Attractiveness of the islands and maritime transport services (EUROISLANDS)

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Objective of the EUROISLANDS Study

The objective of the study was:

- to **evaluate the level of divergence of islands from EU-27 average** as well as the national entities

- to **analyze the islands' future potential** form a European perspective

- to **analyze the policy option** that can be adopted in order to face Weaknesses and to exploit Strengths and Opportunities

Basic assumption

An area that is not (any longer) <u>attractive</u> for establishing (competitive) economic activities and attracting or retaining (active) population will witness a reduction of its socioeconomic base and its overall viability, and will diverge increasingly from EU and national goals for **sustainable development**, as well as those for economic, social and spatial cohesion

Islands are a characteristic region

Islands have **specific characteristics**:

- – Small size (limited population, area, natural resources)
- – Remoteness and isolation
- – Particular, rich and vulnerable natural and cultural environment

Insularity is affecting permanently "classic" attractiveness as it influences negatively **production and living cost.** Islands –compared to the mainland- cannot have:

- - economies of scale due to limited variety and quantity of resources
- - good accessibility and low transport cost
- - agglomeration externalities

General Conclusions (1)

- The **performance of the islands is generally lagging behind EU-27** considering most of the key development indicators*; this low performance may be attribute to the **low attractiveness** of the islands

- **Islands' <u>Attractiveness</u> is directly influenced by insularity:** low Accessibility*, low quality and high cost Public Interest Services*, low external economies

General Conclusions (2)

- **Vulnerability** is a characteristic of islands' economy (monoactivity/tourism – public intervention) and environment (low availability of resources - fragility);

- Attractiveness and performance is even lower for **small islands and archipelagos**; vulnerability is higher

- **Natural and cultural assets** constitute a prominent potential for a significant number of islands.

General Conclusions (3)

Insularity has to be considered as a **permanent, natural feature that affects negatively**, directly and indirectly, **islands' attractiveness** and subsequently places **obstacles** to their performance in terms of sustainable development.

Insularity creates unequal opportunities between these territories and the rest of the European Union).

EU has to stress on attractiveness parameters in order to **address the different characteristics the different costs of insularity** by a differentiated policy

MARITIME TRANSPORT

vital for social cohesion and islands attractiveness as a place:
  to live and
  make business.

Structure and performance are related with:
  Regulatory framework
  Business strategies
  Passengers attitude and perceptions.

Insularity and Attractiveness

Attractiveness factors are directly and indirectly influenced by insularity

Attractiveness Parameters	Direct influence by insularity
Accessibility	---
Public and Private services to business and population	--
Agglomeration economies	---
Environmental and cultural heritage	+++
Feeling of safety - Security	++
Natural and technical hazards	+/0
Labour qualification	No direct influence
Information society	No direct influence
Research and Innovation	No direct influence
Social capital	No direct influence
Governance Quality	No direct influence
Employment opportunities	No direct influence

Accessibility

- *In terms of accessibility, **islands are in a less favourable situation compared to the continental mainland*** as far as the transport choice, travel time and costs are concerned.*

- ***The situation is aggravated in the archipelagos** where the permanent population of the very small islands needs to commute every day to receive basic services such as education, health, etc*.*

