



European
Commission

The European Commission's
in-house science service



Annual Report 2013

Joint Research Centre

*The European Commission's
in-house science service*

2

3

4

6

8

10

12

**FOREWORD BY
MÁIRE
GEOGHEGAN-QUINN**

- European Commissioner for Research, Innovation and Science



**FOREWORD BY
DOMINIQUE
RISTORI**

- Former JRC Director-General



**OBSERVATIONS
FROM THE BOARD
OF GOVERNORS**



**ECONOMIC AND
MONETARY
UNION**

- Towards a stable banking system
- Monitoring fiscal imbalances for the Stability and Growth Pact
- Linking corporate taxation to financial stability
- How can science contribute to financial stability?
- Insurance for natural catastrophes



**SINGLE MARKET,
GROWTH, JOBS
AND INNOVATION**

- Efficient buildings, vehicles and equipment
- New single innovation indicator
- Smart specialisation for research and innovation strategies
- A European Research and Innovation Observatory
- Bioeconomy Observatory
- Scientific Support to the Internal Market



**LOW-CARBON
ECONOMY
AND RESOURCE
EFFICIENCY**

- Scientific support to energy transition
- Smart grids
- Charging up: Safety testing of electric vehicle batteries
- New car emission test procedure
- Modelling climate change
- Biodiversity monitoring
- Striving to improve air quality
- Global resources and pollution indicators



**AGRICULTURE
AND GLOBAL
FOOD SECURITY**

- First Soil Atlas of Africa
- Modelling agricultural market developments
- Impact of biofuels
- Evaluating resource-efficiency options
- Insect pollination and agricultural productivity
- Innovative assessment of fish stocks



TABLE OF CONTENTS

14

PUBLIC HEALTH, SAFETY AND SECURITY

- Addressing public health challenges
- Harmonising cancer and rare disease information systems
- Disaster anticipation and management
- Detecting small boats at sea
- Assessing Critical Infrastructures

16

NUCLEAR SAFETY AND SECURITY

- From European to global radioactivity environmental monitoring
- Safeguards for a new gas centrifuge uranium enrichment plant
- Reducing chemical, radiological and nuclear threats
- EUSECTRA: new European nuclear security training centre
- Tracking illicit nuclear trafficking
- Nuclear decommissioning
- Management of spent fuel

18

SCIENCE FOR STANDARDS AND INNOVATION

- Radionuclide Metrology
- Hydrogen fuel blends
- Reference materials
- Spatial data sharing
- Energy performance of buildings
- Maritime information exchange
- Chemical emissions from construction products
- Gas sensors
- Fibre mixtures
- Photovoltaic solar energy
- Water quality
- "Best Available Techniques" (BAT)
- Product environmental footprint (PEF)

20

PARTNERSHIPS AND INTERNATIONAL COOPERATION

- When industry meets science
- Scientific support to the EU's Danube Strategy
- Reinforcing transatlantic ties
- Electro-mobility: first EU-US interoperability centre
- Scientific cooperation with Brazil
- Monitoring natural resources in Africa

22

REINFORCING THE JRC'S SCIENCE INFRASTRUCTURE

- Upgrading JRC infrastructure in Karlsruhe
- New research facilities to support solar technologies in the EU
- New eco-friendly infrastructure at JRC Ispra site
- Communicating science

24

FACTS AND FIGURES

- Quick facts
- Staff
- Visiting staff
- Equal opportunities
- Publications
- Budget
- JRC earned income
- JRC media coverage in 2013
- Science for growth and jobs

26

JRC BOARD OF GOVERNORS