



ANPA

Agenzia Nazionale per
la Protezione dell'Ambiente

**Unità per
la Qualità
Ecologica
dei Prodotti**

National Study for the Application of the European Environmental Quality Label in the Tourism Sector

SUMMARY

This study was carried out during the year 2000 by the following work group:

ANPA: Stefania Ministrini, Giovanni D'Anna, Ugo Pretato, Maurizio Fieschi
Ministry of Environment: Paolo Piacentini
CISSET: Mirella Cerato
ENEA: Luca Andriola
ISTAT: Gianlorenzo Bagatta, Roberto Gismondi, Monica Perez
FAITA: Marco Sperapani
Federalberghi: Maurizio Perez
ACTA: Lorenzo Canova
CTS: Micaela Solinas
Ecotrans: Herbert Hamele

The summary report was prepared by Stefania Ministrini, Giovanni D'Anna, Ugo Pretato, Maurizio Fieschi

Thanks are owed to the Ecolabel-Ecoaudit Committee which, together with ANPA, ensured that the study was carried out.

Thanks for their contribution to the study go to: the CIRM Research Institute, Agriturist, the Italian Alpine Club, Federturismo, the responsables for the Cavallino 2000 Environment Quality Manifesto, the Jesolana Hoteliers Association, the Riccione Hoteliers Association, the Gardesana Hoteliers Association, and all the accommodations in Italy that collaborated in collecting data, and the SOGESCA consulting company.

Thanks also go to the General Tourism Office of the Ministry of Industry, Trade and Crafts for the collaboration provided.

The present publication was translated in collaboration with Qualitalia s.r.l.

For further information, please contact:

ANPA – Italian Environment Protection Agency
Unit for Products Environmental Quality
Via Vitaliano Brancati, 48
00144 Roma
Fax: +39.06.5007.2048
e-mail: ecolprod@anpa.it
<http://www.sinanet.anpa.it/ecolprod>

ISBN 88-448-0273-2

CONTENTS

1. Introduction.....	5
2. Study objectives.....	6
3. Study structure	6
4. Demand for environmental quality in the service offered	8
5. Supply of services and attention to the environment	12
5.1 <i>Characterisation of tourist flows</i>	13
5.2 <i>Characterisation of the type and methods of management of the services offered by accommodations.....</i>	14
6. Technical feasibility	20
6.1 <i>Presence of indicators.....</i>	20
6.2 <i>Presence of techniques and technologies for environmental improvement.....</i>	24
6.3 <i>Presence of areas for improvement.....</i>	25
6.4 <i>Presence of economic and commercial advantages.....</i>	27
7. Conclusions	28
 Appendix	 Tourism demand: ISTAT and CIRM data
Annex 1	Life cycle of tourism service offered by accommodations
Annex 2	List of selected indicators

Figure index

Fig. 3.1	Structure of the study.....	7
Fig. 4.1	Appreciation of the adoption of measures by accommodations in order to safeguard the environment.....	9
Fig. 4.2	Perception of an improvement in the quality of the services offered due to the adoption of measures to safeguard the environment.....	10
Fig. 4.3	Advisability that measures to safeguard the environment adopted by accommodations should be recognised by an environmental quality label certified by a national public Authority or by the European Union.....	10
Fig. 4.4	Level of consideration attributed to various factors in selection of the accommodations - CIRM survey.....	11
Fig. 4.5	Level of consideration attributed to various factors in selection of the accommodations - ISTAT survey.....	12
Fig. 5.2.1	Results of the survey on the environmental characteristics of the service offered by hotels.....	18
Fig. 5.2.2	Results of the survey on the environmental characteristics of the service offered by campsites.....	19
Fig. 6.1.1	Indicator identification scheme.....	21
Fig. 6.1.2	Example of the breakdown into the life cycle of the tourist..... service offered by accommodations.....	22 22
Fig. 6.2.1	Daily energy consumption per guest in six “good practices” in Luxembourg (averages and distribution).....	25
Fig. 6.4.1	Survey on the presence of economic and commercial advantages in the use of quality labels (percentages of businesses declaring advantages).....	28

Table index

Tab. 5.1.1	Examples of characterisation of national tourist interest areas.....	13
Tab. 5.1.2	Distribution of hotels by sample Provinces.....	14
Tab. 5.2.1	Characteristics of services offered by hotels.....	14
Tab. 5.2.2	Issues surveyed by the questionnaire sent to accommodation structures.....	16
Tab. 5.2.3	Characteristics of services offered by campsites.....	18
Tab. 6.1.1	Example of environmental aspects associated with elementary tourist activity.....	22
Tab. 6.1.2	Example of indicators associated with a single environmental aspect of the activity [A221] Use room by the guest.....	23
Tab. 6.3.1	Comparison of water and energy consumption between domestic use and hotels.....	26
Tab. 6.3.2	Comparison of water and energy consumption between domestic use and campsites.....	26

1. Introduction

In recent years, some businesses within the tourist industry have responded to environmental problems by introducing voluntary self-regulating measures. Most of them have begun to recognise that environmental policies may prove not merely functional for business but also essential for the industry's economic survival.

The industry's main initiatives include the development of voluntary tools, such as codes of conduct, guidelines, labels. Among these tools, an important role is played by environmental quality labels, most often associated with the environmental quality of the accommodation facilities rather than tourist destinations.

Interest among industry operators in obtaining an environmental quality label arises out of a need to certify the quality of the service offered by the structures and to differentiate it with respect to a market in which there is a mass supply. Indeed, the most interesting nation-wide programs are found primarily in tourist areas characterised by two factors: a particular concentration of accommodation facilities, and the presence of an international tourist demand that is more attentive to environmental problems.

The new EC regulation n. 1980/2000 by the European Parliament and Council call for an expansion of the range of application of the European Eco-label to the services sector, and the first industry chosen for that application, because it is considered a priority in Europe, is tourism.

The European Eco-label is a tool for improving the quality of products and services that is:

- voluntary
- selective
- addressed towards specific groups of products
- based on quantifiable criteria identified on the basis of a life-cycle approach.

The European Eco-label is actually a label of approval that is granted at the request of service producers and managers after the documented achievement of specific environmental requisites. These requisites are selected so that they can be achieved solely by those producers who are most respectful of the environment. The competitive advantage conferred by use of the label creates an emulating effect that pushes the overall market towards continual improvement.

In January 2000 the European Commission began a feasibility study as the first step in the process of defining the environmental quality label for the tourist industry, aimed at

evaluating the presence of the conditions necessary for introducing the Eco-label into the tourist industry.

The European Commission's orientation is to consider the tourist services offered by accommodations as the first product to be included in the Eco-label system; later, activities associated with tourist transport and recreation will be added.

2. Study objectives

Following the European initiative, and in consideration of the significance of the industry for the country, ANPA deemed it appropriate to promote a national study to evaluate the degree of applicability of the European Eco-label to the Italian tourist industry, and to contribute towards defining a group of products in line with specific national needs. The Italian situation in the tourist industry in fact presents certain unique features in the industrial fabric, such as characteristics of micro-entrepreneurship, very often organised under family management, as well as a complex system of regional differences with highly diversified social, cultural and environmental characteristics.

The results of the study thus constitute a basis for comparison with the positions of the other European countries.

The broad approach taken by the study makes it possible to refer the results more generally to each Type I label according to the ISO 14020 standard.

3. Study structure

There are three essential factors for evaluating the possibilities of applying the European environmental quality label: particular types of tourist demand and supply in accommodation facilities, and the presence of specific technical conditions in the system to which the label is applied.

The following diagram shows how the various parts of the study are interconnected.

