

Paris region facing the climate change challenge

The first climate footprint study for the world's
top tourist destination

A need for concrete tools to enhance sustainability



Paris Ile-de-France Key points

With 32.7 million arrivals and 68.3 million overnight hotel stays in 2012, Paris Ile-de-France is the **world's most popular tourist destination**

Tourism, the essential sector of the regional economy: more than 500,000 people are employed by companies whose business activities focus on tourism.

This figure represents 9.5 % of the total salaried workforce in the Ile-de-France region.

Revenue from tourism : €9.8 billion was spent by international tourists arriving by air, reflecting an increase of 5.7 %

Sustainable Tourism and Quality issues



As the world's number one tourist destination, Paris Ile-de-France has to develop a stronger strategy about **Sustainable Tourism** issues.

Internationally speaking, in order for Paris and its region, to maintain its rank as top leader in this field, **quality**, based on sustainable values, needs to be improved.

Paris region facing the climate change challenge



Prospective study on the future of tourism in our destination, including a Bilan carbone (**carbon footprint**) assessment

*Diagnostic tool developed by **ADEME** (French Agency for Environment and Energy Management).*

It is an accounting method for GHG emissions for any organization, industrial or tertiary companies, public administration, communities or territory

ADEME



**PARIS
REGION**
TOURIST BOARD



Bilan carbone (carbon footprint) assessment of tourism in the Paris region



17.6 million teqCO₂ of GHG emissions due to the tourism activity in Paris and its region

Tourism sector in the Paris region has a **very high energy intensity** (responsible for almost 30 % of GHG emissions)

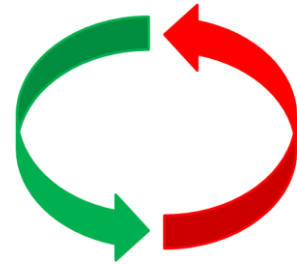
The study evaluates the economic **vulnerability** of the tourism sector



Set up of a CC **mitigation policy** for the tourism industry in order to prepare the stakeholders to its impacts

Scopes

- Arrivals and departures of international and French tourists
- Departures of the region's inhabitants for travel/holiday
- Business and Leisure tourism



The studied sectors:

- transportation (air, route, etc.),
- accomodation,
- transportation at the destination,
- activities,
- restaurants, etc.

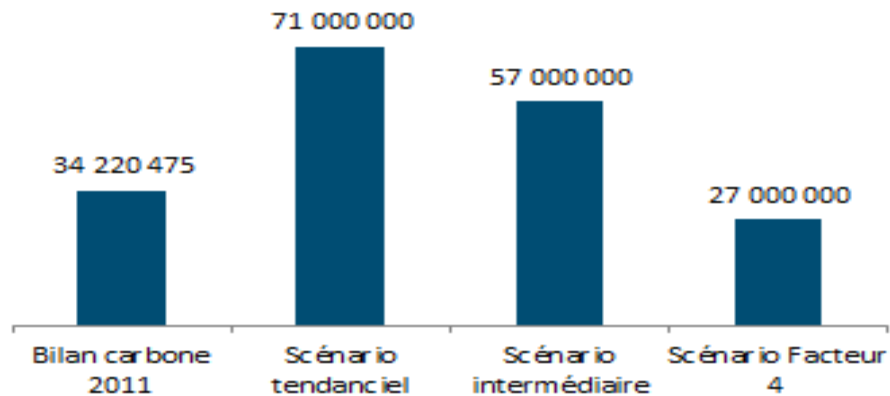


Nature	Origine	Motif	Postes d'émissions						
			Transport A/R	Infrastructures de Transport	Hébergement	Activités	Mobilité sur place	Restauration	Déchets
Réceptif	Etrangers	Affaires							
		Loisirs							
	Français	Affaires							
		Loisirs							
Emissif	Franciliens	Affaires							
		Loisirs							
Excursionnistes	Franciliens	Loisirs							
En dehors du périmètre				Inclus dans le périmètre d'évaluation					

3 adaptation scenarios for 2050

- Business as usual
- Intermediary
- Factor 4: division of the GHG emissions by 4 by 2050: France's commitment (energy law 2005)

Nombre de voyages aller-retour



Take action by adopting concrete tools

An urgent need for **concrete measures** in order to help our stakeholders of the different segments of the tourism chain (accommodation, transport, restaurants, museums, historic sites and monuments, leisure parks, etc.) to **adapt** their activity to the effects of climate change

Environmental management tools : hotel energy solutions, hybrid or electric car park, water resource management, waste management, etc.



