# The impacts of green energy policies on the transformational processes within the context of the contemporary rural landscape.

## A comparative analysis of three European national and regional scenarios (Italy, France and Spain)

1. **Introduction:**
   **The main scientific challenge for the session; the European legislation context**

2. **The Italian national and regional context:**
   **Regione Puglia – Parco Nazionale dell'Alta Murgia**
   **Daniela Perrotti – ENSP Versailles (FR) ; Politecnico di Milano (IT)**

3. **The French national and regional context :**
   **Region Centre – Vallée de la Beauce**
   **Stanislas Henrion – ENSA Paris-Malaquais (FR) ; IUAV Venezia (IT)**

4. **The Spanish example:**
   **Comunidad Autónoma de Andalucía - Alpujarra et Valle de Lecrín**
   **Marina Frolova – Universidad de Granada (ES)**

5. **Comunidad Autónoma de Castilla y León - Comarca de "La Mudarra"**
   **Daniel Herrero – Universidad de Valladolid (ES) ; Université de Nancy2 (FR)**

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# EU Energy Policy Establishment Process: 6 + 1 milestones

Commission **Green Paper / White Paper** (January 1995 / December 1995)
"For a European Union Energy Policy" / "An Eneregy Policy for European Union"

Commission **Green Paper** for a Community Strategy (November 1996)
"Energy for the Future: Renewable Sources of Energy "

**towards**
(common)
European energy policy

**1.Commission White Paper** for a Community Strategy and **Action Plan** (November 1997)
"Energy for the Future: Renewable Sources of Energy" - COM(97) 599

-non-discriminatory **access** to electricity market
-fiscal and financial **measures** for Action Plan
-new initiatives regarding **bio-energy** for transport, heat, electricity (bio-fuels, biogas, solid biomass)
-**renewable** energy sources (solar energy) in construction industry (retrofitting and new buildings)

**European Burden-Sharing** Agreement (June 1998 EU Environment Council).

**2.Commission Green Paper** (November 2000)
"Towards a European **strategy** for the security of energy supply" - COM (2000) 769

-**environmental** and **energy dependence** concerns influence energy choices (reducing risks)
-development of **internal** market (new place and role to energy demand)
-political **tensions** (falling prices undermine efforts)
-**lack** of political **consensus** on a Community energy policy (limits the scope for action)
-need of **compromises** (extend Community powers; more control ; launch a debate)

* **Green paper : discussion** document intended to **stimulate debate** and launch a **process of consultation**
* **White Paper** : authoritative **report** containing **proposals** for European Union action in a specific area (following Green Paper)

# EU Energy Policy Establishment Process: 6 + 1 milestones

**concept approval**
of introducing a mandatory and comprehensive
(common) European energy policy

**3.European Council** on 27th October 2005 in London

"For far too long we have been in the situation where, in a **haphazard** and **random way,** energy needs and energy priorities are simply determined by **each country** according to its needs, but without **any sense** of the **collective power** that we could have in Europe, if we were prepared to pool our energy and our resources.

That policy should focus not on new regulatory barriers, but rather on obtaining a **genuinely open energy market.** It should deal with, for example, a properly **integrated European Union grid**. Already this is done on a **bilateral basis** between countries. Think of how much greater **economic power** and **competitiveness** we could have, if we were prepared to make sure that it was integrated on a **Europe-wide basis**.

Secondly, we, like other major countries in the world, should be prepared **to enter into dialogue at European level** with key suppliers of energy, to use our collective weight to make our voice heard.

Thirdly, we need to be developing **clean technologies**, **energy efficiency** and coming to some **common views** at least about the possibilities and perspectives on issues related to areas such as **nuclear power**."

Tony Blair, President-in-Office of the Council

# EU Energy Policy Establishment Process: 6 + 1 milestones

**implementation**
of (common) European energy policy

**4.Commission Green Paper** (March 2006)
"A European strategy for sustainable, competitive and secure energy" - COM(2006) 105

**3 core objectives :**

-sustainability ; competitiveness ; security of supply

**6 priority areas**

-"Energy for growth and jobs": completing the **internal energy market** (**European grid,** common rules and standards for cross-border trade, no protectionism, opening up the markets, July 2007)

-"**Security** of supply: **solidarity** between Member States" (**European Energy Supply Observatory** ; create emergency stocks, foster solidarity to avoid energy supply crises )

-"Towards a more sustainable, efficient and **diverse energy mix" (Strategic EU Energy Review,** coordinated Members' energy mix choice)

-"The EU at the **forefront** of tackling climate change" (**Renewable Energy Road Map,** decouple economic growth from energy consumption: consuming less and still being more competitive)

-**"Research** and **innovation** at the service of Europe's energy policy" (**Strategic energy technology Plan, EU's 7th Framework Programme** for research in new energy technologies)

-"Towards a coherent **external** energy policy" (**Pan-European energy community,** dialogue with producer countries )