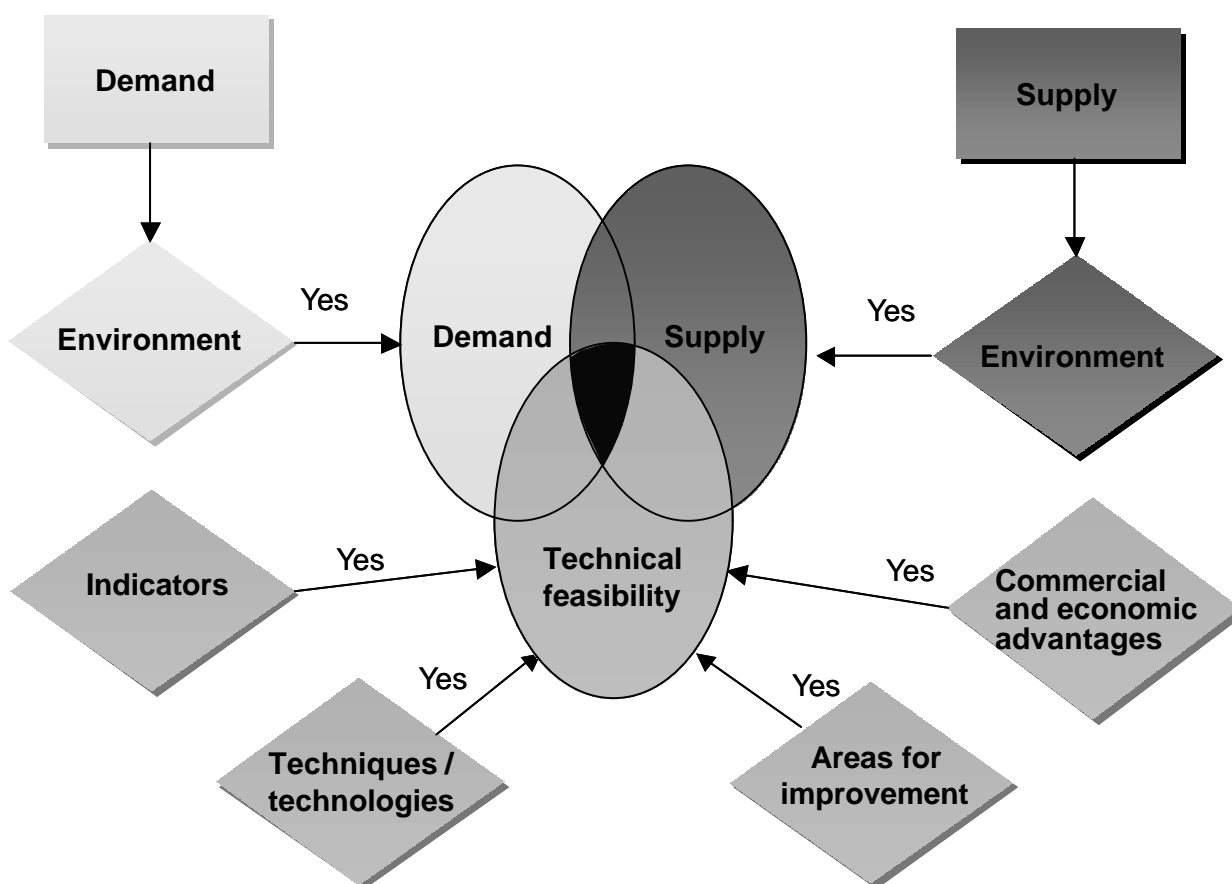


Fig. 3.1 Structure of the study

Conditions for application of the label are present if the following obtain:

1. a tourist demand sensitive to environmental variable, and in particular to improving the environmental quality of the service offered by the accommodation facilities;
2. a service supply sensitive to the environmental variable and potentially interested in the use of a tool such as the Eco-label;
3. specific technical conditions such as:
 - the presence of indicators capable of representing the environmental aspects of the activities constituting the tourism service - the European Eco-label sets performance criteria for its award and hence requires particular quantitative indicators;

- the presence of techniques and technologies that can be adopted by the accommodation facilities and can make significant environmental improvements in the way the service is provided;
- the presence of significant margins for environmental improvement in the current situation;
- the presence of economic and commercial advantages and opportunities for those who obtain the environmental quality label.

4. Demand for environmental quality in the service offered

The objectives of the survey carried out regarding the national tourism demand were to determine the degree of tourist sensitivity towards the environment and in particular the interest in greater quality in the service provided by accommodation facilities.

To this end, two surveys were done: the first, carried out by the CIRM Market Research Institute in March 2000 on a sample of 800 Italians who had taken vacations; the second, done by ISTAT (National Statistics Institute) as part of the quarterly “Trips and Vacations” survey on tourism demand on a sample of 3,500 families for each quarter, for a total of 8,000 Italians aged 18 and up. Both surveys were conducted using interviews through the C.A.T.I. (Computer-Assisted Telephone Interview) system.

The ISTAT estimates relate to the first two quarterly surveys of 2000 (January-March and April-June).

The questions asked were intended to determine:

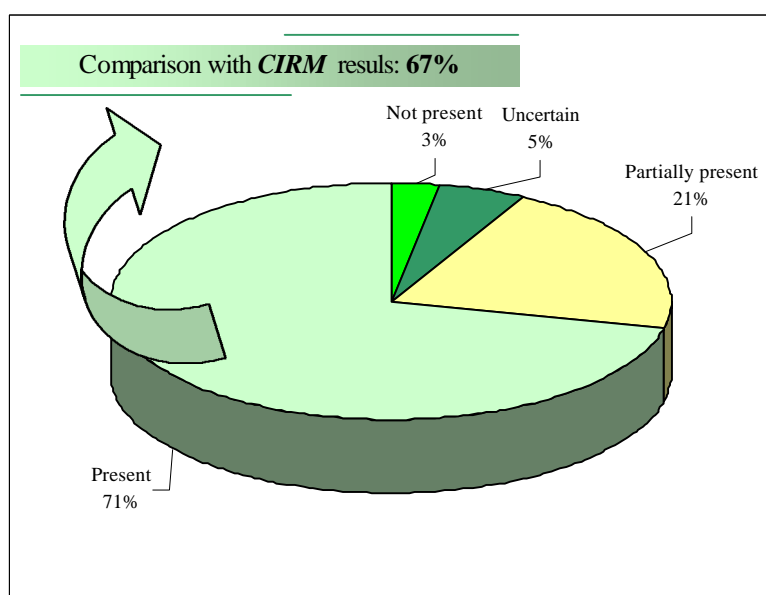
1. the level of importance attributed by tourists to the environmental variable in choosing accommodations in relation to other criteria, such as:
 - variety of services offered
 - proximity to specific interests
 - price
2. the level of tourists’ appreciation of the adoption of measures to protect the environment by accommodation facilities;
3. tourists’ perception that the environmental improvements achieved correspond to an improvement in the quality of the service offered by accommodation facilities;

- whether it is worthwhile to acknowledge environmental quality in accommodation facilities through a system that assigns a label of environmental quality for the service provided.

The results of the two surveys, which were consistent with each other, revealed the following:

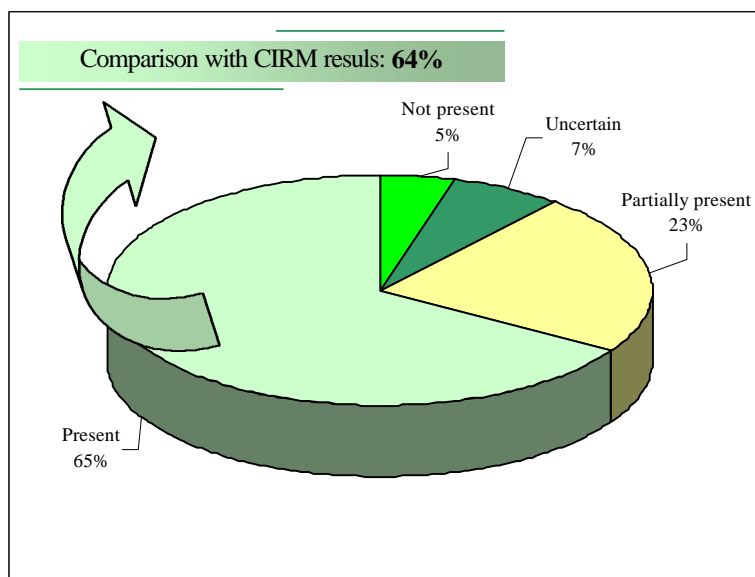
- tourists' appreciation of the adoption of measures to protect the environment by accommodation facilities (cf. fig. 4.1);
- a positive perception by tourists that greater environmental quality in the services provided corresponds to a real and overall improvement in those services (cf. fig. 4.2);
- environmental quality should be recognised through a system that confers a label of approval by a national governmental authority or by the European Union (cf. fig. 4.3).

Considering the specific nature of the environmental theme for which a positive predisposition was found, independently from the actual attitude, it was deemed worthwhile to add the data gathered according to the methods illustrated in the appendix. The appendix includes the original data from ISTAT and CIRM surveys.



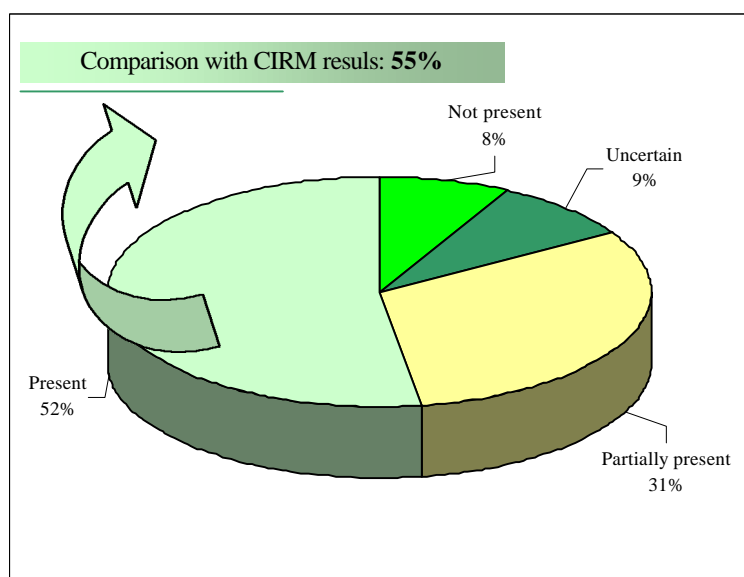
Source: prepared by ANPA based on ISTAT data

