

# Horizonte 2020

**Encuentros con la Mar  
“El I+D+i En el Sector marítimo”  
Clúster Marítimo Español**

**CDTI, 28 de Febrero de 2017, Madrid**

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# Horizon 2020: Programa de I+D

 **74 Billion**  
(aprox)

Framework funding programme for all EU research & innovation-related activities (2014-2020)



## Funding Rates

One Project= One Rate

Up to **100 %** of the eligible costs for research actions;

Up to **70 %** for innovation actions (exception for non-profit organizations – up to 100%).

**25 %** direct cost (indirect cost)

## Consortium requirements

- Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy (EUR 3,7 Billion)
- Secure, Clean and Efficient Energy (EUR 5,6 Billion)
- Smart, green and integrated Transport (EUR 6,1 Billion)

Work Programmes (WPs)

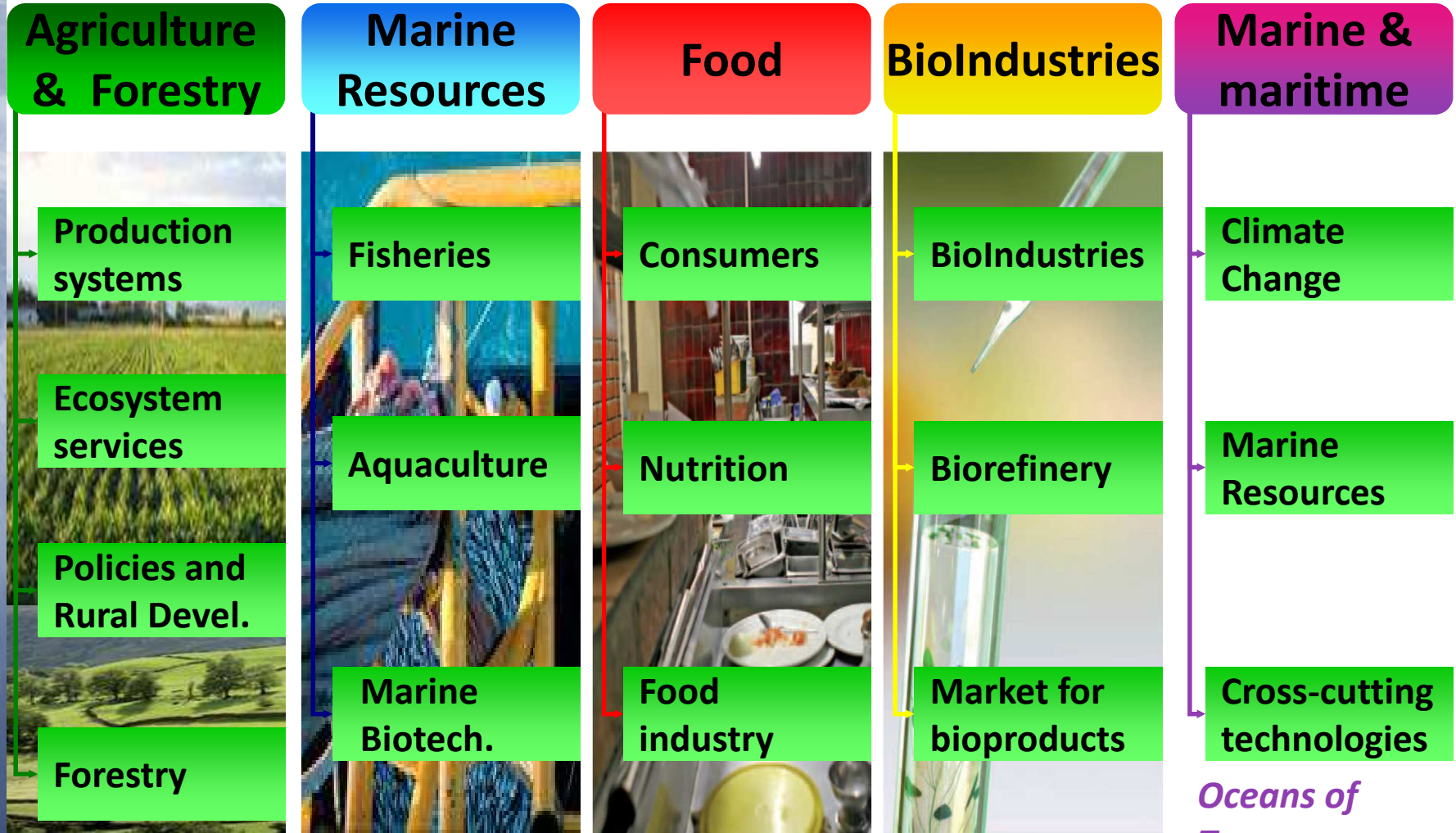


...

