

# Sustainability and cohesion: local resilience as a key factor

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## EXTENDED ABSTRACT:

Regions with different levels of social and economic development could present the same level of transition toward sustainability. This sustainability, disconnected from the social and economic development, could be caused by a different attention in regional policies to specific elements characterizing the territory and to the relational dynamic of the social frame, creating as a result a different kind of sustainability, more focused on local relations and network creation, that we define “advanced sustainability”.

What we define as advanced sustainability is the result of the cumulated impact of organizational and economic instruments (such as incentives, creation of market conditions, regulations) and relational and participative instruments (local cooperation, network creation).

These different types of policy instruments are part of the Energy and Environmental Regional Programs (Piani energetici ed ambientali regionali- PEAR) that every single Italian region has to prepare independently. Analyzing PEARs comparatively permits us to define the structure of the programs and the common elements, but also to identify the peculiarity of every region, especially from an energy production point of view. In this programs, accordingly with national and international laws, the development of renewable energy is promoted, so every region has different possibilities to develop one or more specific renewable resource. Putting the accent on the structure of energy production gives us the opportunity to map the different relations involved into energy production on regional and national scale, considering not only producers and consumers but also local government, local networks of stakeholders, environmental associations.

The analysis of PEAR is divided into two subsections: the first one dedicated to the targets of the plan and the second part dedicated to the policy instruments. The targets are analyzed using textual analysis techniques, instead the instruments using a semi structured questionnaire (content analysis). The use of content analysis was due to the variability of policy instruments among the different regional plans and to the necessity to use a flexible instrument in representing properly this variability and richness, connecting the specific situations depicted into PEARs with a wider range of environmental issues discussed internationally on dedicated literature.

One target emerged by the analysis is obviously the social and economic development of the region. It's a residual target, after the energy efficiency and the environmental problems connected with the development of specific renewable resources. But having the opportunity to describe how every Pear define the idea of future development is interesting in order to clarify if renewable energies are considered the main ingredient of a different kind of development or not. Hopefully, to contrast energy dependence and increasing consumes, every region will stimulate an energy autonomy, developing internal resources and possibilities to turn into localized energy production, as happens with renewable energies. In this change of direction a different social involvement for the regional or sub-regional population could be a natural consequence.

The policy instruments were distinguished into vertical instruments and horizontal instruments. The vertical instruments are more connected with top-down actions like subsystems organization, specialized and dedicated local government units, use of incentives or other financial and economic solutions. The horizontal instruments instead are dedicated to the creation of local systems of auto-production, network creation, diffusion of a sustainability culture, participation.

<b>Vertical instruments</b>	<b>Horizontal instruments</b>
– Economic incentives	– Supply side management of Energy sources
– Management and organization	– Research & Development
– Demand side management of economic sectors	– Creation of local network of auto-production
	– Creation of stakeholders network
	– Cultural instruments

One of the most important horizontal instrument is the creation of localized center of energy auto-production. This kind of instrument is able to convey all the local potential present in a specific territory, guaranteeing a full return of benefits for the areas involved. In this way is possible to create energy localized basins able to use properly the natural resources of the area to produce renewable energy. In some region, like Marche for example, this transformation is operated thanks also to the presence of a previous industrial and manufacturing district. For other regions without this kind of industrial poles the energy production itself could represent a way of future development. In this sense biomasses are the most challenging way of producing energy because of their connection with local forestry recovery, dedicated agriculture, low emissions, biofuels, on site consumption, distributed production.

The PEARs analysis will show how, besides in defining target these programs could appear still internal to an old definition of sustainability, when the instruments are designed there is a bigger attention to a major involvement of local communities and small networks, integrating also this elements in the old top-down regulatory definition of sustainability.

The final part of the document is dedicated to a rating of all the Italian regions in respect to advanced sustainability, using factor analysis techniques on social, environmental and economic indicators. After an exploration of the Sustainable Development indicators used nationally and internationally we selected a set of regional indicators on development, energy production and consumption, environment, public investments mainly from the “Banca Dati territoriale per le Politiche di Sviluppo” realized by the Italian National Institute of Statistics (ISTAT) and other ISTAT surveys.

Using factor analysis on these indicators we ranked the regions simultaneously of socio-economic development and on the transition towards sustainability, showing how regions with a different economic profile could show a similar level of transition, due to a relevant weight of indicators of social inclusion and network creation.

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