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## Climate Change Adaptation Indicators in Portugal: Pathways to monitor Adaptation



UNECE

Expert Forum for producers and users of climate change-related statistics

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- Overview of National Adaptation Strategy work and progress
- Progress (process) Indicators
- Financing mechanisms and related output/outcome indicators:
  - Adaptation Indicator from Cohesion Fund Programme
- Future steps: Adaptation Action Plan and new paradigm for Adaptation MRE



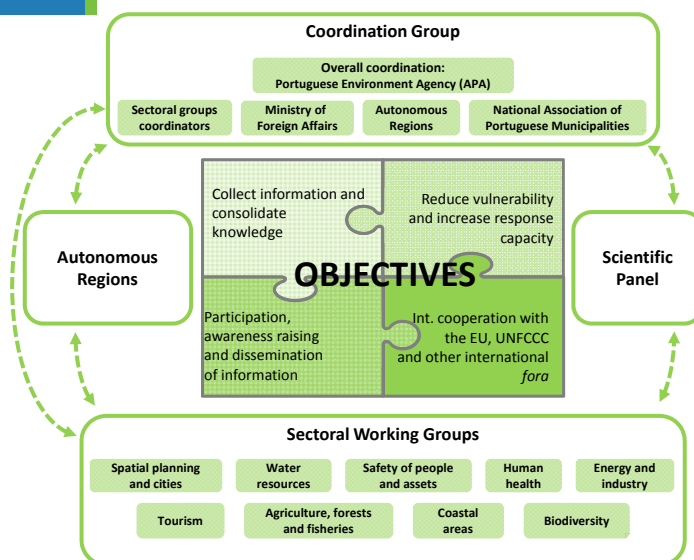
## SIAM projects (I&amp;II) Scenarios, Impacts, and Adaptation Measures



