

## Environmental and Social Data Sheet

### Overview

Project Name:	<b>NOVAMONT RENEWABLE CHEMISTRY</b>
Project Number:	2015-0447
Country:	Italy
Project Description:	The project, which is part of a larger investment programme of Novamont, concerns the promoter's investments for (i) R&D in the fields of materials science, polymer synthesis, agronomy and organic chemistry and (ii) the production deployment of innovative bioplastics process and product technology at the promoter's plants of Patrica and Terni in Italy
EIA required:	Yes, for some of the project components
Project included in Carbon Footprint Exercise <sup>1</sup> :	no

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The Research, Development and Innovation (RDI) activities included in the project concern research and development activities that are not specifically listed in the EIA Directive 2011/92/EU and that will be carried out in existing facilities without changing their already authorised scope. An Environmental Impact Assessment (EIA) is therefore not required by EIA Directive 2011/92/EU.

Due to their technical characteristics, the CAPEX investments at the promoter's industrial sites at Patrica and Terni fall under the scope of Annex II of EIA Directive 2011/92/EU (modification of integrated chemical installations for the production of organic chemicals) and, therefore, the Member State has to determine whether the project has to be subject to an environmental impact assessment.

The Italian legislation foresees a one-step authorisation for both the construction and the operation of a plant under the provisions of the transposition of both the EIA Directive 2011/92/EU and the Industrial Emissions Directive 2010/75/EU. The investment at the Patrica plant includes 3 components. For the first one (a by-products recycling unit), an application for the authorisation of a non-substantial change has been submitted to the competent national authority on 06/07/2015. The other two components still have to go through a screening procedure. The investments for the extension of the Terni plant are in a similar situation but due to their characteristics, they fall under the competency of the regional authorities. The promoter will be required through the corresponding Disbursement and Undertaking conditions in the finance contract to forward to the Bank any relevant permitting documentation (such as EIS, screening decisions, integrated environmental permits and building permits) before any such sub-investment takes place.

For its plant expansions the promoter will implement innovative technologies applying the highest environmental standards and best available abatement technologies within the existing industrial sites. Some of the planned investments (particularly at Patrica) aim at improving the environmental and greenhouse gases (GHG) footprint of the industrial process. Agricultural feedstocks (corn starch, sugar and sunflower) are only purchased from certified

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100 000 tonnes CO<sub>2</sub>e/year absolute (gross) or 20 000 tonnes CO<sub>2</sub>e/year relative (net) – both increases and savings.

suppliers from within the EU meeting strict sustainability criteria. Due to the location of the plants, the project is not expected to affect any natural conservation areas and in the case of Terni will help to recuperate abandoned industrial installations. Based on these considerations, the project is considered to meet the EIB environmental and social standards and is hence acceptable for the Bank's financing.

## **Environmental and Social Assessment**

### **Environmental Assessment**

The CAPEX investments in Patrica include 3 components: (i) a by-products recycling unit, (ii) a trigeneration plant for energy supply to the plant and (iii) the conversion of the existing PET production line into an Origo-Bi production line. All three investments constitute a modification of an existing, permitted production plant of organic chemicals. The by-products recycling unit and the trigeneration plant will have significant positive environmental externalities, such as the avoidance of GHG emissions due to the reduction of transport of the by-products waste or the efficient operation of the trigeneration plant. The thermal input capacity of the trigeneration plant is below the thresholds established in the annexes of the EIA and IED directives. The promoter expects the modification of the PET production line in Patrica and the capacity expansion project at Terni to be considered by the competent authorities as a substantial change, in which case a full environmental impact assessment will have to be carried out, along with a public consultation procedure.

Overall, the project is considered to have very positive environmental effects. It targets, through the implementation of market-ready, innovative technology, to improve the environmental and GHG footprint of certain uses of plastics in households, food packaging and agriculture. It aims at offering environmentally-friendly compostable bioplastics alternatives to traditional plastic materials from fossil origin that, especially for some uses, are posing serious challenges to the environment (micro-pollution and accumulation in nature) as well as for waste management. The project generates greenhouse gas emissions which do not reach the thresholds for the EIB Pilot exercise as defined by the EIB draft Carbon Footprint. But out of the project boundary, the project will have substantial environmental externalities derived from the substitution of plastics from fossil origin by bioplastics.

### **Social Assessment, where applicable**

The promoter's RDI in agriculture aims at the development of a new crop system that is adapted to the Mediterranean climate, offering attractive returns to farmers and at the same time being able to guarantee a sustainable supply of the needed feedstock to its factories at competitive costs. If this work is successful it will enable the establishment of integrated bio-refineries in less developed, predominantly rural areas, by offering sustainable employment opportunities in the manufacturing and feedstock supply chain (agriculture). It will herewith help to address the issue of rural unemployment and depopulation due to emigration to cities by guaranteeing the long term sustainability of the agricultural operations in regions with less favourable agro-climatic conditions, where agricultural production would otherwise be abandoned in the long term. The model would be replicable in other areas within the Mediterranean basin, where climate change adaptation measures will be necessary to guarantee viability of agricultural production. The Terni plant site is within the historical chemical industrial complex of Basell Polyolefins, a declining industrial site that was prone to closure. The Patrica plant site was facing uncertain future because of its small size before the promoter's intervention. Through its investments the promoter reinforces its operations in the sites creating employment in an economically declining area with high unemployment.

### **Public Consultation and Stakeholder Engagement, where required**

As most of the project's CAPEX elements are still in the planning phase, screening decisions by the Italian public authorities are still pending.

## **Other Environmental and Social Aspects**

The promoter's sites are certified under ISO9001, ISO14001 and OHAS18001. The two industrial project sites (Terni and Patrica) do hold chemical product stocks below the typified threshold established in the Directive 2003/105/EC, which in turn, amends Directive 96/82/EC (SEVESO II). The promoter complies with the provision of the REACH Directive for the transport of chemicals. The promoter is also committed through its E&S statements not to use nor promote feedstocks from agricultural GMO – crops.

The promoter has stringent environment, health and safety policies (EHS) in place and is subject to frequent internal and external audits as well as inspections by the local Italian competent authorities.

Some of the proposed RDI programmes foresee the development of innovative chemical processes and industrial biotechnology processes. The promoter's industrial biotechnology processes make use in some cases of engineered microorganisms in contained environments as it is commonly the case for the production of industrial chemicals, enzymes, proteins, medicines and food additives. These products are produced using selected and often genetically-modified non-pathogenic fungi, bacteria and microalgae and separated from the micro-organisms in the production process. There will be no genetically-modified micro-organisms in the end products.

The micro-organisms that could be targeted in the project's RDI programmes are expected to be categorised under class 1 "no likely risky for health and environment" (there are four risk classes from class 1 for the lowest risk level to class 4 for the higher risk level). A notification to the competent authorities is mandatory for any new pilot or production units making use of microorganisms that would fall under a risk class higher than class 1. The Cat 1 RDI activities themselves are non-notifiable, although they are open to scrutiny by the competent authority that enforces the regulations.

Undertaking clauses to the finance contract have been proposed to ensure that the Bank receives copy of the relevant notification information related to project components that may fall under the provisions of the Council Directive 2009/41/EC and corresponding acknowledgement notes from the competent national authorities.