ANNEX I:

1. Índex de Pressió Humana
2. Estacionalitat del Turisme
3. Estabilitat Laboral
4. Evolució dels salaris
5. Accés a l'Habitatge
6. Parc Mòbil de Vehicles
7. Platges:freqüentació i saturació turística
8. Canvis d'Ús del Sòl
9. Espais Naturals Protegits
10. Consum Urbà d'Aigua
11. Emissions de CO2 i Consum Energètic Brut
12. Reciclatge de Residus

1. HUMAN PRESSURE INDEX

Demographic Indicator
Pressure Indicator
Level: Island, Balearic Islands
Period:1994-2002

The human pressure index has been rising very slowly, with a yearly increase of 1,02%; this variation has been accompanied by an increase in the resident population and a progressive decrease in the floating population.

Trend observed: The evolution of human pressure in the period analysed is shown in two dimensions: on one hand, an increase in the resident population of the Balearic Islands of between 2% and 3% annually has been noted as of 1996 and on the other hand, a sharp decline in the floating population due to the falling number of tourists and a decrease in their average length of stay as of 2000. The overall trend of the HPI shows a slight increase, reaching a peak of 1,136,772 persons/day in the year 2000.

Desired Trend: The human pressure index reflects the pressure on a specific territory. It would be desirable if pressure stabilised and thus the progressive environmental, social and economic degradation would be prevented.

Description: The indicator attempts to reflect the approximate total number of persons who can be found in the Balearic Islands per month and includes both the resident as well as the floating population.

Methodology: The Human Pressure Index is calculated by adding together the resident and floating population at a specific moment as from:

Resident Population = 1991 and 2001 census and annual corrections in the municipal census.

Floating Population = Floating population in the regulated offer (FPRO) + the rest of the floating population (RFP).

FPRO = % Monthly Occupancy * Number of tourist beds

RFPMONTHLY = [(Passengers arriving daily– Passengers departing daily)AEROPLANE+ (Passengers arriving monthly– Passengers departing monthly)SHIP]- (FPRO)

2. SEASONALITY IN TOURISM

Demographic Indicador
Pressure Indicator
Level: Balearic Islands
Period:1994-2002

Tourism in the Balearic Islands shows a high level of seasonality in the summer season. In high season 2002, the total number of tourists was over 1.88 times the annual average

Trend observed: In recent years, seasonality in tourism has been rising steadily in high season with a 9.04% growth from 1999 to 2002. This growth during high season has led to an equivalent decline in the medium season. Low season has remained steady and is very low throughout the entire series.

Desired trend: The excessive concentration of tourism in high season has an impact on the increase in human pressure in a specific period. It would be desirable for the same number of tourists to be spread out among the three seasons.

Description: From the number of tourists during each one of the three tourist seasons it is possible to extrapolate the impact of seasonal tourism on the Balearic Islands. The tourism seasonality index reflects the degree of seasonality in each season in relation to the average of the three seasons into which the tourist year is divided.

Methodology: To obtain the tourism seasonality indicator, data from the publication "La Despesa Turística" on the number of visits during each tourist season has been used and has been divided by the average length of stay per season which results in the total approximate number of tourists per season.

According to this methodology, if the number of tourists were spread out homogeneously, the tourism seasonality indicator would be equal to 1 throughout the year's three tourist seasons (high-medium-low).

3. JOB STABILITY

Socio-Economic Indicator
Indicador of State
Level: The Balearic Islands
Period:1989-2001

Employment contracts in the Balearic Islands clearly demonstrate the Balearic Islands' capacity for generating employment on one hand and on the other the consolidation of temporary contracts as a norm, a characteristic which is repeated year after year

Trend observed: In the Balearic Islands, job stability went from 0.2 in 1989 to 0.10 in 2001, i.e., 90.22% of new job contracts signed in 2001 were temporary contracts, compared to 79.86% in 1989. The minimum statistics of 1998 and 1999 are worth noting in the evolution of this indicator, with job stability indices of 0.04 and 0.05 respectively. In general terms, the high degree of precariousness characteristic of these new contracts is evident.

Desired trend: The level of 0.2 attained in 1989 is the desired minimum. The objective is an increasingly higher job stability indicator; therefore the closer to 1 the indicator is, the more stable the job market situation in our islands is, as 1 is the maximum job stability index.

Description: This indicator analyses job contracts in order to understand job stability. Job stability is defined as long-term or temporary contracts offered in the Balearic Islands over the total number of job contracts. The higher the percentage of long-term contracts, the lower job precariousness is.

Methodology: To attain this indicator, the number of temporary contracts is compared to the total number of contracts.

