised by higher employment rates and a greater percentage of private companies, while the south regions have greater levels on unemployment, a reliance on welfare and a greater proportion employed in the agricultural sector. There is a significant underground economy related to the continued presence of organised crime in the country and especially the south, which could account for up to 15% of GDP².

The economic recession has seen Italy fall behind other European nations in terms of competitiveness and economic growth³, as demand for exports falls and the costs of servicing the national debt rises. A lack of structural reform following the financial crisis has seen the economy contract over the last three years.
Policy influences on SMEs
Approximately 19% of European SMEs are located in Italy, the highest proportion out of all the Member States. The vast majority of these are micro-enterprises employing fewer than 20 people. As such, the relative importance of small businesses on the national economy far exceeds the European average.

National environmental and economic policy provides the context in which SMEs make decisions related to their environmental performance. This report will first summarise environmental policy in Italy in relation to SME operations, before considering how the current economic climate determines business strategy and decisions on environmental performance.

Environmental policy

The first national plan to combat climate change was implemented in 1994 and has been regularly updated since. Italy is a signatory to the Kyoto Protocol, and has committed to reduce greenhouse gas emissions by 6.5% of 1990 levels by 2012. This target was originally considered more difficult for Italy than other European nations due to its relatively low energy intensity (energy use per unit of GDP). Italy is currently not on track to meet its target, with emissions approximately 5% above 1990 levels in 2008.

Italy's 2008-2012 National Allocation Plan for the EU Emissions Trading Scheme (ETS) agrees a cap of 201.63 million tonnes for the period, and a commitment to reduce emissions by 13.65 million tonnes from the relevant ETS sectors.

The 2002 National Environmental Strategy for Sustainable Development is the current benchmark framework for environmental actions in Italy. The strategy was created by the Ministry of the Environment and Land Protection and was due to be revised in 2007; however this process was interrupted by the general elections in 2008. The strategy acknowledges that sustainable development cannot be based on environmental actions alone, but must also allow for long-term economic development, high employment, low inflation rates and international trade stability.

The most recent national update on Italian progress is the 2007 report to the European Commission on implementing the European Union Sustainable Development Strategy. This report documents actions which include the following:

- Reducing greenhouse gas emissions
- Developing a sustainable energy policy and increasing renewable energy provision
- Promoting energy efficiency
- Reducing transport energy use and greenhouse gas emissions
Improving the environmental and social performance of business

Increasing European market share of environmental technology and eco-innovation

Sustainable resource use, including halting biodiversity loss and reducing waste

The Ministry for the Environment and Territory ensures that the priorities of the European Sixth Environmental Action Plan are implemented on a national scale. These priorities cover climate change, nature and biodiversity, quality of environment and life in urban environments, and the sustainable use and management of natural resources and waste.

Environmental strategies are outlined at the regional and local level, with the relevant authorities allocating funds from overall budgets to implement the stated actions. The Government is also expected to financially support regional actions.

**Renewable energy**

Renewable energy and green technology are two of the fastest growing investment sectors in Italy, with a combined turnover of approximately €25bn. Several high profile events, such as the 2009 Italian PV Summit and the Solar Expo in Verona, have heightened European interest in national energy markets and increased the number of cooperation projects.

Renewable energy presents business opportunities for SMEs; however these are dependent on the further development of the renewables sector and national electricity networks, required both to facilitate access to the market and to improve energy distribution.

While hydropower currently supplies the greatest proportion of Italy’s renewable energy, solar production is the fastest growing sector of the market. The development of large solar photovoltaic and thermodynamic plants is supported by a dedicated feed-in tariff. Italy is also one of the top European manufacturers of biodiesel, with fuel companies required to produce a certain percentage of biofuels every year. These are eligible for tax exemption and production subsidies.

