

Industrial relations for a green economy

Innovative bargaining processes for a sustainable growth and a quality employment



Project VS/2014/0405 co-founded

by

DGESAI - DG EMPLOYMENT, SOCIAL AFFAIRS and INCLUSION

CASE ITALY Novamont Matrica

Industrial relations for a green economy

Innovative bargaining processes for a sustainable growth and a quality employment



Project VS/2014/0405 co-funded

by

DGESAI - DG EMPLOYMENT, SOCIAL AFFAIRS and INCLUSION

Presentation:

Novamont/Versalis/Matrìca.

Conversion of Porto Torres (Sassari) petrochemical plant from basic chemical plant to an integrated biorefinery.

Short description

Matrìca is a joint venture between Novamont and Versalis (ENI).

It was established in 2011 with the aim of converting the Porto Torres (Sassari) petrochemical plant into one of the world's leading integrated biorefineries.

In June 2014 Matrìca began producing a wide range of products (biochemicals, bio-intermediate elements, bio-lubricant base stock and bio-additives for rubber, extensor oils) using selected vegetable oil crops with a low environmental impact.

The number of people directly employed by the petrochemical plant was 582 at the end of 2010, and this should rise to around 700 by the end of 2016, given the number of activities that will be shut down and started up. Currently around 500 people are employed at the plant.

The innovative processes with a low environmental impact are the result of Novamont's biochemistry research and production activities.

Novamont is a global leader in the production of compostable bioplastics.

Established in 1989 as a strategic research centre for the Montedison chemicals group, in 1996 the company was spun off from the group to become an independent, profitable company with the mission to make a practical contribution to the industrial project of integrating chemicals, the environment and agriculture.

Novamont manufactures and sells a family of bioplastics under the Mater-Bi brand. These are based on recyclable elements with characteristics and properties of use very similar to traditional plastics, but are biodegradable and compostable, therefore disposed of as organic waste, in accordance with European standard EN 13432.

Matrìca is the first large-scale industrial operation for an integrated biorefinery to replace the traditional petrochemical plant at Porto Torres (Sassari), which closed mainly due to the crisis in the market and its obsolescent technology, but also due to strong opposition to the serious environmental damage caused by its activities in the past.

The Matrìca project for an integrated biorefinery, based on strong multi-disciplinary cooperation with local agriculture, research and the local institutions, will continue to employ the majority of the current employees of the petrochemical plant, thanks also to the reclamation work on the polluted land that ENI will have to carry out.

Territorial and sectoral location

The Porto Torres petrochemical plant occupies an area of around 1,250 hectares, part of which is seriously polluted, and the Matrìca project plant that will be built on the unpolluted areas of the site will occupy around 30 hectares. The agricultural production of the vegetable raw materials for the

Industrial relations for a green economy

Innovative bargaining processes for a sustainable growth and a quality employment



Project VS/2014/0405 co-founded

by

DGESAI - DG EMPLOYMENT, SOCIAL AFFAIRS and INCLUSION

various biochemical products will take place on around 500 hectares of the site, using part of the former petrochemical plant land. On the site of the petrochemical plant a new biomass cogeneration thermoelectric plant will be built to replace the existing fossil oil plant, which will have its capacity considerably reduced so that it acts as a back-up and integration plant to the new biomass plant.

Players/organisers

The project was initially proposed by the chemical engineers' union and the Sardinian community, which involved regional mayors and authorities. Together they forced the central government to make ENI commit to find an alternative to simply shutting down the Porto Torres petrochemical plant.

Other partners involved

Among the alternative initiatives proposed, the proposal of the partnership with Novamont was the most successful. Novamont is constantly expanding its production and workforce, and has patents and products that require additional production volumes if they are to cover the growing market demand for biochemical products.

Types of beneficiaries

The direct beneficiaries were the employees at the Porto Torres petrochemical plant, who had no other employment prospects once the plant closure had been announced.

However, the local farmers are also apparently indirect beneficiaries, as they will be able to grow the oil-seed crops that will provide the raw materials for the integrated biorefinery on their land.