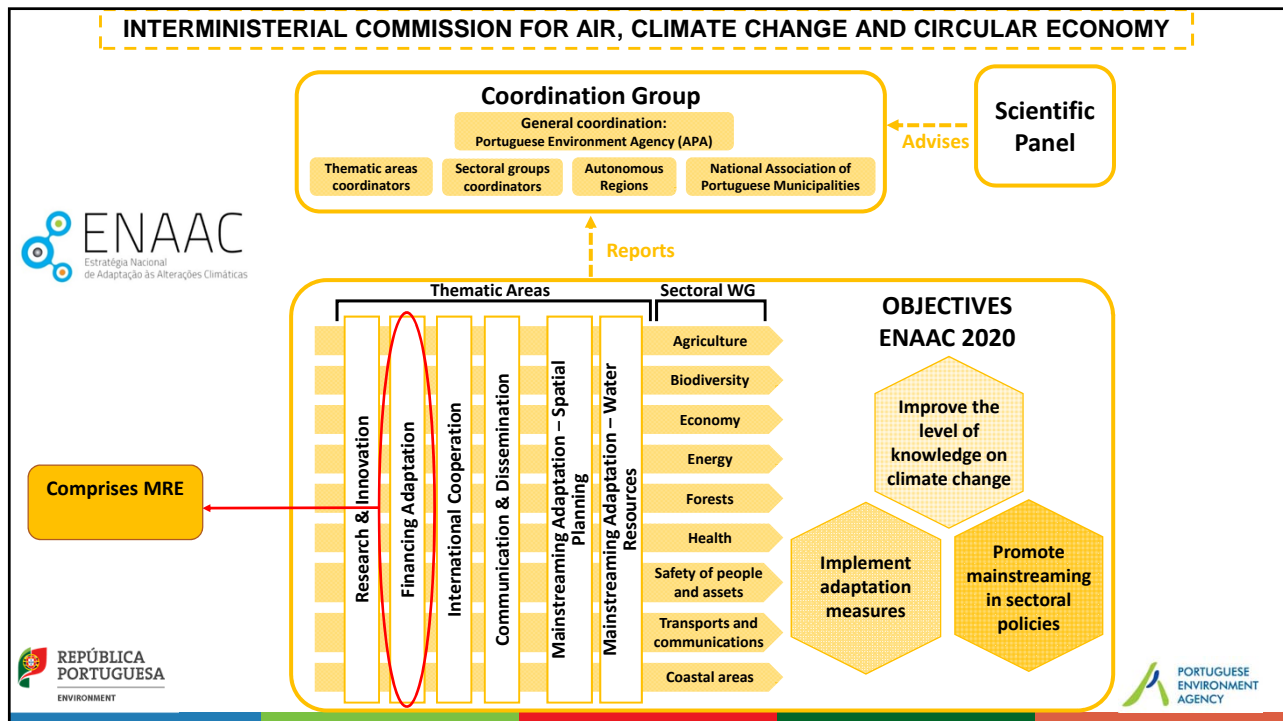
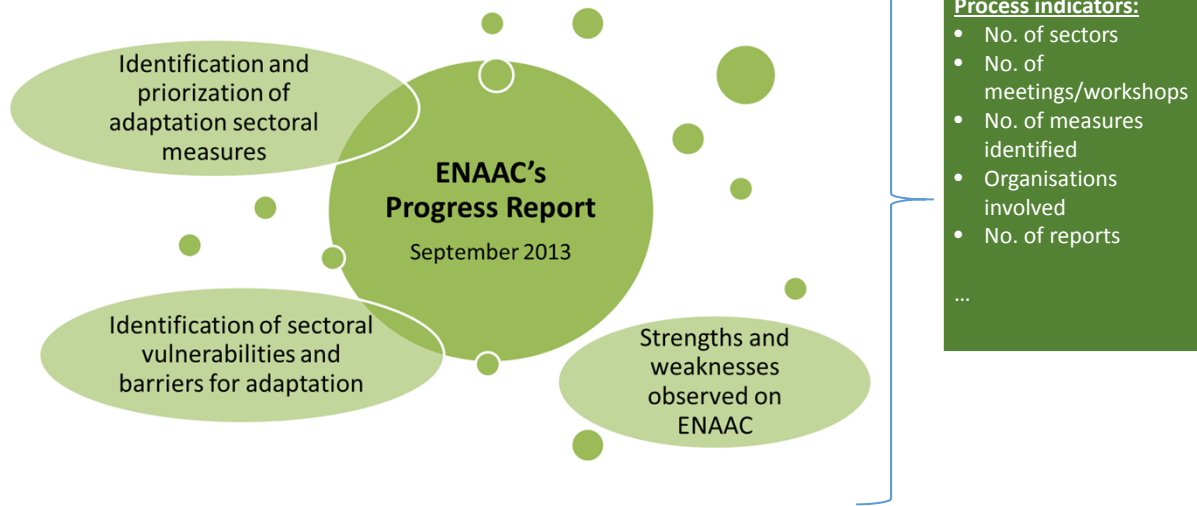
## National Adaptation Strategy (2010)