The renewables sector is expected to expand as Italy seeks to comply with EU Directives on the promotion of renewable energy and the European 20/20/20 goals. Italy is aiming to generate 30% of its energy from renewable sources by 2020, improving on its current proportion of 20% in 2010. In order to incentivise the renewable energy market, producers receive green certificates which conventional energy generators are obliged to purchase. Small renewable producers can alternatively opt to supply their energy via a feed-in tariff. Electricity generated from renewable sources and combined heat and power plants is granted priority access to the national grid.
**Transport**

Government incentives are in place to encourage the replacement of old, high-emission car models with ones that meet stricter environmental standards. Funding is also in place for establishing bike-sharing projects in urban areas. Improvements in transport logistics aim to make emissions reductions through better management of motorway, rail, maritime and airway networks.

**Energy efficiency**

Italy has dedicated funds to areas relating to energy efficiency, and has established a standardised framework for assessing energy efficiency in buildings which accords to the EU Directive on the Energy Performance of Buildings.

In 2005 Italy became the first country in the world to introduce tradable white certificates or Energy Efficiency Securities, applicable to ten electricity and twenty gas companies. The distributors are obliged to meet energy reduction targets in both their own operations and the final customer’s premises. This can be achieved through in-house efficiency projects, investments in consumer energy efficiency, partnerships with third parties, and the purchase of white certificates from other organisations. Distributors receive white certificates proportional to verified energy reductions made. The scheme has been regarded as a success, exceeding the initial targets by making average annual carbon dioxide savings of 2.3Mt/year.

In 2009 the Ministry of Environment made €16.9 million available for research into energy efficiency and renewable energy in urban areas. Funding is also available for the purchasing of domestic energy efficient appliances, low-emissions motorcycles, new farm and construction machinery, and high-efficiency generators. In 2010 further funds were made available by the Ministry of Environment for energy efficiency measures by municipalities, institutions and national park managers.
Waste

Italy has seen a general reduction in the amount of waste sent to landfill, although the proportion of waste recycled or composted varies between the northern (35.5%), central (18.3%) and southern (8.1%) regions. Southern Italy also has the highest number of landfill sites. The amount of waste combusted in waste-to-energy facilities is increasing, especially in the north.

In 2010 the Ministry of the Environment launched a monitoring system called SISTRI, as part of a national strategy to make waste management more efficient. This system builds on previous work by the government which obliged organisations to install electronic tracking equipment on transport vessels for waste, and aims to combat the large-scale involvement of organised crime in illegal waste disposal.

Environmental authorities

Since 1996 Italy has strengthened its national environmental institutions, devolving environmental responsibilities to regional and local authorities while maintaining centralised responsibility for strategic planning and legal co-ordination. New directorates have been implemented on sustainable development and climate-related disasters, with the National Environmental Protection Agency (ANPA) providing scientific and technical support.

A national environmental information system (SINAnet) has also been developed by the ANPA, and has gradually been made accessible to the general public and businesses via the internet.

Environmental initiatives

A number of incentive programmes exist to support Italian businesses in improving their environmental performance and boosting competitiveness. These are delivered both at the European level, and by national or local institutions.

EMAS, the European Environmental Management and Audit Scheme, is the preferred method of environmental certification. EMAS is a voluntary process which assists businesses in developing and implementing an Environmental Management System (EMS) and building environmental considerations into organisational practice.

EMAS provides companies with the opportunity to gain public recognition for improving their environmental performance. Every EMAS-certified manufacturing site is recorded on the Gazette of the European Union and receives a quality mark from the Commission. This can be used as a marketing tool allowing a company to distinguish itself from the competition and win new business.
The European Ecolabel standard became operational in Italy in 1997, and received much interest from SMEs who again desired a means to reach new customers and raise their marketing presence.

The 2007 report to the European Commission detailed national efforts to identify other legislative instruments for improving energy efficiency in business. This included information on the Green and White certificates mentioned above, along with details of capital grants targeted towards energy saving projects, the use of renewable energy, and sustainable mobility on the smaller Italian islands.

**Impact on SMEs**

Increasing consumer interest, coupled with tougher environmental legislation, has led to a higher demand for environmentally responsible products and services. At the same time national and regional initiatives are progressively lowering the cost of environmental investments in business.

Italian SMEs have been slow to respond to these changes, lagging behind their European counterparts in terms of implementing energy-saving measures and investing in environmental protection. They also rank below the EU average for performance in innovation, which includes environmental factors.

