



THE
CARABINIERI

INTERNATIONAL CENTRE OF EXCELLENCE
FOR THE PROTECTION OF THE ENVIRONMENT
AND THE CARE OF TERRITORY



THE **SABAUDIA**
PROJECT

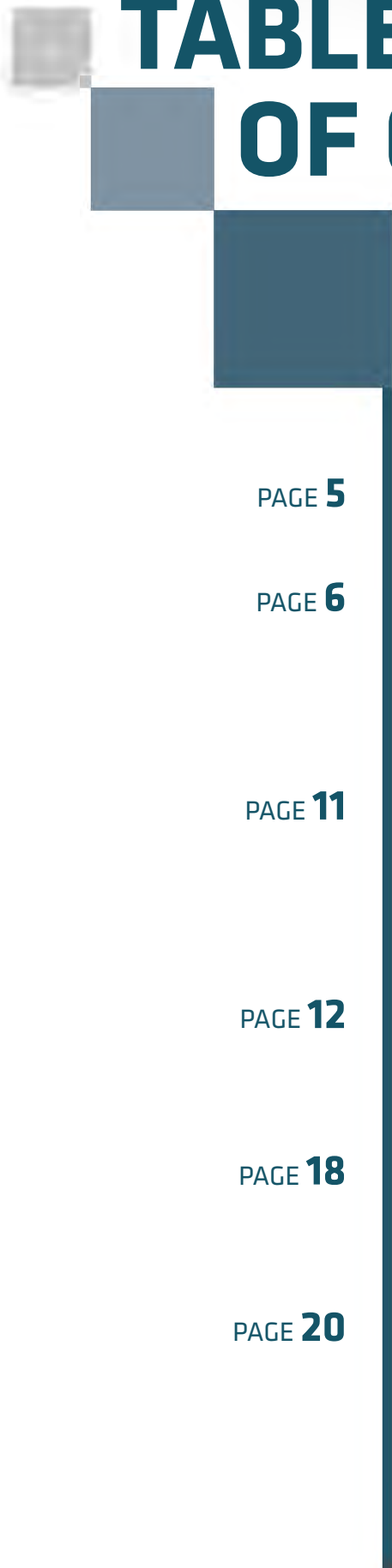


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THE
SABAUDIA
PROJECT

INTRODUCTION



The Arma dei Carabinieri is a **police force with military status and general competencies with a territorial mission and an international projection.**

The most original feature of its organisational model is to be found in the widespread distribution of over 5,000 departments, scattered throughout the national territory, which are capable of responding, with immediate effectiveness, to the different security needs of citizens, from large cities to smaller villages.

In over 200 years of the history of the Corps, this "proximity" has also favoured the development of specific operational models, aimed at supporting **widespread community interests** concerning life quality, and specialised units have recently been committed to ensuring their protection.

The protection of the environment, biodiversity and ecosystems is one of the main sectors to which the organisation has directed its attention.

The Carabinieri's engagement in environmental protection dates back to 1986 and was strengthened in 2017 with the establishment of the **Organisation for Forestry, Environmental and Food Protection**: over 7,000 highly qualified personnel are dedicated to ~~the control and care of the territory~~ as environmental police, preventing and combating biodiversity and ecosystem damage, as well as supervising and certifying legal food production.

In particular, within this organisation:

- the **Carabinieri Command for Environmental Protection and Ecological Transition**, organised in 29 Operational Units, is oriented towards complex investigations concerning waste recycling, also from a transnational perspective;
- the **Carabinieri Command for Forestry Protection**, divided into 788 Stations and 83 Investigative Units of the Environmental and Forestry Police, operates to prevent and suppress environmental crimes and also contributes to the care of the territory through targeted forestry engineering activities;
- the **Carabinieri Command for the Protection of Biodiversity and Natural Parks** is specifically tasked with safeguarding protected areas and biodiversity and operates through 20 Park Departments and 148 Park Stations which also contribute to the monitoring of forest ecosystems;
- the **Carabinieri Command for Food Protection** protects consumers and guarantees the wholesomeness of food products.



ENVIRONMENT PROTECTION ACTIVITIES

The Carabinieri specialised departments have over time perfected different methods of control and care of the territory to protect **environment, biodiversity** and **forest ecosystems**.



LANDSCAPE

The Arma dei Carabinieri implements a range of relevant capabilities to **counter** all conduct that damages natural reserves: from illicit waste trafficking to uncontrolled waste disposal, from the spillage of industrial wastewaters, to emissions of fumes in the atmosphere, from toxic and hazardous waste buried on land to illicit practices affecting negatively the agri-food production chain, from hydrogeological instability to hydraulic police.

At the same time, specific attention is paid to **prevention**, taking in consideration that the damage to the

ecosystem, once caused, is often irreversible and represents a great obstacle to the economic development of communities too. For this reason, the Carabinieri Departments also use highly technological tools to deliver dedicated surveillance services that cover the entire spectrum of the threat.



BIODIVERSITY

Biodiversity makes the planet habitable. The most suitable tool to preserve biodiversity is the establishment and management of an effective system of **protected areas**.

The Arma dei Carabinieri is committed to the surveillance of all **National Parks** and directly manages **130 State Natural Reserves** and **19 state-owned forests**, which are precious centres of animal and plant biodiversity.

In particular, the management also includes forest engineering activities for the maintenance and improvement of the functionality of forest ecosystems, through the maintenance of paths, the planting of rare plants, the selective felling for the elimination of non-indigenous species, and the interventions of hydraulic-forestry arrangement, stemming hydro-geological instability phenomena.

Furthermore, **3 National Carabinieri Biodiversity Centres** and **10 for the Rescue of Exotic Wild Animals** provide for the care of animals illegally captured, thus preserving their life and reproduction.



For all this, the Arma dei Carabinieri is the Organisation responsible for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**), which regulates the trade in endangered animal and plant species, as an international pioneering instrument for the protection of biodiversity.