- ***Accessibility is even worse for small islands** as revealed by the case studies: more complex (need to use many different means of transport to travel out of the island); more costly; lengthier*.*
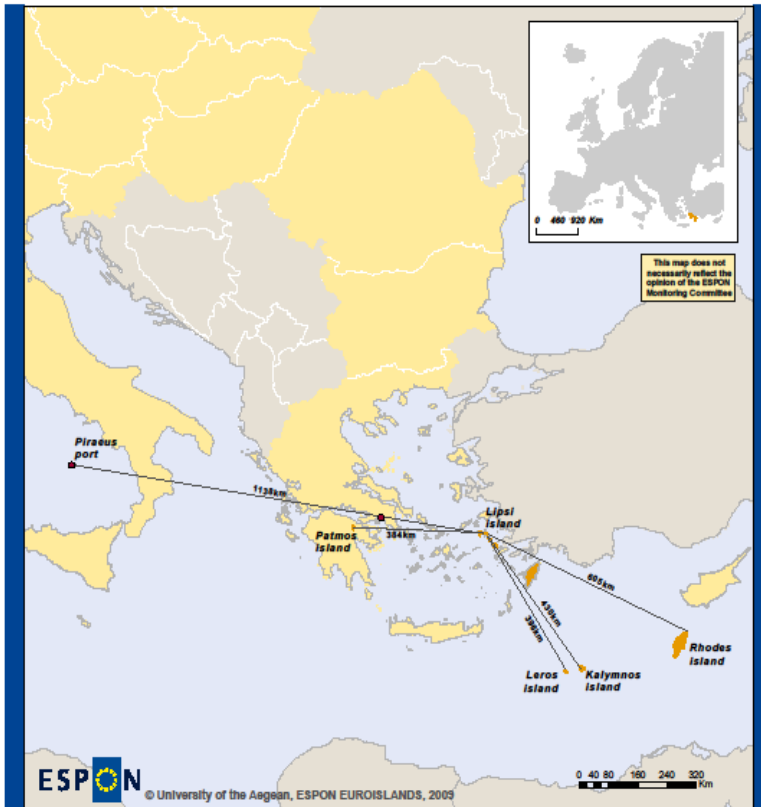
Islands' accessibility for goods is low

Taking into account the time of terrestrial transport + waiting time + time of maritime transport

EURISLES 2002

Lipsi island: Accessibility to services

Time and Cost of accessibility

The cost of island accessibility: for 283km, 4 passengers + car
 - from Lipsi to Pireas:
      54,5 h and 323€
 - on mainland:
      4h and 34 €*