- **Key message : Sustainability can also enable significant benefits**

Enhance and optimize environmental performance of the accommodation sector

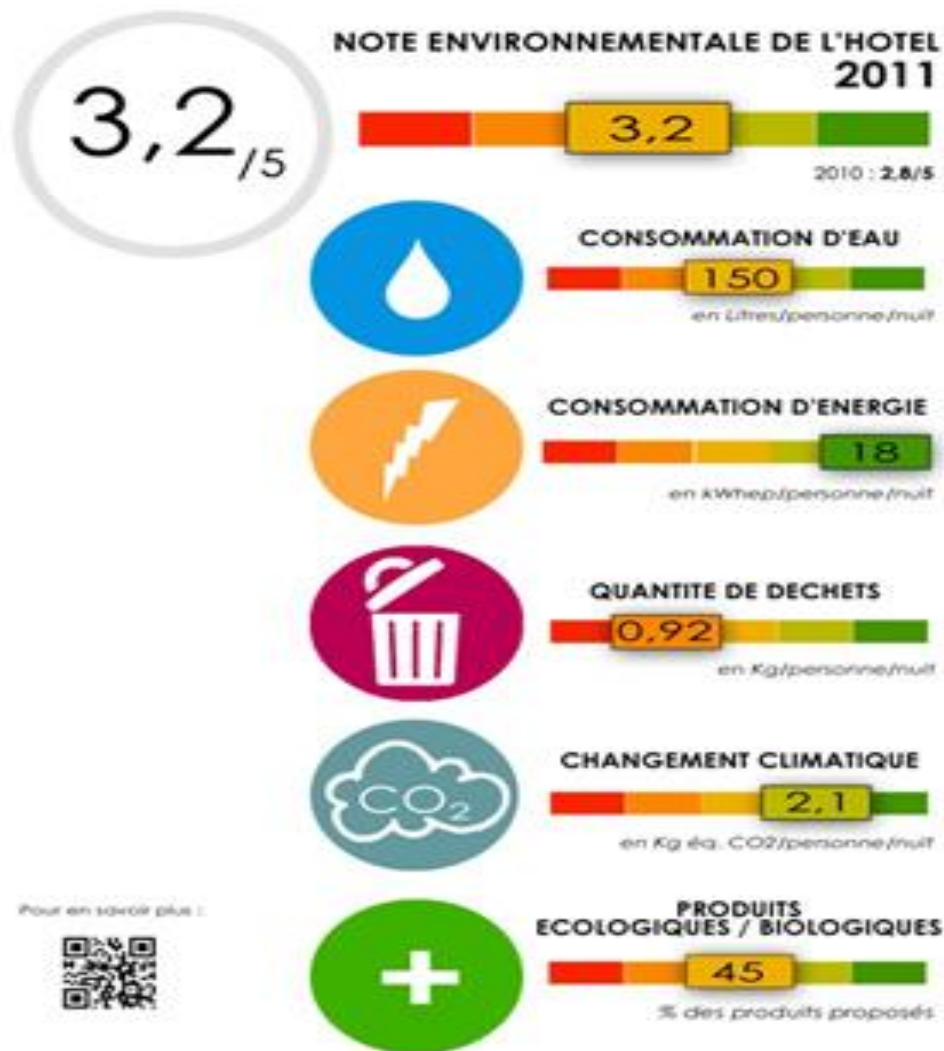
Main objective :

improve the stakeholders' **awareness** of the impacts of climate change on the tourism industry
+ How to **reduce expenses**

An innovative web tool application developed by *EVEA Tourisme*:

- enables very precise analysis of the hotel's **expenses** and its **environmental footprint**. A module for simulations is integrated into it, and it also permits to set up action plan on several years
- helps to **communicate** about the environmental performance to the customers, the hotel staff and the decision-makers of the country, thanks to the **environmental tag**
- *Facilitate the obtaining of European Eco-label*
- *Provide a tool for managing a network, territory or chain*

The Environmental tag



- Project born in 2011 launched by the French Ministry of Ecology based on the environmental performances and criteria of an overnight stay :
- 5 indicators

The criteria used for monitoring and assessment in France



Water consumption



Energy consumption



Amount of Waste generated



Emissions of greenhouse gas



Percentage of ecofriendly and organic products

The economic criteria:

✓Annual cost

✓Investments

Assessment by hotel, by post, by practice and equipment

Partnership

Public institutions and NGOs

working in the tourism and the climate change field : Paris region council, ADEME, local energy management agencies, etc.

Private stakeholders :

accommodation
transport
restaurants, etc.



Objective : identify together and put to the test measurements and tools facilitating the world's most popular tourist destination's adaptation to the impacts of climate change

July 8: **Climate change and Tourism**

Ile-de-France Regional Council

Thank you for your attention!

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Tourism Businesses Initiatives on Energy Efficiency and Management



Workshop, Brussels, 23 June 2014

Climate Change Mitigation through Tourism Energy Efficiency

Sarah Huber, Project Manager, Foundation for sustainable development in mountain regions



Network of European Regions for
a Sustainable and Competitive Tourism

NECSTouR



Fondation pour le développement durable
des régions de montagne

Valais and Tourism



12'000'000 overnight stays / year

10% of employment

15 % of GDP (hotels/restaurants)

Well known resorts :

Zermatt
Loèche-les-Bains
Crans-Montana
Verbier
Saas-Fee



Valais and Energy

Before 2020

- - 5% on final energy consumption
- -18% on fossil energies consumption
- +/- 0% on electricity consumption
- +10% indigenous production of renewable electricity
- +100% indigenous production of renewable thermic energy

Reference year 2010



Various forms of support to private sector

- Wide range of subsidies

- Expertise and innovation



- Exchange of best practices www.hotelpower.ch

- Label Valais Excellence



A good practice : Maya Boutique Hotel



Maya Boutique Hotel – In a few words

- Located at 1'300 m altitude, 20 mn from the city of Sion
- 8 double rooms
- Opened in 2012
- A global concept allying respect of the environment, economic efficiency and social responsibility



Maya Boutique Hotel – Actions and success

- The first hotel built entirely with straw bales (55 tons)
- All materials are natural
- Very low energy needs
- Wood oven and thermic solar energy
- All furniture hand made with local wood
- Cuisine based on local seasonal products
- Sauna heated by solar energy and financed by crowd funding
- Future projects : emphasize the air quality of the region, electric cars to visit the valley



