



# Strategic Research and Innovation Agenda



## PRIMA:

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# Acknowledgements

This was prepared by the 4PRIMA CSA task force composed by Representatives of the:

- **Tunisian** Ministry of Higher Education and Scientific Research
- **Spanish** Ministry of Economy, Industry and Competitiveness
- **French** Research National Agency
- **Moroccan** Ministry of Higher Education, Scientific Research and Professional Training
- **Italian** Ministry of Education, University and Research

The SRIA also takes in consideration contributions provided through:

- Public **web consultation**
- **Stakeholder fora (Egypt)** organised in the frame of the 4PRIMA project
- All the members of the **PRIMA General Assembly**



# Common Mediterranean Challenges

- Climate change

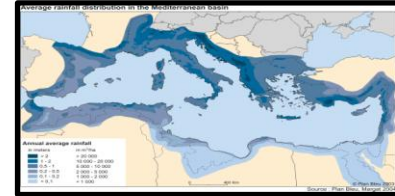
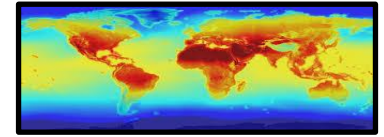
The Mediterranean is a vulnerable region to climate change, it is predicted to become **warmer and drier**. The effects are **water shortages**, with impacts on **agriculture** and the **environment**

- Population growth and food security

There will be **520 million persons** to feed in the region by 2020. Mediterranean agriculture will have to provide **quality food**

- Water scarcity and overexploitation of natural resources

Mediterranean **water resources** are limited and of low quality, fragile and unevenly distributed in space and time. **Land degradation**, particularly **erosion and salinization**, are risks difficult to restore



# Sustainable agriculture

Agriculture is a major economic sector in terms of its capacity to generate employment and income for a large fraction of the Mediterranean population. In most southern Mediterranean countries, it is providing employment for 20 to 30% of the population





## Agro-biodiversity loss

The genetic diversification of food crops and animal breeds (agrobiodiversity) is declining. Many local varieties are being replaced by a small number of improved non-native varieties. Climate change is expected to speed the loss of agrobiodiversity as certain areas become unsuitable for less tolerant varieties.





# Mediterranean agro-food value chains

- Suffer from inappropriate logistic infrastructure, and a lack of safety, quality and traceability standards. Low rates of innovation and management, and poor marketing and communication skills make difficult for businesses (especially SMEs) to meet consumer requirements.
- Improved food processing, including innovative packaging, could make local products more competitive and create new trade opportunities.



H2020 SC5

JPI Water

JPI FACCE

Climate Kic

# PRIMA as a platform for research & innovation integrating disciplines and R&I initiatives



H2020 SC2

JPI HDHL

Food Kic

BlueMed

## Mediterranean basin specificities

- **Environmental**
  - Water quantity and quality restrictions (salinity)
  - Climate change
  - Salinization and desertification (land sustainability)
- **Socio-economic**
  - Demographic growth
  - Relevance of the agro-food sector
- **Technical**
  - Agriculture the main user of water resources
  - Specific high value farming systems
  - Mediterranean diet



# Three main interconnected thematic areas



## Cross-cutting themes



SOIL  
SUSTAINABILITY

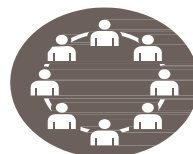


FOOD  
SECURITY

## Cross-cutting technologies and approaches



DIGITAL  
REVOLUTION



SOCIO-ECONOMIC  
RESEARCH  
AND STAKEHOLDERS  
INVOLVEMENT



CAPACITY  
BUILDING



# 8 Operational Objectives



## 8 OPERATIONAL OBJECTIVES



### 1/ WATER-SAVING SOLUTIONS

To test and stimulate adoption of context-tailored water-saving solutions, in particular in agriculture



### 2/ LAND AND WATER SUSTAINABILITY

To improve land and water sustainability in arid and semi-arid watersheds



### 3/ WATER GOVERNANCE SYSTEM

To elaborate and stimulate adoption of new policies and protocols for the governance of water management system