FORESTAL ECOSYSTEM

The Arma dei Carabinieri monitors the qualitative and quantitative status of forest ecosystems, evaluating the carbon storage capacity (carbon sink) and biodiversity levels, storing data in the **National Inventory of Forests and Carbon Tanks (INFC)**.

The Inventory, in addition to providing a detailed, thorough and scientifically reliable picture of the consistency and characteristics of the national forest heritage, with the quantification of carbon stored in forest ecosystems, certifies the contribution of forests



in mitigating the effects of climate change, in compliance with the international commitments undertaken by Italy*.

At the same time, the Carabinieri Forestry Departments are engaged in the prevention of deforestation and fires, to protect the forest heritage and to ensure sustainable use of wood resources.

The Forest Fire Information Unit and forest firefighting representatives constitute a network of experts providing qualified advice in the specific sector and a comprehensive knowledge of the phenomenon, in order to better deliver territory surveillance services and coordinating, on request, assessments and delimitation of burned areas.

As far as **illegal logging** is concerned, the Carabinieri carry out specific checks, as part of the European Union Forest Law Enforcement Governance and Trade (FLEGT) action plan, to combat deforestation and the illegal timber market.

** United Nations Convention on Climate Change of 4 June 1992, Kyoto Protocol of 11 December 1997 and Paris Agreement of 12 December 2015.*



INNOVATIVE TECHNOLOGY

Specialised Carabinieri units for environmental protection are supported by advanced technological tools.

Remotely piloted aircrafts are used for aerial photogrammetry activities, in combination with an advanced photo interpretation software that facilitates the identification of fire outbreaks.

Post-fire operational protocols are supported by remote sensing techniques for the assessment of satellite images through the application of algorithms developed to meet this specific need.

The images provided by satellite systems are also exploited for the development of innovative methodologies aimed at detecting multispectral anomalies of the forest ecosystem, thus providing for a prompt mapping of illegal exploitation of forests, hydrogeological instability phenomena, extreme meteorological events damage, as well as parasitic attacks and plant diseases.





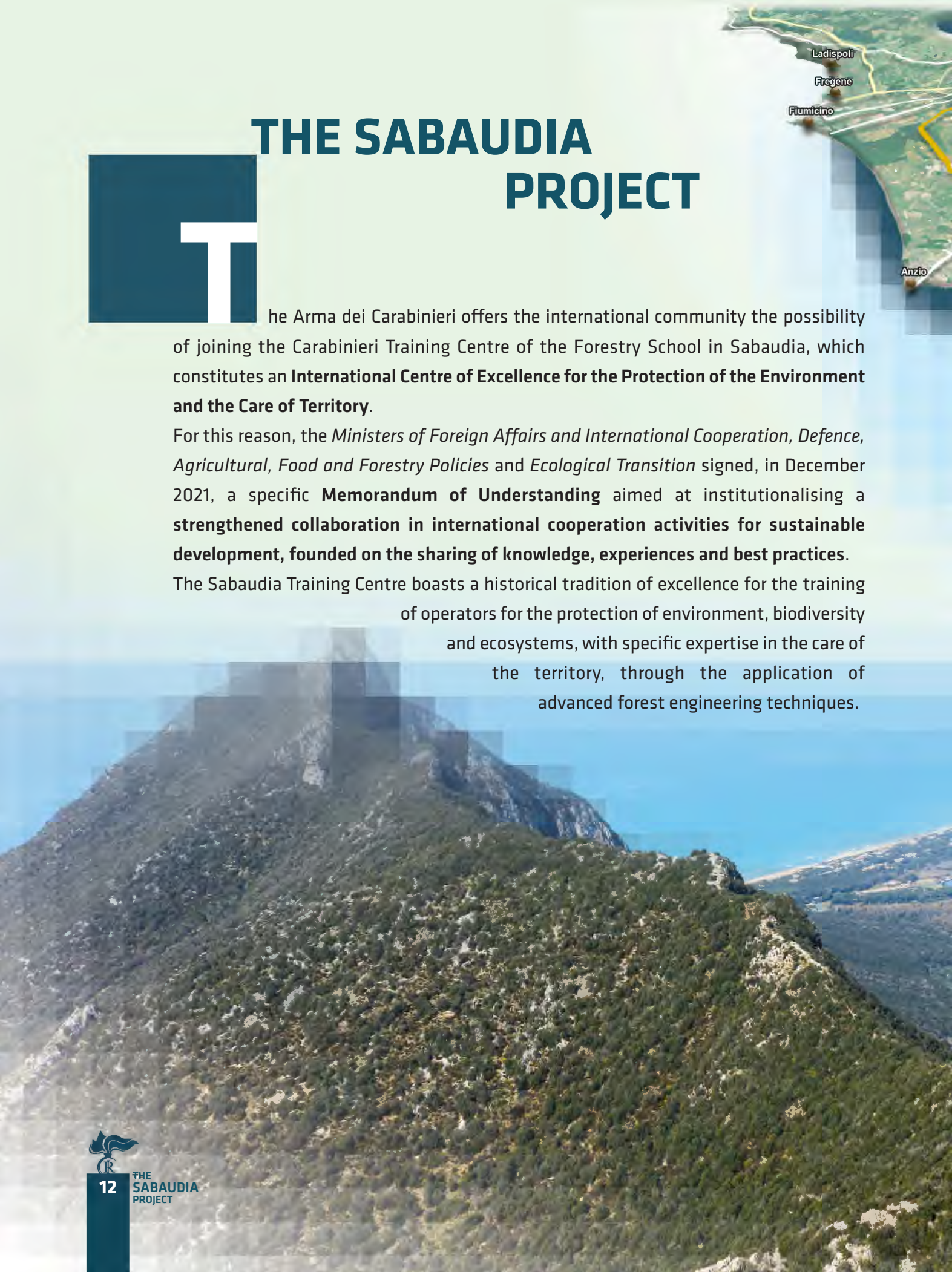
THE INTERNATIONAL “GREEN” COMMITMENT

The unique operational model of the Arma dei Carabinieri has for some time now crossed the borders of Italy and today the Institution participates in numerous international stability operations in conflict-affected areas, such as the United Nations operations in Lebanon (UNIFIL), Cyprus (UNFICYP) and Mali (MINUSMA).