Fig. 4.1 Appreciation of the adoption of measures by accommodations in order to safeguard the environment



Source: prepared by ANPA based on ISTAT data

Fig. 4.2 Perception of an improvement in the quality of the services offered due to the adoption of measures to safeguard the environment



Source: prepared by ANPA based on ISTAT data

Fig. 4.3 Advisability that measures to safeguard the environment adopted by accommodations should be recognised by an environmental quality label certified by a national public Authority or by the European Union

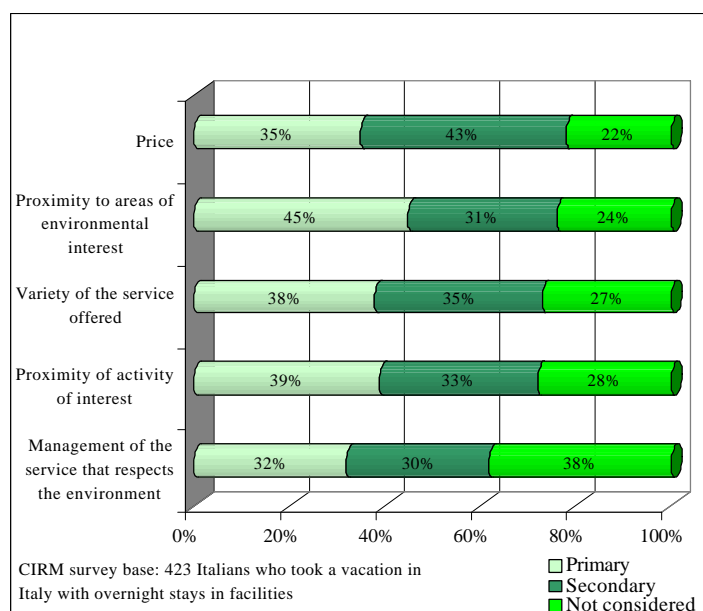
If we compare how much environmental factors weigh as a criterion for selection of accommodation structures compared to such traditional criteria as price, type of services

offered, and comfort, the results seem less homogeneous than the preceding, but in any case provide significant indications.

The differences can be attributed to the diversity of the target population in the sample. Whereas the CIRM survey considered only the opinions of those Italians who had taken trips for their vacation, the ISTAT survey refers to the opinion of those who have travelled either for vacation or for work.

In particular, the lesser importance attributed to the environmental variable in the choice of accommodation facilities which seems to emerge from the ISTAT estimates as compared to the CIRM data is probably due to the fact that the ISTAT survey includes cases in which the environmental variable in the choice of facilities is less important, especially with reference to choices in which the interviewee was only partially responsible, as occurs on job-related trips organised by travel agencies or specific corporate offices; this is confirmed by the high percentage of responses in which none of the selection factors was considered (cf. fig. 4.5).

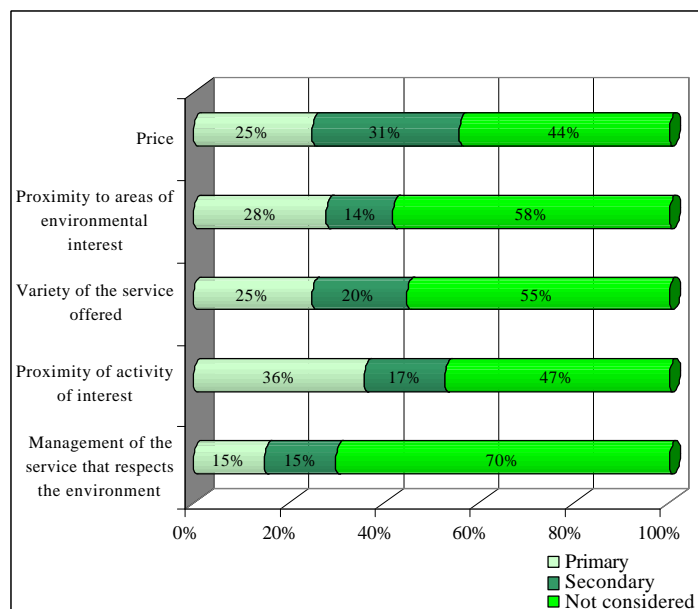
In the CIRM survey (cf. fig. 4.4), it is significant to note how in fact environmental factors, including those associated with management of services, count at a level comparable to the traditional selection factors, such as price. While it may not fully correspond to the selection scenario actually applied, it nonetheless indicates the growth in environmental awareness by a majority of tourists.



Source: prepared by ANPA based on CIRM data

Fig. 4.4 Level of consideration attributed to various factors in selection of the accommodations - CIRM survey

The ISTAT survey shows that proximity to the activity of interest gets priority (expressed in 36% of the trips taken), given the weight taken on by the job-related travel, which in fact represent 35% of trips taken by Italians during the first half of 2000 (cf. fig. 4.5).



Source: prepared by ANPA based on ISTAT data

Fig. 4.5 Level of consideration attributed to various factors in selection of the accommodations - ISTAT survey

5. Supply of services and attention to the environment

Analysis of the supply of tourism services was carried out in order to determine both the types and methods of operation of the tourism services offered and the amount of attention paid by operators to the environmental variable.

Analysis of the supply excluded private residences and second homes. This is a significant factor in some regions of southern Italy and at times constitutes the primary component of the accommodation system; however, because of a whole series of objective limitations, foremost among them the lack of data and the presence of “unofficial” situations, this type of accommodation was excluded from the survey.

The analysis thus focused primarily on two types of facilities: tourist hotels and campsites/villages, which represent 87%ⁱ of Italy’s total accommodation capacity.

5.1 Characterisation of tourist flows

Analysis of tourist flows and characterisation of the country's areas of tourist interest were carried out nation-wide using data from the ISTAT Office of Business statistics (DCII) and from the Italian Exchange Office.

Broken down to the provincial level, the results obtained identified the following:

1. estimated breakdown of tourist numbers by type of tourism and accommodations;
2. quantification of per capita and total tourist spending (excluding transportation expenses for reaching the destination);
3. calculation of tourist pressure indicatorsⁱⁱ.

In Italy, 10 different types of tourism can be identified: seaside, mountain, rural, lakeside, cultural, natural, thermal, thematic, business, religious. Certain representative provinces (14 in all) were identified for at least seven of these types, which can be used as a sample. Provinces were selected by taking into account, at first level, tourist numbers and pressure, and, at second level, the regional context (the province's geographical area : north, south, central) and the representativeness of the type of accommodation facilities present (various classes of hotels, campsites, etc.).

Table 5.1.1 shows some examples of characterisation of the sample areas.

Tab. 5.1.1 Examples of characterisation of national tourist interest areas

<i>Type of tourism</i>	<i>Typical Province</i>	<i>Number of tourists (1000's)</i>	<i>Expenditure by tourists (Bln)</i>	<i>Tourist pressure</i>
Seaside	Rimini	14,362	1,851	Medium high
Mountain	Bolzano	23,255	3,078	Medium high
Rural	Perugia	3,193	436	Medium high
Lakeside	Verona	9,226	1,364	Medium high
Cultural	Rome	16,723	5,100	High
Thermal	Padua	4,340	625	High
Business	Milan	7,678	1,876	Low

Source: prepared by ANPA based on ISTAT data

It should be pointed out that, based on current systems for classifying tourist flows used by APTs (*Aziende di Promozione Turistica*), it was impossible to identify Italian provinces that are representative of natural, thematic or religious tourism (cf. tab. 5.1.1).

Table 5.1.2 lists the 14 selected Italian provinces and shows the number of hotels. The survey sample (13,298 hotels) represents 41% of the total of 32,352 Italian hotelsⁱⁱⁱ.

Tab. 5.1.2 Distribution of hotels by sample Provinces

<i>Sample Province</i>	<i>Number of hotels</i>
Bolzano	2,660
Rimini	2,139
Trento	1,665
Venice	1,317
Rome	956
Naples	725
Verona	718
Brescia	668
Milan	578
Florence	510
Siena	430
Bologna	380
Messina	296
Padua	273
Total	13,298

Source: prepared by ANPA based on Federalberghi data

5.2 Characterisation of the type and methods of management of the services offered by accommodations

Characterisation of the type of services offered makes it possible to give proper consideration to the various activities – overnight stays, food service, recreational activities – that take place in an accommodation structures.

By analysing and processing the data from Federalberghi files, it was possible to identify the tourist services offered by the hotels in the sample provinces. Table 5.2.1 shows the distribution of these services in the 14 selected provinces.

Tab. 5.2.1 Characteristics of services offered by hotels

<i>Type of service</i>	<i>Present in the sample province</i>
Bar	72%
Restaurant	49%
Sports and recreational activities	13%

Sample of 13,298 hotels

Source: prepared by ANPA based on Federalberghi data

Analysis revealed that 72% of the 13,298 businesses analysed offered bar service, while 49% offered restaurant service. These data show that for characterising tourist services and

for defining an environmental quality label it is essential to focus attention on activities related to overnight stays and food services, while sports and recreational activities represent a less-important component of the services offered (13% of the hotels analysed). The identification of environmental management methods of the services offered by accommodation facilities was achieved by sending a questionnaire to individual accommodations (hotels and campsites), through the industry associations and federations. The questions posed in the questionnaire focused on the key relevant issues from an environmental viewpoint in management methods of the tourist service offered (cf. tab. 5.2.2).