### 4/ SMART AND SUSTAINABLE FARMING

To develop smart and environmentally sustainable farming systems to maintain natural resources and to increase production efficiency



### 5/ PESTS AND PATHOGENS IN FARMING

To design and promote the adoption of novel approaches to reduce the impact of pests and pathogens in farming, including their consequences on human health



### 6/ NUTRITION AND HEALTH

To innovate in the Mediterranean food products based on Mediterranean diet heritage and to enhance the links between nutrition, physical activity and health



### 7/ REDUCE LOSSES AND WASTES

To find context-adapted solutions to increase food and water chain efficiency and reduce losses and wastes

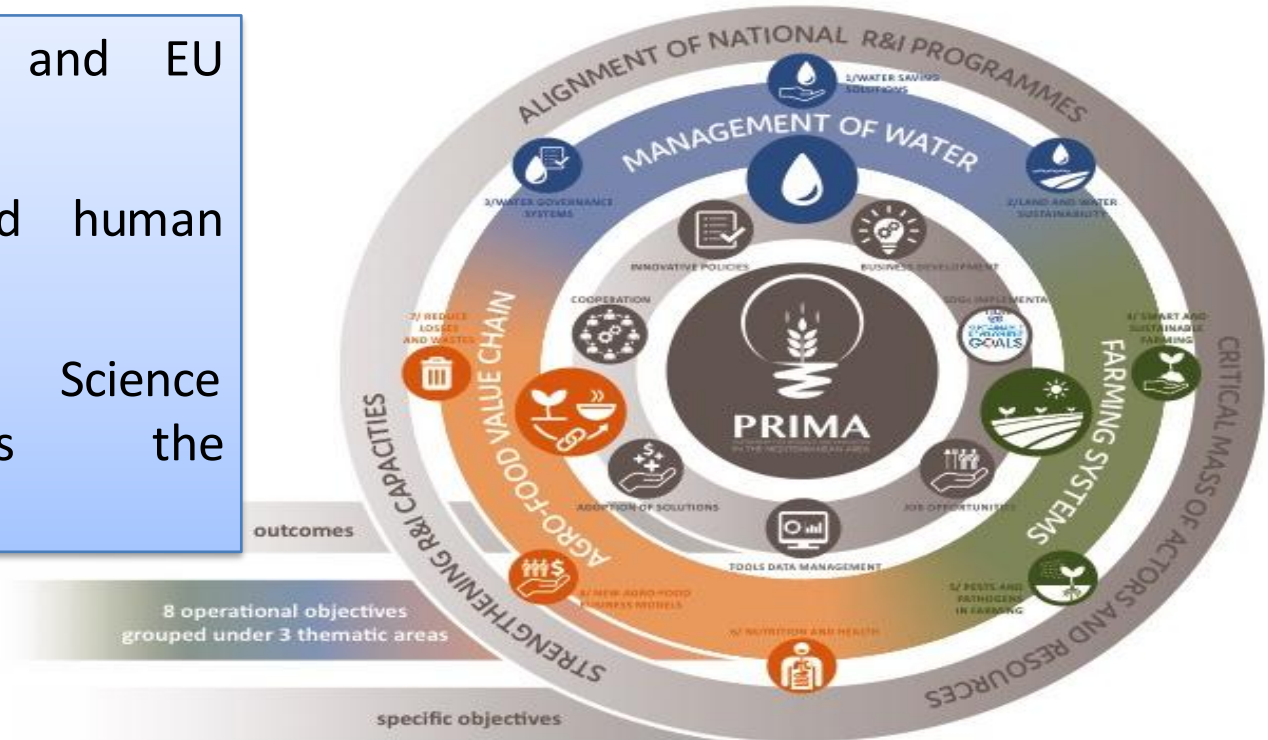


### 8/ NEW AGRO-FOOD BUSINESS MODELS

To conceive and implement innovative, quality oriented models in agro-businesses as potential sources of new jobs and economic growth