Accessibility and Travel Cost

Existence of Public and Private Services

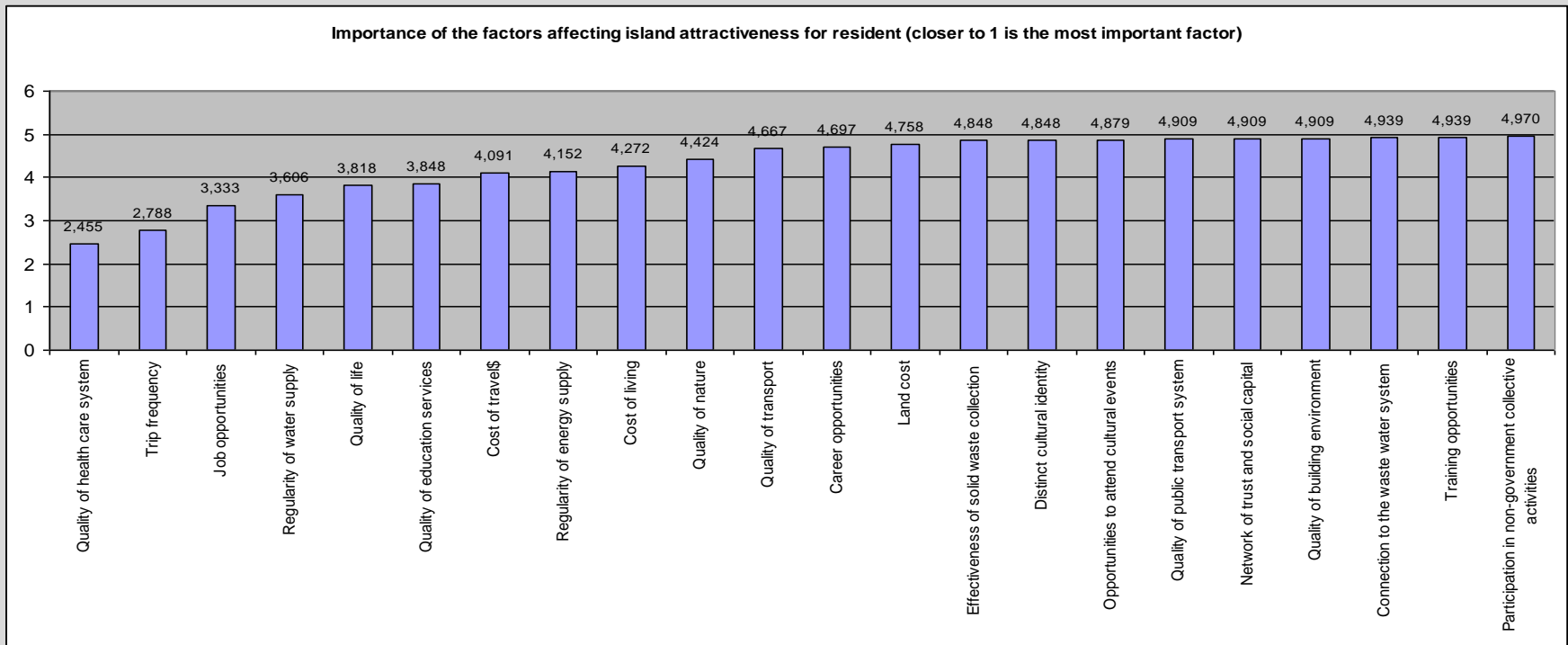|	Pharmacy	Hospital	Bank	Tax service/ Social Security	Tertiary Education
Kokar	No	Only a Clinic. Need to travel to Mariehamn or Turku-Upsala	yes	No / Internet services	No. In Mariehamn-college Turku - Stockholm
Lipsi	No	Doctor + nurse. Need to travel to Rodos or Athens.	no	No / In Kalymnos	No. Anywhere in Greece
Samso	Yes	Small, threatened with closure. Need to travel to Aarhus	yes	Yes	No. Aarhus
Kalymnos	Yes	Yes	yes	Yes	No. Anywhere in Greece
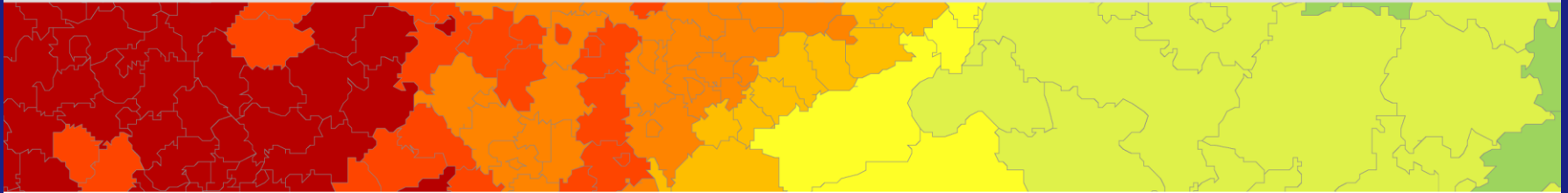
CONNECTIVITY is a crucial aspect

Connectivity is the availability of transport that enables people and goods to reach a range of destinations at a reasonable generalised cost.
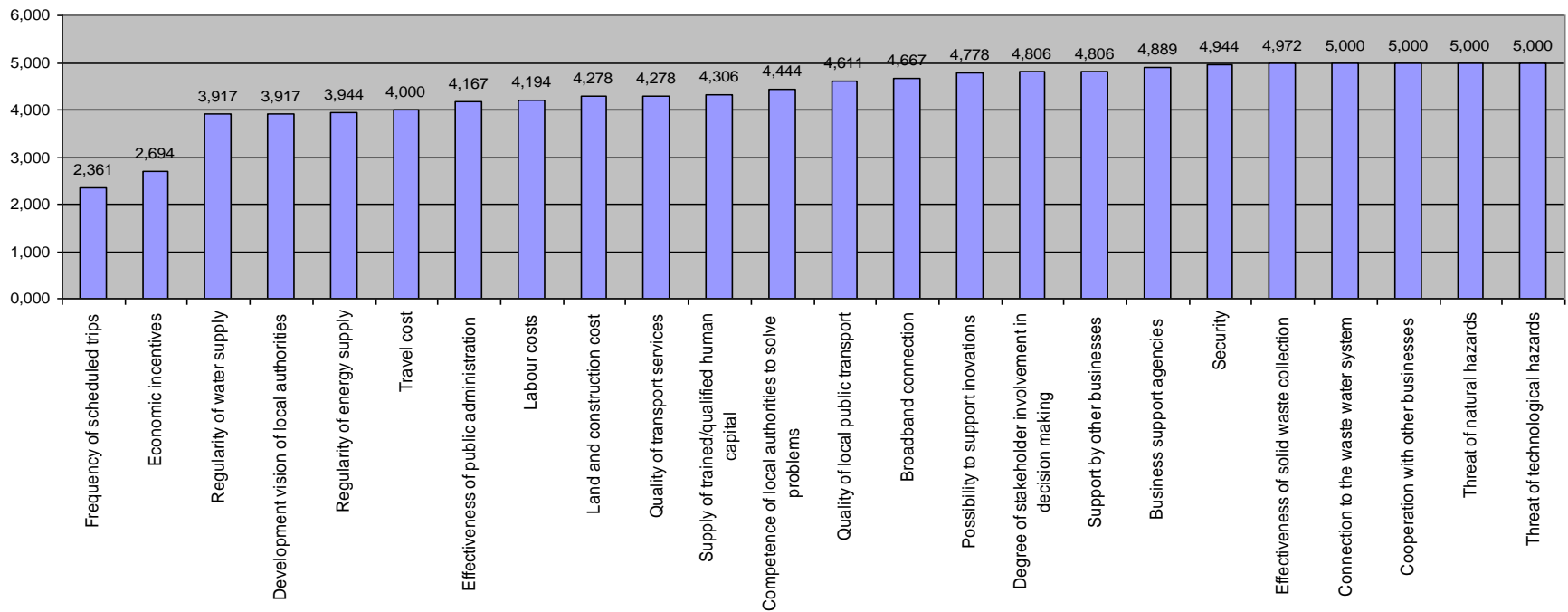
Islands' attractiveness for living