Tab. 5.2.2 Key issues surveyed by the questionnaire sent to accommodations

<p><i>Purchasing</i></p> <ul style="list-style-type: none"> • Purchase of products having reduced environmental impact, such as products with ecological labels (Eco-label), recycled paper, fully biodegradable cleaning products • Use of local and/or organically grown produce on menus • Non-use of throwaway packaged products (e.g., jams and jellies, honey, butter) <p><i>Management of the service</i></p> <p><u>Water</u></p> <ul style="list-style-type: none"> • Presence of water-conservation measures/systems • Regular checks for losses or defects • Existence of systems for the treatment of waste water • Presence of flexibility in linen changes <p><u>Energy</u></p> <ul style="list-style-type: none"> • Use of renewable sources of heat/energy • Presence of energy-conservation measures (e.g., insulation, low-consumption light bulbs). • Operation of the heating/air conditioning system according to outside temperature <p><u>Noise</u></p> <ul style="list-style-type: none"> • Presence of noise-reduction measures <p><u>Transportation</u></p> <ul style="list-style-type: none"> • Coupons provided to guests using public transportation • Bicycles made available to guests • Use of ecological transport means (electric, methane, LPG) <p><u>Training, education, public awareness</u></p> <ul style="list-style-type: none"> • Staff training/information activities regarding environmental problems • Public-awareness and information activities for guests regarding respect for the environment • Participation in environmental information/education programs with institutions, public and/or private bodies or individuals <p><i>Waste</i></p> <ul style="list-style-type: none"> • Adequate treatment for dangerous substances • Presence of measures to minimise waste production • Differentiated waste collection • Packaging recovery
--

The questionnaires received numbered 282 from hotels and 32 from campsites.

The results made it possible to demonstrate awareness of the environmental variable on the part of accommodations through the presence of environmental-protection measures in management methods.

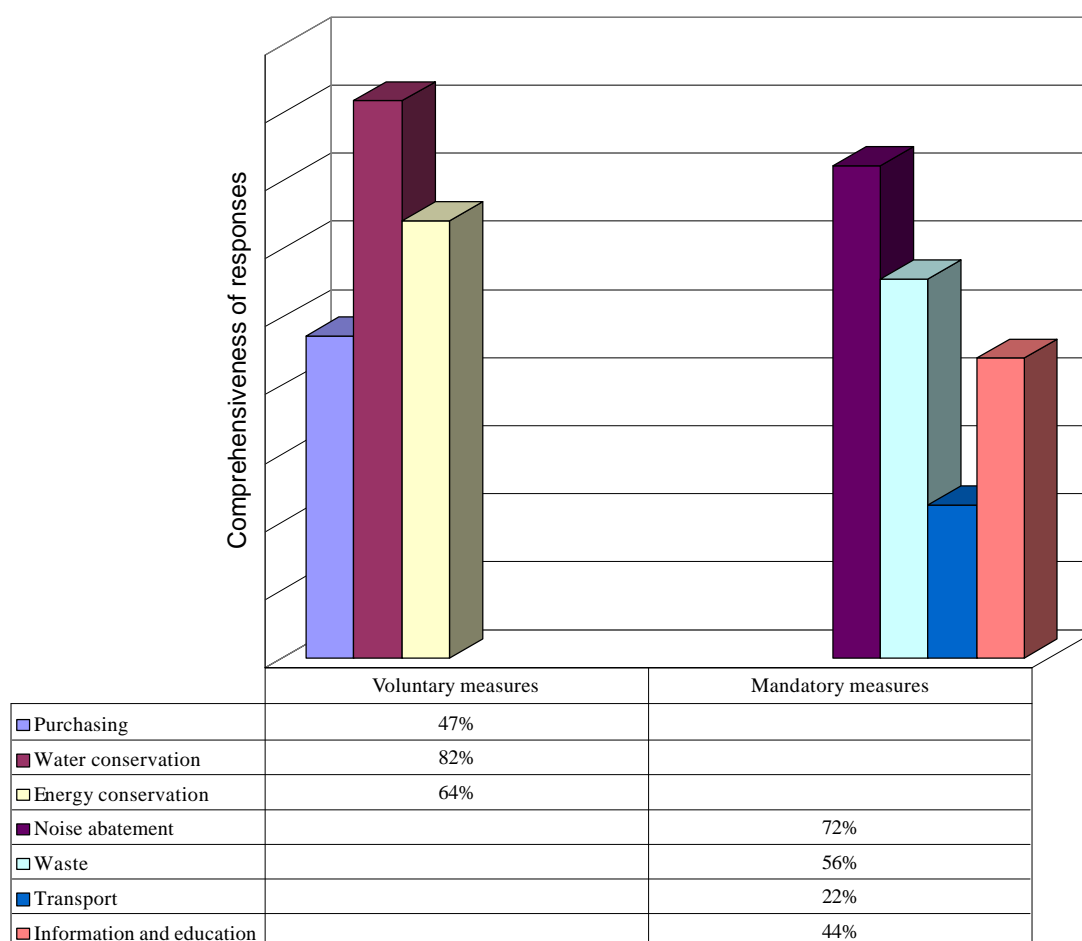
The management methods adopted within the various areas investigated (supplies, water, energy, etc.) can be reduced to two types of measures:

- a) voluntary measures, such as voluntary initiatives aimed specifically at achieving environmental improvements, often also associated with economic interest (e.g., energy savings);
- b) measures related to opportunities or requirements imposed by mandatory regulations or deriving from contingent situations, such as the presence of differentiated waste collection systems that facilitate operators.

The results related to the questionnaires returned by the hotels are shown in fig. 5.2.1.

The graph shows that the areas presenting greater coverage in the responses relevant to water management through the introduction of water-conservation measures (82%), to noise abatement (72%), and to energy management (64%); with regard to the latter area, a distinction should be made between the presence of energy-conservation measures and methods for energy supply. In the former case, we find widespread use (86%) of energy-conservation measures (e.g., use of low-consumption bulbs, insulation, etc.), while the use of renewable sources of energy is low: only 11% of the facilities state that they use these, and 8% state they are inclined to adopt them in the short term, whereas 80% use non-renewable energy sources.

This is followed by the waste disposal area with 56%, the purchasing area with 47% positive responses, the environmental training/information area with 44%, and finally the transport area with 22%. With regard to waste management, it should be noted that the percentage of 56% refers to the 79% of the accommodations examined for which the municipality has implemented differentiated waste collection.



Source: prepared by ANPA based on Federalberghi data

Fig. 5.2.1 Results of the survey on the environmental characteristics of the service offered by hotels

The information received through the questionnaire made it possible to define the type of services offered by the 32 campsites. The results are shown in Table 5.2.3.

Tab. 5.2.3 Characteristics of services offered by campsites

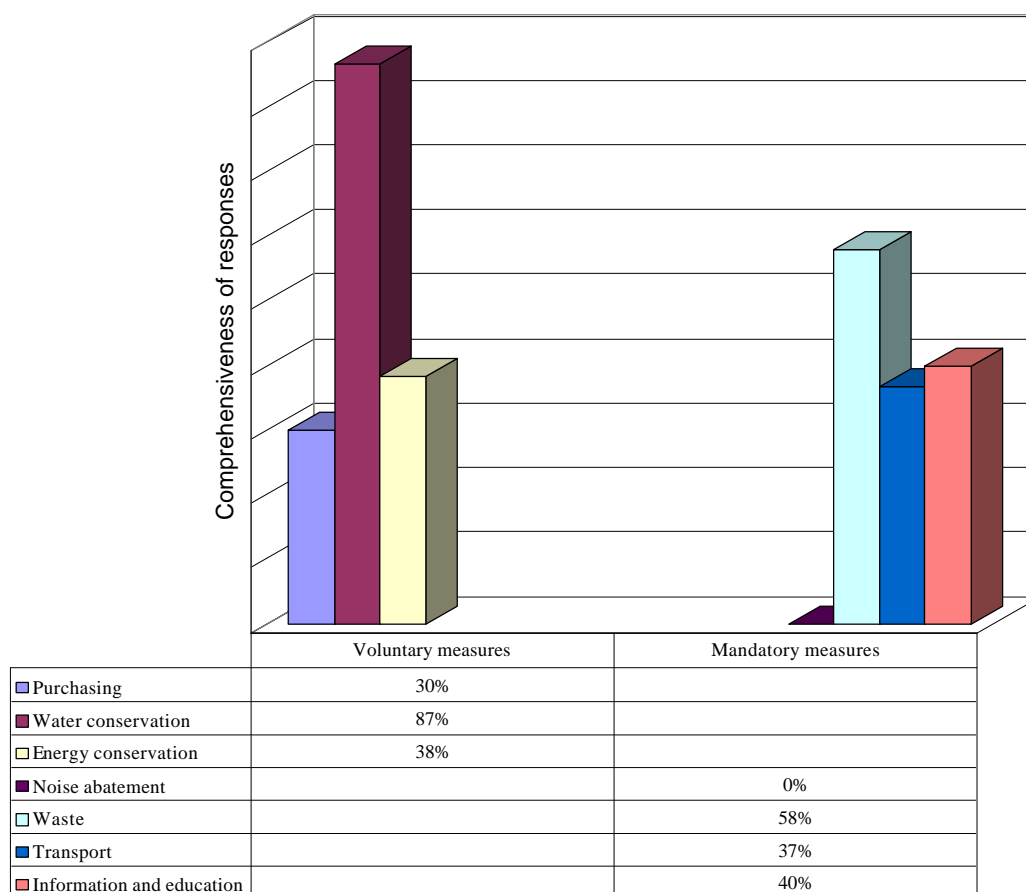
<i>Type of service</i>	<i>Presence in the sample province</i>
Supermarket	100%
Restaurant	40%
Sports and recreational activities	22%

Sample: 32 campsites

Source: Prepared by ANPA based on FAITA data

Fig. 5.2.2 shows the results of the survey on operating methods for campsites.