# EU Energy Policy Establishment Process: 6 + 1 milestones

**first proposal**
of (common) European energy policy

**5.Communication** from Commission to European Council and European Parliament (January 2007)
"**Energy for a Changing World.** An energy policy for Europe" - COM(2007) 1

**6 objectives:**

-establish the **internal** energy **market (Energy Customers' Charter** clearer separation between management of gas and electricity networks , production or sales activities)

-ensure a **secure energy supply (**strategic oil stocks, gas, electricity supply)

-reduce **greenhouse gas emissions** (emissions at least 20% by 2020**;** energy consumption by 20% by 2020; increasing proportion of renewable energies by 20% by 2020

-develop **energy technologies** (**Intelligent Energy for Europe** programme)

-consider the future of **nuclear energy** (common and coherent approach with respect to security, safety and non-proliferation ;dismantling of installations ; management of waste)

-implement a common **international** energy policy (**consumers**: United States, India, Brazil ,China; **producers:** Russia, Norway, OPEC, Algeria; new **partnership :**Africa)

# EU Energy Policy Establishment Process: 6 + 1 milestones

setting out
European Commission's energy **strategy to 2020**

**6.Communication** from Commission to European Parliament, Council, European Economic and Social Committee, Committee of the Regions (November 2010)
"**Energy 2020** A strategy for competitive, sustainable and secure energy" - COM(2010) 639

**5 priorities:**

-"limiting energy **use** in Europe" (achieving **20% energy savings by 2020**, **buildings** and **transport** sectors' energy-saving potential, **industry energy efficiency**, **ecodesign** requirements)

-"building a **pan-European** integrated energy market" (energy **free movement**, blueprint European infrastructure 2020-30, **European Network of Transmission System Operators** gas/electricity)

-"**empowering consumers,** achieving the highest level of safety and security" (**consumers participation** in internal market : suppliers, billing, complaint-handling, dispute resolution scheme)

-"extending Europe's **leadership** in the development of technology and innovation" (high performance low-carbon **technologies**: smart grids; electricity storage; biofuel production; energy savings both in cities and in **rural areas**)

-"strengthening the exter**nal dimension** of the EU energy market" (low carbon and nuclear-safe; cooperation with Africa and International **Atomic Energy Agency**, conclude **Euratom** agreements)

# EU legislation context : 6 + 1 milestones (Energy + Landscape Policy)

new point of view on aesthetic and perception **quality** in landscape

**Council of Europe**
*European Landscape Convention*
adopted October, 2000; came into force March 2004; ratified 2006 (France, Italy) 2007(Spain)

**"Landscape quality":**

"landscape is an important part of the **quality of life** for people everywhere"

"**quality** and **diversity** of European landscapes" as "**common resources**" (ELC *Introductio*)

"**Landscape quality objective**" :

"for a specific landscape, the formulation by the competent public authorities of the **aspirations** of the **public** with regard to the **landscape features** of their surroundings"

"each Party undertakes to define landscape quality objectives for the landscapes **identified** and **assessed**, after **public consultation**"

(ELC Article 6 – *Specific measures*
d. Landscape quality objectives)

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## The Special Session main scientific questions (rural landscape)

- Is it possible to ascribe the reasons for the close relationship between green energy and agricultural production to the current **crises** affecting the **agricultural economic cycle** ?

-In the light of the recent political changes in green energy strategic orientation, may we consider the fulfilment phase of the **European renewable energy burden-sharing standards agreement** to be almost totally complete?

- Can we identify the emergence of **new multi-scale political interest** (European, national, regional, local) in **landscape quality** (ELC, 2000) and not merely in simple quantitative management?

**INTRA-EUROPEAN COMPARATIVE ANALYSIS**

evaluation of material and non-material impacts of green energy directives on contemporary **rural landscape** (socio-economic, ecological, aesthetic issues)

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# The Italian national context

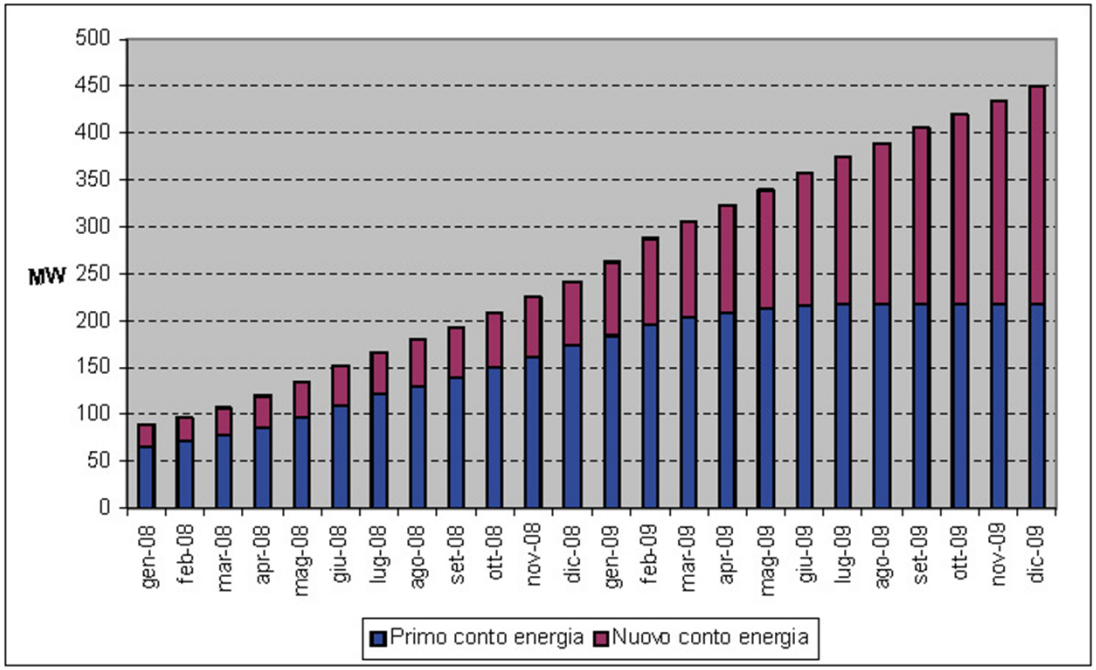
**a) National Action Plan**
Conto Energia 1 (2005-2007)
Conto Energia 2 (2008-2009)

