

Approaches towards adaptation strategies: Italian NAS

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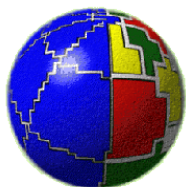
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Istituto Nazionale di Geofisica e Vulcanologia



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cmcc
Centro Euro-Mediterraneo
sui Cambiamenti Climatici

Outline:

- The EU Adaptation Policy Framework:
EU Adaptation Strategy
- The Italian National Adaptation
Strategy
- The Regional considerations
- Some conclusions

EU Guidelines on developing adaptation strategies

page 5 footnote:

“Strategies shall be understood in this document as an umbrella term for adaptation policies (including strategies, action plan and potentially sectoral plans).

EU Guidelines on developing adaptation policies

1. Step 1: Preparing the ground for adaptation
2. Step 2. Assessing risks and vulnerabilities to climate change
3. Step 3. Identifying adaptation options
4. Step 4. Assessing adaptation options
 - Prepare a strategy document and get political approval
5. Step 5: Implementation
 - Develop an action plan
6. Step 6: Monitoring and evaluation

Some definitions: NAS and NAP

National Adaptation Strategy (NAS):

- Involvement of **stakeholders** and **decision-makers**
 - Analysis of possible mainstreaming of adaptation in the different sectoral policies
 - **Recommendations and guidelines** to build up adaptive capacity in different sectors and at different spatial scales (national, regional and local) and to reduce societal costs
 - Review after n years
- ITALIAN NAS
- A National Adaptation platform

National Adaptation Plan (NAP):

- **Implementation** of NAS with **governance provisions** and **funding** allocation
- **Evaluation** of implementation (**indicators**)



The National Adaptation Strategy project in Italy

- National Project SNAC *“Elements for the elaboration of a National Adaptation Strategy to climate change”*
- Institutional Coordinator:
Italian Ministry for Environment Land and Sea
- Technical Coordination:
CMCC, Sergio Castellari
- **Start: July 2012**
- **End: July 2014**



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

The NAS in Italy: structure and approach

TOP DOWN

Technical Panel – about 100 Italian scientists/sectoral experts

Coordinator: Sergio Castellari (CMCC, INGV)

Institutional Panel – Ministries, regional authorities, province authorities and municipalities

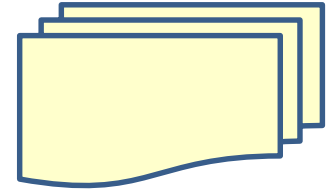
Coordinator: MATTM

BOTTOM-UP

Participative process - transparency, sharing with national stakeholders (civil society, scientific community, private sector...)



The NAS in Italy: structure and approach



The Italian NAS package:

1. **Technical Report:** *“National assessment of knowledge on climate change, impacts, vulnerability and adaptation for relevant sectors”*
2. **Technical Report:** *“Analysis of adaptation framework: European and National level.”*
3. **Strategy Document:** *“Elements for an Italian NAS”*

Participatory Approach:

Involvement of stakeholders at all levels

1. *On-line preparatory survey (October – November 2012)*
2. *Ad hoc Public Consultations (Rome, 9-10 December 2013)*
3. *Public on-line review of the Strategy Document (30 October 2013 – 20 January 2014)*

Italian NAS: *National assessment*

- A desk study of the scientific literature for Italy
- Definition and identification of **sectors**
- Assessment of **present and expected impacts** of climate change for each sector
- Assessment of **vulnerability** of each sector to the present and future climate
- Tentative **estimate of cost of inaction and adaptation** for each sector (if possible).

1. **WATER RESOURCES** (quantity and quality)
2. **DESERTIFICATION, SOIL DEGRADATION and DROUGHTS**
3. **HYDROGEOLOGICAL RISK**
4. **BIODIVERSITY and ECOSYSTEMS:**
 - *Terrestrial ecosystems*
 - *Marine ecosystems*
 - *Inland water ecosystems and transition ecosystems*
5. **HEALTH**
6. **FORESTRY**
7. **AGRICULTURE, ACQUACULTURE, FISHERY:**
 - *Agriculture and Food Production*
 - *Marine Fishery*
 - *Aquaculture*