The graph shows the almost complete comprehensiveness of the responses with regard to water management methods, and significant lower values for the other areas. Note the lack of noise-related measures as almost all campsites are located in non-urban areas.



Source: prepared by ANPA based on FAITA data

Fig. 5.2.2 Results of the survey on the environmental characteristics of the service offered by campsites

The response sample may include a greater percentage with respect to all such businesses in Italy, since the act of submitting the questionnaire is already a selection of those operators who have developed some awareness of these topics.

The many responses received do however represent a positive indicator of the beginnings of a process of awareness and sensitisation of operators and adaptation of accommodations with respect to the environment.

6. Technical feasibility

As already stated in paragraph 3, technical feasibility is understood as all those conditions necessary for application of the environmental quality label: the presence of indicators, the presence of techniques and technologies that allow environmental improvements, the presence of significant margins for environmental improvement in the current situation, the presence of economic advantages and opportunities for those who obtain the environmental quality label.

The following paragraphs describe the results of the analysis of the various feasibility conditions.

6.1 Presence of indicators

Identification of indicators usable for conferring the European Eco-label was achieved by checking their effectiveness in evaluating services during the environmentally relevant phases of the life cycle.

Figure 6.1.1 shows the scheme of the logical flow followed.

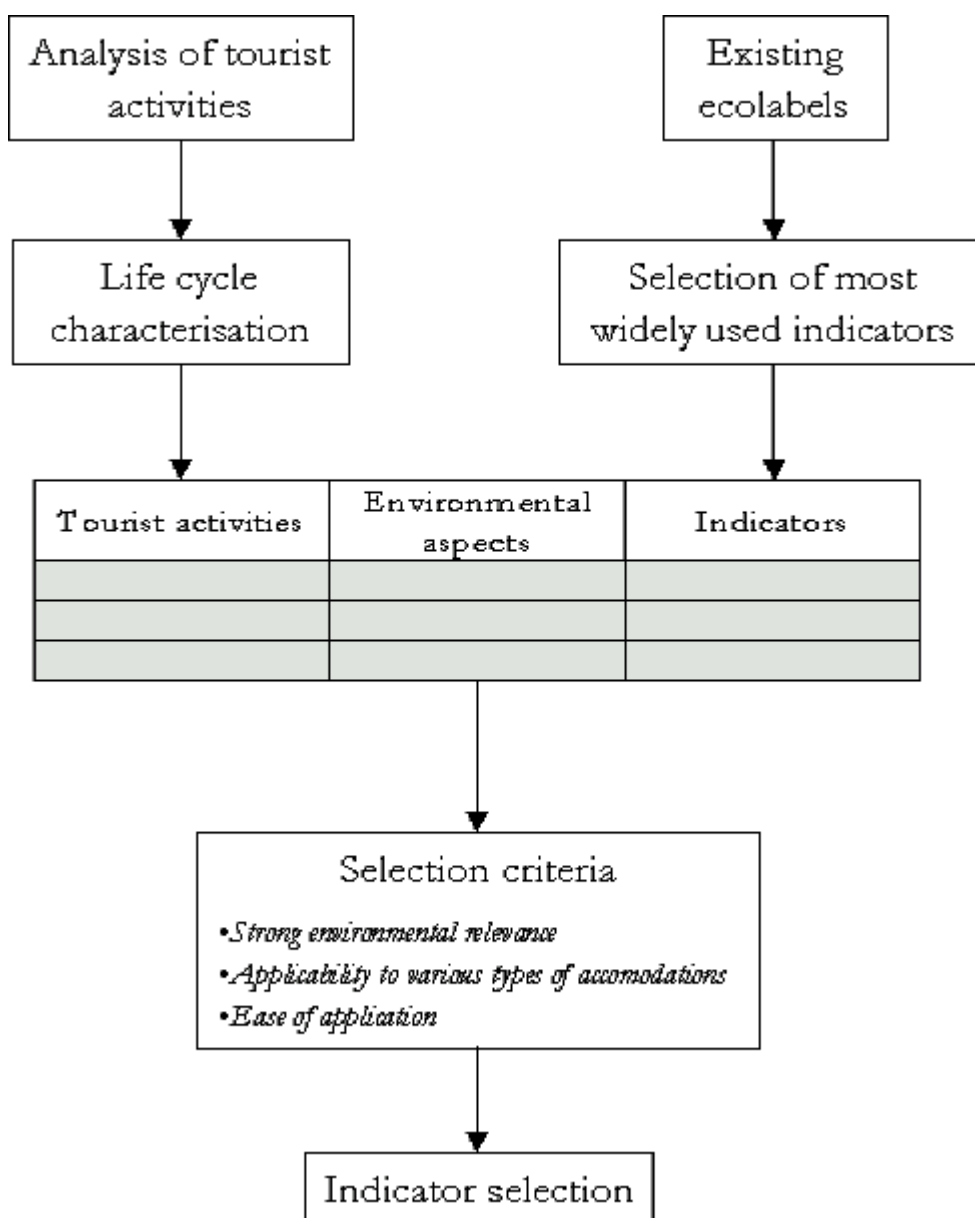


Fig. 6.1.1 Indicators identification scheme

Starting from an analysis of the existing environmental quality labels in Europe in the tourism industry, 12 Eco-labels were identified as most representative, and the most widely utilised indicators were identified.

At the same time, those activities making up the tourist service were analysed using an initial characterisation of the service's life cycle. Fig. 6.1.2 shows an example of the breakdown of the tourist service into basic activities grouped in the three phases of the service's life cycle (cf. the life cycle of the complete service in Annex 1).

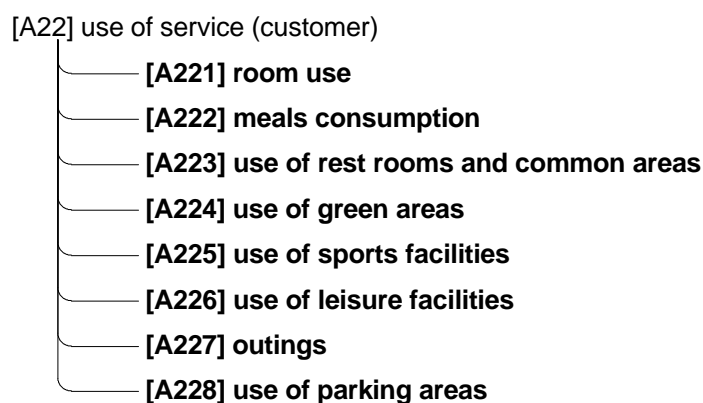


Fig. 6.1.2 Example of the breakdown into the life cycle of the tourist service offered by accommodations.

As shown in fig. 6.1.1, for each basic activity the environmental aspects were considered (cf. tab. 6.1.1) and subsequently, for each environmental aspect considered, the reference indicators were considered (cf. tab. 6.1.2).

Tab. 6.1.1 Example of environmental aspects associated with elementary tourist activity

<i>Tourist activities</i>	<i>Environmental Aspects</i>
[A221] Use of the room by the guest	Water emissions
	Waste production
	Energy consumption
	Consumption of natural resources
	Greenhouse gas emissions
	Emission of harmful substances/ozone
	Environmental health and safety
	Sound emission

Tab. 6.1.2 Example of indicators associated with a single environmental aspect of the activity [A221] Use room by the guest

<i>Environmental aspects</i>	<i>Indicators</i>
Energy consumption	Regular maintenance of heating system and record keeping in compliance with current legislation
	Energy-conservation procedures (TV not on stand-by, timer switches, etc.)
	Energy consumption measurement system (solid and liquid fuels, oils, electricity, central heating)
	Use of energy-saving bulbs, timer switches, photoelectric cells
	Use of heating system thermostat in relation to weather conditions

Analysis led to a list of about 200 indicators being identified, which were subsequently selected based on the following criteria:

- strong relevance for the environment
- applicability to many types of accommodation facilities
- ease of application by businesses.