The land in the area had essentially been abandoned, because it had poor yields and generated few profits. Planting wild thistles, which are more compatible with the arid ground, provides products that are useful to the biorefinery, and the by-products produced as waste after extraction of the raw material for use in the refinery can be used as an excellent quality vegetable-based fodder for rearing livestock.

Production for the biorefinery also opens up the possibility for generating profits in farming. The beneficiaries will be the companies that transform Matrìca products downstream, including some green chemical worker cooperatives that are being set up.

Human resources and their competencies

The human resources directly involved in the Matrìca project are first of all the Novamont technical and managerial personnel that hold the biorefinery patents, followed by all the technical personnel and most of the employees of the former petrochemical plant, who have already been sent on professional retraining courses for management of the new systems.

Tests have also begun on the agricultural crops most suitable to the agronomic characteristics of the land around the plant, such as *cardus marianus* (milk thistle), particularly suited to the generally arid land in Sardinia.

Indicators for monitoring and evaluating activities

The Matrìca project has been the subject of a central government agreement with a memorandum of agreement for Green Chemistry at Porto Torres.

Industrial relations for a green economy

Innovative bargaining processes for a sustainable growth and a quality employment



Project VS/2014/0405 co-funded

by

DGESAI - DG EMPLOYMENT, SOCIAL AFFAIRS and INCLUSION

The national agreement defines the new company Matrìca as a joint venture between Novamont and Versalis owned by ENI and the schedule for implementation of the investments, to be completed by the end of 2016.

The text of the agreement includes an attachment with the Matrìca business plan and the schedule of all the related activities, including professional retraining and organisation of the related agricultural activities. As well as the Presidency of the Council of Ministers, all the local administrations and the Sardinia regional government signed the agreement, along with the trade unions and enterprises involved.

Summary

Starting-point of the initiative/project/intervention as related to the local context (social, economic, political, etc.)

The Matrìca project originates from the need to convert the failing petrochemical plant into a related, but completely innovative activity with definite prospects for the future and for success based on the green economy and its characteristics.

Description of the socio-economic and territorial context in which the initiative is based

The context was the bleak prospect of the decommissioning of an important industrial site suffering from the market crisis and with obsolete, polluting technology, which has been given a new industrial purpose thanks to the meeting with a young company, Novamont, which had invested in low-impact technology when there was not yet any strong policy direction of that kind.

Is it possible to describe the 'philosophy' inspiring best practice?

The most significant characteristic is definitely the acumen and determination of the management and the owners of Novamont in undertaking the mission to make chemical production more environmentally compatible, and in uniting it with agriculture and the study of nature along with continuous and growing investment in research, even at times when production yields are low.

What problems/general needs is the intervention trying to address? What specific needs?

The Matrìca Project has been a very successful response to a structural crisis in a traditional industry, involving the most innovative solution available in chemical production. In addition, it offers Novamont, and its strongly defined green economy production, the opportunity to significantly increase its competitiveness on the international market.

What goals/objectives is the intervention aiming to achieve?

The complex industrial conversion of a market-obsolete plant into a new type of production that will need to be able to establish itself on the market brought with it two other results that were not central when the project first began.

The first is the major involvement of the local economy with the return to productivity of many hectares of land of little agricultural value. The second outcome was not clear at the beginning of the process, but became more consistent and definite as time went on. This is the reclamation of

Industrial relations for a green economy

Innovative bargaining processes for a sustainable growth and a quality employment



Project VS/2014/0405 co-funded

by

DGESAI - DG EMPLOYMENT, SOCIAL AFFAIRS and INCLUSION

land that had been seriously polluted by the former petrochemical plant. Once the site became productive again it made more economic sense to recuperate the whole area, which was at risk of becoming a polluted wasteland.

What activities/tools make up the initiative?

The Matrìca Project consists of many different jobs and activities if we take into account all the initiatives involved in 'Green Chemistry at Porto Torres':

1. Dismantling of the old petrochemical plant.
2. Retraining of staff.
3. Reclamation of the land and the polluted ground water.
4. Construction of the new biorefinery plant.
5. Creation of a new Research Centre, in conjunction with the local universities, to research new biochemical intermediate products and carry out tests to identify the oil-seed crops most suited to the agronomic characteristics of the area.
6. Cultivation of the crops selected for the biorefinery with guaranteed returns for the farmers.
7. Production of excellent natural vegetable fodder as a by-product of the process of extracting the raw material for use in the biorefinery.
8. Construction of a new biomass cogeneration plant to replace the fossil oil plant that aims to use biomass solely from the local area.
9. A return to a closer territorial relationship with tourism.