Job Stability Indicator = Indeterminate number of contracts /Total number of contracts

4. EVOLUTION OF WAGES

Socio-Economic Indicator
Indicator of State
Level: Balearic Islands
Period:1989-2001

The period analysed shows that national wages are clearly higher than wages in the Balearic Islands and that the gap widens every year. The year 2000 is worth noting in the general tendency, as in this period a notable increase in wages was produced. This tendency shows a marked reverse in 2001, both at the national as well as local level.

Trend observed: National and local movements in average monthly wages has been shown in parallel form, although wages in the islands' are consistently below the national average. The sharpest increase in average monthly wage per worker occurred in the year 2000 at both the national as well as local level. The gap between national and local wages has been increasing since the beginning of the period analysed and has gone from 5.46% in 1989 to 10.73% in 2001.

Desired trend: The ideal result would be if the average wage per worker in the Balearic Islands were on a par with the national average and in the second place, that the annual increase in wages were equivalent to the increase in wealth,in terms of the Balearic Islands' GDP.

Description: This indicator studies the evolution of the average monthly wage per worker in constant euros since 1999. The objective of the indicator is to reflect the evolution of Balearic residents' wages for their subsequent comparison to other social indicators, such as the evolution of housing prices, for example, to see if both evolve correlatively.

Methodology: Average wages in all sectors, both in the Balearic Islands as well as at the national level,have been extrapolated from historical data from the National Survey of Wages for different sectors (agriculture, non-construction industry, construction and services) and the values in constant euros in 1999 has been obtained from INE data on inflation.

5. ACCESS TO HOUSING

Socio-Economic Indicator
Indicator of State
Level: Balearic Islands
Period:1990-2001

In spite of the slight rise in gross disposable family income per person (GDFI), the last 4 years has seen a sharp increase in housing prices, provoking an increase in the difficulty of acceding to housing, especially in cases of housing purchases.

Trend observed: The first years of the period were characterised by very high interest rates, which meant that mortgages were not generally used. Access capacity to housing purchases (ACHP) meant an average GDFI of 109.4% per person in the period from 1990 to 1994. As of 1994, declining interest rates led to an improvement in the situation. Nevertheless, as of 1997, the trend was reversed and access capacity to housing decreased as the principal consequence of the increase in housing prices per m2: from 1997 to 2001 the percentage of income devoted to housing purchases increased by 67.2%. Access capacity to housing rental remained stable throughout the entire period studied, oscillating between 28.7% and 32.2%.

Desired trend: The percentage of income (GDFI) devoted to housing should fall to below 50% for housing purchases and below 30% for rentals.

Description: To define access capacity to housing from the relationship between the GDFI per person and mortgage payments for the purchase of housing. It also shows the GDFI per person as regards housing rental. The objective of this indicator is to reflect the efforts necessary at the individual level to accede to housing purchases or rentals. It is necessary to take into account that the average number of people per housing unit in the Balearic Islands is 2, according to the Council of Public Works, Housing and Transport and therefore the cost of housing is divided among family members.

Methodology: The Access to Housing Index has been divided into two different indices:one index that refers to housing purchases, which is more complex,and one that refers to rental. Both indices reflect the necessary cost of access to housing, either through purchase or rental, and the disposable gross monthly family income per person (GDFI). Gross disposable family income includes the following components:

Wages (+)

Non-wage income (+)

Family surplus (+)

Social security benefits (+)

Social security dues (-)

Income and property taxes (-)

The methodology for calculating Rental AHI is simple as the data base is expressed in the same units of measure (monthly payments) and therefore no prior treatment is necessary.

Purchase AHI is calculated from the monthly GDFI and monthly payments earmarked to paying mortgages for housing purchases. The methodology established for calculating monthly mortgage loan payments is the same as that used by the Ministry of Development.

$$AHI^{c} = \frac{\text{Monthly mortgage loan payments}}{\text{Monthly GDFI per person}} \times 100$$

6. NUMBER OF VEHICLES IN USE

Socio-Economic Indicator
Pressure Indicator
Level: Island, Balearic Islands
Period:1998-2001

The annual increase in the number of vehicles in use is growing at a rate of 4%. This increase reached a peak in 2001 with a ratio of 831 vehicles per 1000 inhabitants, making the Balearic Islands the community with the highest index in Spain.

Trend observed: The number of vehicles in use has been rising constantly since 1989 and has gone from 450,000 vehicles in 1989 to over 700,000 vehicles in 2001. This gradual increase has been accompanied by a stabilisation in the number of vehicles per 1000 inhabitants index, a fact which demonstrates that the increase in population has been more significant than the increase in number of vehicles.

Desired trend: To reverse the upward trend, decrease to a minimum of 400 vehicles per 1000 inhabitants (EU average) and promote the use of public transport instead of private transport (see next page).