A number of regional incentive schemes have been introduced in an attempt to improve this situation, such as the inclusion of environmental selection criteria into traditional financial aid systems. Regional policy has continued to support the spread of environmental certification and low-carbon technologies, and seeks to further catalyse co-ordination between research and innovation.

Since 2003 a funding programme has been available which allocates non-refundable grants for the development of Environmental Management Systems in SMEs. 30% of the available grants are intended for SMEs in the regions of Southern Italy. Many regional authorities have also provided subsidies, simplified procedures and benefits for organisations registered under the EMAS Scheme. In recent years these initiatives have slowly increased the rate of environmental management practices in SMEs and raised awareness in local communities.
Support for SMEs
Italy has a range of support programmes and incentives to encourage national enterprise development, growth and competitiveness. These are overseen by the Government agency Invitalia, the National Agency for Inward Investment Promotion and Enterprise Development, which provides consulting services to business. Programmes are delivered through merged allocations of European and national funding, which focus predominantly on investment in the underdeveloped southern regions of Italy and on areas such as research and technological development, increasing the adaptability of workers, firms, entrepreneurs and enterprises, environmental protection and risk prevention, and energy.

The ‘Industry 2015’ programme defines in more detail the focus for investment, with priority sectors including energy efficiency, renewable energy, sustainable mobility, innovative technology for preserving cultural heritage, and new technology for the export market. Other significant programmes in this area include the Technological Innovation Fund, Innovation Contracts, Territorial Research and Development Initiatives and the Research Incentive Fund.

In addition to Government investment programmes for environmental technology and eco-innovation, more specific support exists to foster sustainability in business. Since 2003 non-refundable grants have been available to SMEs to reimburse the costs of implementing Environmental Management Systems such as EMAS or ISO14001. An Environmental Business Award was also established in 2005 to recognise innovation by companies in the fields of sustainable development and social responsibility.

The effects of the 2008 elections, coupled with the economic crisis, have slowed progress on investment and reduced the levels of financing available. However there remain a range of financing schemes available for business including tax relief, capital grants, operating grants and interest rate subsidies. Government incentives generally focus on reviving industrial areas, expanding the research and development sector, promoting technological innovation and increasing productivity.

### Regional focus – Sicily

Sicily is composed of one large island and a number of minor islands, with a population of just over 5 million. Sicily is an autonomous region, and as such has exclusive legislative powers in a number of policy areas including environmental protection. In other areas decision making is shared between the Region of Sicily and central government, including the enhancement of cultural and environmental assets, organisation of cultural activities, banking, and regional credit institutions.
The Go Green Research
This report now focuses on the results of the Go Green Europe research in Sicily. This research was conducted between 2010 and 2011 with the goal of identifying different approaches taken by SMEs in improving their environmental performance. The research aimed to clarify not only the environmental benefits of these actions, but also their effects in areas such as cost savings, efficiency, staff moral, marketing and publicity.

Examples of good practice are presented in the form of case studies, which detail the efforts taken by a selection of SMEs to reduce their environmental impact. The case studies look to identify the reasons why companies had chosen to implement specified measures, the nature of the intervention, the support they received, the need for further support, and their plans for the future.

In order to conduct the research on a manageable scale this project focused on SMEs in Palermo. This choice reflected the fact that there is a high and diverse number of SMEs in the city from which to draw trends and good practice. However despite the geographical limit of the case study selection, the issues raised and solutions offered are broadly applicable to SMEs across Sicily as a whole.

**SMEs in Sicily**

Industry in Sicily is made up in large part by small and medium-sized enterprises (SMEs), many of which have a low number of staff. Many of the SMEs are rooted in the local culture and their activities cover a wide range of sectors. Regional legislation and support places emphasis on helping SMEs to become more competitive, and improving the capacity of research and innovation to feed into businesses. Support also exists to facilitate technological transfer to and between SMEs.

There are various financial incentives for businesses which aim to support entrepreneurship, research and innovation and employment in the South of Italy. These include subsidies for new materials and equipment, and up to 40% research tax credit towards costs for research and innovation. Tax credit also exists to boost employment and encourage new businesses.