**public funding policy for renewable energy production** (energy purchase's incentive rates for land property owner)

green energy production as a **financially interesting alternative** to agriculture economic crisis

**1. new economic flow**

**2. competitive environment** between agricultural /zootechnical and new energy sectors and production




**Electric power increase in Italian national context, thanks to public funding policy of Conto Energia 2008-2009. Primo (first) Conto Energia : 2005-2007 ; Nuovo (new) Conto Energia : 2008-2009 (Source*: Impianti a fonti rinnovabili, Rapporto statistico 2009*)**

## The Italian national context

**b) National Guidelines**
Linee Guida Nazionali (2010)
Conto Energia 3 (2010-2011)

**radical shift** in political strategy for energetic sustainability
(beyond simple **management concerns for green energy production)**

- regulating **authorisation** process for the installation of renewable energy power plants

- ensuring appropriate **integration** of these installations into the landscape

within the **agricultural context**

quest for a **larger consensus** at local scale (different forms of **territorial governance**)

overcoming ***top-down*** application of sustainable development's fundamental principles

adopting ***bottom-up*** consideration of social demands by local actors and communities

## The Apulia regional context

### a) Energetic and Environmental Regional Plan
PEAR Puglia (2007)

report / evaluation of **regional energetic context** (2007-2016) in different activity sectors (agriculture, zootechnics, industry, real estate, transportations, tertiary)

analysis of regional energy **supply / demand development** (2007-2016)

identification of a **new system of regulations,** suitable for green energy production local supply / demand

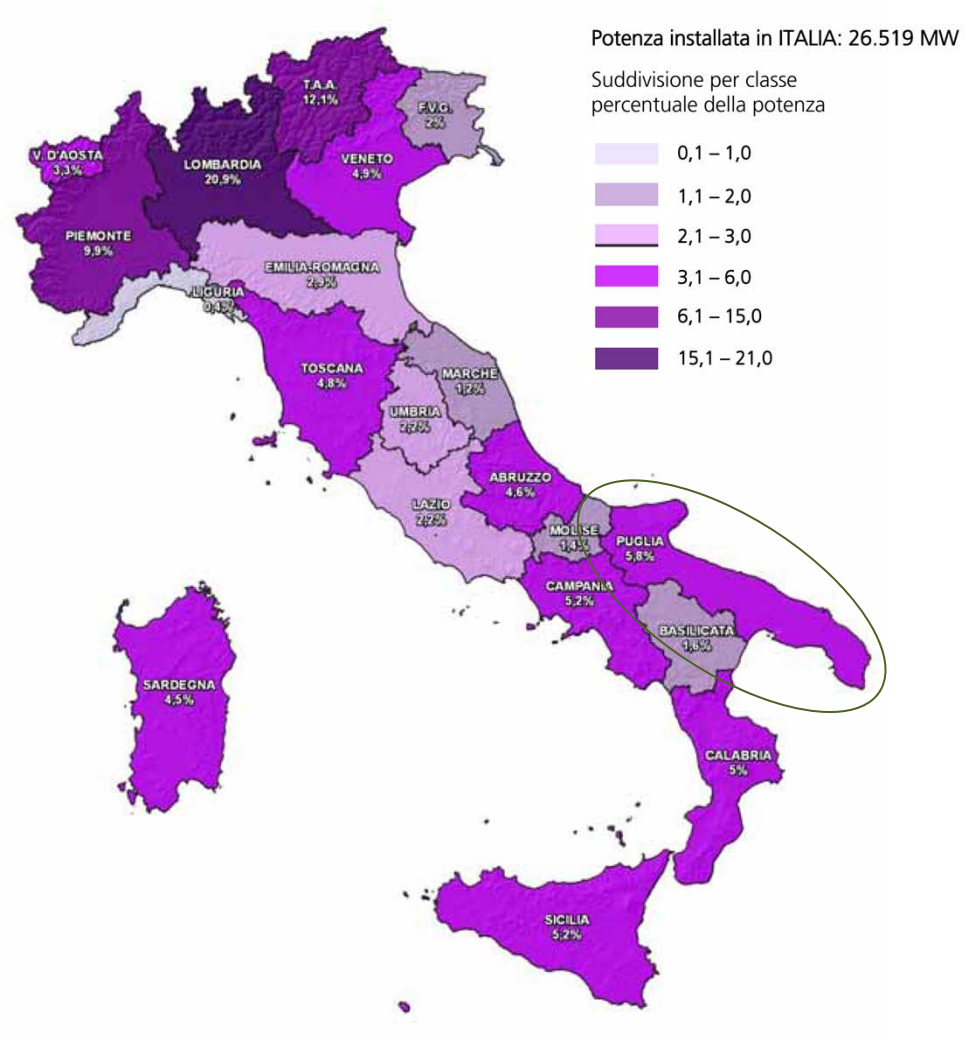
clean **surplus** of regional energetic production (green/fossil) compared to real consumption