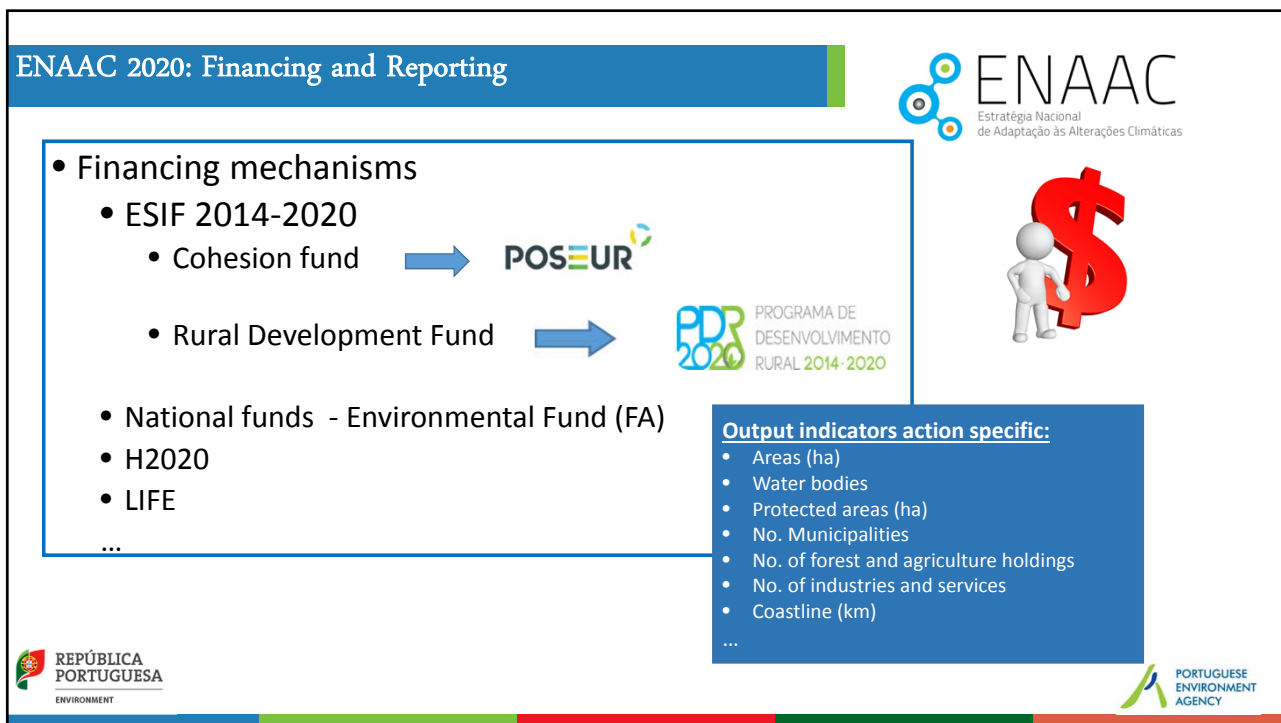
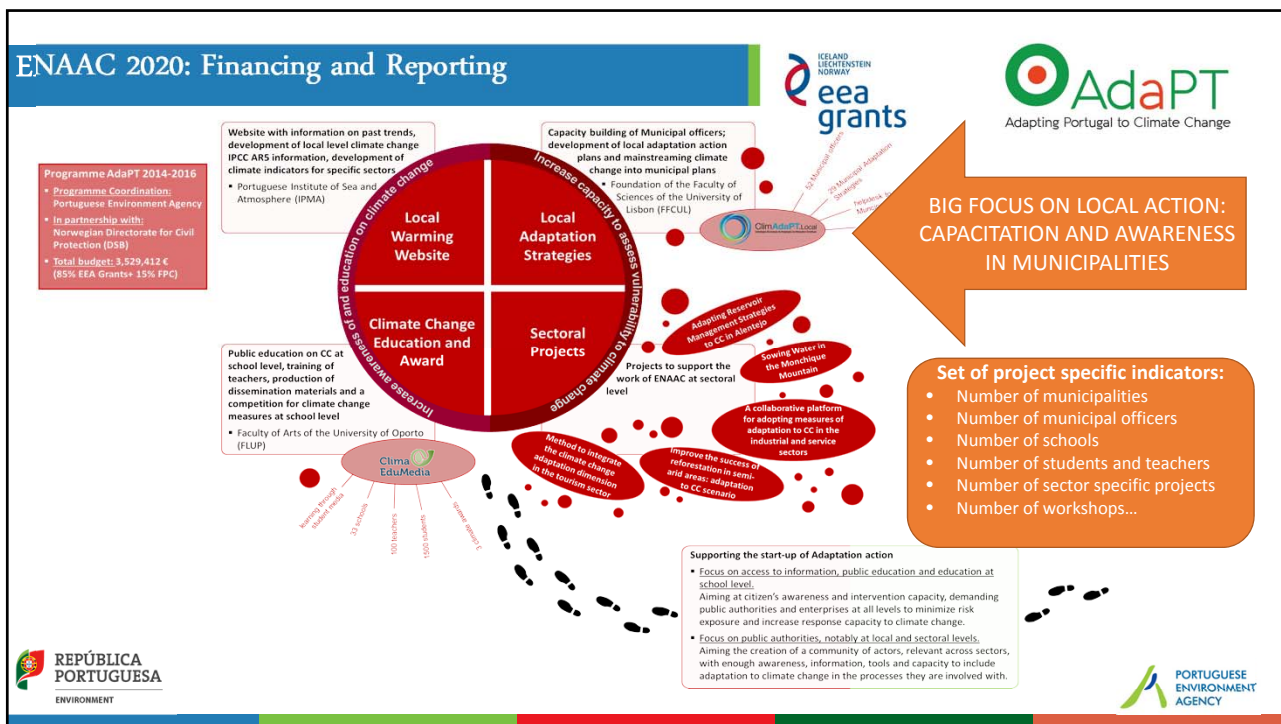
## MAIN ASPECTS