Maya Boutique Hotel – Lessons learned

- Subsidies and incentives are available but procedures are too complicated
- Mentalities need to evolve to go from individual initiatives to collective commitment
- New ways of financing ideas have to be found
- A commitment for sustainable development is positive but not yet decisive in the choice of customers



A good practice : FerienArt Resort & Spa



FerienArt Resort & Spa – Actions and success

- First Minergie Hotel in 2000
- Since 2012 engaged in a three steps program to reduce CO2 emissions
- Monitoring of water and energy consumptions
- Furniture in local wood
- Priority in the ecological cleaning products
- 'Eco-team'



FerienArt Resort & Spa – Lessons learned

- Economic viability (resilience) is essential and energy efficiency measures can contribute
- Employees involvement and commitment are essential





Fondation pour le développement durable
des régions de montagne

Pré d'Amédée 17
CH - 1950 Sion

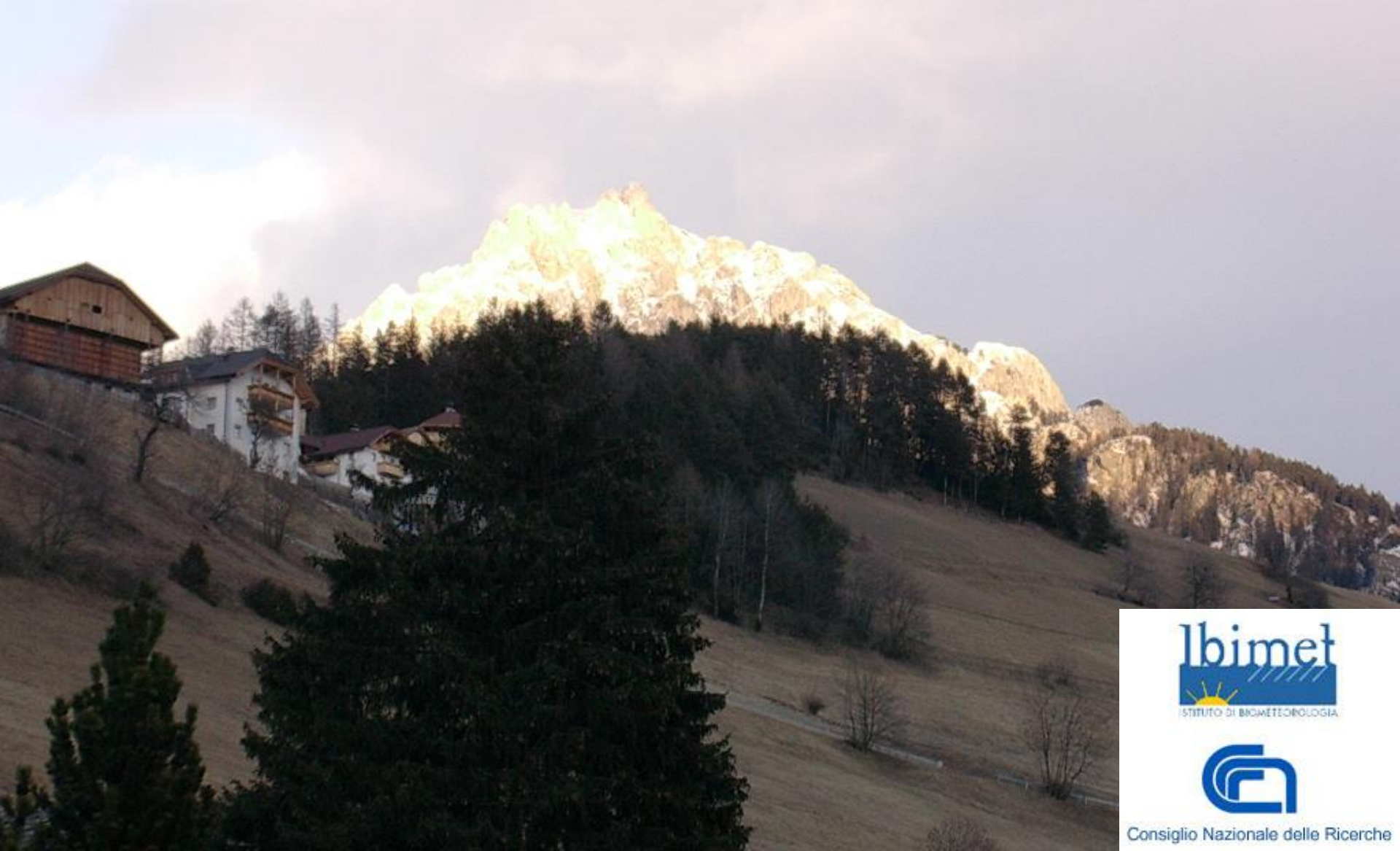
Tél +41 27 607 10 80
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CLIMATE CHANGE MITIGATION THROUGH TOURISM ENERGY EFFICIENCY

