

**AN OUTLINE OF**

**ANPA**

**(Italian National Agency  
for Environmental Protection)**

107  
XA9846940



## The Institutive Law of ANPA

*accelerating factors:*

- *results of a national referendum related to environmental controls*
- *establishment of a European Environmental Agency*

**Law no. 61/94 proposed by the Government to establish activities and structure for environmental protection in Italy.**

**Approved by the Parliament and issued on 27/01/1994**

# **Main tasks of ANPA**

**(according to the Law 61/94)**

*Slide 1*

- **control of the activities related to the pacific use of nuclear energy and radiations**
- **promotion of research on the physical environment, pollution, industrial risks and ecosystems protection and conservation**
- **systematic collection, storage and publication of environmental data; creation of a centralized data bank of environmental and monitoring data; spreading of environmental consciousness and of formation programs on environmental topics**
- **technical advice to public authorities about:**
  - **pollutants acceptability levels**
  - **air water and soil quality standards**
  - **waste management strategies and technologies**
  - **methodologies for environmental monitoring and controls**
  - **risk factors control**
  - **natural environment and protected areas conservation**
  - **reclaiming of polluted areas and hazardous situations**

# **Main tasks of ANPA**

**(according to the Law 61/94)**

*Slide 2*

- **cooperation with international organizations, in particular with the European Environmental Agency and with the European Statistics Institute (EUROSTAT)**
- **promotion of research and diffusion of environmental sustainable technologies, of production systems and products with reduced environmental impact, including activities related to the labelling of products (European Logo of Ecological Quality) and auditing activities in the environmental field**
- **verification of the efficiency of environmental standards and regulations in producing expected results**
- **technical and scientific support for the activities related to risk analysis and environmental impact assessment procedures**
- **controls about physical, chemical and biological factors of acoustic, air, water, soil pollution and environmental health**
- **other relevant activities related to environmental protection**

1/2

4/.

**ANPA is charged with these tasks.**

**As a parallel rule, for each of the Italian Regions,  
the Regional Environmental Protection Agencies  
(ARPA)  
are charged with the activities related  
to the monitoring and control at local level**

## **STRUCTURE OF ANPA**

- **a Council of Administration nominated by the President of the Ministers' Council upon proposal of the Minister of the Environment, and composed by three Administrators, one of which is elected as President;**
- **a Director, who will be nominated by the President of the Ministers' Council upon proposal of the Minister of the Environment;**
- **a Control Board of two members taken from the Public Administration, to review financial matters.**

h/1

6,

## **PERSONNEL OF ANPA**

**The personnel of the new Agency is composed of:**

- **the personnel of ENEA-DISP, that constitutes the basis of ANPA with its organization and structures (about 270 persons);**
- **personnel to be taken from ENEA (at least 150 persons);**
- **personnel to be taken from other public institutions that operate in the field of environmental analysis and controls (150 persons);**

**Additional personnel should be taken from commissions and groups that operate at the Ministry of Environment, whose tasks should be part of the activities of ANPA.**

# PROVISIONAL STRUCTURE OF ANPA

## Three Departments:

- Nuclear Safety and Radiation Protection  
*(65 persons)*
- State of Environment, Prevention, Reclamation  
and Informative Systems  
*(75 persons)*
- Integrated Strategies, Promotion, Communication  
*(45 persons)*

Administrative Area *(45 persons)*

Top Management Staff *(25 persons)*

1/6

3/



## ORGANIZATION OF ANPA

The President of Ministers' Council, upon proposal of the Minister of the Environment and advice of the Parliament, issues a STATUTE defining powers and functions of the Board of ANPA.

Beside, a CODE for the new Agency, defining its organization, will be issued.