Ppto. "Post" Juncker Plan



## SC2 - BIOECONOMY – Structure and Contents



*Oceans of Tomorrow*

## Societal Challenge 2. 4 Calls in 2016 & 2017

**Sustainable  
food  
security**

**Blue  
Growth**

**Rural  
Renaissance**

**Bio-based  
innovation  
for  
sustainable  
goods and  
services**



# SC2 - BIOECONOMY – Topics in Blue Growth Calls



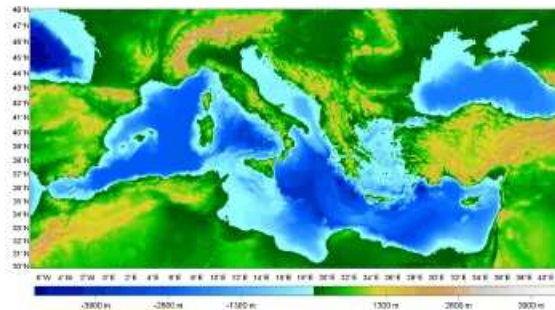
## Offshore



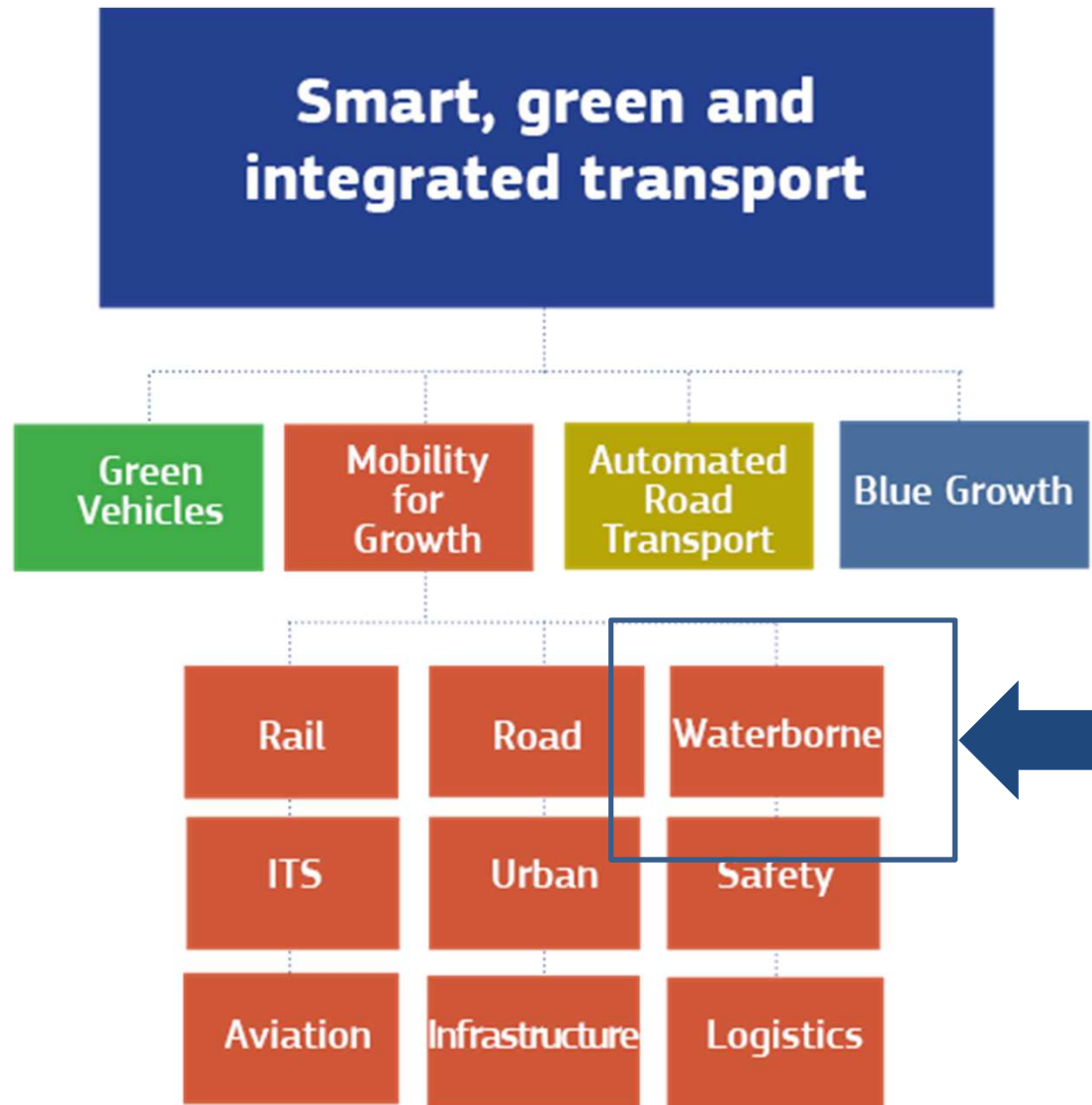
## Cleaning the Sea



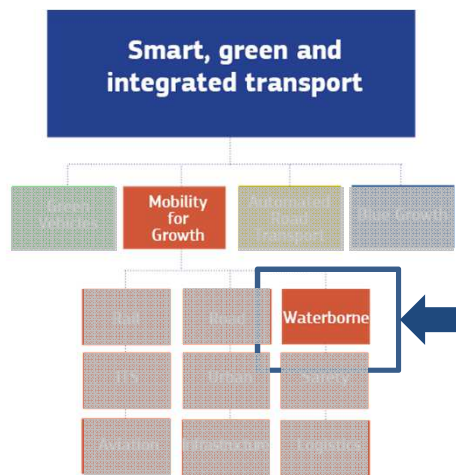
## The BLUEMED Initiative



# Horizon 2020: Transporte. Estructura actual (orientativo)



# Horizon 2020: Transporte. Estructura actual (orientativo)