Importance of the factors affecting island attractiveness for resident (closer to 1 is the most important factor)

| Factor	Value
Quality of health care system	2,455
Trip frequency	2,788
Job opportunities	3,333
Regularity of water supply	3,606
Quality of life	3,818
Quality of education services	3,848
Cost of travel$	4,091
Regularity of energy supply	4,152
Cost of living	4,272
Quality of nature	4,424
Quality of transport	4,667
Career opportunities	4,697
Land cost	4,758
Effectiveness of solid waste collection	4,848
Distinct cultural identity	4,848
Opportunities to attend cultural events	4,879
Quality of public transport system	4,909
Network of trust and social capital	4,909
Quality of building environment	4,909
Connection to the waste water system	4,939
Training opportunities	4,939
Participation in non-government collective activities	4,970

Local authorities' survey gives as main reasons: quality of health care system, trip frequency, job opportunities, regularity of water supply quality of life and quality of education services

Islands' attractiveness for business

Importance of the factors affecting island attractiveness for economic activities (closer to 1 is the most important factor)

Factor	Value
Frequency of scheduled trips	2,361
Economic incentives	2,694
Regularity of water supply	3,917
Development vision of local authorities	3,917
Regularity of energy supply	3,944
Travel cost	4,000
Effectiveness of public administration	4,167
Labour costs	4,194
Land and construction cost	4,278
Quality of transport services	4,278
Supply of trained/qualified human capital	4,306
Competence of local authorities to solve problems	4,444
Quality of local public transport	4,611
Broadband connection	4,667
Possibility to support inovations	4,778
Degree of stakeholder involvement in decision making	4,806
Support by other businesses	4,806
Business support agencies	4,889
Security	4,944
Effectiveness of solid waste collection	4,972
Connection to the waste water system	5,000
Cooperation with other businesses	5,000
Threat of natural hazards	5,000
Threat of technological hazards	5,000

More important factors: trip frequency, economic incentives, regularity of water supply, development of vision of local authorities, regularity of energy supply, travel cost
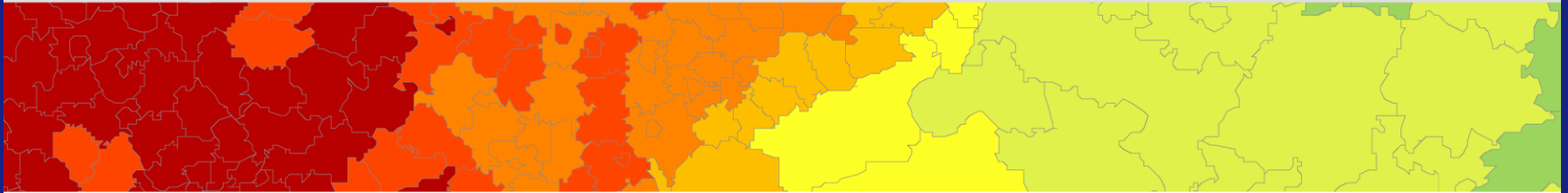
Assessment of the maritime transport system