Description: This indicator analyses the number of vehicles in circulation in the period between 1989-2001. It is a pressure indicator and establishes an approach to the level of motorization of the Balearic society.

Methodology: The number of vehicles in circulation per year is taken from the General Direction of Traffic data,and uses the difference between the number of vehicles registered and the number of vehicles retired from use. This data does not include rental vehicles or motorcycles.

Vehicles lorries + buses + passenger cars + motorcycles + industrial tractors

Vehicles/1000 inhabitants = (vehicles * 1000)/resident population

As regards hire vehicles, we have data from the Association of Non-driver Vehicle Companies of the Balearic Islands, which calculates the estimated number of hire vehicles in use each year, as it has not been possible to obtain data from the General Direction of Traffic about these types of vehicles.

7. BEACHES: TOURIST USE AND SATURATION

Socio-Environmental Indicator
Indicator of State
Level: Beaches
Period:2001-2002

Palma, Benirràs, Alcúdia and Son Saura are the beaches with the highest saturation values among the 18 beaches studied. According to the 2001 Tourism Saturation Index (TSI) these beaches were already the most saturated.

Trend observed: The beaches with the highest saturation indices are urban beaches, except Benirrás. More or less natural beaches and beaches that have low levels of construction have the lowest TSI values. The beaches of Alcúdia and Palma on the island of Mallorca have the highest levels of use, with over half of the total users. As regards user density, Benirràs, Son Saura, Cala Agulla and Ses Fonts de n'Alis beaches have the highest values.

Desired trend: Urban beaches, such as the Palma or Alcúdia beaches should have TSI values below 2.00 and values for natural beaches with low levels of construction should be below 1.20. The islands of Minorca and Formentera have values that are closest to optimum.

Description: The Saturation Index measures the degree of saturation or congestion of beaches in function of three main aspects: density of daily users, transport used by visitors and urbanisation of the adjacent coastal area. The results oscillate between 0.5 - 5. The most saturated beaches and therefore the most unsustainable beaches are those with higher TSI values. User density (UDI) is compared to the minimum standards established by the Tourist Offer Regulation Plan of 7.5 m2 per user.

Methodology: This indicator has been applied to 18 beaches on the Balearic coastline which were selected according to type (urban, semi-urban and natural). Data on beach surface area (useable beach), urbanisation, density of users and type of transport used has been included in this indicator.

$$ITS = IT^{TRANSPORT} + (2XCU^{URBANISATION}) + \frac{7.5\ m?}{UDI}$$

TItransport: This expresses in fractions of one the percentage of visits to beaches in motorised transport from the site of origin (t. no m.=0; t. m.public=0,5; t. m. private=1). The result is higher when more visits in private and public motorised transport is used.

CU urbanisation: This expresses in fractions of one the percentage of coastline adjacent to the urbanised beaches (500 m).

UDI: This expresses user density per m2 of disposable beach area per user and is measured when the number of visitors is at its peak.

8. ACCOMMODATION CAPACITY

Demographic Indicator
Pressure Indicator
Level: Balearic Islands
Period:1991-2001

The total accommodation capacity in the Balearic Islands has not stopped growing, an increase of 1.52% per year. This increase is due in large part to the rise in residential accommodation.

Trend observed: Total accommodation capacity reached a peak of 1,884,505 in 2001, an increase of 16.25% compared to 1991. The 2.06% annual growth in residential accommodation capacity is the predominant cause of this increase, as tourist accommodations have remained more or less stable in the last 10 years, and show a slight annual increase of .63%.

Desired trend: Controlling accommodation capacity is one of the keys to the efficient management of human pressure on resources. The lack of control in this area is the main vector leading to unsustainable situations. The number of beds should be stabilised through declassifying urban land and promoting housing rehabilitation instead of incentivating new constructions.

Description: Total accommodation capacity (TOAT) is calculated from residential accommodation capacity (RAC) and tourist accommodation capacity (TAC).

Methodology: This indicator is calculated by obtaining the sum of the Residential Housing Capacity Indicator (number of housing units multiplied by 2.97) and the Tourist Accommodation Capacity (number of regulated tourism beds). The number of non-regulated beds is obtained through residential accommodation.

RAC= Total housing units * 2,97

TAC= Number of tourist beds

TOAT= RAC + TAC

9. PROTECTED NATURAL SPACES

Environmental Indicator
Response Indicator
Level:Municipalities, Island,
Balearic Islands
Period:1988-2002

Although protected surface area has increased considerably in recent years, it is still far from the goal of 12% protected territory.

Trend observed: Declaring protected natural spaces has taken place very gradually from 1998 to 2000. In recent years, protected surface area has increased notably as a conse•uence of the establishment of the Llevant Nature Park and its associated marine reserve.