# Integrated PRIMA approach

- Aligning national and EU research agendas
- Pooling funding and human resources
- Strengthening Science Diplomacy across the Mediterranean shores



# R&I priorities, operational objectives, main actions and Technology Readiness Levels



## MANAGEMENT OF WATER

Integrated and sustainable management of water for arid and semi-arid Mediterranean areas

### Actions

RIA/ Research and Innovation

IA/ Innovation

CSA/ Coordination and Support

RESEARCH AND INNOVATION PRIORITY	LINK TO OPERATIONAL OBJECTIVE	MAIN ACTIONS	TRL
<b>1</b> Water resources availability and quality within catchments and aquifers	 2/LAND AND WATER SUSTAINABILITY	RIA	2 to 5
<b>2</b> Sustainable, integrated water management	 2/LAND AND WATER SUSTAINABILITY 3/WATER GOVERNANCE SYSTEMS	RIA and CSA	3 to 6
<b>3</b> Irrigation technologies and practices	 1/WATER SAVING SOLUTIONS	RIA and IA	4 to 8
<b>4</b> Use of alternative water resources, technologies and governance models	 1/WATER SAVING SOLUTIONS 3/WATER GOVERNANCE SYSTEMS	RIA and IA	5 to 8

# R&I priorities, operational objectives, main actions and Technology Readiness Levels



## FARMING SYSTEMS

Sustainable farming systems under Mediterranean environmental constraints

Actions  
RIA/ Research and Innovation  
IA/ Innovation  
CSA/ Coordination and Support

RESEARCH AND INNOVATION PRIORITY	LINK TO OPERATIONAL OBJECTIVE	MAIN ACTIONS	TRL
<b>1</b> Adaptation of agriculture to climate change	 4/ SMART AND SUSTAINABLE FARMING	RIA	2 to 5
<b>2</b> Developing sustainable and productive agro-ecosystems	 4/ SMART AND SUSTAINABLE FARMING	RIA and IA	2 to 7
<b>3</b> Preventing the emergence of animal and plant diseases	 5/ PESTS AND PATHOGENS IN FARMING	RIA	2 to 6
<b>4</b> Developing farming systems able to generate income, to create employment and to contribute to a balanced territorial development	 4/ SMART AND SUSTAINABLE FARMING	RIA and CSA	2 to 5

# R&I priorities, operational objectives, main actions and Technology Readiness Levels



## AGRO-FOOD VALUE CHAIN

Sustainable Mediterranean agro-food value chain for regional and local development.