How can the actions implemented increase knowledge and problem-solving tools?

This case shows that the industrial relations component both in Novamont and the ENI Group has supported the success of the good industrial policies of the companies and the management. The trade union at Novamont has always been aware that the company was investing in innovation and research, and supported these commitments by ensuring the organisational and production flexibility that a focus on innovation and research can inevitably lead to. ENI has assumed responsibility for the workers and technicians of the old petrochemical plant in the community at Porto Torres, ensuring that production is converted into extremely forward-looking products that will guarantee job prospects. This commitment has been supported by close-knit trade-union relations and by agreement on the strategic choices.

What are the most innovative aspects of the initiative in terms of its local context, and why?

For Novamont, the most significant aspect of the national context is undoubtedly its strong commitment to research and innovation in the Green Economy and sustainable chemistry with a major reduction in the environmental impact. For ENI, the commitments made with the trade unions to find solutions to the critical industrial issues through discussions with the union.

What are the 'internal quality factors' of the initiative (sustainability, internal effectiveness, efficiency)?

Industrial relations for a green economy

Innovative bargaining processes for a sustainable growth and a quality employment



Project VS/2014/0405 co-founded

by

DGESAI - DG EMPLOYMENT, SOCIAL AFFAIRS and INCLUSION

For Novamont the internal quality factors are the fact that the strategic vision of the management is shared by the company's unitary union representative bodies. For ENI an initial underestimation of the technology delays and considerable environmental damage to the land, subsequently helped by a strong mobilisation of the trade union and the local institutions and community, and the ability to offer a highly innovative, challenging solution in industrial terms and the environmental reclamation of the land.

Can the initiative be reproduced in similar contexts?

The initiative can definitely be reproduced in similar contexts, but the most interesting transferable aspect is the strong mobilisation of the workers, trade unions and local authorities to deal with industrial crisis situations, and the ability of the companies involved to re-invent themselves and change their strategy from simply abandoning plants during an industrial crisis, as well as the relevance and possibility of other industrial initiatives that are going through a phase of expansion.

Can the initiative be reproduced in different contexts?

A case such as this requires above all the same ingredients of mobilisation of workers, trade unions, institutions and local and national authorities.

List the initiative output (e.g. website, documents, brochures, etc.)

There are various (we will provide them).

Conclusions

Novamont Versalis and Matrìca are the triumph of the Green Economy, of green chemistry, of chemistry based on the products and processes of agriculture and nature. In addition research into agricultural production compatible with the local land produces an integrated system that optimises the phases of the total life-cycle of agricultural and industrial production, closing the circle without producing waste, as in natural life-cycles. A new form of production scientifically interwoven with nature is possible, with a minimal negative impact on the environment.

Big business is still tied to the production of fossil fuels. We need to accelerate the transition to a low-carbon, high labour-intensive, low environmental impact economy. However, to do so, we need more than companies like Novamont, precious and indispensable as they are.

We need overall European Governance to optimise and support this transition to a good economy, to a Green Economy, slowly but surely, to a specific timetable, bringing the production and sale of traditional plastic materials to an end.

Finally, still at European level, we need to make it more mandatory and rewarding to develop good industrial relations capable of making the most of the human resources available within the company and the local area, or we will have Green Businesses unable to make much of an impact also in environmental terms.

The Green Economy is an extraordinary opportunity to make major changes if alongside the culture of environmentally responsible production and consumption we have absolute and full positive use

Industrial relations for a green economy

Innovative bargaining processes for a sustainable growth and a quality employment



Project VS/2014/0405 co-founded

by

DGESAI - DG EMPLOYMENT, SOCIAL AFFAIRS and INCLUSION

of the human resources working in the company and the area, and industrial relations must foster these processes and objectives.