8. **ENERGY** (production and consumption)
9. **COASTAL ZONES**
10. **TOURISM**
11. **URBAN SETTLEMENTS**
12. **CRITICAL INFRASTRUCTURES:**
 - *Cultural Heritage*
 - *Infrastructures for Transport*
 - ***Dangerous industries***
13. **SPECIAL CASES:**
 - *Mountain Areas (Alps and Apennines)*
 - *Po river basin*

Aggregated and sectoral cost estimates for impacts and adaptation in Italy:

On four key vulnerable areas:

1. *the Alps and glacier ecosystems;*
2. *coastal zones;*
3. *arid areas and areas threatened by desertification;*
4. *areas prone to floods and landslides.*

Aggregated losses induced by climate change would amount to **0.12%-0.16% GDP** with an equivalent loss of about **20-30 bn Euros up to 2050**, considering a temperature increase of 0.93°C.

Larger losses in the range of **0.16%-0.20% GDP** are expected for a **+1.2°C** temperature rise scenario (*Carraro et al., 2008*).

Analysis of adaptation framework: European and National level

- Analysis of the **EU Adaptation Strategy**
- Analysis of **NAS adopted in Europe** with focus on governance settings and sectoral approaches
- Overview of **EU legislation** for mainstreaming adaptation in EU sectorial policies
- Analysis of the **national implementation of *Acquis communautaire*** for the different sectors of Italian NAS

Methodology: desk research (CLIMATE-ADAPT, EEA Reports etc); personal contacts with national focal points

Italian NAS: strategy document

- General principles and objectives;
- To provide a reference framework and a national vision for adaptation at Italian level;
- To provide a set of adaptation measures (soft, grey and green) at different time scales for key national sectors;
- Cross-sectorial adaptation actions.

Strategy Document: Cross-sectorial issues

1. *The observations and the monitoring needed for adaptation*
2. *The science needed for adaptation*
3. *Synergy among adaptation and mitigation and sustainable development*
4. *Disaster risk reduction and adaptation*
5. *Uncertainties and decision processes for adaptation*
6. *Transnational level of adaptation*
7. *Communication and information to stakeholders on adaptation*

Strategy Document: Tables with adaptation actions

1. *Actions per sectors and type (green, soft, grey)*
2. *Actions per sectors and per implementation time*
 - **Short term: by 2020**
 - **Long term: beyond 2020**
3. *Cross-sectoral actions*

How the Italian NAS is aligned to the *EU NAS Guidance*

- The concept of the Italian NAS was defined around **October 2011** and adopted in **July 2012**
- The **EU NAS Guidance** was released on **April 16th 2013**
- The Italian NAS fulfills **Step 1 to 4** of *EU NAS Guidance*
- Need for additional work to fulfill **Step 5 – 6:** implementation and monitoring

Lombardia Climate Change Adaptation Strategy

Guidelines for the implementation
of the Regional Adaptation Strategy
in Lombardy, 2012

Strategy Report, December 2014

Main elements expected ...

- Evaluation of current and projected impacts and vulnerabilities of CC on each sector;
- Possible estimation of socio-economic costs of CC impacts;
- Decision-makers and other stakeholders engagement in the process thought out participatory tools;
- Proposal of adaptation objectives and measures with a mainstreaming approach;
- Public information and dissemination



The reports by
Fondazione Lombardia Ambiente

The sectors

1º Agriculture, Water resources and Energy

2º Tourism, Forest and Biodiversity

3º Urban planning, Natural hazard and Transport

4º Human health and Air quality

Criteria:

- Common cross-cutting issues
- Greater potential conflicts of Interest
- Shared responsibilities

The structure

I. climate change variability, trends and projections

II. climate change impacts and vulnerabilities

III. Definition of adaptation priorities and outline of specific adaptation options

Mainly informative

Proactive and consultive

Conclusions:

- The **Italian NAS** has been finalized and it will be adopted soon.
- The Italian NAS must be a reference for the main actors for adaptation actions: **Regions** and **Municipalities**.
- **Regional Adaptation Strategies** installed and elaborated taking into consideration the Italian NAS.
- Some lessons from the Italian NAS:
 - *Strong Participatory process*
 - *Making explicit **portfolio of options** (measures/strategies/policies) for adaptation*
 - *Work with **time horizons: -2015-2030-2050-2100**. Connect short term measures to long term options*