







URBAN AND REGIONAL DEVELOPMENT

DM 629/PA - Move for Clean Air

Funded By MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:9742978058-Politecnico di TORINO [P.iva/CF:00518460019]

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Context of the research activity

Italy is facing a complex dispute with the EU Commission for non-compliance with air quality directives, receiving a negative ruling on some procedures from the EU Court of Justice. If, on the one hand, the 2022 Financial Law established a fund of 2.3Bn euro for the implementation (2023-35 period) of the National Air Pollution Control Programme and to achieve emission reduction targets, on the other hand, the PNRR allocated about 6.6Bn to urban mobility infrastructures but not to the issue of air quality, sustainable mobility or mobility demand management. This approach threatens the overall effectiveness of the PNRR also in terms of reducing pollutant emissions. Integrating NAPCP and PNRR is a highly topical issue.

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Italy urgently needs to ensure that the Air Quality Plans establish appropriate measures so that the exceedance of the limit values is as short as possible and that the measures adopted are implemented.

Given the existence of the Air Quality Fund and the PNRR fund, it seems more appropriate than ever, given the urgency of bringing measures that can be financed by the Air Quality Fund to the ground as quickly as possible, to act promptly to identify integrated actions that, while enhancing the PNRR investments, do not undermine their spending effectiveness, but rather act in a complementary manner without overlapping.

It is clear that mobility is still a sector with enormous development margins, especially in relation to the organisation of land use and urban functions.

In the identification of actions in the mobility sector in particular and their practical implementation, it is necessary to provide for the direct involvement of local administrations (Municipalities or Associations of Municipalities), which are familiar with the context of their respective urban areas and can also make it easier to reach citizens' needs. The study of general (PRG) and sectorial planning tools (PUT and PUMS, which, in most cases, have been drawn up in a compilative way but not cast in the relevant urban reality) and

Objectives

the provision of single mobility demand management platforms in order to guarantee single tools to citizens regardless of the urban area in which they are located, is of great importance in this context.

Moreover, complying with the objectives set at European level and putting an end to exceeding the limit values envisaged by the Directive requires the availability of data and information useful for assessing the state and trend of anthropogenic emissions and air quality, on the basis of which remedial measures can be identified and selected and regional and national remedial plans drawn up.

In operational terms, there are three main lines of action:

- 1. Building and structuring knowledge bases:
- Data on morphology, climate, and emission sources also from outside the area of reference
- Estimated polluted surface area
- Population exposed to pollution
- Techniques for assessing pollutant emissions and constructing evolution scenarios as a function of emission sources
- 2. Defining objectives:
- Intermediate and final targets
- Implementation and monitoring indicators
- Parties responsible for implementation and monitoring
- 3. Identifing the measures to be implemented:
- Timeframe (start of implementation, duration) territorial perimeters in which the measures are to be implemented
- Expected effects on the different perimeters identified
- Costs associated with implementation (including maintenance costs and management models).

Research on these issues can be a central element for the Ministry of the Environment and Energy Security for implementing and/or running integration of sustainable mobility projects implemented by the Air Quality Fund.

Skills and competencies for the development of the activity

- Excellent knowledge of settlement principles, descriptive indicators of the constituent elements of urban morphology.
- Excellent knowledge of italian municipal spatial planning instruments and italian sectoral mobility planning instruments.
- Excellent knowledge of GIS technology, in particular of ESRI software (ArcGIS Desktop and others) and other open-source applications (QGIS).
- Excellent skills in data geoprocessing techniques in the field of GIS for the realisation of new information layers to support analyses and urban plans
- Excellent knowledge of software for ecosystem assessment, integrated and interoperable with GIS applications (e.g. InVEST).
- Excellent knowledge of descriptive data and indicators of the main urban socio-economic features.