◆ a systematic measurement of critical key performance indicators (KPIs)

◆ a broad, continuous and representative consultation with users and stakeholders
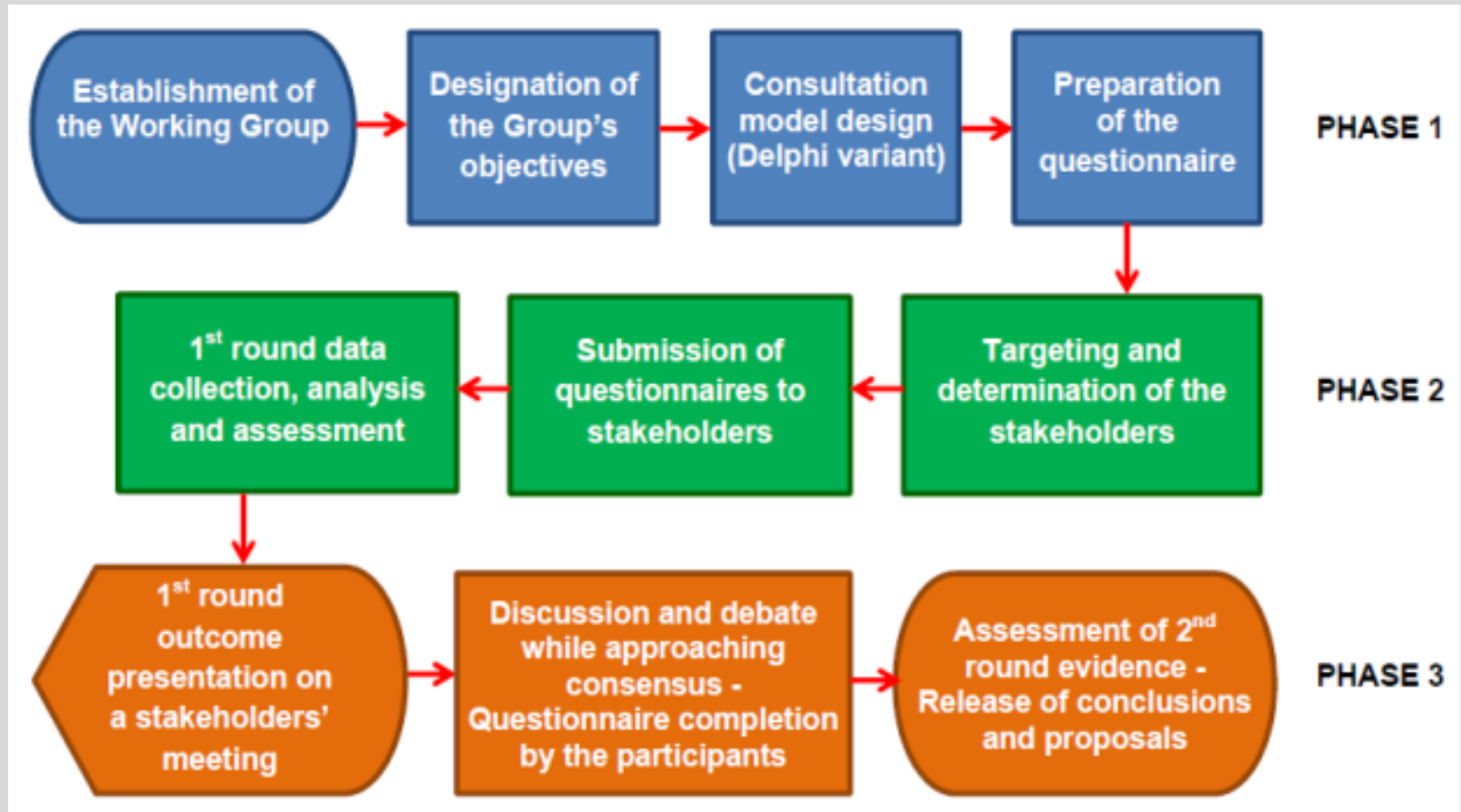
ASSESMENT OF THE MARITIME TRANSPORT