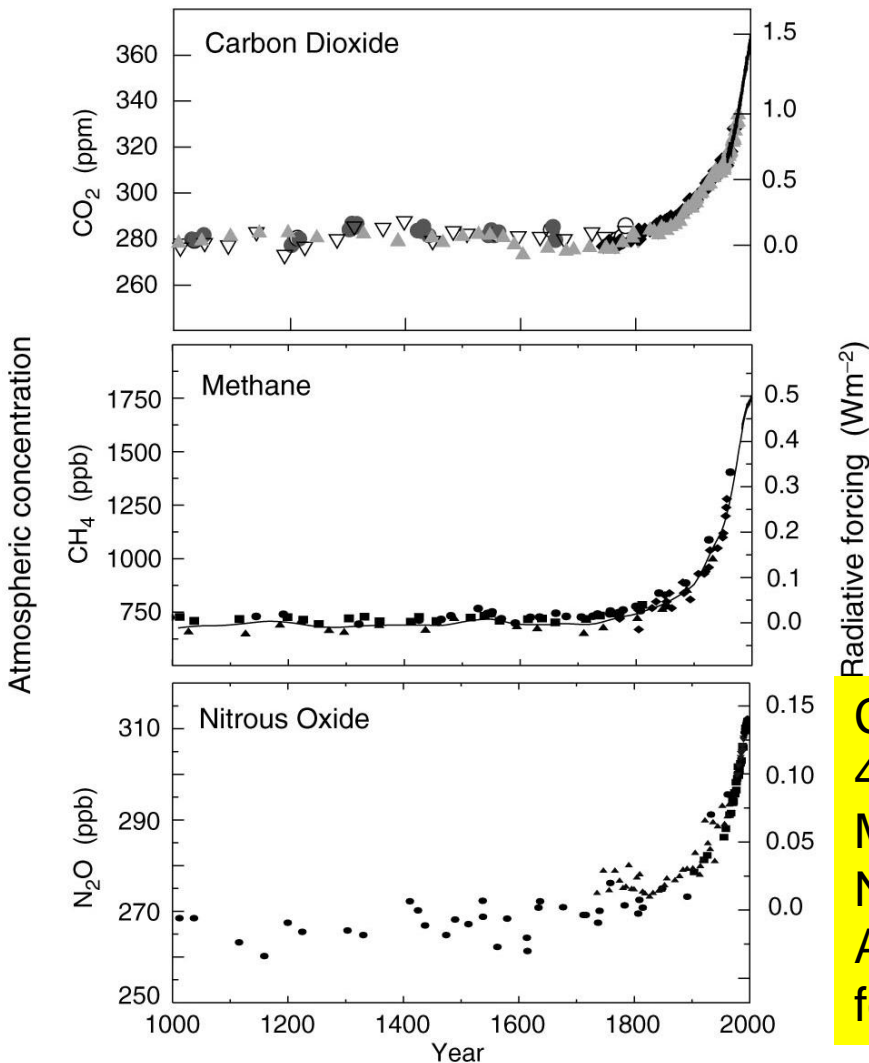
Antonio Raschi, CNR – Institute of Biometeorology, Firenze, Italy



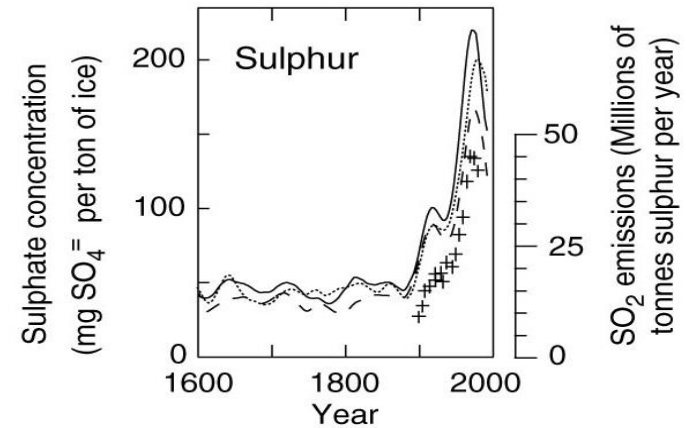
Consiglio Nazionale delle Ricerche

Human activities have modified the composition of atmosphere since the beginning of industrialization

