



**European Union**  
European Regional Development Fund

**NOSTRA Seminar – 24<sup>th</sup> to 27<sup>th</sup> February 2014 in Reggio Calabria**  
**Link between the coast and the hinterland**

**Ecosystem characteristics and uniqueness**

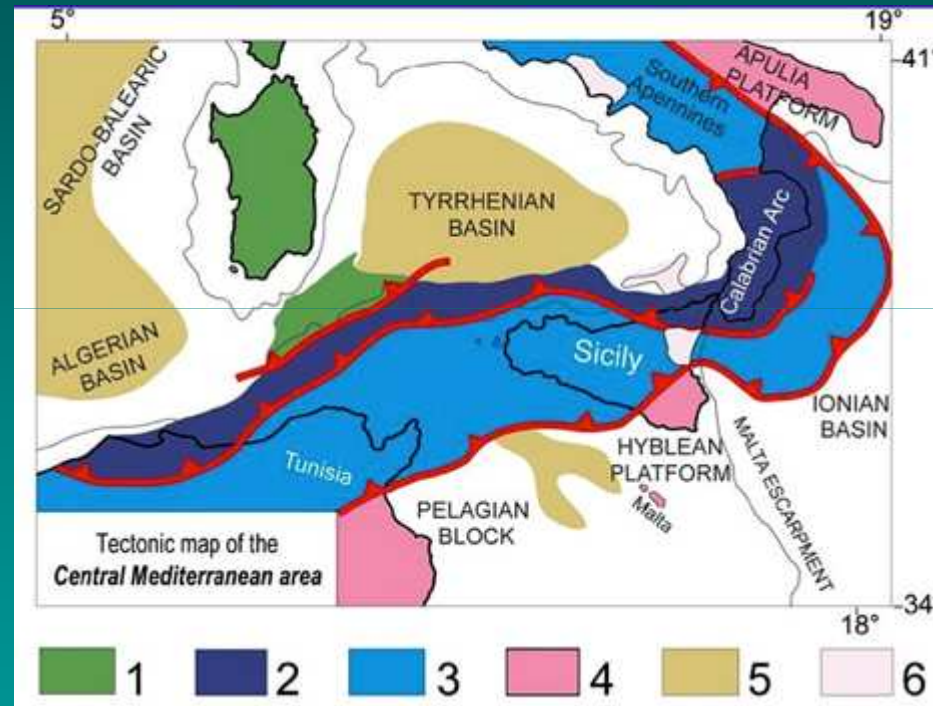
# **PLANT BIODIVERSITY OF TERRESTRIAL ECOSYSTEM**