# MAIN TASKS OF ANPA NUCLEAR DEPARTMENT

- to fulfil the obligations of the Italian Nuclear Law  
(*Decree N° 230 issued on march 1995*) :
  - controls and surveillance on existing nuclear installations;
  - licensing on new nuclear installations;
  - controls and surveillance on possession, commerce, transportation, utilization, dismissal of radioactive (nuclear) material;
  - controls and surveillance on radioactive waste management;
  - radioprotection of workers, public, environment.
  
- to maintain, improve and bring up to date the domestic know-how in the field of nuclear safety and radiation protection;
  
- to promote international cooperations in the field of nuclear safety and radiation protection.

118

# PROVISIONAL STRUCTURE OF THE NUCLEAR DEPARTMENT

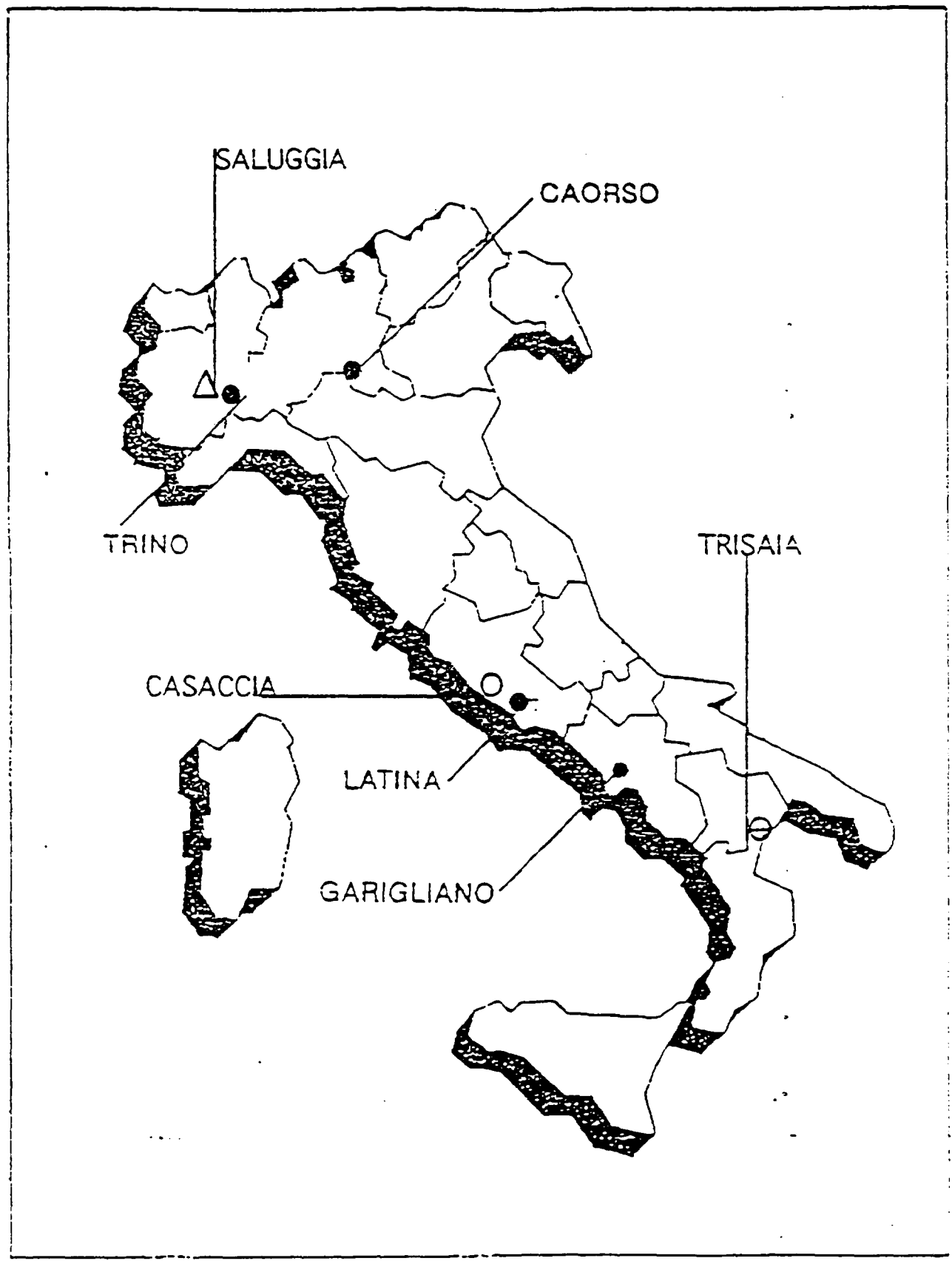
- international cooperation for nuclear safety (eastern countries)
- international relations (IAEA, NEA, EU, bilateral agreements)
- nuclear safety controls and surveillance coordination
- nuclear emergency coordination
- nuclear plants, radioactive waste, decommissioning
- reactor safety
- nuclear technologies and techniques
- radioprotection of nuclear installations
- radioisotopes and radio-apparatuses
- nuclear material transportation, nuclear accountability and safeguards