(a) greenhouse gases

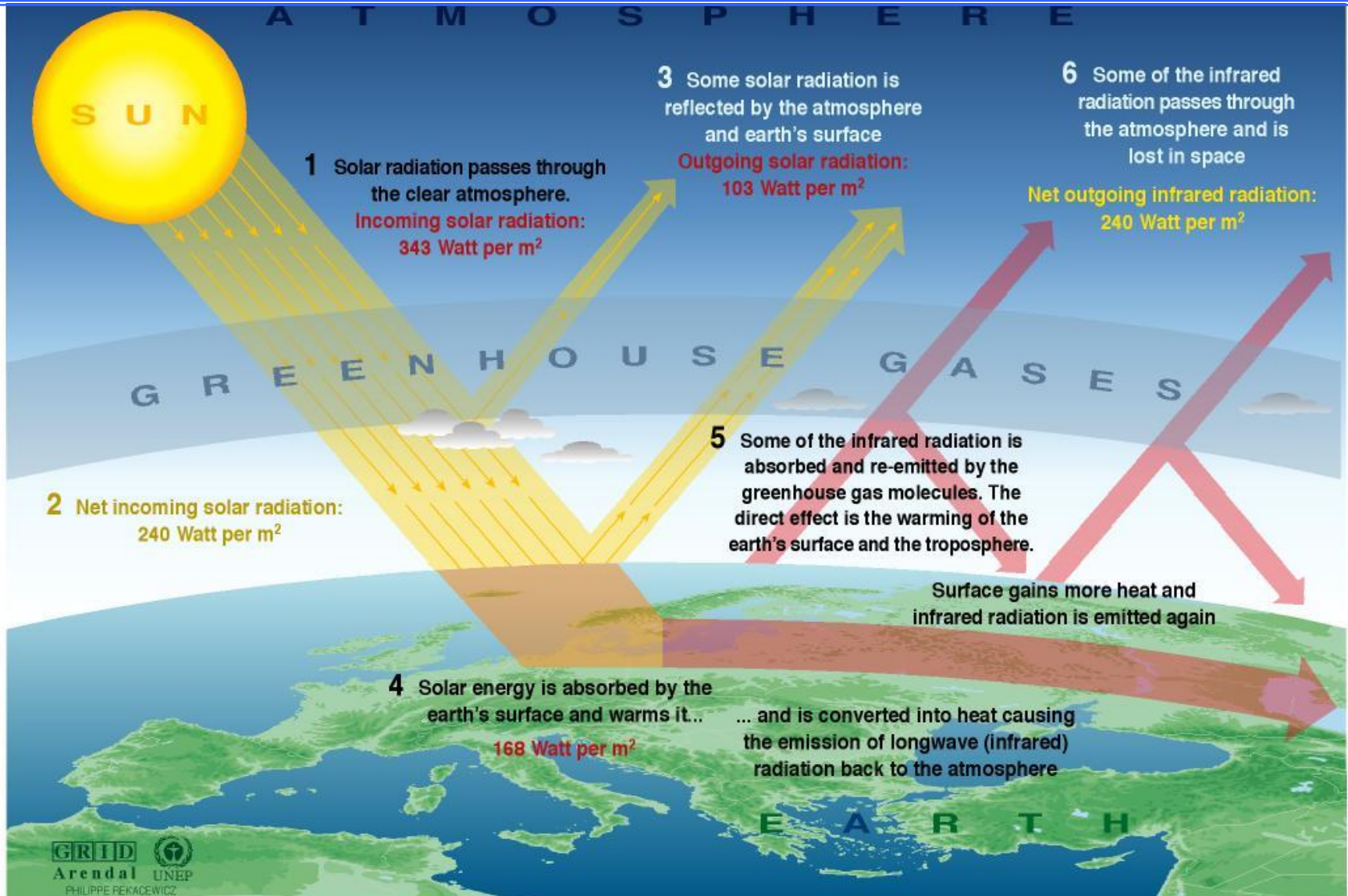


(b) Sulphate aerosols deposited in Greenland ice



CO₂ increased by more than 30%, reaching 400 ppm in 2014.
Methane by 150%
N₂O by 17%
All these gases increased the radiative forcing

Greenhouse effect



Sources: Okanagan university college in Canada, Department of geography, University of Oxford, school of geography; United States Environmental Protection Agency (EPA), Washington; Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge university press, 1996.

SOME THINK IT IS A SOMEHOW “NEW” TOPIC

1822 Hypothesis by FOURIER

1896 S. ARRHENIUS examined the role of CO₂ emissions in increasing temperatures

1930 G.S.CALLENDAR debated the increase in temperature in relation to industrial pollution

1956 G. PLASS wrote that human activities were causing an increase in global temperature

1958 C.D. KEELING started regular CO₂ concentration measurements on Mauna Loa

1966 National Academy of Sciences in USA linked human activities with global heating

IS IT REALLY NEW?

Relationships between climate change and tourism are multifaceted and tangled.

Tourism is something complex, and also ecosystems

Direct effects

Tourism activities contribute to Climate Change through Greenhouse gas emissions

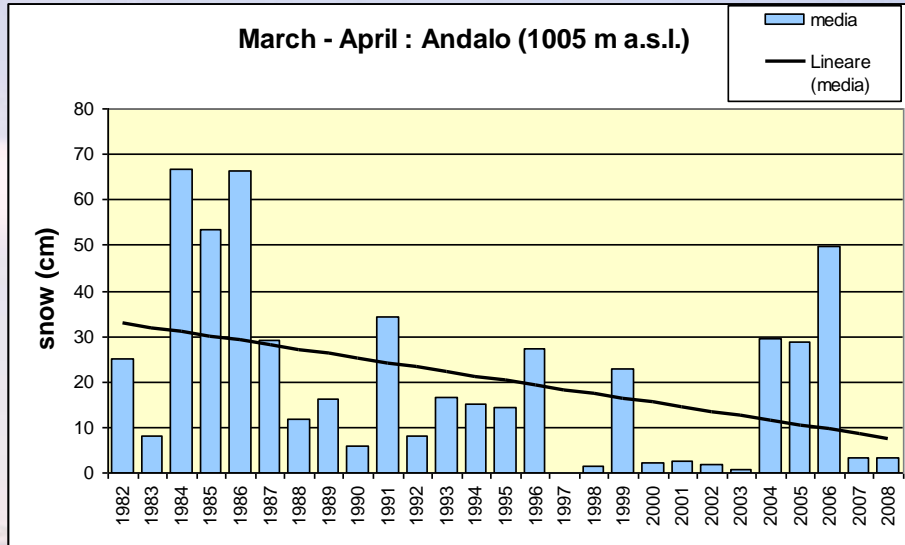
Tourism in different areas can undergo changes in consequence of climate change (ex. Decrease in snow cover)