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# Geological features

**Sicilian and Calabrian slopes of the Strait of Messina have the same geological structure.**

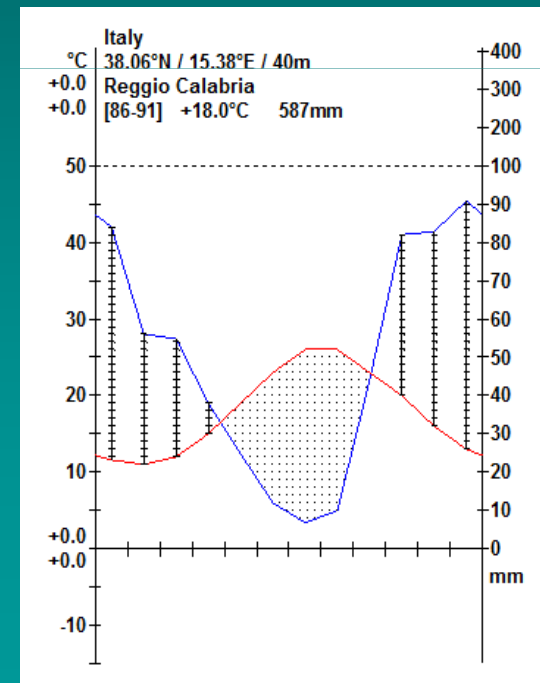
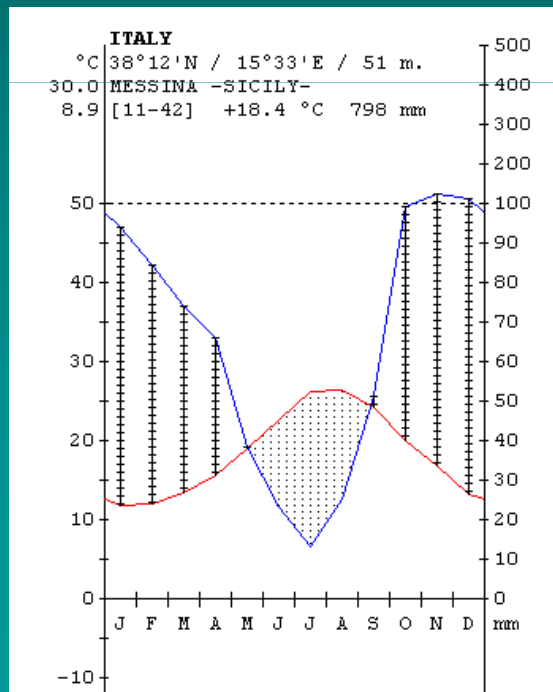


**Tectonic pattern of the central Mediterranean 1) Corsica-Sardinia, 2) Calabria – Peloritani Arc, 3) Apennine Maghrebids Unit; 4) foreland and little deformed foreland , 5) extension areas; 6) volcanics Plio quaternary**

# Climatic features

The climate diagrams of Reggio Calabria and Messina show similar climatic characteristics

According to Rivas Martinez (2008) the macrobioclimate is Mediterranean pluvioseasonal-oceanic



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# Habitat

**The common geological origin and climatic affinities determine the presence of the same habitats that host similar plant communities**

- **Rocky headlands**
- **Fiumare**
- **Beaches**
- **Sandy hills**
- **Ravines and gorges**



## Similar habitat: beach

The beaches of the Strait of Messina have similar plant communities, which are characterized by the same species of vascular plants.



Sand dunes near Catona (RC)