- **ACCESIBILITY**

- **AFFORDABILITY**   **3 As**

- **ACCEPTABILITY**

Having in mind 3 ways of expressing transport users':

✓ **Usual tools of political lobbying**

✓ **Formal consultation procedures**

✓ **Informal participation exercises**

# PARTICIPATORY EXPERIMENT FOR THE ASSESEMENT

RECOMENDATIONS

<u>Strategic issues</u>

➢ Reviewing and redesigning of the **minimum islands' connection** requirements as well as determining of an optimal islands' connections network

➢ Examining and implementing joint **or multimodal transport systems** to and from the islands

➢ Forming **joint ventures between port authorities and shipping companies**

➢ Establishing a "**coastal shipping observatory**"

➢ Reconsidering of the relevant justification regarding the **determination of the annual compensation** of the subsidized lines

➢ **Adopting unemployment benefits** to seamen

Elaboration of independent studies

➢ A Study for the reconsideration of the **Minimum Island Connection Requirements** in order to determine the optimal Islands' Connections network (connectivity)

➢ A Development of a **national transport strategy** for all transport modes and their combinations for the entire country

➢ **A 5-year horizon study for the transport system** (with emphasis on maritime and air domestic transportation)

Building islands' connectivity index
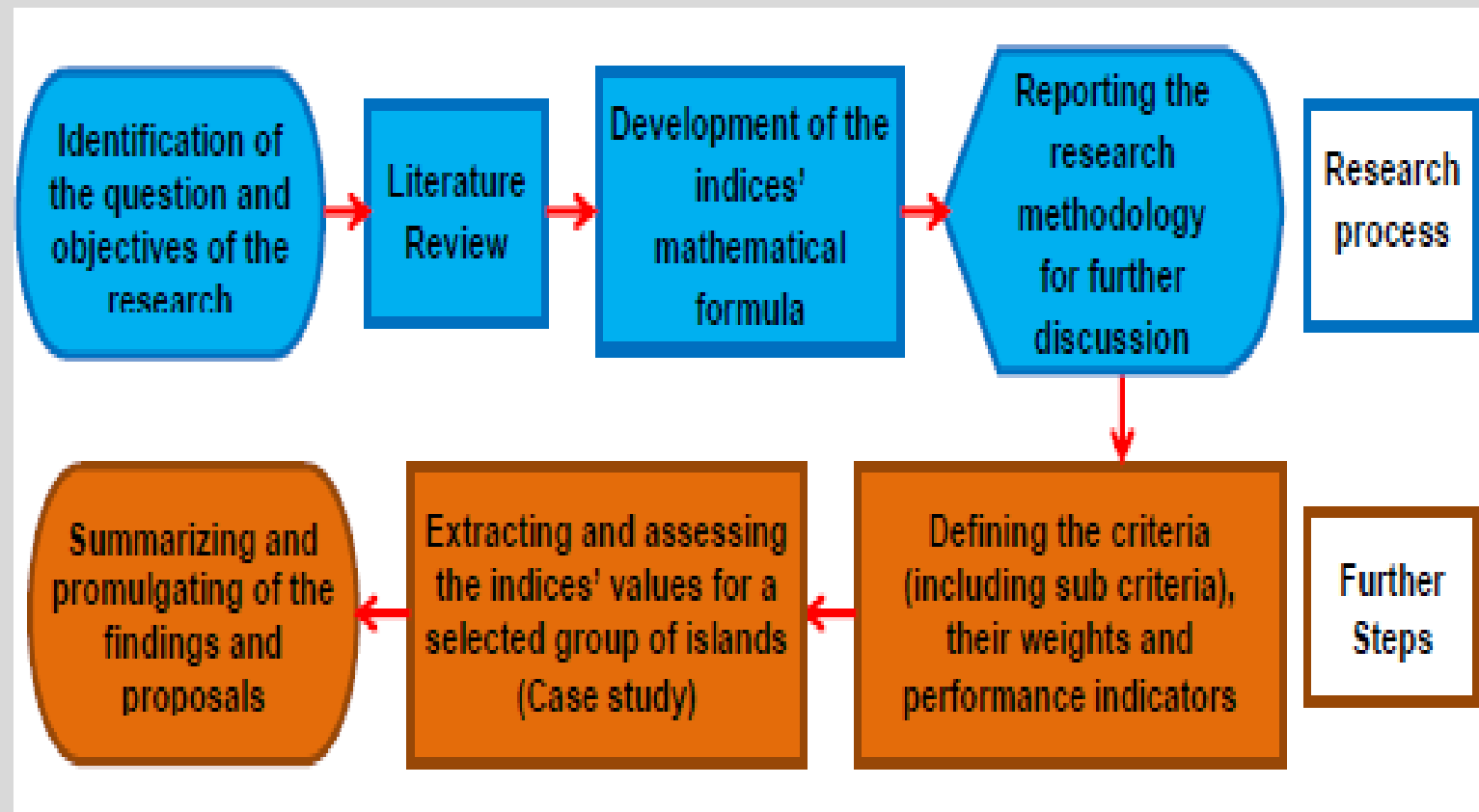
ISLANDS' CONNECTIVITY INDEX