## WATERBORNE

### WATERBORNE

**+ 130 Million EUR (aprox) / 8 Topics**

+ Safety, Urban Mobility, Logistics, Infra, Socio, Blue Growth

**> 200 Million EUR**

## WATERBORNE. Líneas de investigación

Towards the **energy efficient** and **very-low emission vessel**

Safer and more efficient waterborne operations through new technologies and **smarter traffic management**

System modelling and life-cycle cost and **performance optimisation** for waterborne assets

Advancing innovation in the **Inland Waterways Transport (IWT)** sector

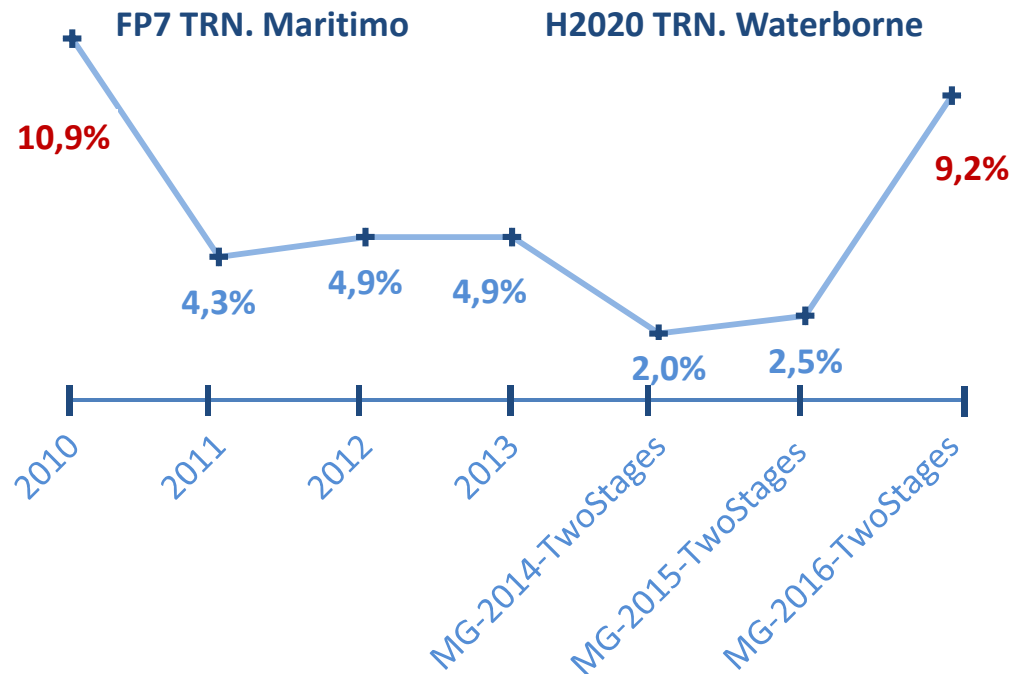
Innovations for **energy efficiency and emission control** in waterborne transport