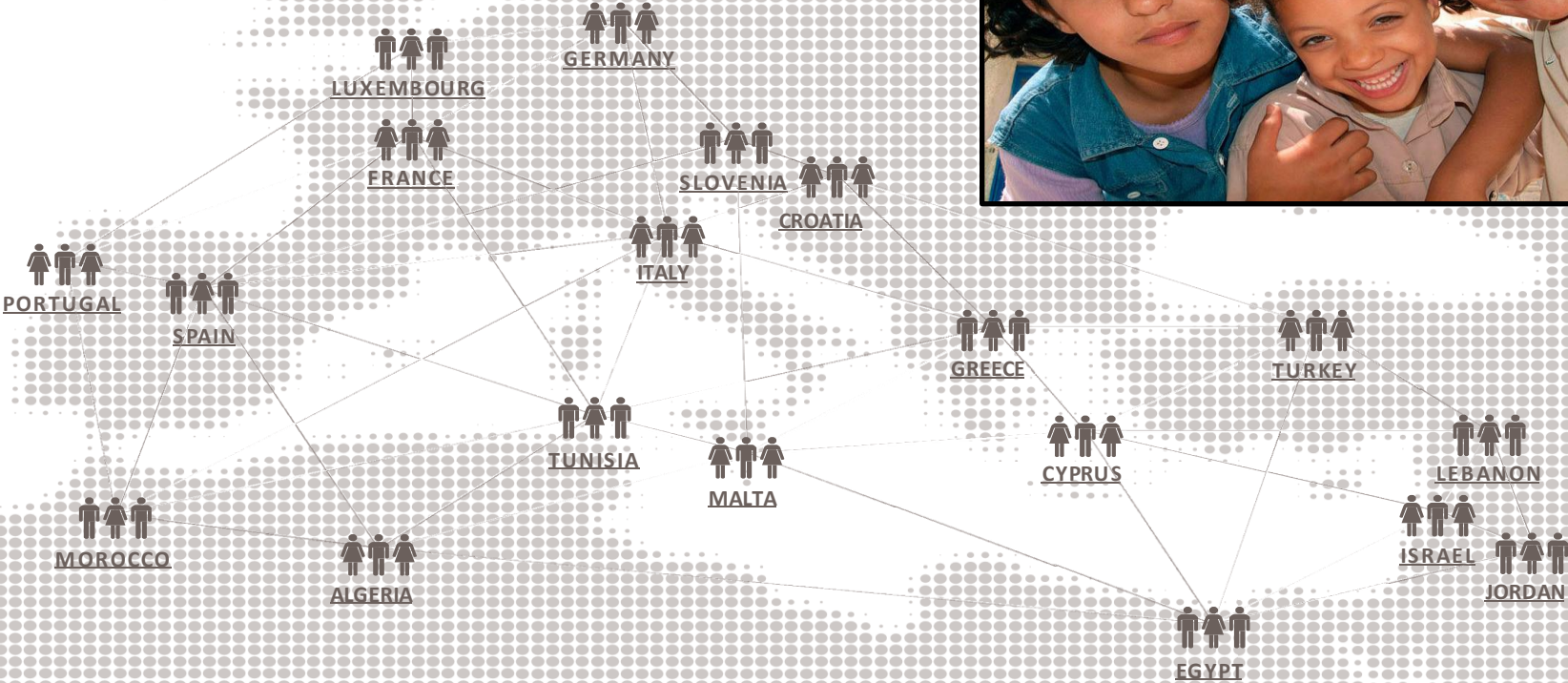
### Actions

RIA/ Research and Innovation  
IA/ Innovation  
CSA/ Coordination and Support

RESEARCH AND INNOVATION PRIORITY	LINK TO OPERATIONAL OBJECTIVE	MAIN ACTIONS	TRL
<b>1</b> Valorising food products from traditional Mediterranean diet	 6/ NUTRITION AND HEALTH	RIA and CSA	2 to 7
<b>2</b> Food Safety in local food chains	 7/ REDUCE LOSSES AND WASTES	RIA	2 to 6
<b>3</b> Implementation of innovation in the Agro-food chain, promoting higher quality, sustainability and competitiveness, with particular reference to smallholders	  7/ REDUCE LOSSES AND WASTES 8/ NEW AGRO-FOOD BUSINESS MODELS	RIA and IA	4 to 8
<b>4</b> Implications of dietary shifts and sustainable diets for the Med populations and food industry	 6/ NUTRITION AND HEALTH	RIA and CSA	2 to 6



# Beyond Research and Innovation



# Public consultation opened from April to June 2017 Total of 861 valid replies received



COORDINATION and SUPPORT for the PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