In an era in which globalisation has virtually eliminated the distance and time-delays of exchanges and relationships, the impact of environmental disasters and the depletion of natural resources has also grown on a global scale and has been aggravated by climate change.

THE CARABINIERI:

- contribute with their own qualified personnel to the network of UNESCO environmental experts – the “International Environmental Experts Network” – which can be employed for planning and design interventions, alongside local authorities in places recognised as World Heritage Sites;
- play a key-role in achieving the 17 objectives of the 2030 Agenda for Sustainable Development, the programme shared by the entire international community that aims to meet the needs of current generations without compromising the possibility of future ones;
- operate in partnership with international organisations and actors, including FAO and the Massachusetts Institute of Technology and WWF.



THE SABAUDIA PROJECT

The Arma dei Carabinieri offers the international community the possibility of joining the Carabinieri Training Centre of the Forestry School in Sabaudia, which constitutes an **International Centre of Excellence for the Protection of the Environment and the Care of Territory**.

For this reason, the *Ministers of Foreign Affairs and International Cooperation, Defence, Agricultural, Food and Forestry Policies and Ecological Transition* signed, in December 2021, a specific **Memorandum of Understanding** aimed at institutionalising a **strengthened collaboration in international cooperation activities for sustainable development, founded on the sharing of knowledge, experiences and best practices**.

The Sabaudia Training Centre boasts a historical tradition of excellence for the training of operators for the protection of environment, biodiversity and ecosystems, with specific expertise in the care of the territory, through the application of advanced forest engineering techniques.

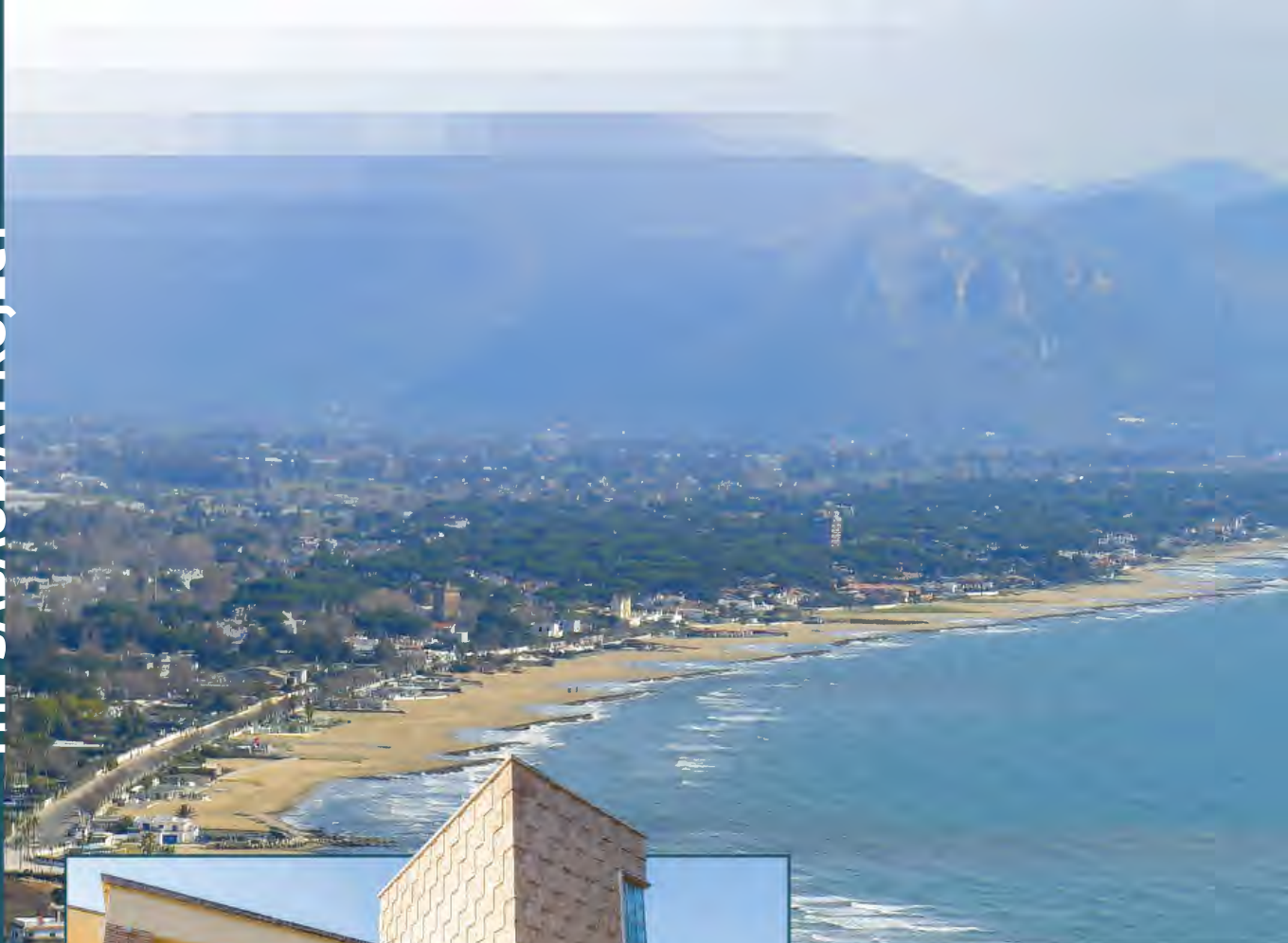




The Sabaudia Centre is located in the area of the Circeo National Park – a UNESCO biosphere reserve – and can be reached in one hour from the international airport of Rome-Fiumicino. For this reason, the Centre is the ideal venue for international environmental training courses and meetings.