**agricultural** and **zootechnical** sectors particularly involved in energetic issues:

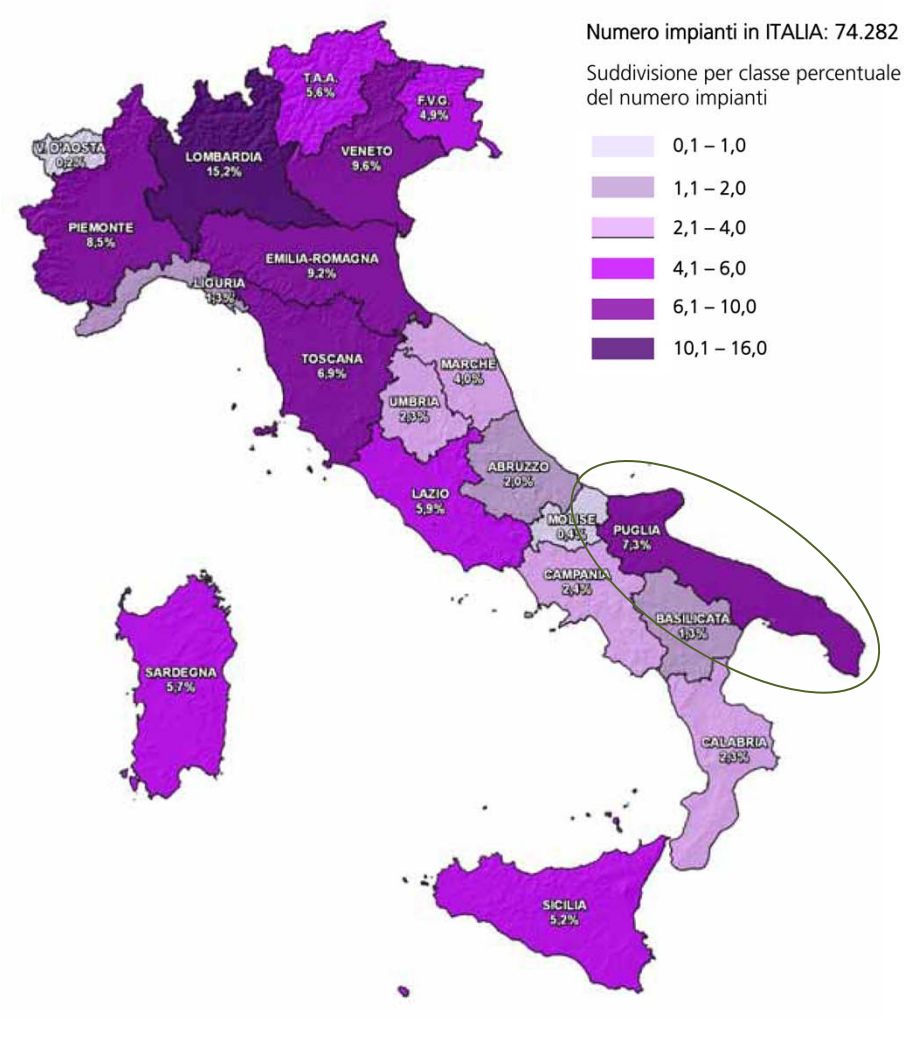
**demand** (energy-intensive sectors : irrigation, greenhouse warming...)