The indicators selected (see Annex 2) are of three types:

1. management indicators
2. structural indicators
3. performance indicators.

The management indicators are associated with the presence of practices suitable for monitoring environmental aspects in the everyday practice of providing the service (for example, assigning responsibility for environmental-protection aspects to a staff member). Structural indicators are associated with the technical characteristics of accommodations that provide the service and are linked to the presence of factors primarily suitable for introducing savings of energy and resources (for example, purchase of regional products, energy-saving procedures).

Performance indicators measure the actual numerical results of the good practices introduced into the management of the service (for example, consumption of drinkable water, energy, etc.).

6.2 Presence of techniques and technologies for environmental improvement

An environmental quality label such as the Eco-label is a selective label, and therefore actual conditions must be present that make it possible to differentiate, environmentally, the various methods of providing the service. In practice, in order to evaluate whether it is worthwhile to introduce an environmental quality label it is not enough merely to evaluate the overall environmental load of the service; it is also necessary to determine whether there are “good practices” available to mitigate that load, and whether they are suitable for making significant improvements.

There is no unambiguous definition of “good practice”. In the present report, this is understood as “a practice that is better than the average, not necessarily the best”, where practice is understood as everything that contributes towards providing the tourism service. Through selection and analysis of positive cases from nation-wide^{iv} and international^v studies, it was possible to evaluate the effectiveness of some of the more widespread good practices. For example, significant energy and water conservation can be achieved by taking simple structural measures:

- using water-air mixers in bathroom fixtures would lead to a 25% reduction in water consumption;
- the use of low-consumption light bulbs would yield a 15% reduction in total electricity consumption;
- the use of insulating material (glass) would yield a 5-10% saving in total thermic energy consumption.

Fig. 6.2.1 shows the improvements in terms of energy savings achieved by six accommodations in Luxembourg through the application of energy-conservation measures. It is significant to note that in just one year average energy consumption dropped by more than 10%, and that the greatest contribution to this improvement came from those accommodations that had had the highest consumption the year before.

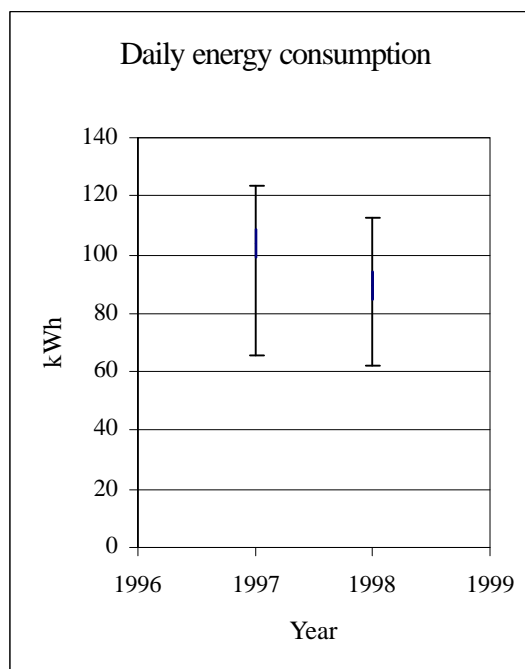


Fig. 6.2.1 Daily energy consumption per guest in six “good practices” in Luxembourg (averages and distribution)

6.3 Presence of areas for improvement

Evaluation of contributions in environmental terms made by good practices is the basis for a broader evaluation of the overall improvements that can be achieved with the introduction of a tool such as the Eco-label.

The commitment necessary to achieve sustainable-development goals in fact requires that the resources used be targeted at the most effective and best tools on a cost-benefit scale.

The main areas for improvement analysed for both hotels and campsites included water and energy consumption.

Table 6.3.1 shows a comparison of data relating to water and energy consumption in hotels and in domestic consumption.

In order to allow comparison between consumption in accommodations facilities and domestic consumption, only that consumption associated with overnight stays and food service provided in the accommodation facilities was considered^{vi}.

Table 6.3.1 shows that water consumption for hotels is more than twice domestic consumption.

Water consumption in the hotel portion of the tourism industry is equal to 120 million m³/year^{vii}. If we assume a 10% savings in consumption through application of good practices, we can reasonably hypothesise a savings of about 12 million m³/year.

Tab. 6.3.1 Comparison of water and energy consumption between domestic use and hotels

	<i>Domestic</i>	<i>Hotels (***)</i>	<i>Ratio</i>
<i>Water consumption</i>	250 litres/day (*)	560 litres/guest	2.24
<i>Electrical power consumption</i>	10 MJ/day (**)	40 MJ/guest	4

(*) Source: ENEA, 2000

(**) Source: ENEL, 1998

(***) Source: ANPA survey

Likewise, electric power consumption in the hotel portion of the tourism sector is four times domestic consumption.

Total energy consumption by Italian hotels is 9,200 million MJ/year, equal to the total energy consumption of one-fourth the region of Sardinia and 1% of total energy consumption in Italy (1,000,000 million MJ/y in 1999)^{viii}.

We can reasonably hypothesise that by introducing energy savings of 10% through the use of good practices it would be possible to achieve a savings of about 1,000 million MJ/year. Table 6.3.1 shows a comparison of water and energy consumption between domestic use and campsites use.

Tab. 6.3.2 Comparison of water and energy consumption between domestic use and campsites

	<i>Domestic</i>	<i>Campsites (***)</i>	<i>Ratio</i>
<i>Water consumption</i>	250 litres/day (*)	250 litres/days	1
<i>Electricity consumption</i>	10 MJ/day (**)	20 MJ/guest	2

(*) Source: ENEA, 2000

(**) Source: ENEL, 1998

(***) Source: ANPA survey

As for water consumption at campsites, this is 14.5 million m³/year, equal to 12% of annual consumption in hotels.

The consumption recorded is equivalent to domestic consumption, and therefore we can not assume any significant savings.

With regard to energy consumption, however, campground consumption is twice domestic consumption, equal to 1,200,000 MJ/year, equivalent to 0.12% of Italy's total energy consumption.

If we assume a 10% energy savings, it is possible to hypothesise a reduction in electrical energy consumption of about 120,000 MJ/year.

6.4 Presence of economic and commercial advantages

The presence of economic and commercial advantages for those who receive an environmental quality label is an essential condition for making it attractive to operators.

An evaluation of the perception of such a label by consumers and the related commercial advantages for operators can be made based on historic data regarding existing programs.

In Italy, local labels of approval similar in their objectives to the European Eco-label have been present for some years.

These are the “Jesolo for the Environment” environmental quality label, and the Riccione environmental quality label.

Given the international nature of tourism, it can reasonably be assumed that a European label would certainly be more effective in terms of image than would a local or regional label. Data referring to the latter can thus be considered as valid indications for the European Eco-label.

Fig. 6.4.1 shows the results of the survey done in Italy on a sample of 16 hotels.

The advantages provided by a selective label are, first of all, direct, associated with commercial aspects, due to the increase in customers through the firm's improved image.

In addition, the so-called indirect advantages should be considered: these are associated with economic advantages through better management, which manifest themselves when a company undertakes environmental improvements: reduction in costs associated with the use of resources, lower environmental liabilities, lower costs for waste disposal, etc.

Taking into account the fact that regional labels may at times not be very indicative of the European situation, and that it is useful to calibrate these evaluations with respect to the European market, some data from the literature on the Luxembourg label were also used for comparison (cf. fig. 6.4.1).

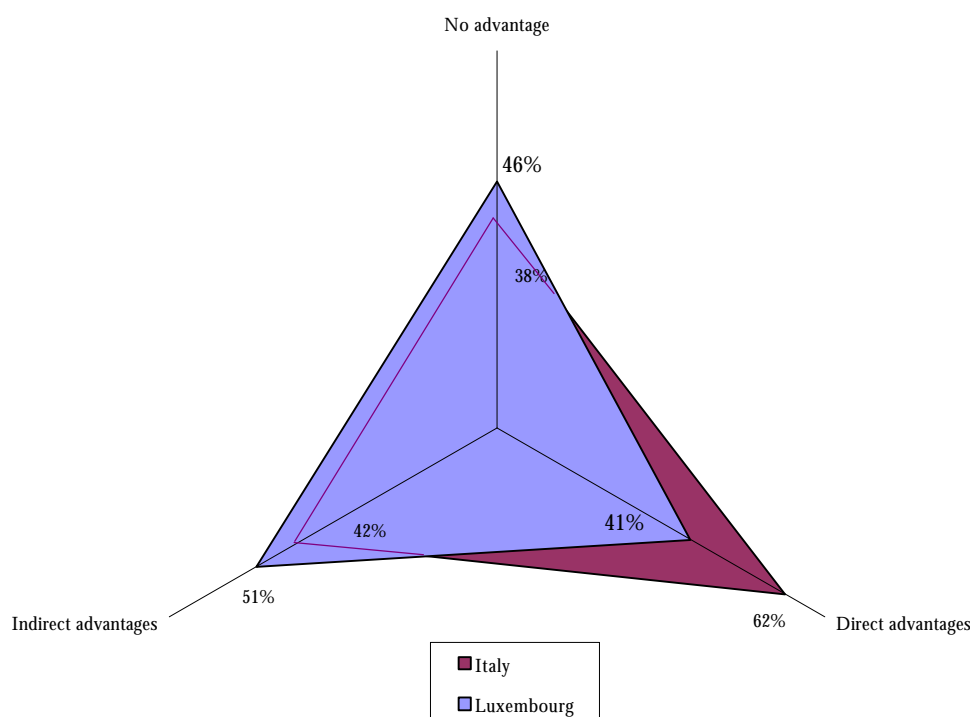


Fig. 6.4.1 Survey on the presence of economic and commercial advantages in the use of quality labels (percentages of businesses declaring advantages)

The results of the survey show that in Italy 62% of businesses state that they have obtained advantages by adopting the label, expressed as direct advantages.