Desired Trend: To achieve the goal recommended by the Brundtland Report in reference to the percentage of Protected Natural Spaces, which considers 12% as optimum for ensuring the protection of the biodiversity, traditional and cultural activities. This would entail declaring the Tramuntana Mountains a Protected Space.

Description: This indicator expresses the percentage of land and marine surface area included in land protected by the Conservation of Natural Spaces, Flora and Wildlife Act of 4/89 on total surface land area and the surface area of the Balearic marine platform.

Methodology: The percentage of protected land surface has been obtained from the surface area of natural spaces in the Balearic Islands land area. The percentage of protected marine area is obtained by adding marine reserve area and the surface area of the Balearic platform (the Balearic platform is considered the marine space between the coastline and the bathimetric 200 benchmark ceded by IMEDEA

10. URBAN WATER CONSUMPTION

Environmental Indicator
Pressure Indicator
Level:Municipality, Island,
Balearic Island
Period:1998-2001

In recent years, urban water consumption per person/day has fallen 5.5% in the Balearic Islands

Trend observed: The population has not stopped growing in the Balearic Islands since 1998 and parallel to this increase is an increase in urban water consumption. A change in the consumption rate can be observed after 1999 when consumption reached a peak of 204/lit/inh/day. From this point onwards, water consumption per capita stabilised and even fell.

Desired trend: Water consumption per capita should be reduced until the standards stipulated by the World Health Organisation of 150 litres per person and day have been attained.

Description: This indicator reflects the evolution of urban water consumption in the Balearic Islands since 1998.

Methodology: Daily consumption or use per capita is calculated from total consumption divided by the entire population and by 365 days a year. The resulting unit is litres/person/day.

Water consumption/person/day = Total Consumption/(Pl*365)

To calculate water consumption in 1999 and 2000 for all the Islands, data has been extracted from the Hydrological Plan of the Balearic Islands Report, but in this case the yearly increase in Palma has been used and not the average. Subse•uently, consumption for the rest of the islands is estimated for 1999 and 2001 from the data for 1998 in the above report and the consumption data for Palma.

11. CO_2 EMISSIONS

Pressure Indicator
Environmental Indicator
Level: Island, Balearic Islands
Period:1989-2001

CO_2 emissions in the Balearic Islands in 2001 surpassed by 42.4% the emissions permitted by the Kyoto Protocol for 2010. Nevertheless, emissions have stabilised over the last three years.

Trend observed: Emissions remained below the Kyoto Protocol levels from 1989 to 1993, but as from 1994, emissions underwent an accentuated growth. The emission threshold for 2010 permitted by the Kyoto Protocol was surpassed in 1995. After 1999, the situation stabilised once more and the rate of growth for emissions moderated. On the other hand, the use of clean energy sources has gone from 0.107% in 1989 to 0,123% in 2001, as regards total energy consumption.

Desired trend: Emissions should fall to 1994 levels in order to comply with the stipulations set forth in the Kyoto Protocol for 2010. According to the VI Community Action Programme on the Environment (Decision 1600/2002 CE of the European Parliament and Council of July 22, 2002) 12% of global energy use should be obtained from clean energy sources.

Description: This indicator calculates CO_2 emissions from fuel consumption in the Balearic Islands. The maximum level of emissions permitted by the IPCC is used as a referent and annual emissions are compared to the maximum emissions permitted for the year 2010 stipulated by the Kyoto Summit Meeting (1997).

Methodology: CO_2 emissions produced by the consumption of combustible fuel are calculated from the Carbon Emission Factors (CEF) of each of the different types of combustible. Once the amount of carbon emitted from these products during combustion is obtained, we can calculate the amount of CO_2 liberated in the atmosphere thanks to a conversion factor (established by the IPCC) which converts carbon tonnes into CO_2 tonnes.

12. RESIDUAL WASTE RECYCLING

Environmental Indicator
Response Indicator
Level:Municipal, Island,
Balearic Island
Period:1998-2001

The percentage of residual waste recycling in 2001 fell 22.6% compared to 2000 due in large part to the higher rate of residual waste production.

Trend observed: The number of selectively collected tonnes of residual waste has increased in the last four years, but residual waste production has also increased notably.

Desired trend: To reduce total residual waste production. The proportion of recycled residual waste should increase until it reaches 56% of the organic amount, 30% for paper, 41% for glass and 22% for light packaging, as proposed by the Sectorial Direction Plan for Urban Residual Waste Management in Mallorca

Description: The residual waste recycling indicator aims to reflect the percentage of material recycled compared to the total collected.

Methodology: Calculations are obtained from total collected residual waste (mass residual waste) and are based on the supposition that all selectively collected residual waste is really being recycled. The municipal study is based on data from the Residual Waste Reduction Department and the annual evolution of selectively collected residual waste at the municipal level is obtained.