- **Mainstreaming**
  - Clear focus on promotion of adaptation at sectoral level
  - No operational character of an action plan, instead incentivised the sectoral groups to develop and adopt their own adaptation action plans
- **Horizontal coordination**
  - 9 priority sectors
  - Each involved their set of stakeholders in the discussions and developments of ENAAC
- **Vertical coordination**
  - Acknowledgment that is at the local level that many adaptation measures will be defined and put into practice
  - Autonomous Regions of Azores and Madeira + National Association of Portuguese Municipalities:



## National Adaptation Strategy (2010)





## ENAAC 2020: Financing and Reporting



- Outcome indicator for Cohesion Fund Programme Support for Adaptation (Sustainable and Efficient Use of Resources – PO SEUR):

“Implementation Level of Adaptation Actions coming from Strategies and Plans”:



➤ Methodological definition by the University of Lisbon:

- Designed to capture and assess the **degree to which climate adaptation capacities in Portugal are strengthened** by the adoption and articulation of cross-sectoral and territorial measures
- Relevant for **monitoring the implementation of interventions resulting from strategies and plans** that aim to increase adaptive capacity or reduce vulnerabilities related to climate change.
- Used to **assess the performance of POSEUR Investment Priority for Adaptation** by monitoring the level of implementation of adaptation options/measures that have been entered by sectors, regions, communities or municipalities in their strategies or plans (for climate change or other topics, e.g: water management; forest fires; coastal protection)
- Can also be applied in the **self-assessment** of the level of integration of adaptation by public or private institutions that are developing their own adaptation initiatives to climate change.



## ENAAC 2020: Financing and Reporting



- **Scorecard-type assessment**, variables codified into a closed and sequential questionnaire
- **5 questions** whose answer will evaluate to what extent the criteria in the variable have been reached:
  - **YES** (criteria reached to a great extent, 2 points)
  - **PARTIAL** (if partially, 1 point)
  - **NO** (if they have not been, 0 points)
- The **NO** response to the first variable (key variable) stops the procedure with a scorecard result of **0 (zero)**.

$$\text{Indicator result (\%)} = \frac{\text{No. scorecards with a result } \geq 1 \text{ point}}{\text{No. scorecards duly completed and validated}}$$

- **The indicator result** is the only necessary information for PO SEUR and **could be obtained exclusively through Q1**, however this monitoring exercise **was also used to gather more qualitative information to be used under the National Adaptation Strategy**
- **Frequency**: biennial
- **Format**: electronic questionnaire (allows direct consultation of all sources of information and easy calculation of results)
- **Universe**: more than **350** entities (Municipalities; regional entities; central administration)