THE SABAUDIA PROJECT

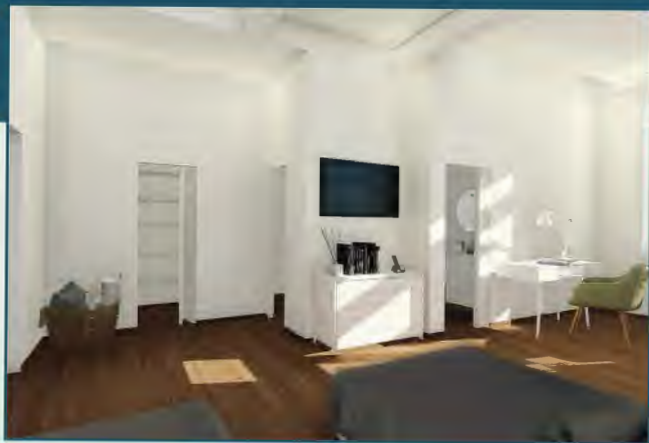




THIS TRAINING HUB HAS:

- ❑ 1 lecture hall with 100 seats, also equipped for simultaneous translation.
- ❑ 3 spacious and bright classrooms.
- ❑ A number of double and triple rooms, able to accommodate about 60 trainees at the same time.
- ❑ A wide range of facilities including a canteen, a gym, a recreation room and an infirmary, as well as a guesthouse, with double and single rooms, for 16 guests.







TRAINING ACTIVITIES

IN

an international context, the Centre can be key to injecting elements of environmental governance in countries in need of acquiring skills and experiences, so that their economic development is also sustainable at an ecological level.

The founding idea is to seek an institutional partnership with UN Agencies engaged in environmental issues, to promote annual operation plans and calls for the selection of applicants coming mainly from developing countries.

The activities will be oriented to the conservation techniques of territory and biodiversity - reforestation and fight against climate change, inventory of animal and plant species at risk, protection of indigenous species from the threat of alien ones, hydrogeological protection while also being able to make use of the potential of the interactive digital simulator for complex exercises for the defence of forest ecosystems from fires (*Forest Fire Area Simulator - FFAS*) located at the nearby Carabinieri Training Centre of Castel Volturno.

In particular, 14 training modules with a minimum duration of 5 days have been developed, creating an interdisciplinary thematic path that can be divided, validated and shared in different international contexts.

The teaching will be carried out, in both English and French languages, by experts from the Forestry, Environmental and Food Organisation of the Carabinieri, Officials of the Ministries involved in the activities, as well as magistrates and professionals from the academic world and the private sector.

Thanks to its versatility, this training can be offered to international organisations,





governmental and non-governmental agencies, the academic world and the private sector for *train the trainer* activities, which can be suitable for decision-makers, as well as executive activities, dedicated to technical staff working in the field.

The training modules, summarised in the following tables, are based on the quality of teaching and on the experience gained by Subject Matter Experts (SMEs). Continuous interaction with trainees and different activities (case studies, visits, workshops, exercises), which merge theoretical training with practical applications, lays the foundations of the educational path.

Furthermore, the Centre is able to deploy Mobile Training Teams (MTT), made up of instructors and experts, with three distinct functions:

- ▣ providing pre-deployment training sessions in beneficiary countries (on request);
- ▣ validating that trained units correctly form their units according to established standards;
- ▣ ensuring that units continue to maintain their prerogatives.