**supply** (potential producers of biomass and biofuel ; land use conversion of agricultural parcels to wind and photovoltaic power plants)

Distribuzione regionale % della potenza a fine 2009




Distribuzione regionale % numero impianti a fine 2009




**Regional distribution % of electric power (MW) produced by renewable sources, in Italy, end 2009 (Source *: Impianti a fonti rinnovabili, Rapporto statistico 2009*)**
**Apulia : 5,8 %**

**Regional distribution % of green energy power plants' number in Italy, end 2009 (Source : *Impianti a fonti rinnovabili, Rapporto statistico 2009*)**
**Apulia : 7,3 %**

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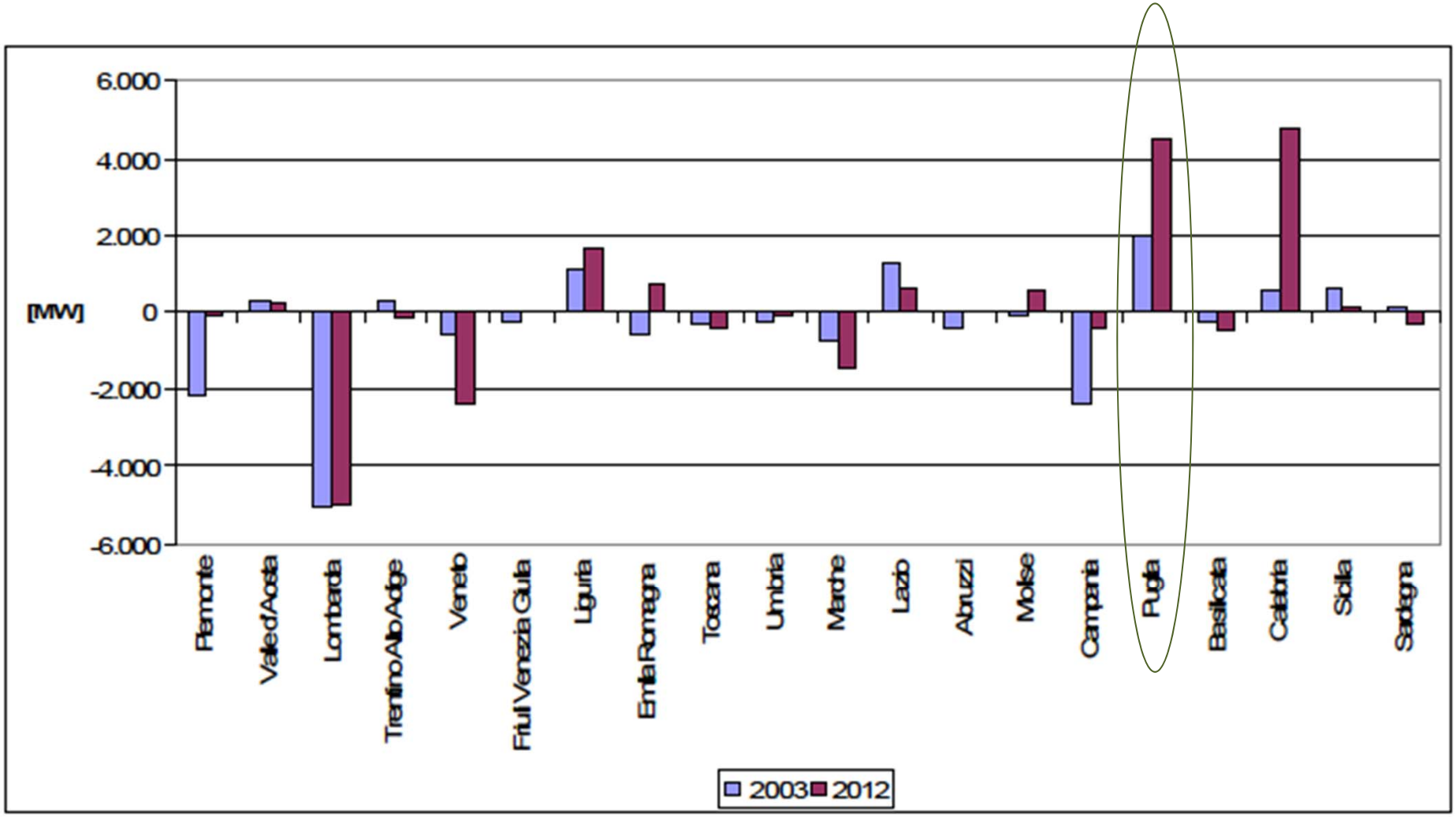



**Variance between demanded and installed electric power in each Italian region, between 2003 (report) ad 2012 (estimation) (Source : *Impianti a fonti rinnovabili, Rapporto statistico 2009*)**

**implementation** of National Guidelines (2010): abolishment of **indiscriminate public funding policy**

more **sustainable** (time/space) **management strategy for** energy production in agricultural sector

**site-specific** regulations and policies for territory management and land use

classification (local criteria) of **suitable and unsuitable areas** for renewable energy plant installations : *Regional Land Inventory of Renewable Energy Sources*

within the **agricultural context**

**capillary diffusion** of smaller power plants on the territory (cogeneration power station, electric and heating grids, *smart grids*)

**private – public cooperation** at local level

organisation of **local districts** for agroenergetic production and **regional cluster** for renewable energies and energetic efficiency (*La Nuova Energia. Distretto Produttivo delle Energie Rinnovabili e dell'Efficienza Energetica della Regione Puglia*, 2011)