*Centaurea deusta* subsp. *conocephala*

*Calystegia soldanella*



# Similar habitat: beach

Habitat directive ECC 43/92

**0 - 1120\* Posidonia beds (*Posidonia oceanica*)**

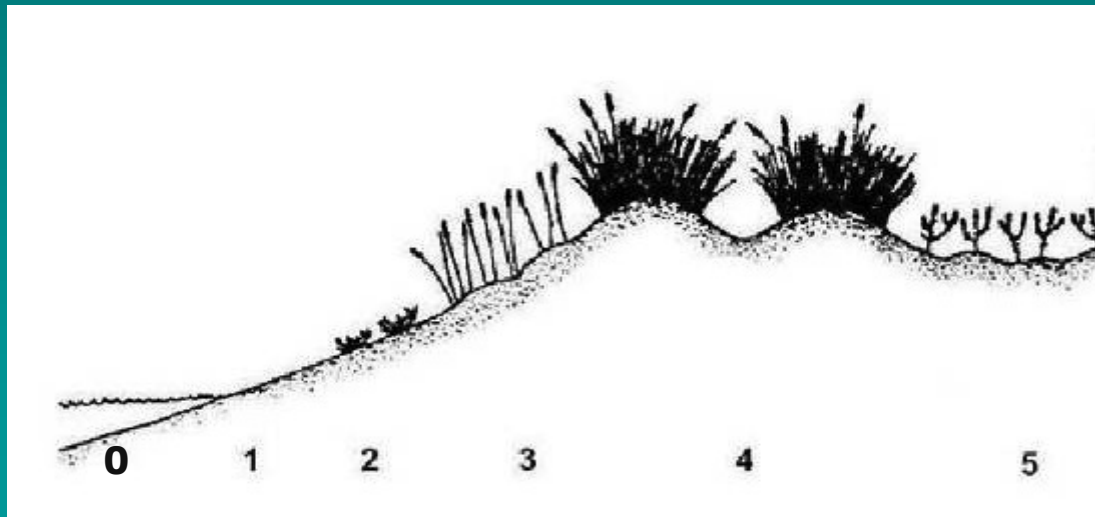
**1 – Aphytoic zone**

**2 -1210 Annual Vegetation of drift lines**

**3 - 2110 Embryonic shifting dunes**

**4 - 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (White dunes)**

**5 - 2210 Crucianellion maritime fixed beech dunes**



## Similar habitat: beach

**Beach habitats are among the most threatened of extinction.**

**The beaches of the Strait are important sites for the conservation of sea turtles that lay their eggs.**

**Coastal erosion, urbanisation and tourism resort are the main threats.**



**A sea turtle that has spawned on the beach of Pellaro (RC)**



**Tourism resort near Pellaro (RC)**



**Beach erosion at Catona RC**



# Similar habitat: Sandy hills

**Hills of Plio - Pleistocene deposits of sand**



**The hill of Pentimele (RC)  
Campo Italia (ME)**



**Habitat detective 6620 Pseudo-steppe with  
grasses and annuals of the Thero-Brachypodietea**

**Anthemis chia**



**Tricholaena teneriffae**



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# Similar habitat: Sandy hills