Development, production and use of high performance and **lightweight materials** for vessels and equipment

New and improved **transport concepts in waterborne transport**

**Complex and value-added specialised vessels**

# Horizon 2020: Transporte (Waterborne). Resultados ES



## RESULTADOS

**MG 2016 Two Stage**  
Liderazgo Proyecto (TSI, PYME)

### Reflexiones

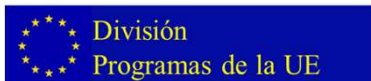
¿Tendencia?  
¿Soportes/Resistencias?  
¿Reflejo ecosistema ES/  
resultados H2020?

## H2020 TRN WP 2018-2020

**A nivel EU**, grandes tendencias (p.e): emisiones, nuevos sist. propulsión, multimodal, accidentes, sistemas autónomos, nuevos sist. producción, etc

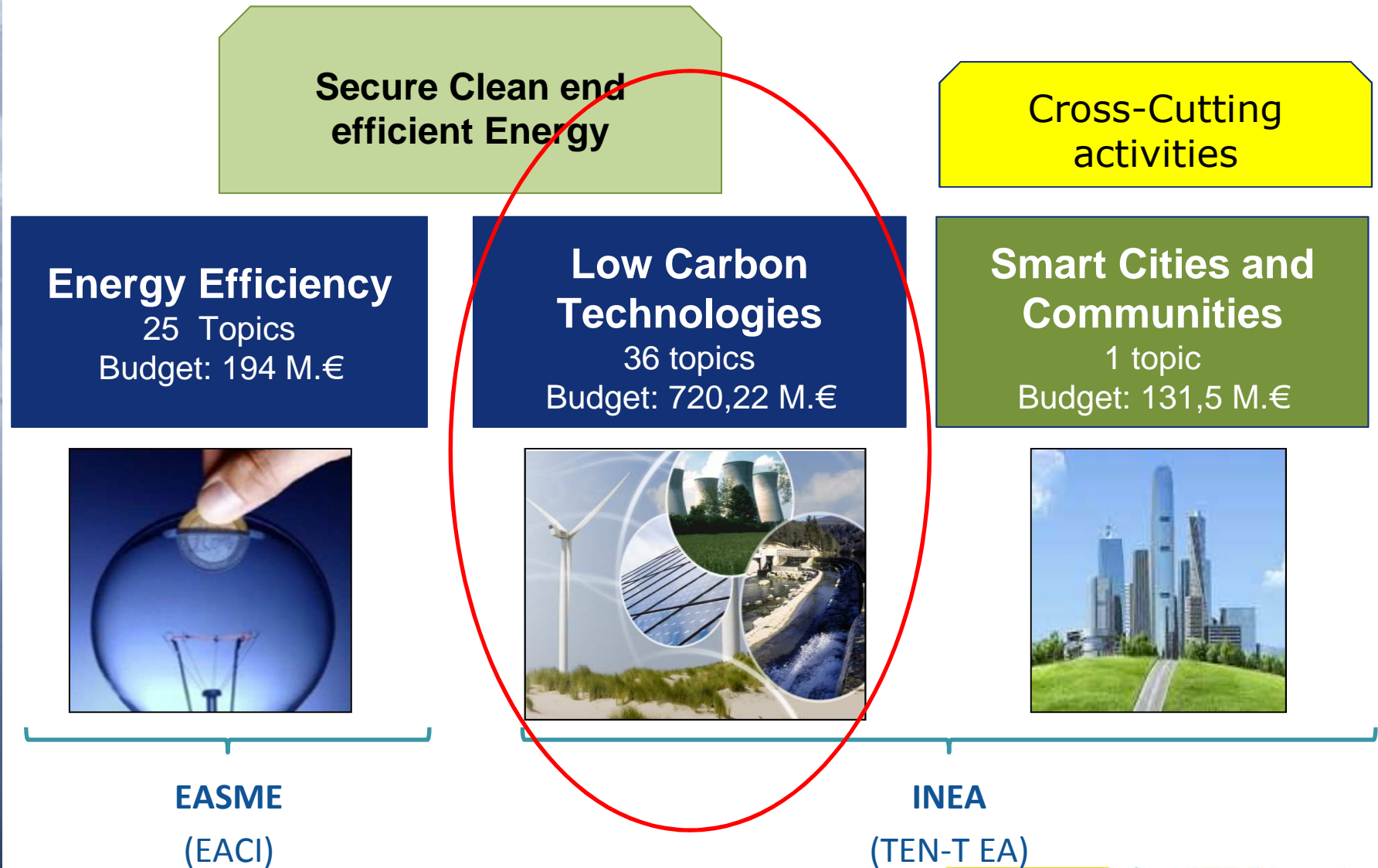
**A nivel ES**...¿intereses? ¿capacidades?