HOME ABOUT STAKEHOLDERS STRATEGIC RESEARCH AGENDA DISSEMINATION LINKS CONTACT US

PRIMA AWARENESS RAISING AND NETWORKING MEETING

## STRATEGIC RESEARCH AND INNOVATION AGENDA (SRIA)

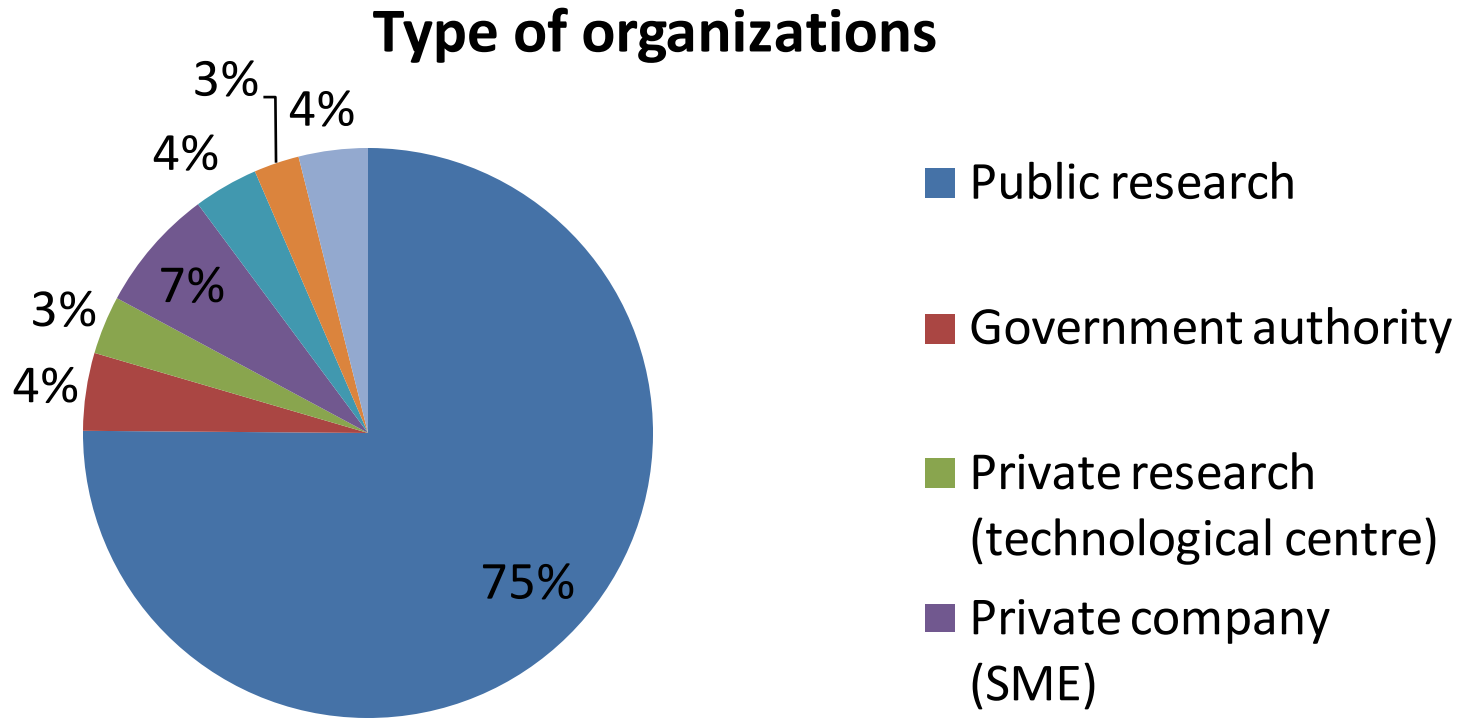
Home » Strategic Research Agenda

A first draft version for PRIMA Strategic Research and Innovation Agenda (SRIA) has been jointly defined by 4PRIMA partners based on an initial broad consultation of relevant stakeholders. The SRIA aims at enabling the prioritization of 8 objectives to be pursued by PRIMA:

1. Smart and sustainable farming;
2. Water-saving solution;
3. Nutrition/Mediterranean diet;
4. Food and Water chain efficiency;
5. Reduction of impact of pest and pathogens in farming;
6. Innovative business models in agri-food industry;
7. Land and water sustainability in arid and semi-arid watersheds;
8. Policies and governance of water management systems



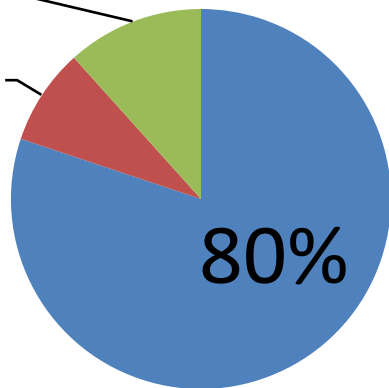
# Answers received from each organization type