118

11/2

# PRINCIPAL NUCLEAR SITES IN ITALY

- : NPPs
- : ENEA Research Center
- △: ENEA Research Center & Avogadro Storage Pool



## NUCLEAR POWER PLANTS IN ITALY

PLANTS	REACTOR TYPE	MWE (net)	COMM. OPERATION	SHUT DOWN
GARIGLIANO	BWR	160	1964	1978
LATINA	MAGNOX	160	1963	1986
TRINO	PWR	272	1964	1987
CAORSO	BWR	870	1981	1986

101

## ANPA

- ALL ITALIAN NPP ARE AT PRESENT UNDER DECOMMISSIONING.
- FIRST PHASE OF DECOMMISSIONING: "SAFE STORAGE".

### *PROBLEMS:*

- "DE MINIMIS" LIMITS NOT SET
- LACK OF NATIONAL DISPOSAL SITE FOR 2nd CATEGORY RADWASTE (LLW+MLW)
- LACK OF CENTRALIZED INTERIM STORAGE FACILITY FOR SPENT FUEL

### *AS A CONSEQUENCE:*

- DISMANTLING ACTIVITIES DEFERRED

ASC

122

141.

**ANPA**

**LATINA POWER PLANT**

- type: MAGNOX
- net MWe: 160
- comm.start: 1963
- shut down: 1987

*status of decommissioning*

- all spent fuel removed (sent to BNFL for reprocessing).
- radwaste treatment and conditioning under way
- mapping of contamination under way
- "easy" decontamination under way

**ASC**

123

151

ANPA

GARIGLIANO POWER PLANT

- type: BWR
- net MWe: 160
- comm.start: 1964
- shut down: 1978

*status of decommissioning*

- all spent fuel removed (stored in AVOGADRO pool).
- radwaste treatment and conditioning under completion
- mapping of contamination fully carried out
- "easy" decontamination performed
- R&D activity (supported by CEC)

ASC

124



**ANPA**

**TRINO POWER PLANT**

- type: PWR
- net MWe: 272
- comm.start: 1964
- shut down: 1987

*status of decommissioning*

- spent fuel:
  - 39 elements + 36 elements "zero burnup"  
+ 8 "MOX" elements stored at site
  - 49 elements stored at AVOGADRO.
- radwaste treatment and conditioning under way.