Indirect effects

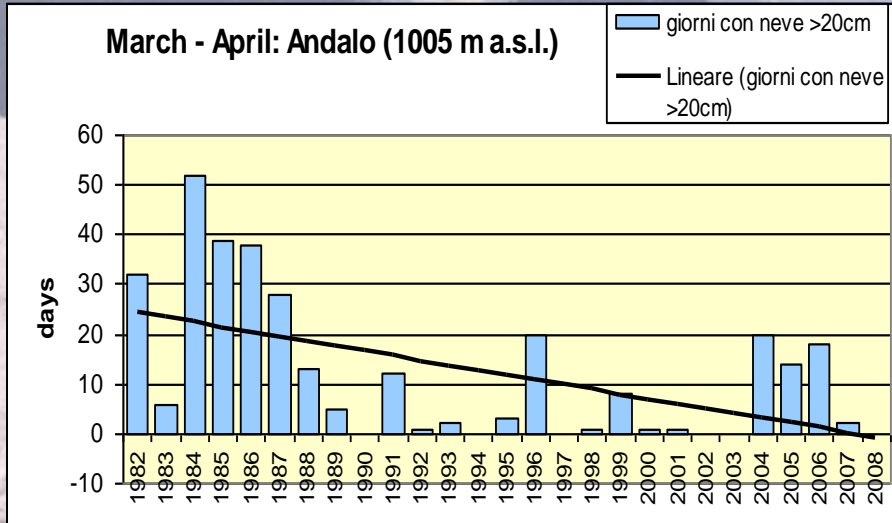
Mediated by changes in ecosystems

Climate change as a consequence of the use of energy to make tourism possible in environments that became unsuitable

An example for the Alps: AVERAGE SNOW DEPTH

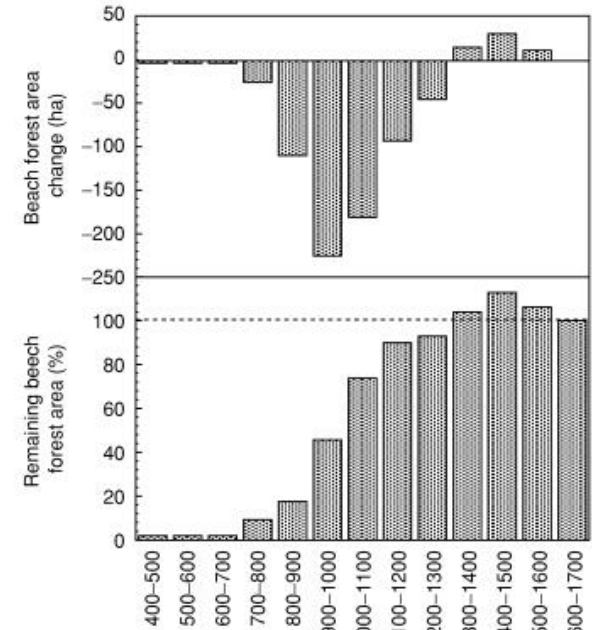
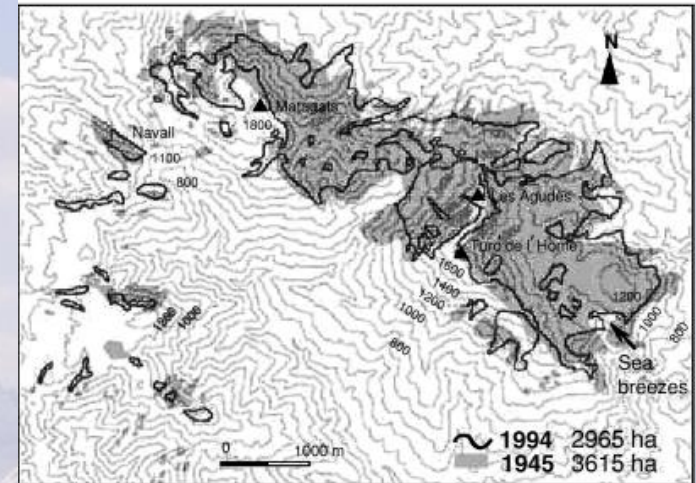