**Do you think the main general priorities  
“Management of Water, Farming Systems and Agro-  
Food Value Chain” describe major challenges of the  
Mediterranean?**

12%

8%

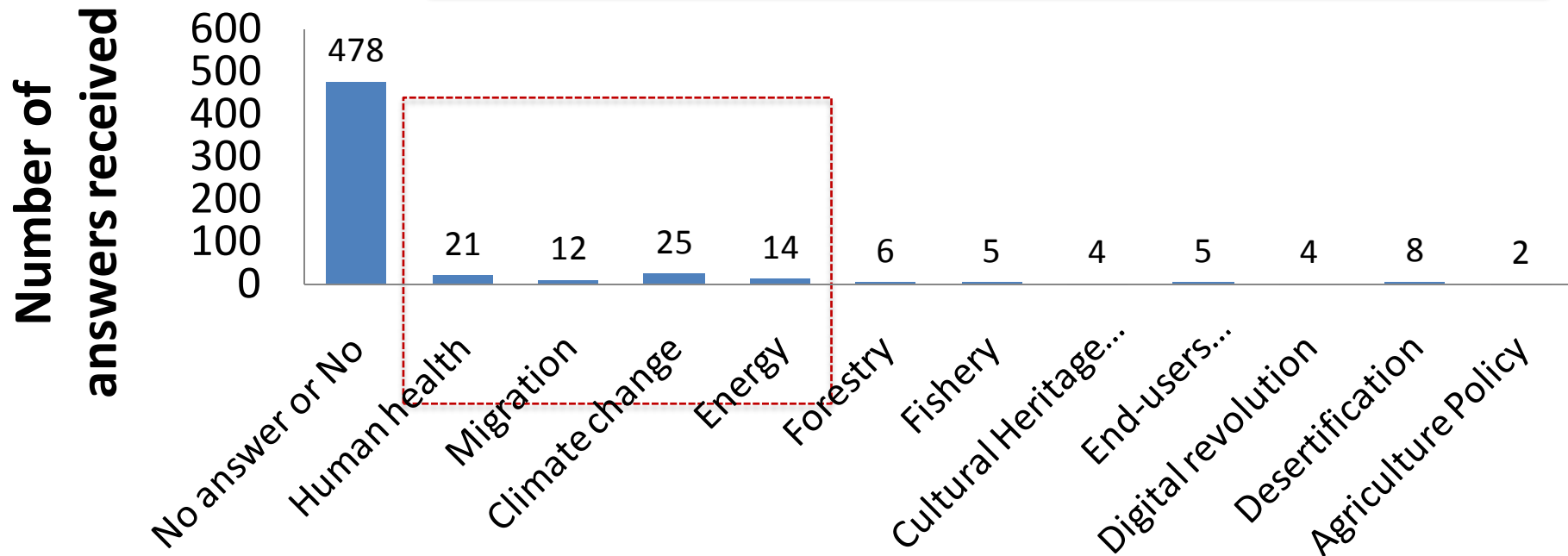


■ Yes

■ No

■ No answer

# Is there any other major challenge you think PRIMA should consider?





# National Contact Points (NCPs)

All NCPs are listed in:

<http://prima-med.org/calls-for-proposals/ncps/>

Spanish NCPs are:

INIA Jesús Escudero [jesus.escudero@inia.es](mailto:jesus.escudero@inia.es) 91 347 39 79

CDTI <http://www.cdti.es/index.asp?MP=101&MS=871&MN=2>

For section 1 calls. Marta Conde, [marta.conde@cdti.es](mailto:marta.conde@cdti.es), 91 581 55 00 / 91 581 55 94

For section 2 call, Maria Jose Tomas, [tomas\\_mariajose@cdti.es](mailto:tomas_mariajose@cdti.es), 91 581 55 02 / 91 581 55 00

AEI

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For scientific matters, Diego Intrigliolo, [prima@aei.gov.es](mailto:prima@aei.gov.es), 656682880





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