## ENAAC 2020: Financing and Reporting



QUESTIONS	Y	P	N
1. Has the sector / region / community / municipality already implemented adaptation options/measures identified in strategies/plans related to climate change or other areas?			
2. Have the adaptation options/measures already implemented correspond to the totality of those identified in the strategies/plans?			
3. Are the adaptation options/measures intended to address the vulnerabilities and/or climate risks identified in the strategies/plans?			
4. Have monitoring and/or evaluation programs been defined for the adaptation options/measures already implemented?			
5. Have the adaptation options/measures already implemented been financed from the sector / region / community / municipality own funds?			

## ENAAC 2020: Financing and Reporting



- 185 questionnaires answered (52% of total sent)
- 162 complete responses to the questionnaire (88% of the total received)
- 77 responses Yes or Partial to variable 1 (Q1) (38% of total received)
- 26 responses with additional comments to Q1

Indicator = (no. Scorecards with Q1 Yes + Q1 Partial) / (Total validated scorecards) \* 100

**FINAL RESULT:**  
Indicator = (37 + 34) / 162 \* 100 =  
**44%**

## Adaptation Action Plan

- Identification of actions arising from the work in ENAAC 2020 and Municipal/Regional Plans and Strategies, with territorial scope
- Priority vulnerabilities and measures
- Basis for mobilize current funding and develop future funding mechanisms (e.g. ESIF Funding; National Funding)
- Beginning implementation in the period 2018-2020, towards 2030
- Public consultation begins in 16<sup>th</sup> October
- Expected approval in December by Council of Ministers



## Adaptation Action Plan

Action Types		MAIN IMPACTS & VULNERABILITIES					
		Forest fires risk increase	Heat waves increase in intensity and frequency	Water scarcity and droughts risk increase	Desertification risk increase	Precipitation extreme events	Sea level rise and storm surges
1	Forest fires prevention actions						
2	Soil Conservation and improvement						
3	Sustainable water use						
4	Ecosystems resilience to climate change						
5	Heat waves prevention actions						
6	Human, plant and animal diseases caused by new vectors						
7	Flooding protection						
8	Coastal protection						
9	Capacitation, awareness and tools for adaptation						

### Output indicators

#### action specific:

- Areas (ha)
- Water bodies
- Protected areas (ha)
- Municipalities
- No. of forest and agriculture holdings
- No. of industries and services
- Coastal line (km)
- ...





## Adaptation Action Plan

OUTCOME INDICATOR	Target 2020	Target 2030
Municipalities with adaptation plan	60%	100%
Municipalities with Forest fires Prevention Plan (taking into account climate scenarios)	2%	100%
Urban Water Use Efficiency	80%	85%
Industrial Water Use Efficiency	85%	90%
Agriculture Water Use Efficiency	65%	80%
Awareness and capacitation actions: population target	5%	25%
Transport infrastructure companies with adaptation or extreme events contingency plans	10%	50%
Energy companies with adaptation or extreme events contingency plans	25%	100%
Water and wastewater infrastructure companies with adaptation or extreme events contingency plans	50%	100%
Communications infrastructure companies with adaptation or extreme events contingency plans	25%	100%
Mainland Coastline in erosion critical situation	16,5%	12%
Irrigation areas with high-tech water use	10%	50%
Reduction of Number of people affected by flooding in mapped risk areas (Flood Risk Management Plans)	-	25%
Reduction on areas with exotic invasive species	-	10%
Reduction on cases of diseases caused by new vectors (by decade)	-	10%



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## Challenges in Adaptation MRE



- ✓ Overall burden to public administration – how to minimize it?
- ✓ How to capture Adaptation efforts? (e.g. how to know if evolution is related with adaptation action or other factors)
- ✓ Where is the line between Adaptation and usual climate related measures?

Focus on Evaluation and adequate indicators to determine effectiveness


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