DAYS WITH SNOW DEPTH > 20 CM

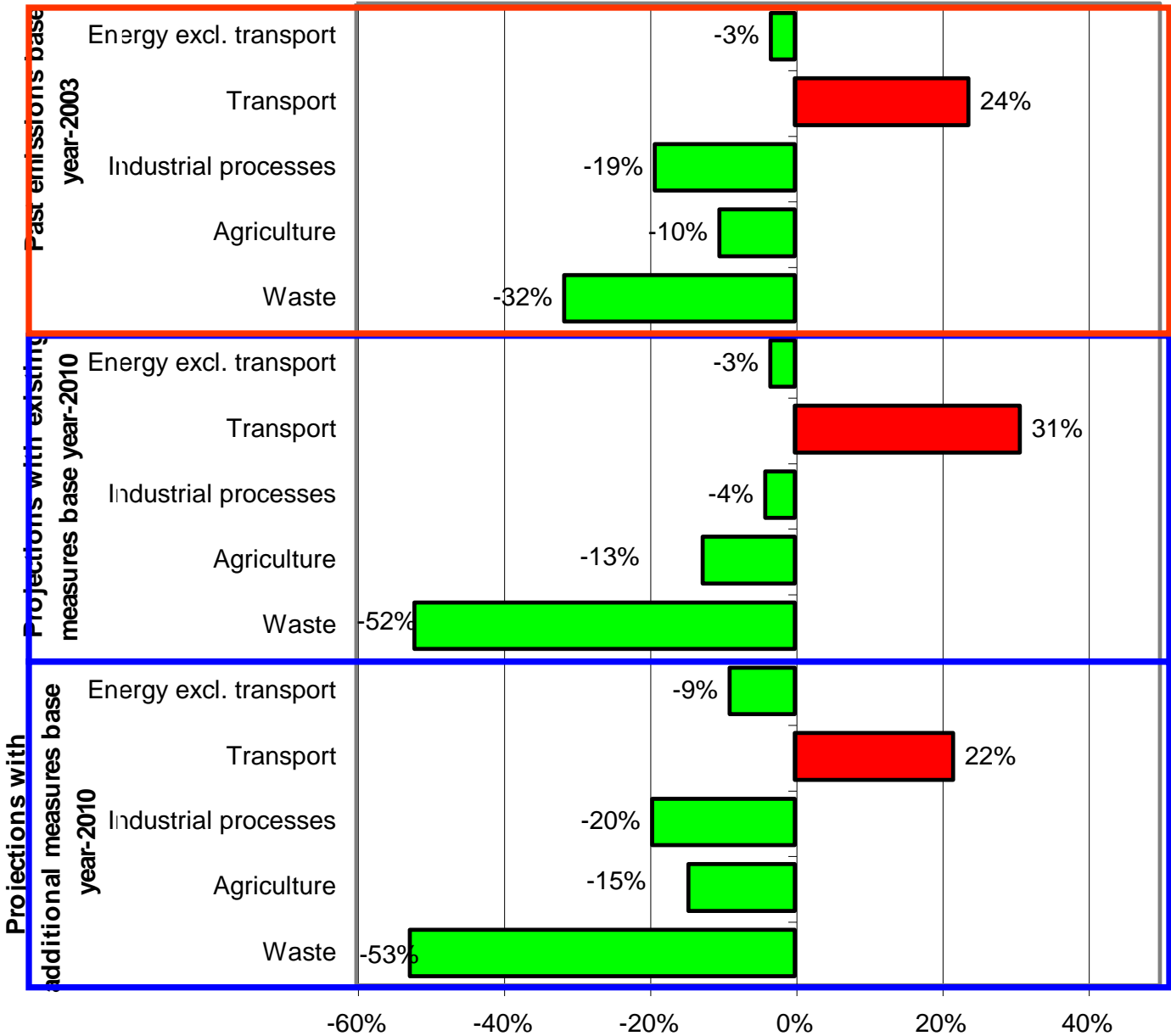


An example for Pyrenees: Beech forest distribution

MONTSENY MOUNTAINS
Beech forest distribution (1945–1994)



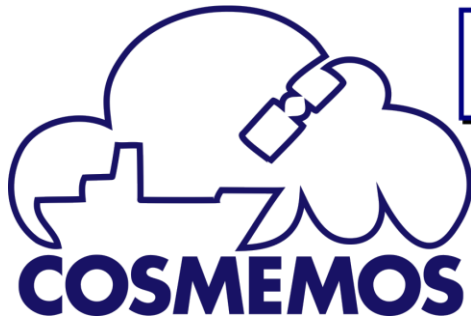
Emission scenarios calculated in different ways, on different bases