**ASC**

125

**ANPA**

**CAORSO POWER PLANT**

- type: BWR
- net MWe: 870
- comm.start: 1981
- shut down: 1986

*status of decommissioning*

- all spent fuel stored at site:  
1192 elements, 286 of which to  
be sent at BNFL for reprocessing
- radwaste treatment and  
conditioning under way

**ASC**

126

186

## Nuclear spent fuel produced by Italian power reactors.

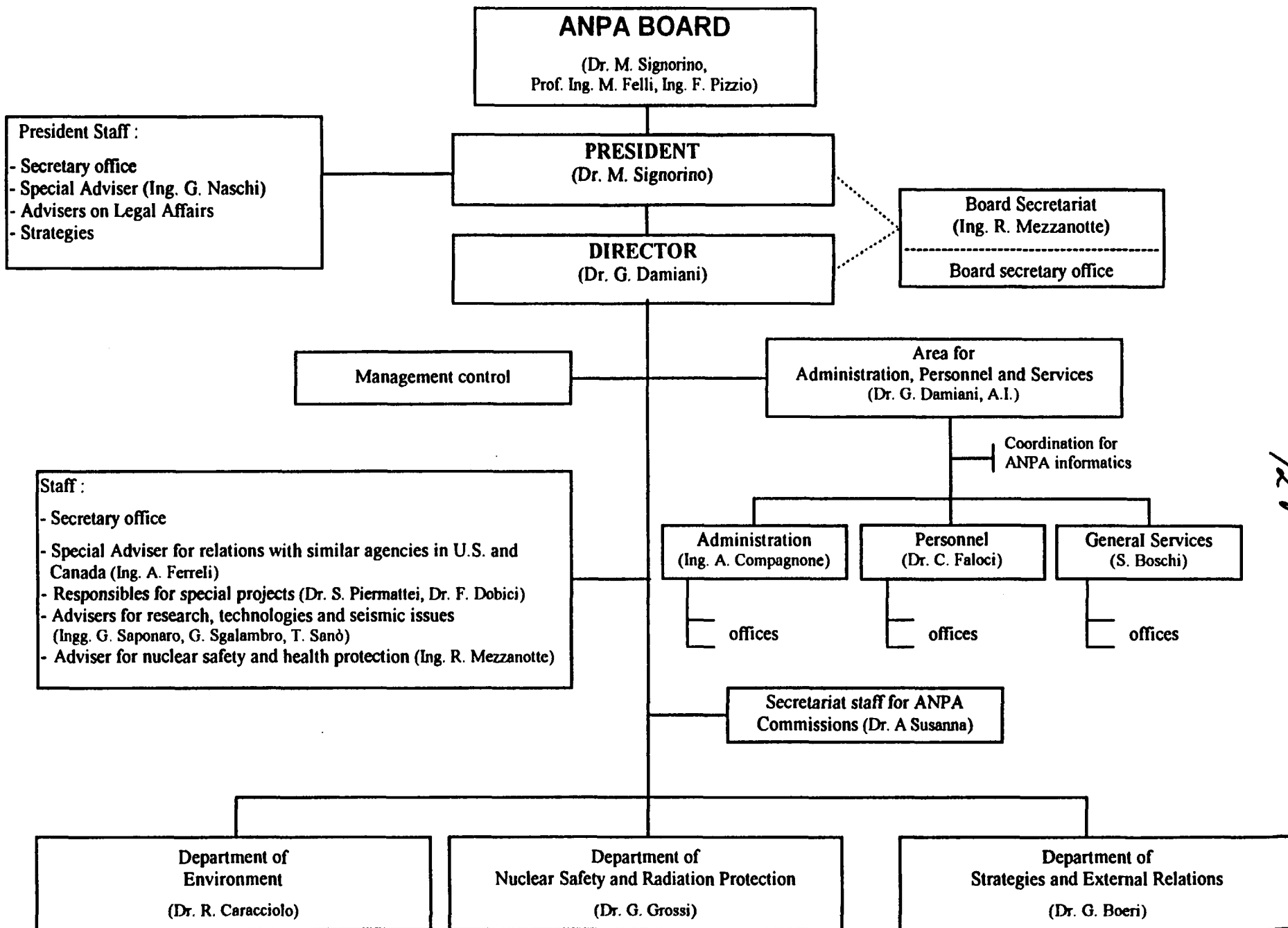
Power Reactor	Overall spent fuel produced (tHM)	Overall spent fuel sent (or to be sent) to reprocessing (tHM)	Overall spent fuel in storage (tHM)
LATINA	1425,5	852,2 (to BNFL)* 573,2 (to BNFL)** ----- 1425,5	-
TRINO	146,7	29,2 (to Eurochemic)* 24,2 (to BNFL)* 51,7 (to BNFL)** ----- 104,8	25,5 (at reactor site) 14,4 (at Avogadro) 2,0 (at Eurex) ----- 41,9
GARIGLIANO	123,8	44,3 (to BNFL)* 13,3 (to KWU)* ----- 57,6	66,1 (at Avogadro)
CAORSO	219,8	53,4 (to BNFL)**	166,3 (at reactor site)