Valores orientativos

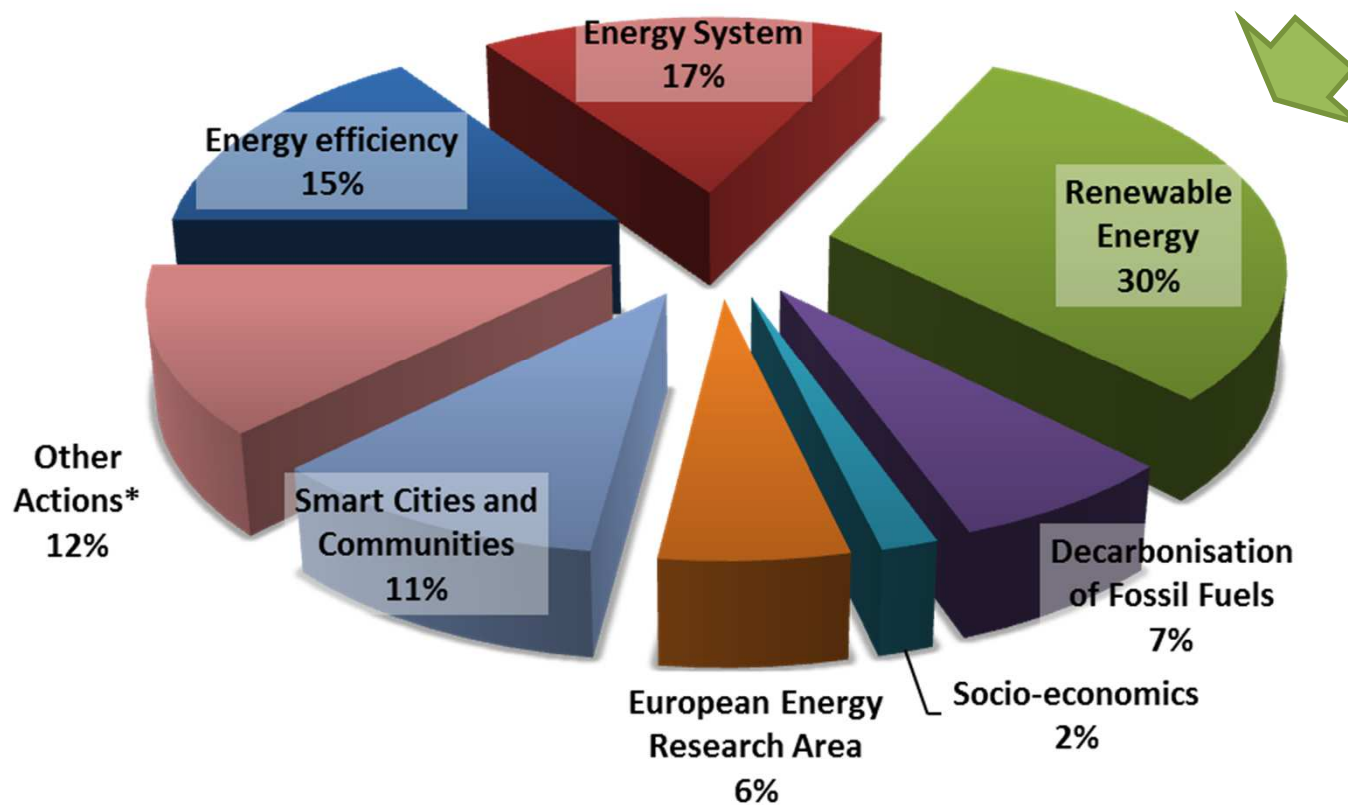




# RS3: Programme Structure Call 2016-2017



# Indicative budget distribution per area for Energy calls 2016-2017



Total budget 2016-2017: EUR 1 344 million

\* *Other Actions* = actions not implemented through calls for proposals (e.g. Risk Finance, procurements, subscriptions, contributions, grant to identified beneficiaries)



# Renewable energies

	Basic Research (TRL <4)	Advanced Research (TRL 3-5)	Demonstration (TRL 5-7)	Market uptake
PV	LCE-6	LCE-7	LCE-9, LCE-10	LCE-21
CSP			LCE-11	
Solar Heating and Cooling			LCE-12	
Wind Energy			LCE-13, LCE-14	LCE-21
Ocean Energy			LCE-15, LCE-16	
Hydropower				
Geothermal Energy			LCE-17, LCE-23, LCE- 18	
CHP				
RES integration in the system				
Bio- and Renewable Alternative Fuels			LCE-8, LCE-22	



# Ocean energy

- **European industries are leading** the emergence of the technologies.
- Many devices developed / prototypes tested, but **market potential yet to be realised.**
- Demonstration of **reliable and survivable** systems essential.
- Environmental, **social and public impacts** to be addressed



# Ocean energy

## ***Basic research (RIA)***

- Upscaling technologies currently at lab-scale - LCE-6-2017 **CLOSED**

## ***Advanced research (RIA)***

- Innovative power take-off systems and control strategies – LCE-7-2016-2017 **CLOSED**

## ***Demonstration (IA)***

- Scaling up in the ocean energy sector arrays– LCE-15-2016 **CLOSED**
- **Design tools for ocean energy devices and arrays development/deployment – LCE-16-2017**



# Design tools for ocean energy devices and arrays development/deployment

## LCE-16-2017

Develop and demonstrate **new advanced tools based on the first experiences of ocean energy arrays**. Enabling **technical risk reduction** and **attracting investors** for future innovative array designs

The impact of design on **energy yield, survivability and O&M as well as environmental impacts** should be taken into account. These tools should facilitate a **significant increase in reliability, survivability, performance improvement and cost reduction of devices and arrays**.

**Budget: 5-7 Million Euros**

**Deadline: 7/9/2017**





# Wind energy

*Demonstration (IA)*

## Large >10 MW wind turbines – LCE-14-2017

The development of **large scale (>10MW) turbines** will have intrinsically logistical requirements regarding **handling, installation, operation and maintenance**, constituting a large part of the levelised cost of energy (LCOE). **Improved handling (storage, loading, transport, etc.) on land, in the harbors and/or at sea, as well as improved logistics around operations and maintenance** have to be taken into account in this innovation action.