A number of bodies provide business support in the region. The Sicilian Chamber of Commerce supports business owners with administrative management, while the Enterprise Europe Network provides information and advice on European business opportunities.

Sicily also receives funding through the Operational Programme Sicily, co-funded by the European Regional Development Fund under the Convergence Objective. Sicily is listed as a "Convergence" region and receives European Community funding of €3.27 billion, with the goal of increasing annual GDP growth to 2% from its current position of 1.5%. The funding also aims to create 15,000 jobs, and reduce greenhouse gases emissions by 0.5% over the period.
There are number of specific priorities under the programme that relate to SMEs and the environment. Priority 2 of the regional programme is focused on the efficient use of natural resources, with measures aimed at reducing energy and resource dependency, and promoting renewable energy. Priority 5 supports enterprise development and competitiveness, fostering the growth of SME business clusters, their access to management services, and the improvement of credit conditions.

**Palermo**

Palermo is the capital of Sicily, with a population of approximately 700,000. A report on the city from ISLENET[^1], a network of EU island authorities, states that lack of awareness coupled with low financial incentives has resulted in a slow introduction of energy efficiency measures and environmental legislation. However the Municipality of Palermo has recently begun to introduce themes of sustainability and environmental responsibility into its cultural and economic events, with the goal of raising awareness. Several actions have been launched to improve air quality, promote sustainable mobility and to optimise waste management.

This increased emphasis on environmental initiatives, together with community incentives and funding, has also led to investment from the local actors into solar healing installations and other forms of renewable energy production.
Go Green Research results
An increasing number of Sicilian SMEs are responding to the growing emphasis on environmental responsibility in business. Within Palermo, a wide variety of routes are taken by businesses when implementing environmental actions in the workplace. These include the use of accreditations and official frameworks, the development of internal planning systems, and the placing of actions as part of a marketing strategy. However some businesses choose to make changes within the context of a Corporate Social Responsibility (CSR) strategy, with environmental actions placed in the broader context of social and ethical decision making.

### Corporate Social Responsibility

The environmental impact of a business forms a significant part of Corporate Social Responsibility, often with companies addressing their products and processes in order to build a more positive public image. In many cases it was found that CSR provides a policy and institutional framework that stimulates companies to raise their performance beyond minimum standards, with environmental responsibility becoming part of a long-term organisational strategy.

The hotel **Plaza Opera** in Palermo decided to improve their environmental performance within the context of CSR, and are currently working to create an environmental management system compliant with the ISO 14001 standard. The hotel has invested in energy efficient lighting, water saving devices, education for staff, and in making the building more environmentally sound. These changes are planned to continue for the next three months.

ISO 14001 requires that environmental impacts are identified and monitored, so the hotel created an emissions baseline using data from electricity and water bills, along with quantities of waste to landfill. This baseline is now regularly updated, helping them to set realistic targets for action. ISO 14001 also required the hotel to create an environmental policy and disseminate it to staff, and to implement control procedures for continuous review of environmental management practices.

**Officine Antonio Marino**, a construction company based on the Island of the Females, also chose to improve their environmental performance as part of ongoing measures to develop a full CSR strategy. Actions taken include the establishing of green procurement criteria, staff education, use of recycled products, reduced waste to landfill, and the promotion of environmentally responsible behaviour outside of the workplace. The transition towards environmental responsibility has increased their competitiveness not only by reducing expenditure, but by creating a unique marketing point in an industry known for high energy consumption and environmental impact.
Marketing and publicity

Environmental and social responsibility can act as a means to increase the brand power of a business. Olio Arke’e Natura, an olive oil making company in Serradifalco, use their sustainability and environmental performance to market their products to clients.

Case study: Olio Arke’e Natura

The company has improved their environmental performance by installing a 20-kilowatt photovoltaic system and using milling residues (pomace olive oil) for biomass. They have also installed a new 40-kw generation plant with the aim of becoming self-sufficient in energy. The company monitor good practice from other local businesses in order to remain at the forefront of environmental initiatives.