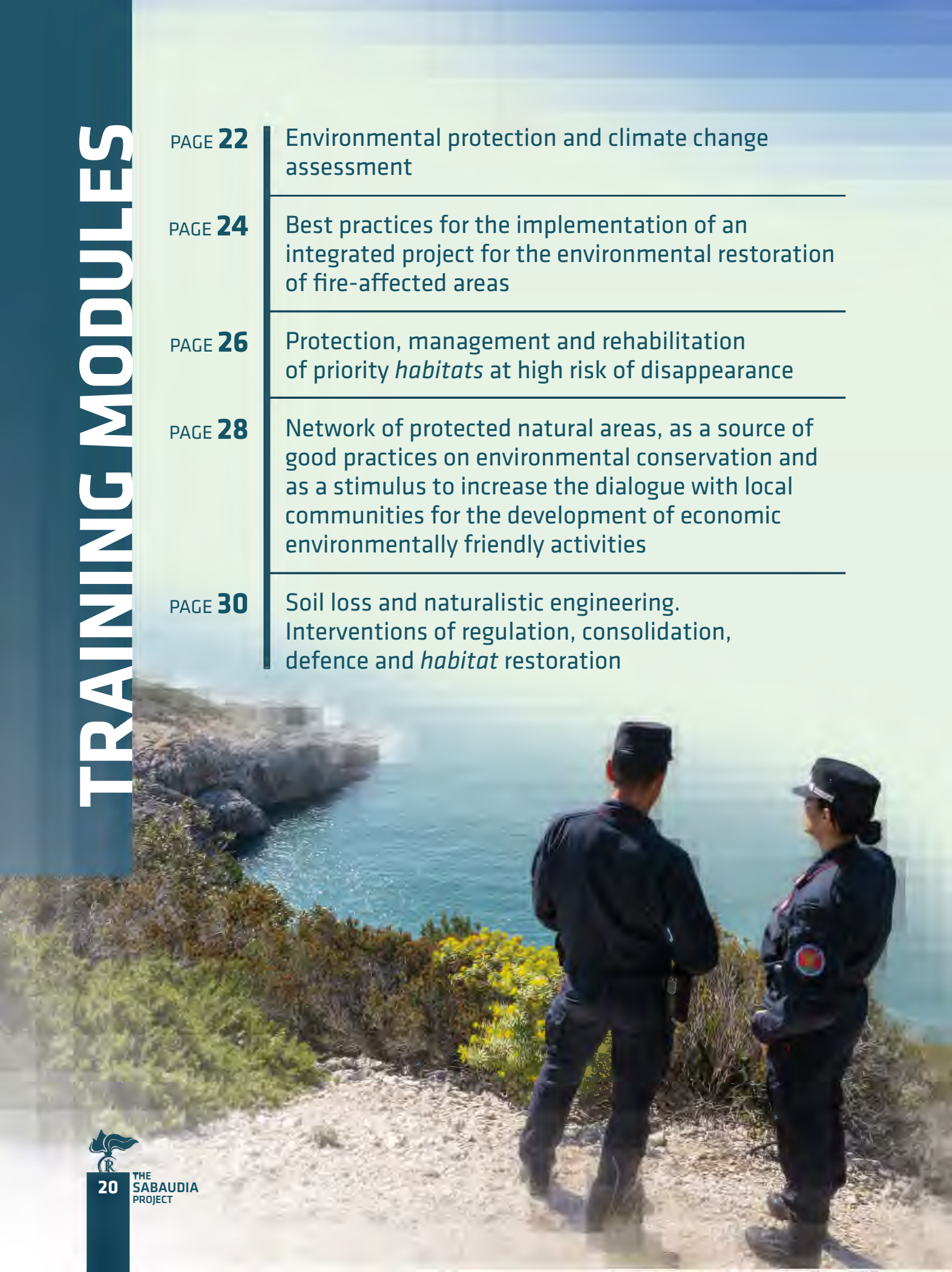
FINANCING OF TRAINING ACTIVITIES

The average cost of a five-day training module is € 125 *per trainee per day*, of which € 100 are borne by the Arma dei Carabinieri as operational costs (lodging, facilities, internal transportation, lectures and teaching material).

The remaining costs to be covered are connected to board and room cleaning (€ 25 *per day*), in addition to flight tickets to/from Italy and possible fees to be paid by the attendants.

TRAINING MODULES

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Environmental protection and climate change assessment

ACTIVITY

TRAINING AUDIENCE

Ministry officials, decision makers and strategic personnel in environmental management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide guidelines to address complex and multi-faceted environmental issues, according to international standards and the Carabinieri CUFA expertise.

PROGRAMME

This course serves as a theoretical tool to countries with unconsolidated administrative systems from an environmental standpoint. The course is a guide to the knowledge of a number of different related issues, which encompasses the *de facto* tools and the expertise that the CUFA has developed over time, given the specialist technical component that has characterised it over the decades.

The course is therefore aimed at sharing the historical path and current skills as embodied in the new Carabinieri organisation. Given climate change, the protection of forests, desertification, as well as the different forms of biodiversity protection, the course goal is to systematise highly distinctive and reproducible experiences in a number of climate contexts, yet inspired by the same management objective: protection and promotion.

Information is shared as much as possible in relevant environments: the proximity of the School of Sabaudia to scenarios of different areas of interest will offer the possibility of visiting places and stations, thus facilitating the understanding and practical applications of discussed issues.

Best practices for the implementation of an integrated project for the environmental restoration of fire-affected areas

ACTIVITY

TRAINING AUDIENCE

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide guidelines for the recovery, conservation, protection and management of damaged ecosystems.

PROGRAMME

This course includes both theoretical lessons and practical activities aimed at the presentation, study and acquisition of technical skills for the planning and implementation of an integrated project for the environmental restoration of areas covered by fire.

In particular, some periods of theoretical activities will be dedicated to the study of the peculiarities and dynamics of the ecosystem of interest, in order to identify necessary remediation and natural forestry interventions, considering the scale and incidence of the fire event. Additional training sessions will be devoted to the identification and development of actions to be undertaken on the basis of the social, cultural and natural context of the concerned area. Regarding redevelopment actions, some periods are dedicated to practical activities of production and reintroduction of species, workshops on environmental education, organisation and active participation in events taking place in structures of the Carabinieri Biodiversity Group with the presence of the citizens to be involved in activities of environmental recovery, in the framework of “active citizenship”.

Protection, management and rehabilitation of priority *habitats* at high risk of disappearance

ACTIVITY

TRAINING AUDIENCE

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To promote the conservation of the priority *habitat* *2250 "Coastal dunes with *Juniperus spp.*" particularly at risk due to the man-made impact, in addition to the protection of the various dune *habitats*, protected by Directive 92/43 "habitat".

PROGRAMME

This programme includes both theoretical and practical sessions.

Some training sessions will be dedicated to the study of the protected *habitat*, the actions to undertake for the protection of dunal *habitats* in all fields, as well as complex and critical systems so as to prevent coastal erosion and mitigate the effects of climate change. There will be a module based on good management practices in order to minimise the anthropogenic impact on these ecosystems with a focus on the problem of the introduction of invasive alien species.

Practical lessons will be dedicated to the knowledge of the main nursery techniques for *in situ* and *ex situ* reproduction of endemic species and space will be given to the presentation of naturalistic engineering techniques, which are useful in the requalification of environments that are particularly degraded. A part of it will deal with techniques and communication systems in the field of dissemination and awareness.

Network of protected natural areas, as a source of good practices on environmental conservation and as a stimulus to increase the dialogue with local communities for the development of economic environmentally friendly activities

ACTIVITY

TRAINING AUDIENCE

Ministry officials, decision makers and strategic personnel in environmental management

DURATION:
5 days,
(3 in classroom,
2 in the field)

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To identify and propose unambiguous strategies of conservation and management that can be exportable.