Islands' Connectivity: $IC = P * u(g)$

P = is the sum of the total number of the passenger capacity provided through <u>the port(s) and airport(s)</u> of an island

u(g), is the qualitative additive value function (performance indicator) of the transport services criteria g

Islands' Transport Potential: $IP = N * v(f)$

N = is the size of the island's population (in case of winter <u>season</u>), or the gross sum of the island's population plus the total available beds in all the island's tourist accommodation establishments (in case of summer season)

v(f), is the qualitative additive value function (performance indicator) of the transport potential of an island related to the islands' transport needs criteria f

Island Connectivity Index: $ICI = IC / IC_{max}$

Island Transport Potential Index: $IPI = IP / IP_{max}$

Island Connectivity Adequacy Index: $ICAI = ICI/IPI$

ISLANDS' CONNECTIVITY INDEX

Passenger Ferry Services' :

- *Criteria g_i* **Sub criteria g_{ij}**

  – **FINANCIAL COST** Fare cost - Cost for accessing port – Cost for on board services

  – **TIME** Trip duration - Consistency Access time to ports

ACCESSIBILITY Number of itineraries-Frequency of trips
Number of interconnected destinations
Number of transits

  – **QUALITY OF SERVICES** Ship's accommodation

   - On board services - Information services –

   - Ticket purchase facilities

SOCIAL COST Ships' environmental performance - Ships' age –

  – Corporate social responsibility of passenger ferries' operators

ISLANDS' CONNECTIVITY INDEX

- **Islands' Transport Potential** main criteria and sub criteria
- ***Criteria f_i***
- ***Sub criteria f_{ij}***
- **DEVELOPMENT**
- Per capita income - (Un)employment rate - Entrepreneurship rate
- **TOURISTIC ATTRACTIVENESS**
- Interest for visiting - Availability of cultural sites, touristic areas and resorts - Multitude of cultural, athletic and touristic events and activities - Availability of hosting, catering and entertainment services
- **INFRASTRUCTURE**
- Adequacy of ports - Internal transport system - Existence of airport - Public services
- **LOCATION**
- Remoteness and isolation - National interests

ISLANDS' CONNECTIVITY INDEX

- ✓ Assessment of the criteria and sub **criteria weights** (AHP)

- ✓ Determination of the most applicable indices for the **estimation of the criteria** (and sub criteria) performance indicators

- ✓ Measurement of the connectivity indices of a group of Islands (**case study**)

- ✓ Developing a **decision making algorithm** regarding the allocation of subsidies to the islands' transport means, based on a systematic data collection and evaluation of the islands' connectivity indices.

**Keep Ithaka always in your mind.
Arriving there is what you are destined for...**
[C.P. Cavafy, Ithaka]

THANK U!