**Pine woods of *Pinus pinea***

**Massa (ME)**



**Terreti (RC)**



## Similar habitat: Fiumare

**Short water courses with torrential regime characterized by significant sediment transport of gravel and pebbles**



***Helichrysum italicum***  
***Artemisia variabilis***





## Similar habitat: Fiumare

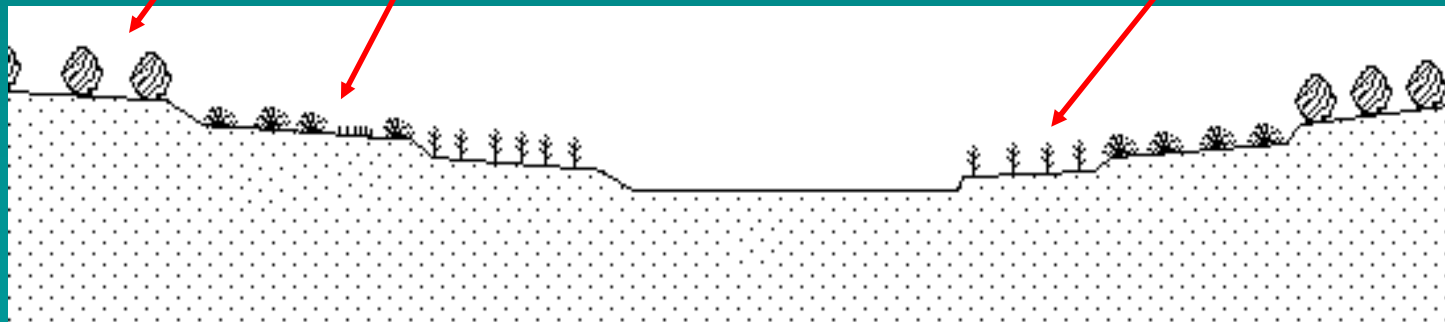
**Nerium oleander**



**Helichrysum italicum**



**Dittrichia viscosa**

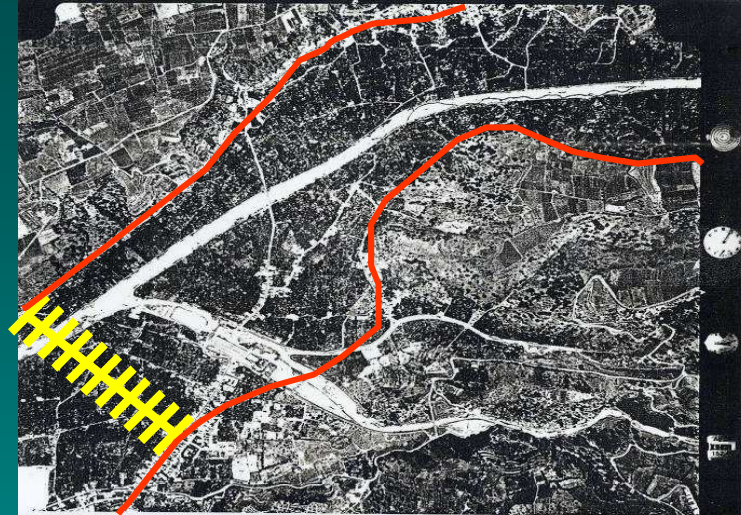




# Similar habitat: Fiumare

Fiumare are very modified by men

Fiumara of Gallico (RC)



Fiumare of Scaletta (ME)



## Similar habitat: rocky headlands

**Rocky headlands have the same habitat: 8210 Calcareous rocky slopes with chasmophytic vegetation very rich in endemic species.**



**Scilla (RC)**



**Cape San Andrea (ME)**



# Similar habitat: Ravines and gorges

The narrow ravines have mesoclimatic conditions with limited heat variance, constantly moist, allowing for the conservation of some subtropical species extinct in the rest of the Italian territory.



## Cainozoic ferns

### Woodwardia radicans



### Pteris cretica



### Pteris vittata





# Floristic pattern: Endemic species

**Peloritani and Aspromonte territory have similar floristic pattern**

**Several endemic species are present in the territories bordering the strait**

**Dianthus arrostii**



**Silene italica subsp. sicula**



**Polygala preslii**

**Senecio ambiguus subsp. gibbosus**



# Floristic pattern: Endemic species

**Endemic species exclusive of the two versant on the strait**

**Trifolium uniflorum subsp. savianum**



**Linaria multicaulis subsp. multicaulis var. messanensis**



# Floristic pattern: Endemic species

**Other endemic species have a distribution extended to the regions of Sicily and Calabria**

- ***Aristolochia clusii***
- ***Bellis margaritifolia***
- ***Carlina hispanica* Lam. subsp. *globosa***
- ***Carlina nebrodensis***
- ***Carlina sicula* subsp. *sicula***
- ***Centaurea deusta* subsp. *divaricata***
- ***Edraianthus graminifolius* subsp. *siculus***
- ***Epipactis meridionalis***
- ***Erucastrum virgatum***
- ***Euphorbia ceratocarpa***
- ***Gypsophila arrostii***
- ***Helleborus bocconeii* subsp. *intermedius***
- ***Hypochoeris hispida***
- ***Micromeria graeca* subsp. *consentina***
- ***Myosotis sylvatica* subsp. *elongata***
- ***Scorzonera villosa* subsp. *columnae***
- ***Thalictrum calabricum***
- ***Tragopogon porrifolius* subsp. *cupanii***
- ***Viola aetnensis* subsp. *messanensis***





# Floristic pattern: Vicarious Endemic species

## SICILIA

### *Bellis perennis* var *peloritana*



### *Adenocarpus commutatus*



### *Anthemis messanensis*



## CALABRIA

### *Bellis perennis* var *aspromontana*



### *Adenocarpus brutius*



### *Anthemis calabra*



# Floristic pattern: Flora of phytogeographic interest

The flora of the Strait has several species of phytogeographic interest because this territory is the limit of distribution area.