PROGRAMME

This course aims to provide management tools for human phenomena in relation to the multi-disciplinary structure deriving from the interaction between natural dynamics (fauna, landscape and environment) and human beings. It is intended to deal with conservation, a key issue in the management of protected areas, and demonstrate how some activities, if well conducted, can increase it, thus safeguarding cultural and economic development.



Soil loss and naturalistic engineering. Interventions of regulation, consolidation, defence and *habitat* restoration

ACTIVITY

TRAINING AUDIENCE

Ministry officials, decision makers and strategic personnel in environmental management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide guidelines for the planning, design and implementation of landslide slope consolidation, management of mountain watercourses, restoration, consolidation and protection of degraded coastal dune systems.

PROGRAMME

This course includes theoretical lessons aimed at framing the problems and the recognition of the main causes and dynamics of hydrogeological instability and *habitat* destruction. In this context, there is the technical discipline for the naturalistic restoration, recovery and prevention of disturbances, landslide slopes, areas in erosion and degraded *habitats*, with reference to the history of natural accommodation and the current opportunities for sustainable intervention, highlighting the constructive and cultural technical value of the naturalistic approach.

Periods and didactic modules will be dedicated to the acquisition of technical skills for the design and practical implementation of environmental restoration activities, through the application of naturalistic engineering techniques. In such fields this matter will be dealt with from a technical point of view, with particular reference to constructive modalities and solutions and to the safety in construction areas. From an ecological point of view, the need to study and deepen knowledge of the ecosystems and *habitats* involved will be stressed, with particular reference to the botanical knowledge and biotechnical characteristics of the plant species to be used. In this context, *habitat* regeneration actions are included, involving the identification of species and ecotypes, the collection of propagation material, the production and conservation of planting stock and reintroduction actions.

They will then describe the main works to be realised in the different environments and for the types of interest, emphasising the aspects of *post-operam* monitoring and maintenance. This activity can be completed with visits to interventions carried out over time in particularly protected areas, such as the Natural Reserves of the State administered by the Carabinieri.

Practical modules can be added to the course, to be organised in schoolyards where, under the guidance of experienced staff and instructors, participants will learn how to work. In this context, an operator training activity is carried out with reference also to the organisational and safety aspects of a natural engineering site.

ACTIVITY

Protection and conservation of biodiversity: heritage for life, development and health

TRAINING AUDIENCE

Ministry officials, decision makers and strategic personnel in environmental management

DURATION: 5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide the cognitive tools to focus and evaluate the benefits for human beings, and all their activities, arising from the actions of protection, conservation and sustainable use of biodiversity.

PROGRAMME

This course will be structured in frontal, participatory and outdoor training lessons and also be carried out with the evaluation and "peer to peer" processing method and with final group essays. Participants will be able to relate and assess the existing situation in the reality in which they operate with the main legislative and regulatory instruments in the field, such as: the Convention on Biological Diversity (CBD); Global Strategies for Nature Conservation and Sustainable Development (SD); European Biodiversity Strategy; UN International Agreements on the protection and sustainable management of biodiversity.

At the end of the course, participants will also be able to recognise and highlight the connections between the heritage, represented by biodiversity and the habits, customs, traditions, economy existing in the reality in which they operate. The course also aims to provide the knowledge necessary to assess the role of biodiversity and the importance of its protection and conservation, in relation to the Health of Human Beings. It also carries out effective educational actions especially aimed at the up-coming generations for the development of responsible citizenship.

ACTIVITY

Monitoring the impact of air pollution on terrestrial ecosystems: the CON.ECO.FOR. and NEC networks

TRAINING AUDIENCE

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide information to third countries on issues related to networks monitoring the effects of pollutants on terrestrial ecosystems, in line with international standards and the positive experience of the Italian network coordinated in Italy by CUFA.

PROGRAMME

This course aims to provide cognitive tools, to be useful for effective monitoring of the health status of forest ecosystems. The purpose is to share the historical evolution of forest ecosystem monitoring since the Convention on Long-Range Transboundary Air Pollution (CLRTAP), signed in 1979 in Geneva. This convention has led to the development of International Cooperative Programmes (Icps) divided into thematic areas, including forests (ICP Forests). The International Cooperative Programme on Assessing and Monitoring the Effects of Air Pollution on Forests conducts surveys on the condition of forests in Europe.

The course will illustrate two types of networks differing by plot detection, based on: investigated parameters, sampling frequency and selection methods of studied areas and monitored targets. Extensive monitoring, known as Level I, which is carried out on a large-scale annual basis, observes the vitality of trees through the assessment of crown conditions. Intensive monitoring, known as Level II, is implemented in permanent areas across Europe to study ecological interactions between structural and functional components of forest ecosystems and large-scale pressure and change factors (air pollution, climate change, changes in biodiversity levels).

The thirty-year experience gained in the State Forestry Corps and currently in the CUFA, on monitoring the health status of forest ecosystems, has also been effectively integrated into the objectives identified by Directive (EU) 2016/2284 “National Emission Ceiling” (NEC) on the reduction of national emissions of certain air pollutants. For the implementation of this European Directive, transposed in Italy by Legislative Decree 30 May 2018 n. 81, the “NEC Network Italy” was established, to monitor the impact of air pollution on ecosystems. The Ministry of Ecological Transition is responsible for this and the CUFA coordinates it.

The course describes the activities that the CUFA carries out for the coordination of the NEC network and the main results.

In this context, the strategic importance of the integration and sharing of data obtained from CON.ECO.FOR. and NEC networks will be analysed. This will allow for the accomplishment of the important objectives identified by the European Green Deal instrument, which has for the first time introduced a binding act for all EU countries aimed at achieving the neutrality of pollutant emissions by 2050.