EMISSIONS FROM TRANSPORT ARE EXPECTED TO INCREASE ANYWAY

New services can be developed to help reduce the use of fuel

COoperative Satellite navigation for MEteo-marine
MOdelling and Services

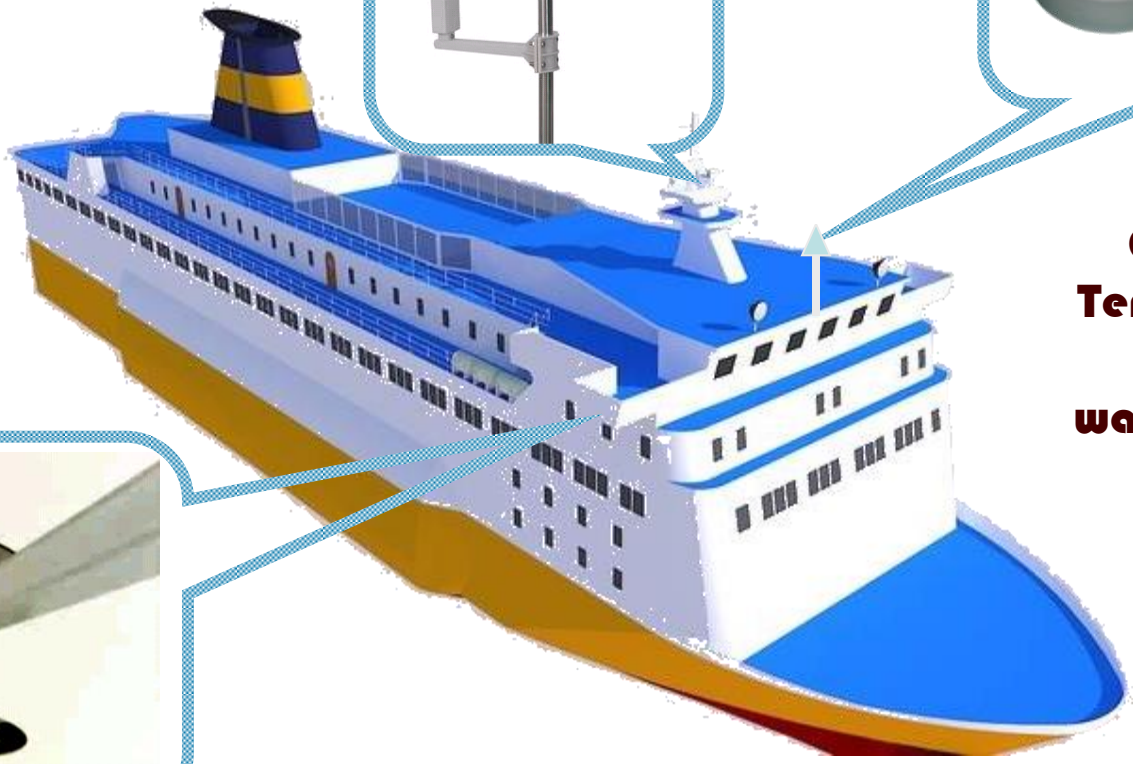


**Meteo
station**

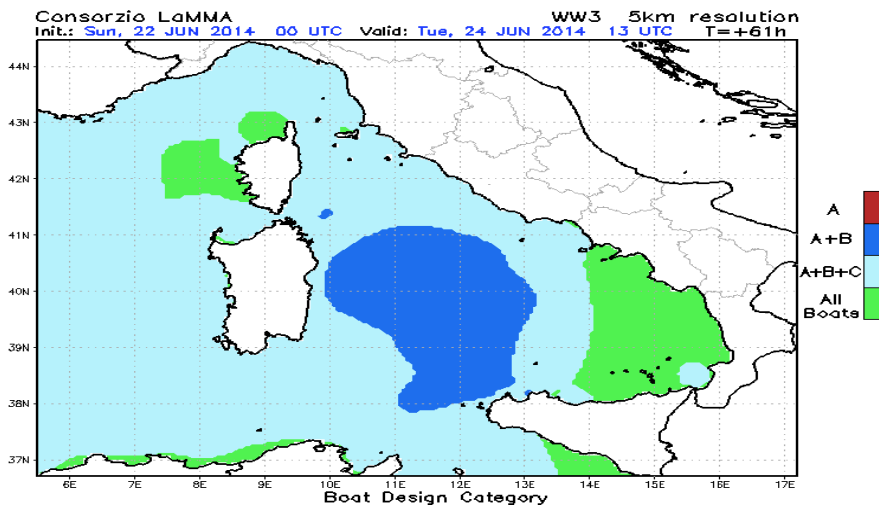
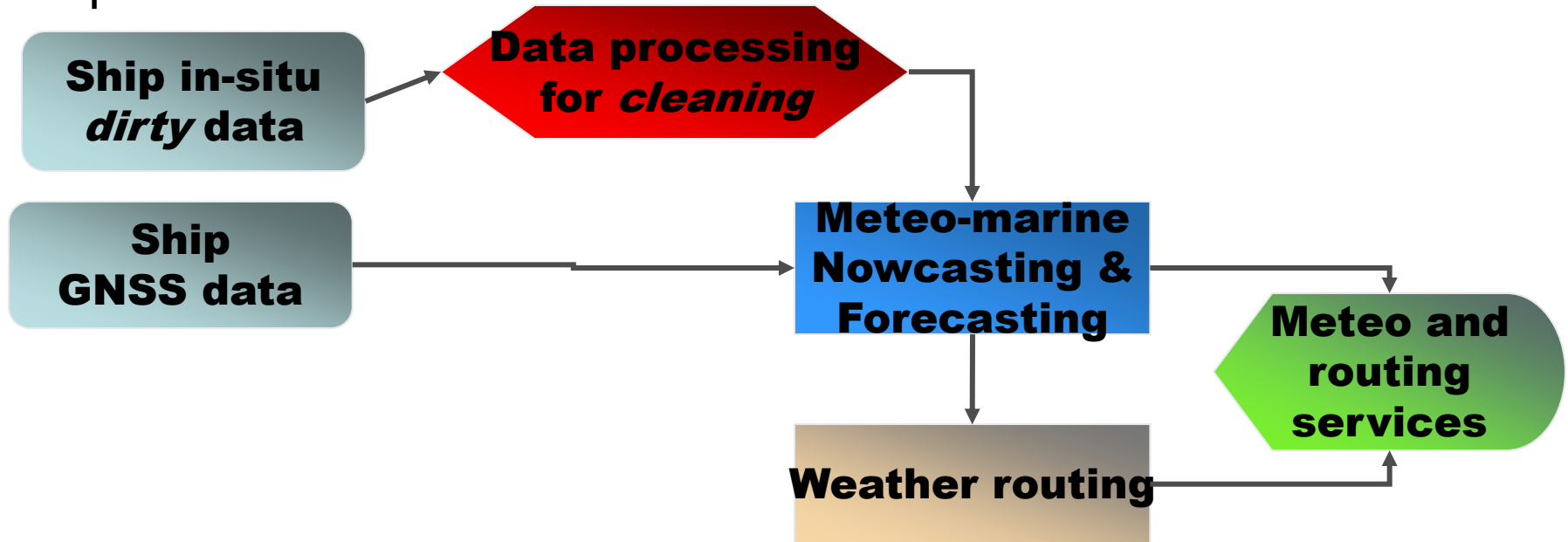


**GNSS for
Temperature
and
water vapour
profiles**

**Oceanpal
GNSS-R for
Wave height**



Assimilation of cooperative measures for improving meteorological forecasts and generating new services for professional and leisure ships



Safe navigation areas for different leisure boat categories

Prototype service under development with the help of Italian Coast Guards

So, why we should focus on energy efficiency?

Tourism is a relevant cause of climate change. We have to do something to counteract it

**Climate change can put at risk tourism assets
Sustainability is not just a word**

A more efficient use of energy can result in a reduction of costs

Environmental consciousness is quickly developing. Tourism enterprises cannot ignore it

Energy efficiency and climate change are good topics for interdisciplinary cooperation

Etc.

Energy efficiency is a first step. Water is the next one.



Thanks for your attention