**South Mediterranean**

**Tricholaena teneriffae**



**West Mediterranean**

**Lavandula multifida**



**East Mediterranean**

**Frillaria messanensis**



## Floristic pattern: Endemic species

**The remarkable affinity of flora and habitat of the two sides of the strait testify the considerable phytogeographic link between these territories.**

**They fall in the same province (Calabrio - Peloritana) of the Mediterranean ecoregion**



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## **SPA - Special Protection Areas**

### **Directive on the conservation of Wild Birds 79/409/EEC**

#### **Sicilia**

**ITA030042 Monti Peloritani, Dorsale Curcuraci, Antennamare e area marina dello Stretto di Messina**

#### **Calabria**

**IT9350300 Costa Viola**

#### **Falco peregrinus**



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# **SCI -Sites of Community Interest**

## **Directive on the Conservation of natural habitats and of wild fauna and flora 92/43/EEC**

### **Sicily**

**ITA030011 Dorsale Curcuraci, Antennamare**

**ITA030008 Capo Peloro - Laghi di Ganzirri**

**ITA030010 Fiume Fiumedinisi, Monte Scuderi**

### **Calabria**

**IT9350172 Fondali da Punta Pezzo a Capo dell'Armi**

**IT9350139 Collina di Pentimele**

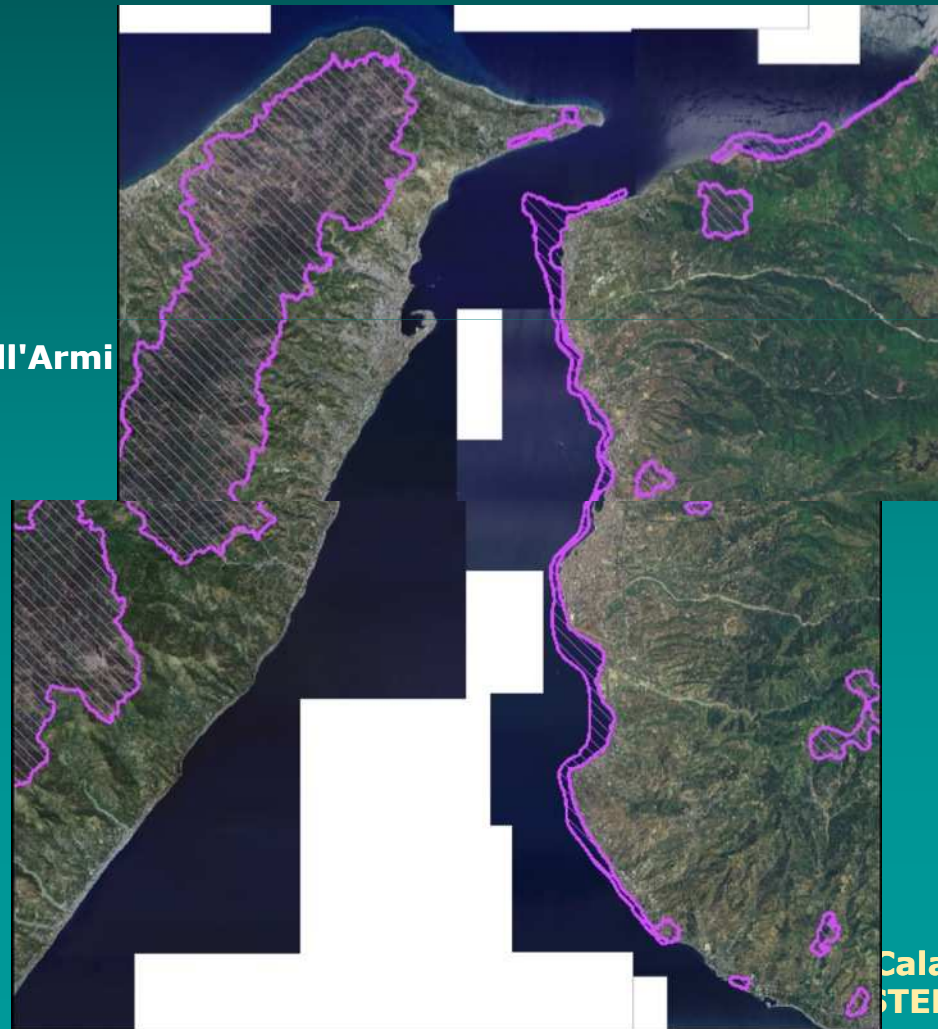
**IT9350177 Monte Scrisi**

**IT9350173 Fondali di Scilla**

**IT9350158 Costa Viola e Monte S. Elia**

**IT9350149 Sant'Andrea**

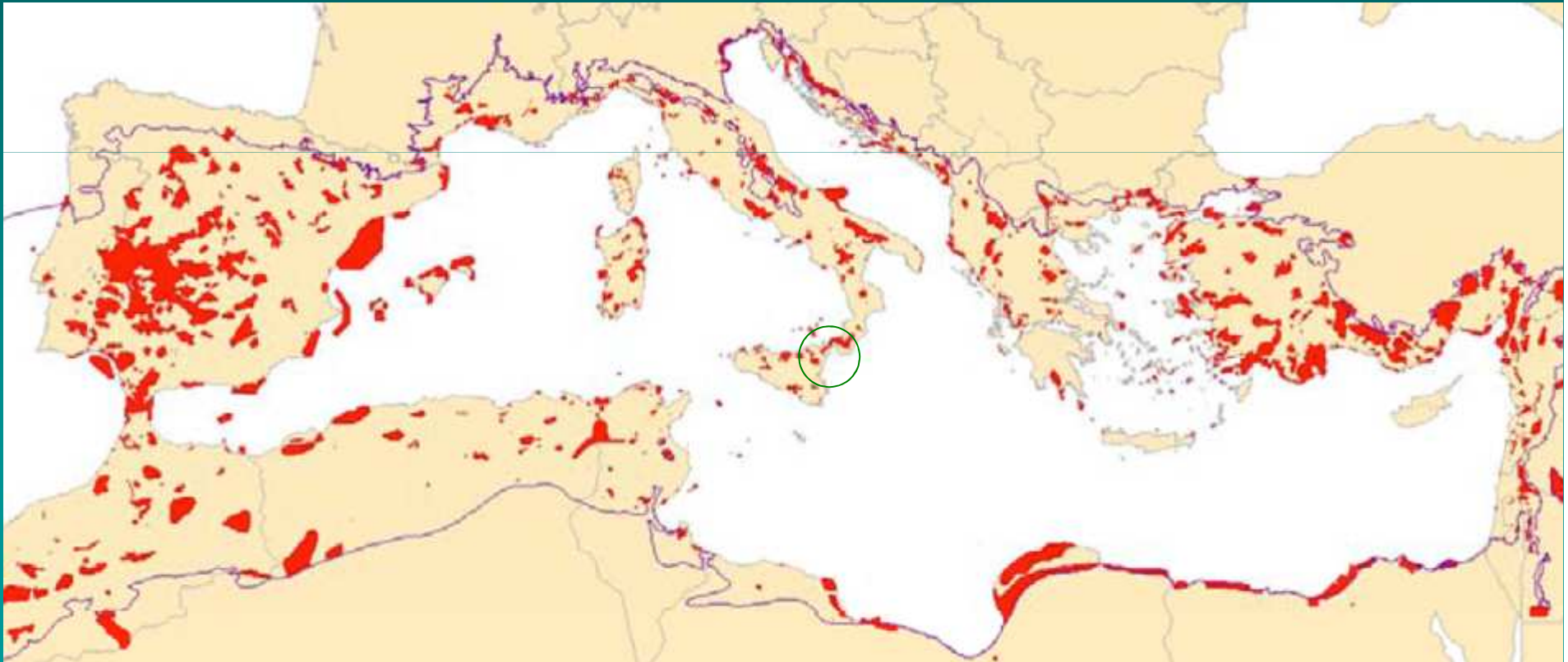
**IT9350143 Saline Joniche**



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## Mediterranean Hotspot



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A scenic landscape photograph showing a coastal town in the foreground, a large body of water in the middle ground, and mountains in the background. The town features a beach, buildings, and a road. A boat is visible on the water, leaving a wake. The sky is blue with scattered white clouds. The text "Thank you for attention" is overlaid in the center of the image.

**Thank you for attention**