The National Inventory of Forests and Carbon Tanks (INFC): the Italian experience of periodic *census* of forest resources and the stock of CO₂ absorbed

ACTIVITY

TRAINING AUDIENCE

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To make the importance of the National Inventory of Forests and Carbon Tanks (INFC) known as a method of quantification of forest resources and CO₂ consumption, in accordance with the provisions of the UN Framework Convention on Climate Change, the Kyoto Protocol and the Paris and subsequent Agreements.

PROGRAMME

This course aims to share the historical path that has led today to the creation of the third Inventory of Forests and Carbon Tanks in Italy (INFC2015) starting from the first Italian Forest Inventory (IFNI85). The monitoring of forest ecosystems is consistent with and effective in the achievement of the strategic objectives identified in the international context (European Green Deal, United Nations Framework Convention on Climate Change, and in particular the application of its operational instrument known as the Kyoto Protocol). During the course, all the steps of the INFC implementation will be described, ranging from design to photo-interpretation and ground detection procedures of indicators, envisioning some hours of practice in the field for testing and familiarisation with the technological and computer tools used in surveys in the woods.

The main quantitative and qualitative data from the inventory survey will be presented. Among the main results is the quantification of the national forest heritage, the estimation of the volume, the biomass and the carbon content stored by the forests. The qualitative parameters investigated are: the biodiversity of forest formations determined by the specific composition and the presence of dead wood; the management in terms of modalities and intensity; the protection constraints; the state of health; the structure; the evolutionary stage.

ACTIVITY

Climate neutrality of field activities: strategies to reduce CO₂ emissions

**TRAINING
AUDIENCE**

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
10 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide guidelines to increase the sustainability of “field missions” in third countries and proposals for the mitigation of human activities.

PROGRAMME

The aim of this training will be to illustrate the international situation on the policies adopted by the main organisations involved in international scenarios, such as UN, NATO and EU, especially in “field missions”. This will be achieved through the application of similar methods and standards for the management of issues related to climate neutrality and strategies to combat the reduction of emissions into the atmosphere. This course consists of classroom lessons and external exercises, the latter aimed at familiarising with monitoring tools and the use of pre-ordered check-lists. Lessons will also include meetings with experts and university professors from the civil world (in panel mode), in order to share best practices and lessons learned.

There will be a large simulation of activities related to “field missions”. The trainers will be asked to draw up documents needed to review traditional working methods, using sustainable solutions and reducing environmental impact. These papers will be shared and discussed in the classroom. The training audience will also be aware of illegal man-made activities and the parameters for the economic definition of environmental damage as a result of such illegal activities.



Forest fires. Techniques of scientific technical collection on topsoil crossed by fires for the detection of the causes of ignition

ACTIVITY

BASIC COURSE

TRAINING AUDIENCE

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide the scientific technical methodology necessary to carry out collection activities on forest topsoil crossed by fire, aimed at identifying, in an objective and scientific way, the place of injection (ignition) of the fire and the cause of the event examined.

To introduce the concept of operational criminal analysis to the phenomenon of forest fires (treatment and resolution of the individual case).

PROGRAMME

This programme has been planned to provide learners with the scientific technical methodology necessary to carry out the collection activities on forest topsoil hit by fire, aimed at identifying, in an objective and scientific way, the potential outbreak of a fire (ignition) and the cause of the fire event to be investigated.

The methodology in question is based on the scientific theories described in the “Method of Physical Evidence” (MEF). These methods can be used to identify the physical evidence left by the fire on the forest species, so as to lead the investigator to the place of origin of the fire. Once the point of initiation of the fire has been identified, the operator in charge must be able to carry out the so-called “Operational Protocol of Collection” (POR) on site. This Protocol, by means of a sequence of 16 steps, allows for detection and collection in line with the best forensic practices, the residues of the triggers or the partially unburnt incendiary devices used to ignite the forest fire.

The educational programme has been designed to ensure the best use of the skills described above, alternating periods in the classroom and exercises in open field on wooded surfaces affected by the flames.

ACTIVITY

**Forest fires.
Techniques of scientific
technical collection
on topsoil crossed
by fires for the detection
of the causes of ignition**

ADVANCED COURSE

**TRAINING
AUDIENCE**

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Ministry officials
Professors



PURPOSE

To provide the scientific technical methodology to carry out criminal analysis and activities of a strategic nature and geographical profiling of offenders (collection and analysis on various forest fire cases). This course aims at identifying, in an objective and scientific way, the flame propagation dynamics (even 3D modelling), the injection site (ignition) of the fire and the determining causes of the events under investigation.

PROGRAMME

This programme has been planned in order to give learners, who have successfully passed the “basic module”, scientific technical methodology necessary to carry out the activities of strategic analysis on the forest topsoil hit by fire.

The methodology in question is based on the knowledge and the commitment of open source GIS software (Qgis) in the analysis and graphing of forest fire events (concentration maps). It also takes into account the administration of applied statistics and the learning and use of the Geometric Evidence Method prepared by the Forest Fire Information Unit, in collaboration with prestigious Italian Universities. The use of these methodologies makes it possible to identify, through simulations, the physical evidence left by the fire on the affected forest species, in order to lead the investigator to the place of origin of the flames and to analyse various potentially related events.

This module has been designed to ensure the best teaching of the skills described above, alternating frontal lessons in the classroom (also multi-building) and on the Forest Fire Area Simulator of the Training Centre based in Castel Volturno.



ACTIVITY

Best practices to combat pollution and environmental disasters

TRAINING
AUDIENCE

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Magistrates



PURPOSE

To analyse investigative procedures and techniques to combat environmental crimes.

PROGRAMME

This course is divided into two parts. The first part consists of a normative and an illustrative session relating to the investigative process aimed at identifying the causes of pollution and the study of technical assessments for the identification of pollutant agents. The second part focuses on the procedures enabling pollution assessment and risk analysis, and then outlines the following phases leading to the restoration of the sites. In the last session, issues regarding the responsibilities of the Authorities and the *per equivalent* damage will be examined in depth.