# The *Alta Murgia* local context

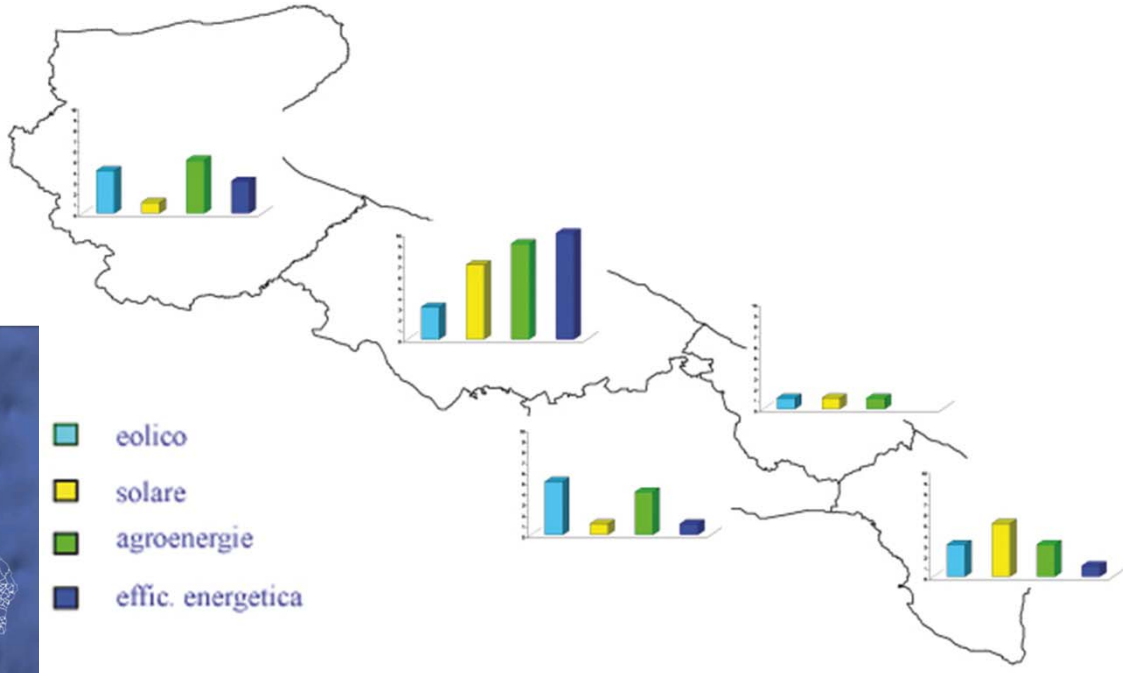
**a) Alta Murgia National Parc** Institution (2004)

first Italian **Rural** Park (2004) in the hinterland of Apulia regional capital (Bari)

traditional intensive **cereal** production and **livestock** farming

Contemporary agricultural industry :
progressive conversion into **agro-energetic crops (biomass)**

Contemporary zootechnical industry:
increasing production of **biogas** for green energy production

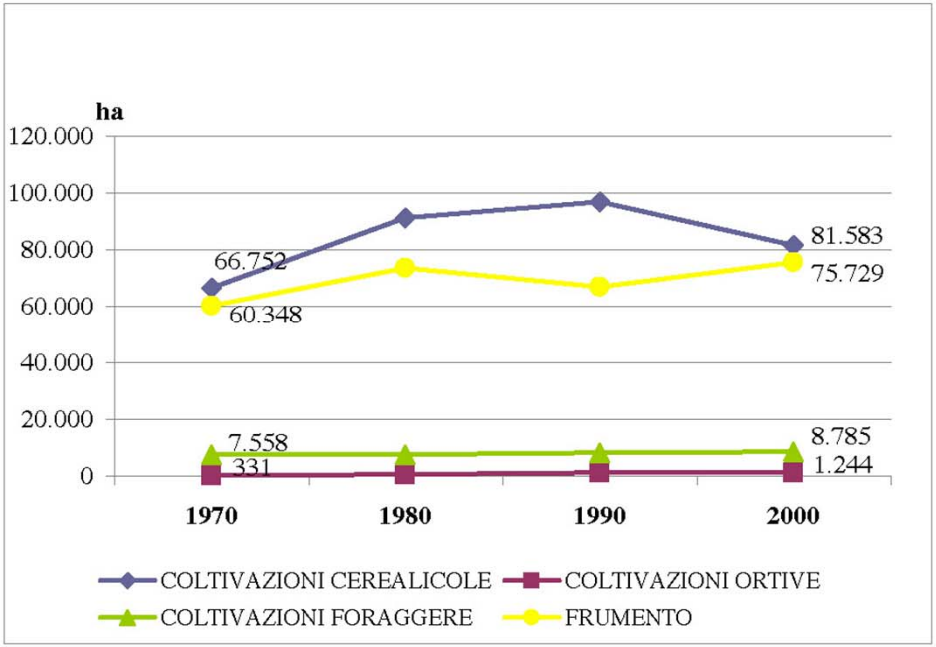




**Green energy farms' territorial distribution, according to sector typology in Apulia Region (Source : *Le Energie Rinnovabili in Puglia. Strategie, competenze, progetti*, 2008)**