However, the survey of the Luxembourg label shows a less-favourable response regarding whether adoption of the label is worthwhile (54%), with a prevalence of indirect advantages (51%).

7. Conclusions

The results obtained allow us to give a positive answer to the main questions on which the feasibility analysis is based (cf. fig. 3.1).

There is a demand potentially interested in association with a European environmental quality label for the tourism industry.

There are situations within the current system of tourism supply that allow us to consider it a potential pool of users of the label.

The necessary technical conditions exist, such as significant margins for improvement achievable with available and easily implemented technologies and operating methods.

The achievable improvements in environmental quality can be quantified and monitored through the use of indicators.

Experiences with receiving the environmental quality labels demonstrate that there are real economic and commercial advantages for operators.

The results obtained also give us an initial idea about how the European label could be structured.

Certainly attention should be focused on overnight stays and food-service activities, while other activities, such as sports and recreational activities, may be put off pending further developments.

It is worthwhile noting that this life-cycle analysis of the tourism service emphasises the concept of activity and moves the accommodations offering them to the background.

This suggests that we ought to seek a quality label system that refers as a product group not to the type of accommodation (hotel, campsites, etc.) as happens in most cases now, but to the type of service (e.g., overnight stays), with a different crosswise approach respect to the accommodations.

The actual feasibility of this approach can be explored in subsequent phases of development of the system.

An additional significant factor is the support obtained in carrying out the study from the industry associations and operators belonging to the Italian accommodation system. The active and spontaneous co-operation we encountered is indicative of concrete interest by the Italian accommodation capacity system in such a tool for improving environmental quality. In particular, the European dimension of the Eco-label was perceived by industry operators as added value in relation to existing initiatives and as an opportunity for making the Italian system competitive in the European context.

ⁱ ISTAT, Statistics of Tourism, 1998

ⁱⁱ Tourist pressure is understood as a qualitative indicator deriving from the intersection of values relating to the relationship between numbers of tourist/residents and to the monthly variability of numbers of tourists. Quantification of the various indicators derives immediately from the provincial data on monthly tourist numbers and from the number of residents. It should be recalled that the formula used to calculate the number of tourists per 1000 residents/day is given by:

$$\left(\frac{P}{365R} \right) 1000$$

where P indicates the number of tourists and R the residents.

The qualitative indicator of tourist numbers is based on the intersection between the mean (ME) and the monthly variability (VAR) in number of tourists per thousand residents/day. This is because, compared to the average, the mean is less influenced by tourist presence of even a few provinces characterised by very high or very low values for the variable studied (in our case, the ratio between residents and tourists). Keep in mind that the median is the value (defined by ME) of the variable studied such that 50% of the units analysed have a value not less than ME (defined as the median value).

The classification is in four categories:

1. High tourist pressure, when $ME > ME_{ITALY}$ and $VAR < VAR_{ITALY}$, where ME_{ITALY} and VAR_{ITALY} indicate the median values of ME and VAR for all of Italy. This is the case of a province with a number of tourists per resident greater than the national mean and little monthly variability in that rate (which therefore remains stably above the national average every month, as in the case of Padua).
2. Medium-high tourist pressure, when $ME > ME_{ITALY}$ and $VAR > VAR_{ITALY}$. This is the case of a province with a number of tourists per resident higher than the national mean but also highly variable from month to month (as is the case for provinces characterised by strong summer tourism, like Rimini, but with strong seasonal peaks, which concentrates the environmental pressure into a few months).
3. Medium-low tourist pressure, when $ME < ME_{ITALY}$ and $VAR > VAR_{ITALY}$. This is the case of a province with a number of tourists per resident that is lower than the national mean, but quite variable from month to month and hence seasonal. This is the case of Viterbo, for example.

Low tourist pressure, when $ME < ME_{ITALY}$ and $VAR < VAR_{ITALY}$. This is the case of a province with a number of tourists per resident that is lower than the national mean and, in particular, stably lower, with no particular monthly variations. This is the case of Campobasso, for example.

ⁱⁱⁱ Federalberghi, 2000.

^{iv} ENEA, 2000, The environmental performance indicators for the sustainable management of tourist services, Technical Report, Env. Dept. RT-AMB-1/2000, by L. Andriola, M.V. Seminara.

ENEA, 2000, Eco-management and audit scheme (EMAS) applied to hotels - "Case-study Jolly Hotel", Technical report Environment dept. RT-AMB-2/2000, by L. Andriola, V. Maida, M.V. Seminara.

^v Ecotrans, 2000.

^{vi} The FEMATOUR report (European feasibility study) shows energy consumption for accommodation facilities ranging from 120 to 300 MJ/guest depending on the season; it also shows the following distribution for the various uses:

Heating	13%
Air conditioning	35%
Food service	25%
Hot water	13%
Lighting	7%
Other (transport)	7%

Additional consumption for swimming pools: 26 MJ/guest.

^{vii} ANPA Estimate.

^{viii} ENEL, 1998.

APPENDIX – TOURIST DEMAND: ISTAT AND CIRM DATA

ANPA used the following aggregation criterion for the ISTAT categories:

Very much = Present
 Somewhat = Partially present
 Don't know = Uncertain
 Not very / not at all = Not present

The following shows the original data from the ISTAT survey and ANPA's processing of same:

Certain actions/measures have been identified for safeguarding the environment... How much would you appreciate having these actions/measures adopted by a hotel or, in general, by accommodation facilities? (Fig. 4.1)			
ISTAT data*		ANPA processing results	
Very much	71,5%	Present	71%
Somewhat	20,6%	Partially present	21%
Not much	1,8%	Not present	3%
Not at all	0,9%		
Don't know	5,2%	Uncertain	5%

* Base: 47,500,000 adult Italians

Does a hotel, or in general an accommodation facility, that decides to adopt measures to safeguard the environment produce an overall improvement in the quality of service offered to guests? (Fig. 4.2)			
ISTAT Data*		ANPA processing results	
Very much	52,6%	Present	53%
Somewhat	31,0%	Partially present	31%
Not much	5,2%	Not present	8%
Not at all	2,7%		
Don't know	8,5%	Uncertain	8%

* Base: 47,500,000 adult Italians

To what extent do you think hotels, and in general accommodation facilities, that adopt measures to safeguard the environment should be recognised with an environmental quality seal certified by a national government authority or the European Union? (Fig. 4.3)			
ISTAT Data*		ANPA processing results	
Very much	66,1%	Present	66%
Somewhat	22,7%	Partially present	23%
Not much	3,0%	Not present	5%
Not at all	1,5%		
Don't know	6,7%	Uncertain	7%

* Base: 47,500,000 adult Italians

APPENDIX – TOURIST DEMAND: ISTAT AND CIRM DATA

For figs. 4.4 and 4.5 relating to CIRM and ISTAT data, the aggregation criterion for the categories is as follows:

Very = Primary

Somewhat = Secondary

Little / Not at all / Don't know = Not considered

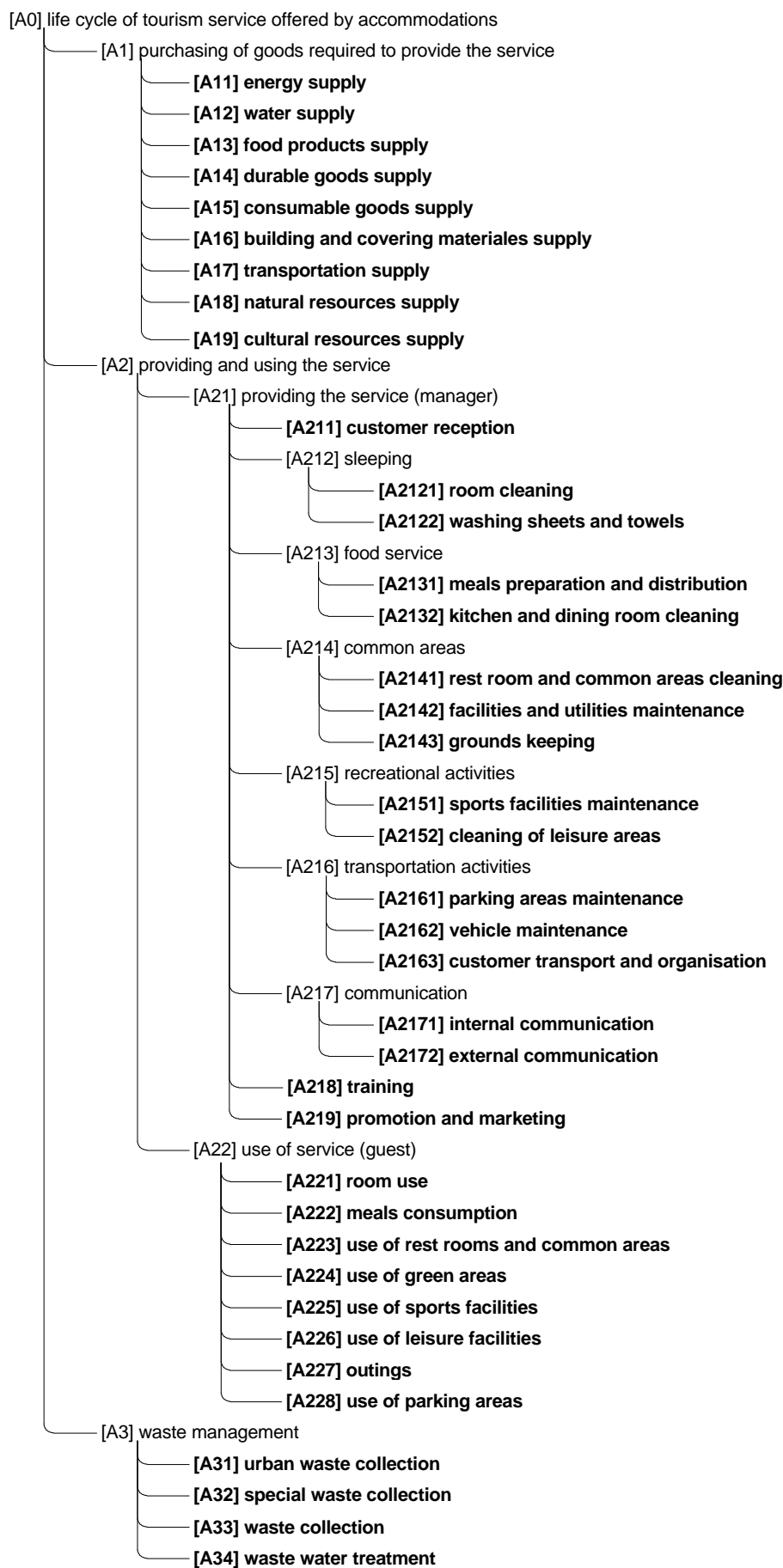
Thinking about your last vacation, how important were the following in your choice of accommodation facilities? (Fig. 4.4)					
CIRM Data *	<i>Very</i>	<i>Somewhat</i>	<i>Little</i>	<i>Not at all</i>	<i>Don't know</i>
Price	34,6%	42,9%	9,3%	5%	8,2%
Proximity to areas of environmental interest	45,6%	30,5%	8,4%	6,8%	8,7%
Variety of services offered	37,7%	35,2%	10,3%	8,5%	8,3%
Proximity to activity of interest	39,2%	32,7%	12,3%	7%	8,8%
Operation that respects the environment	32,4%	30%	11,4%	11,6%	14,6%
ANPA processing	<i>Primary</i>	<i>Secondary</i>	<i>Not Considered</i>		
Price	35%	43%	22%		
Proximity to areas of environmental interest	45%	31%	24%		
Variety of services offered	38%	35%	27%		
Proximity to activity of interest	39%	33%	28%		
Operation that respects the environment	32%	30%	38%		

* Base: 423 Italians who took a vacation in Italy with overnight stays in accommodation facilities

On the trip you took, how important were the following in your choice of accommodation facilities? (Fig. 4.5)					
ISTAT Data *	<i>Very</i>	<i>Somewhat</i>	<i>Little</i>	<i>Not at all</i>	<i>Don't know</i>
Price	24,8%	31,4%	13,8%	15,3%	14,6%
Proximity to areas of environmental interest	28,0%	14,1%	9,9%	35,8%	12,1%
Variety of services offered	25,4%	19,5%	13,2%	28,3%	13,5%
Proximity to activity of interest	35,8%	17,3%	9,9%	24,9%	12,1%
Operation that respects the environment	15,4%	15,1%	13,7%	35,5%	20,4%
ANPA Processing	<i>Primary</i>	<i>Secondary</i>	<i>Not Considered</i>		
Price	25%	31%	44%		
Proximity to areas of environmental interest	28%	14%	58%		
Variety of services offered	25%	20%	55%		
Proximity to activity of interest	36%	17%	47%		
Operation that respects the environment	15%	15%	70%		

* Base: 12,250,000 trips in Italy with overnight stays in accommodation facilities taken by Italians age 18 and over during the period January-June 2000.

ANNEX 1 – LIFE CYCLE OF THE SERVICE OFFERED BY ACCOMMODATIONS



ANNEX 2 – LIST OF SELECTED INDICATORS

MANAGEMENT INDICATORS

Indicators relating to the ‘PROVISION AND USE OF THE SERVICE’ phase

1. Presence of staff training and education activities

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A218 – Training A2171 – Internal communication	All

2. Presence of guest informational and awareness activities

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A218 – Training A219 – Promotion and marketing A2172 – External communication	All

3. Presence of an environmental operations manager

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A2171 – Internal communication	All

4. Presence of a registry of environmental service measures (see service indicators)

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
All	All

STRUCTURAL INDICATORS

Indicators relating to the “PURCHASE OF GOODS TO PROVIDE THE SERVICE” phase (many of these also influence the following phase)

5. Purchase of low-consumption light bulbs

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A15 – Supply of consumable materials	Energy consumption

6. Purchase of regional products

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A13 – Supply of foodstuffs A14 – Supply of durable goods A15 – Supply of consumable materials A16 – Supply of construction and roofing materials	Air emissions Energy consumption Resource consumption Greenhouse gas emissions Social and cultural aspects

ANNEX 2 – LIST OF SELECTED INDICATORS

7. Purchase of recycled paper products for offices, bathrooms, kitchens

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A15 – Supply of consumable materials	Discharge into bodies of water Resource consumption Energy consumption Waste production

8. Purchase of products in suitably sized containers and/or returnable containers

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A13 – Supply of foodstuffs A15 – Supply of consumable materials	Resource consumption Energy consumption Waste production Greenhouse gas emissions

9. Purchase of organically produced food products

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A13 – Supply of foodstuffs	Discharge into bodies of water Resource consumption Soil use/conservation Biodiversity Social and cultural aspects

10. Installation of double-flow-type toilets

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A14 – Supply of durable goods	Energy consumption Resource consumption

11. Installation of mixers for showers and sinks

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A14 – – Supply of durable goods	Energy consumption Resource consumption

12. Prohibition against purchase of deodorising products for bathrooms

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A15 – Supply of consumable materials	Waste production Soil use/conservation

13. Prohibition against purchase of artificial pesticides and herbicides

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A15 – Supply of consumable materials	Energy consumption Resource consumption Biodiversity Soil use/conservation Discharges into bodies of water

ANNEX 2 – LIST OF SELECTED INDICATORS

14. Prohibition against purchase of products containing CFC, HCFC and Halon

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A15 – Supply of consumable materials	Air emissions Greenhouse gas emissions

Indicators relating to the “PROVISION AND USE OF THE SERVICE” phase

15. Presence of saving procedures in the use of detergents/ cleansers

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A2121 – Cleaning of rooms	Discharges into bodies of water
A2122 – Laundry	Resource consumption
A2132 – Cleaning of kitchens and dining rooms	
A2141 – Cleaning of restrooms and common areas	
A2152 – Cleaning of recreational areas	

16. Presence of energy-saving procedures (no TV on stand-by, timer switches)

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A221 – Room use	Energy consumption
A223 – Restroom and common area use	
A224 – Use of recreational areas	

17. Implementation of a transport service for guests arriving by public means of transport

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A211 – Guest reception	Energy consumption
A2163 – Organisation and management of guest transportation	Air emissions Greenhouse gas emissions

18. Absence of foods served in individually packaged portions

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A2131 – Meal preparation and distribution	Energy consumption Resource consumption Waste production

19. Presence of procedures for controlling the thermal efficiency of the facility

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A2142 – Equipment and utilities maintenance	Energy consumption Resource consumption Air emissions

Indicators relating to the “WASTE MANAGEMENT” phase

20. Presence of differentiated waste collection systems

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>

ANNEX 2 – LIST OF SELECTED INDICATORS

A31 – Urban waste collection A32 – Special waste collection A33 – Final awarding	Waste production Soil use/conservation
--	---

21. Presence of systems for recovery of used grease and oils

<i>Primary reference activities</i>	<i>Primary environmental reference aspects</i>
A32 – Special waste collection A33 – Final awarding	Waste production Soil use/conservation

PERFORMANCE INDICATORS

22. Consumption of electrical, thermal, and mechanical energy (MJ/guest)

23. Potable water consumption (litres/guest)

24. Consumption of detergents and other chemical products (gr/guest)

25. Waste production (kg/guest)