ACTIVITY

**The environmental police
with particular reference
to the activities
organised for national
and transboundary
illicit waste traffic**

**TRAINING
AUDIENCE**

Ministry officials,
decision makers
and strategic
personnel
in environmental
management

DURATION:
5 days

TRAINERS

Carabinieri
Magistrates



PURPOSE

To provide basic knowledge to detect typical *modus operandi* trafficking conducts.

PROGRAMME

This course is organised into two parts: the first part concerns definitions (of waste, environmental permits, documentation, etc.); the second part is related to the analysis of practical aspects, in the course of which the criminal modalities will be explained, along with the operational outcomes characterised by significant *modus operandi*.

Finally, the examination of "case studies" connected to illegal waste trafficking activities will be carried out, by analysing the conduct of both national trafficking and cross-border shipments.

ACTIVITY

The environmental police with particular reference to the so-called cement cycle

TRAINING AUDIENCE

Ministry officials, decision makers and strategic personnel in environmental management

DURATION:
5 days

TRAINERS

Carabinieri
Magistrates



PURPOSE

To provide necessary knowledge to conduct investigations into quarrying activities regarding the possible use of extracted material in relevant works financed by European funds allocated through the recovery fund.

PROGRAMME

The course is divided into two main training phases. The first one is devoted to the normative framework (Environmental Code and Presidential Decree 128/59 on the matters of mines and quarries) and to the illustration of the investigative procedures to counter illegal mining activities of aggregates (when linked both to the lack of authorisations and the non-compliance with the authorisation requirements). The second part concerns the illicit re-use of demolition rubble, incinerator and waste-to-energy ash and foundry slag (for environmental restoration activities), which will be thoroughly examined. The course also deals with critical issues that have emerged from investigations in the sector of cement, concrete and bituminous conglomerates production, with a specific focus on how this sector represents one of the main targets of environmental crimes.

PRESS

STI Stampa Tipolitografica italiana

GRAPHICS

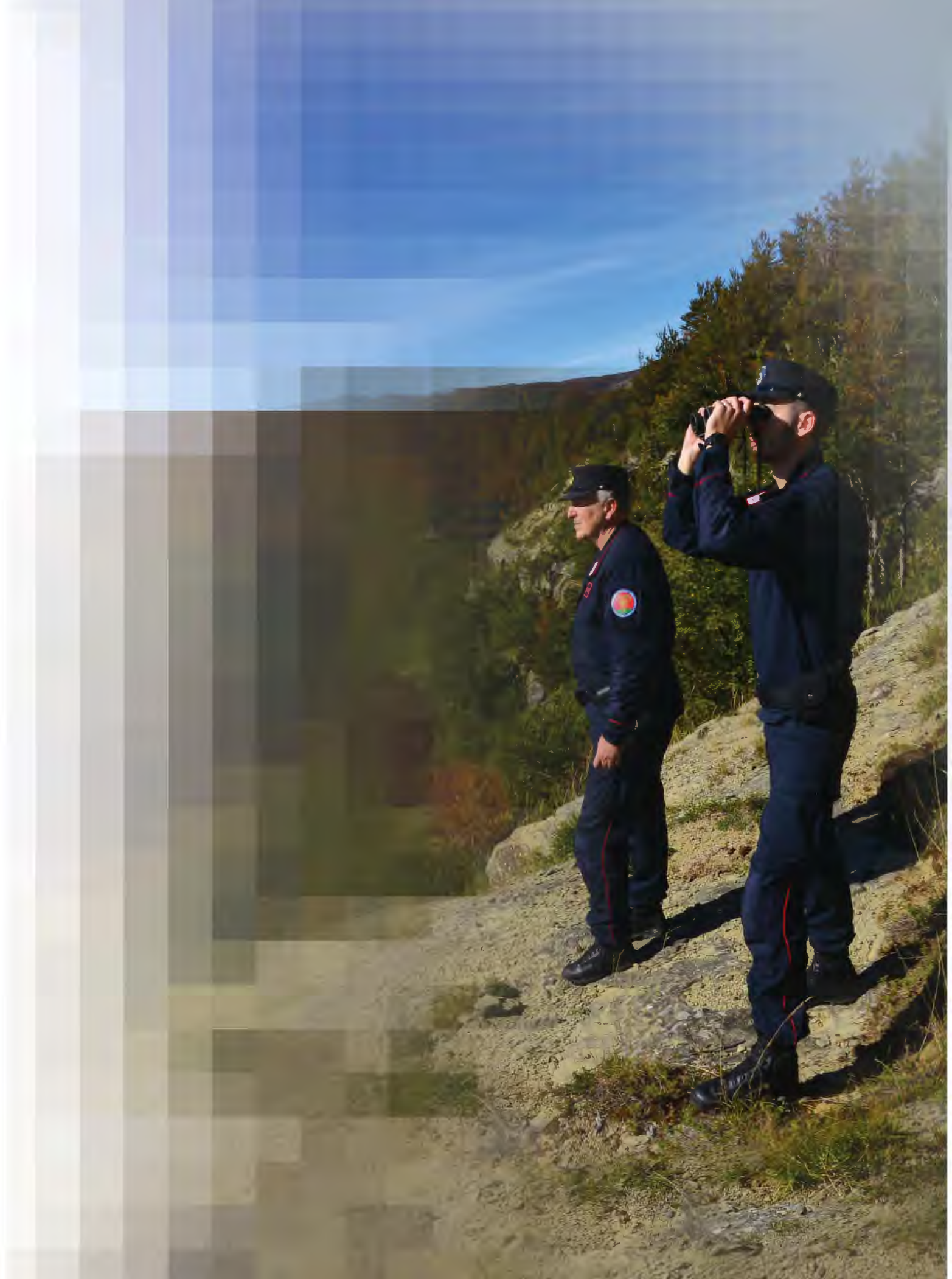
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