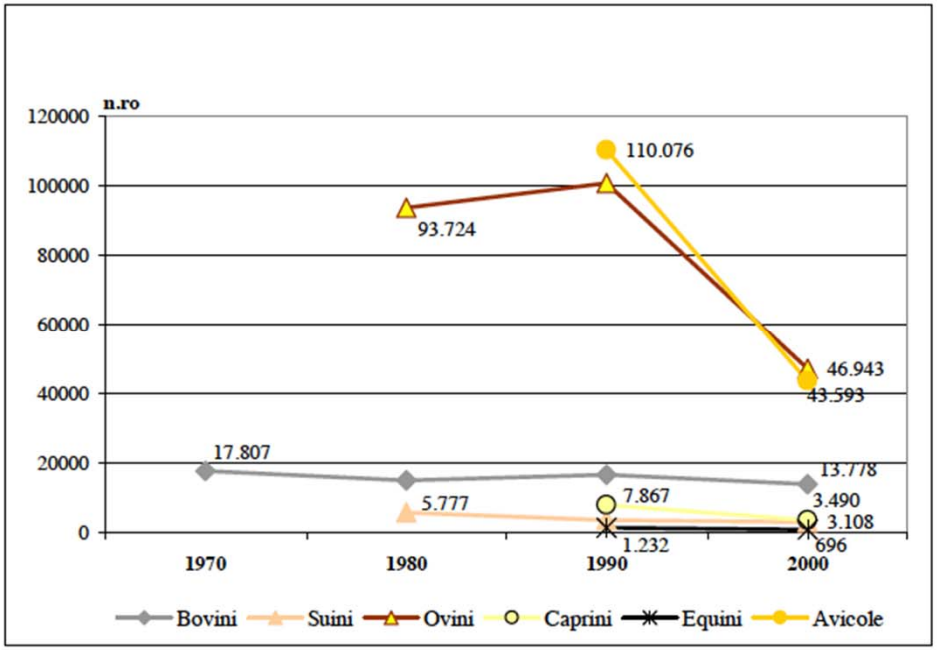
# The *Alta Murgia* local context

**a) Alta Murgia National Parc** Institution (2004)

green energy production as a major factor to thwart the **economic crisis** and the **social isolation** of the agricultural and zootechnical activities in the *Alta Murgia* territory (90s -)




**Evolution of different types of culture (cereal, forage, horticultural, wheat) between 1970 and 2000 (in hectares) in the territory of Alta Murgia National Park**
**(Source : *Relazione del Piano per il Parco*, 2010)**




**Evolution of different types of livestock farming (bovine, porcine, ovine, caprine, equine, poultry) between 1970 and 2000 (in number of animals) ) in the territory of Alta Murgia National Park**
**(Source : *Relazione del Piano per il Parco*, 2010).**

## The *Alta Murgia* local context

**b) Alta Murgia National Parc Plan**
Piano del Parco (2010)

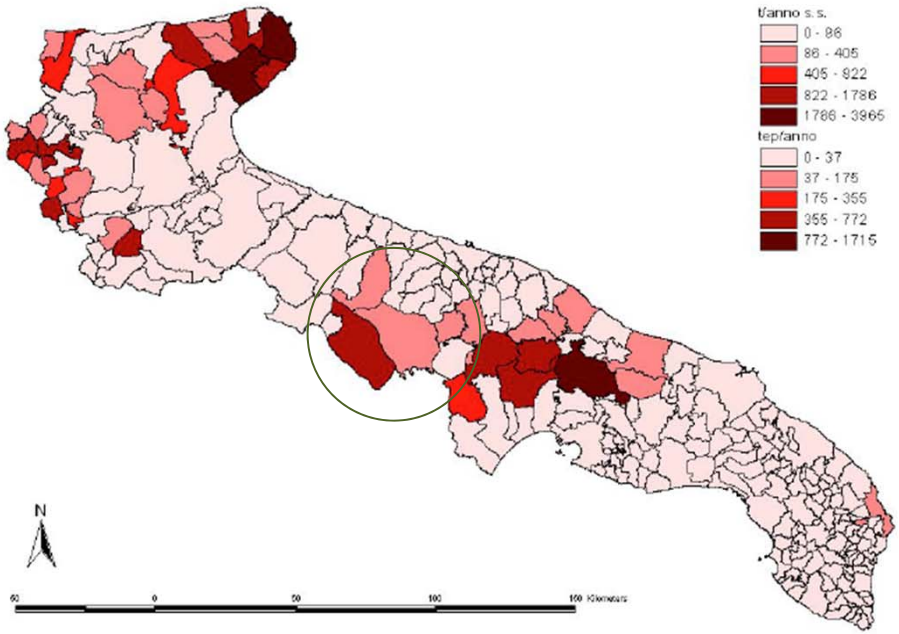
orient the future of farming activity toward a **new development process**
"to support **economic vitality** and to promote a renewed model of **sustainable territorial management**, in continuity with the **local rural traditions**"

create new set of guidelines for a sustainable territorial development
(energy **self-production** / **self-consumption,** testing **actual potentials** for different forms of green energy production)