*Budget: 20-25 Million Euros*

# Resultados H2020: 2014-2015 y provisionales 2016

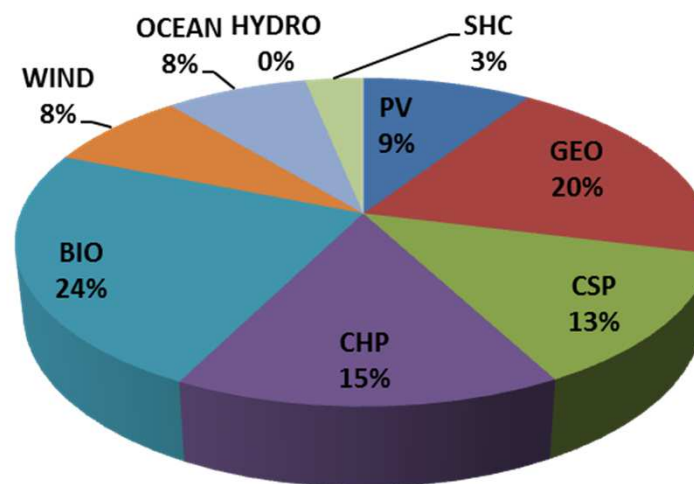


# WP2014-2015

## Tecnologías topics LCE-2 y LCE-11 RIA

	2014			2015			TOTAL	
	Proposals	Funded	Subv (M€)	Proposals	Funded	Subv (M€)	Funded	Subv (M€)
PV	36	2	9,5	47	1	3,3	3	12,8
GEO	11	2	12,1	18	3	14,9	5	27
CSP	25	1	6,5	13	2	11,8	3	18,3
CHP	31	2	12,1	19	2	9	4	21,1
BIO	81	2	10,6	88	4	22	6	32,6
WIND	25	1	7,3	10	1	3,5	2	10,8
<b>OCEAN</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>2</b>	<b>10,8</b>	<b>2</b>	<b>10,8</b>
HYDRO	9	0	0	4	0	0	0	0
SHC	18	0	0	6	1	4,4	1	4,4
<b>Total</b>	<b>261</b>	<b>10</b>	<b>58,1</b>	<b>225</b>	<b>16</b>	<b>79,8</b>	<b>26</b>	<b>137,9</b>

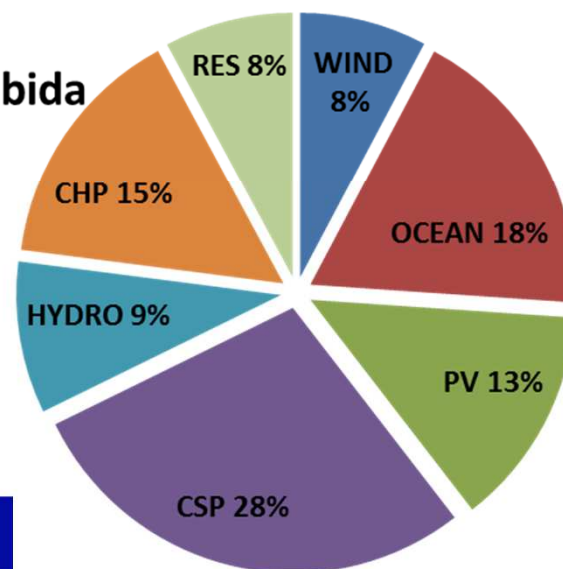
**OPERA**  
 TECNALIA  
 Oceantec  
 Biscay Marine Energy Platform, S.A.  
 EVE



# WP2016 Tecnologías topics LCE-7 RIA

	2016			2017			TOTAL	
	Proposals	Funded	Subv (M€)	Proposals	Funded	Subv (M€)	Funded	Subv (M€)
PV		2	8,5				2	8,5
GEO		0	0					
CSP		4	17,9				4	17,9
CHP		2	9,6				2	9,6
WIND		1	4,9				1	4,9
OCEAN		3	11,7				3	11,7
HYDRO		1	5,9				1	5,9
RES		1	5,0				1	5,0
SHC		0	0				0	0
<b>Total</b>	<b>76</b>	<b>14</b>	<b>63,5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>63,5</b>

**% Subv. Recibida**





**KEEP  
CALM  
AND  
JOIN  
HORIZON 2020**

**Ayuda Horizonte 2020 (temáticas)**

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