\* contracts signed before 1978 ~~not~~ involving return to Italy of relevant conditioned waste

\*\* contracts signed after 1978 involving return to Italy of relevant conditioned waste

127

(2)



128

**Department of Environment**  
(Dr. R. Caracciolo)

Department functional units

**Department sectors**

Central data acquisition and processing (R. Fiorenza)

SINA Coordination  
(Ing. C. Maricchiolo)

Biotic Components  
(Dr. A. Antonelli)

Abiotic Components  
(Ing. C. Ottavi)

Environment Radioactivity and Lab. (Dr. M. Belli)

Processes and Technologies  
(Ing. A. Pini)

Industrial Risk  
(Ing. A. Ricchiuti)

Ground protection  
(Dr. A. Serva)

Regulations and quality control (Ing. S. Benassai)

Acoustics Laboratory  
(Ing. S. Curcuruto)

**Department of Nuclear Safety and Radiation Protection**

(Dr. G. Grossi)

Department functional units

**Department sectors**

Coordination of inspections  
(Ing. E. Sgrilli)

Coordination of emergencies  
(Dr. S. Mancioffi)

Nuclear plants, decommissioning and waste (Ing. P. Petri)

Reactor Safety  
(Ing. G. Pisanti)

Nuclear Technologies  
(Ing. G. Bava)

Radiation protection  
(Ing. C. Rollo)

Radioisotopes and Sources  
(Dr. M. Paganini Fioratti)

Radioactive and fissile materials  
(Dr. F. Maccazzola)

**Department of Strategies and External Relations**

(Dr. G. Boeri)

Department functional units

**Department sectors**

Management of regional environmental agencies  
(Ing. A. Leonardi)

Information and training  
(Ing. A. Morici)

Environmental quality of firms  
(Ing. R. Ielasi)

Product environmental quality  
(Ing. R. Scialdoni)

Management of pilot projects and productive cycles  
(Ing. P.P. Milella)

Relations  
(Dr. M. Roberti)

129

**FUNCTIONAL UNITS of the department for environment :**

- Greenhouse effect and Ozone issues
- V.I.A. (Environmental Impact Analysis)
- Non-nuclear waste management
- Risk analysis for industrial (non-nuclear) plants
- Project for areas with high density of industrial activities

**FUNCTIONAL UNITS of the department for nuclear and radiological risk**

- Relations with the EC and international organizations (Ing. R. Ranieri)
- International cooperation for nuclear safety (Ing. A. Madonna)
- Initiatives in the field of nuclear waste management

**FUNCTIONAL UNITS of the department for strategies and external relations**

- Pilot study for the eco-quality of workplaces

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  
G. Del Nero : ANPA Member for NRW, RSWG (CEC)  
INES (IAEA) National Officer, ANPA Coordinator for Review of EURD by Regulators

**ACRONYMS**

**ANPA** = Agenzia Nazionale per la Protezione dell'Ambiente (National Agency for Environmental Protection)  
**SINA** = Sistema Informativo Nazionale Ambientale (National Informatic System for Environment)  
**V.I.A.** = Valutazione Impatto Ambientale (Evaluation of Environmental Impact)

C

130

232