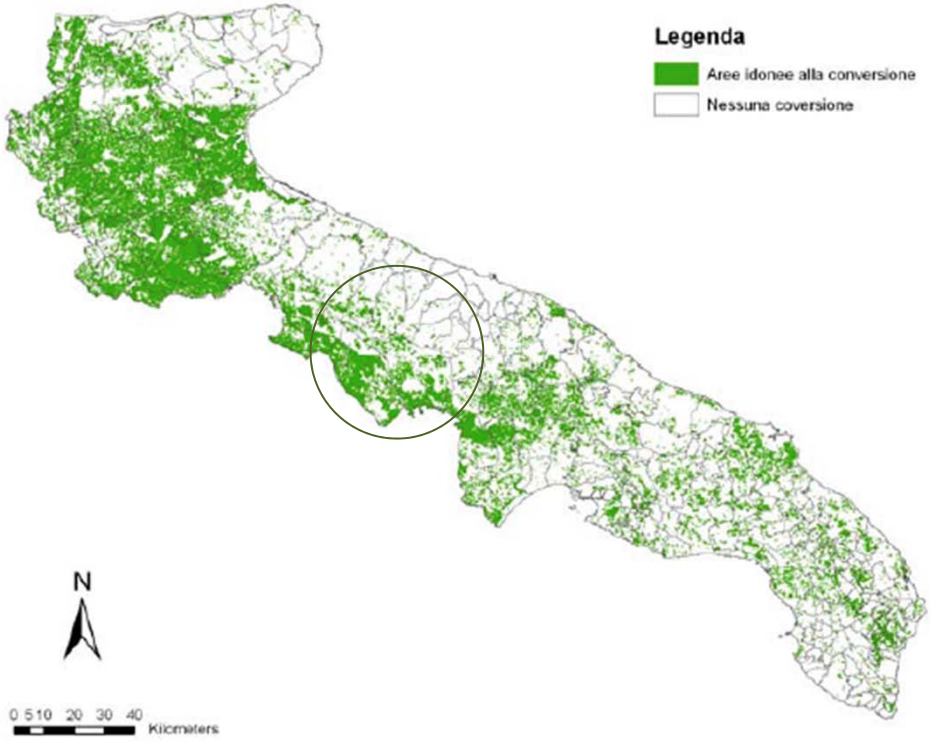
**pilot projects** experimentation (small weaving factories, clusters, districts)

**environmental education** and **training** / **scientific research** and **technological innovation**

integration of **high technology** green energy equipment in local productive unities (**traditional family enterprises**)




**Distribution of forest biomasses (tonne per year) and their energetic content (tonne of oil equivalent) in the Apulia region communal lands (Source : *Studio per la valorizzazione energetica di biomasse agroforestali nella Regione Puglia*, 2007)**




**Rural areas suitable for agricultural conversion into agro-energetic crops in the Apulia region territory (Source : *Studio per la valorizzazione energetica di biomasse agroforestali nella Regione Puglia*, 2007)**

## The *Alta Murgia* local context

**b) Alta Murgia National Parc Plan**
Piano del Parco (2010)

1.pilot project "**Sustainable Zootechnics Revival"** (2005)

- **refoundation** of **multifunctionality condition** of agricultural and zootechnical enterprises

-integration between **traditional techniques** and **savoir-faire** (sustainable management of resources) and new forms of **energetic production**

- protection and valorisation actions of **rural architectural heritage and traditional construction techniques**

2. pilot project "**XXI Century Alta Murgia Farm"** (2010)

- interconnection between **productive, touristic** and **energetic cycles**
- construction of a **diversified energy mix** (combined energetic performance)
- increase in **visibility** and in **touristic competitiveness for sustainable rural** enterprises
- actualisation of agriculture and livestock farming **image**

## Conclusions

1. Is it possible to ascribe the reasons for the close relationship between green energy and agricultural production to the current **crises** affecting the **agricultural economic cycle** ?

green energy production as major factor in **thwarting economic crisis** and **social isolation** of rural activities

**BUT**

only trough promotion of a **local model** of **sustainable territorial management** (new forms of governance; interactions between different territorial actors; integration of rural traditional techniques, savoir-faire; valorisation of rural heritage )

2. May we consider the fulfilment phase of the **European renewable energy burden-sharing standards agreement** to be almost totally complete?

More awareness from political actors about rural production (not only energetic) actual issues (rural regions produce more energy that what they consume).

**THEN**

need of new efficient policy instruments for a new political phase

3. Can we identify the emergence of **new multi-scale political interest** in **landscape quality** (ELC, 2000) and not merely in simple quantitative management?

**YES**

Quality (rural) landscape ("**quality** life **living context" ;** ELC 2000, implementation policies) as platform for direct interactions and participation between public and private local players