Olio Arke’e Natura chose to become more environmentally responsible in order to reduce costs, preserve the local environment, and enhance their CSR strategy. This has provided their business with a valuable selling point, separating them from the competition, attracting publicity and winning new clients.

The company has undertaken actions including using water saving devices, increasing recycling rates, developing communication materials, and raising the environmental education of staff to improve behaviour both within and outside the workplace. Investments have also been made in the energy efficiency of the building, including the installation of external thermal insulation and energy efficiency lighting.

Recording methods and measurable targets have been developed to monitor environmental performance in areas such as energy production and consumption (electricity and water bills) and the amount of waste sent for recycling. It took the company around three months to make these changes.

These improvements were made possible with financial support from the Government. Olio Arke’e Natura believe that access to credit should be more proportionate to business needs, with specific banking products aimed at companies that invest in sustainable energy. This would increase the number of businesses able to make investments, while also benefitting the environment. They also recommend improving communications between environmentally friendly business and the government, in order to encourage other businesses to follow existing good practice.
Cost saving measures

Rising production and delivery costs often stimulate improvements in environmental efficiency as a means to reduce operational costs. The financial benefits of such actions are becoming increasingly apparent to businesses in Sicily, with some seeking support from the government to subsidise investments in renewable technologies and environmental systems.

The production company Coalma sought financial support from the government, along with technical assistance from accreditation systems, to implement an internal environmental management strategy. Their actions have resulted in significant cost savings, with 10% reductions on electricity and gas bills.

The steel processing company Carini has started installing solar panels in order to reduce long-term energy costs. They have also started to reuse certain waste products to minimise landfill tax and reduce material expenses. The total estimated costs for these actions will be €1.5m, partially offset by financial support from the government. Carini have also benefitted from information and advice from other businesses which have already made similar environmental improvements.

Another steel company, Attilio Lodettie Figli, has lowered costs through investments in energy conservation. The company devised an integrated strategy to coordinate actions rather than undertaking isolated measures. This resulted in the increased use of energy efficient lighting and recycling, with staff education leading to environmentally responsible behaviour both on and off-site. These changes have taken approximately one year to implement, and the company wishes to continue making cost reductions by implementing additional environmental actions.
Conclusions
Below are the main findings summarised from the Go Green research, placed in the context of developing economic and environmental policy in Sicily, Italy.

**Government financial incentives have enabled some businesses to implement environmental measures**

- A number of businesses in Sicily have accessed government financial support to implement environmental initiatives.
- The need for financial support was identified by a range of businesses in order to enable environmental improvements. More businesses should be able to benefit from government incentives and financial support, however these programmes are often inadequately publicised.
- The nature and level of intervention undertaken by a business is in many cases dependent on their access to support. SMEs in particular need to be made aware of the support which is available to them.

**Although government subsidies are available, the bottom up approach to environment support needs to be strengthened**

- Authorities should further capitalise on local level approaches in creating better conditions to increase environmental efficiency and productivity in business. Tapping into the existing connections between SMEs and local communities may increase the number of businesses that are incentivised to improve their environmental performance.

**Policy actions and support must be flexible and dynamic**

- Business support and environmental legislation must reflect the range of sectors in which SMEs operate.
- Localised and tailored support is key to understanding specific business contexts and providing appropriate incentives for encouraging environmental responsibility.
The existence of SME clusters in Sicily provides a good opportunity to reach large numbers of businesses

- Stimulating the uptake of environmental responsibility in SMEs may best be achieved through working with business clusters. This provides the opportunity to coordinate knowledge and resources, offer cost effective personal assistance, and tailor support to match the needs of specific sectors.

- Support networks should utilise the high levels of both cooperation and competition within SME clusters to incentivise greater uptake of environmental efficiency measures. The sharing of experience between similar companies can help to reduce the risk of implementing changes, while encouraging individual businesses to reach new customers with marketing strategies which highlight environmental performance.
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41 http://www.camcom.gov.it/cdc/id_pagina/26/id_tema/37/t_po/Gestire-una-attivita-.htm
43 ISLENET is a network of European Island Authorities which promotes sustainable and efficient energy and environmental management. It actively promotes the adoption of local energy saving strategies and renewable energy projects.