ITALIAN NATIONAL AGENCY FOR NEW TECHNOLOGIES, ENERGY AND SUSTAINABLE ECONOMIC DEVELOPMENT

The Technology Mechanisms

LCS-Rnet 8th Meeting
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OUTLINE

- SOME Infos on ENEA;
- SDGs description and current data;
- The Technology Mechanisms as a mean to foster Science, Technology and Innovation (STI)
- Conclusions

About us

- ENEA is the Italian National Agency for New Technologies, Energy and Sustainable Economic Development.
- It is a public RTO (Research and Technology Organization) operating in the fields of energy, environment and new technologies to support Country's competitiveness and sustainable development.
- ENEA's mission is to search for new technological solutions to meet the societal challenges, fostering transition to the Green Economy.
- The institutional mandate of the Agency is to disseminate and transfer knowledge, innovation and technology to industry, institutions and civil society at large.

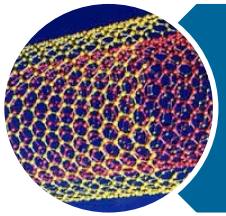
Research and Development

Energy Technologies

Renewable energy sources, Energy efficiency Sustainable fossil fuels, Energy policy, Nuclear Fusion

Environmental Technologies

Prevention and Recovery, Climate change, Eco-innovation of productive systems, Waste and water management, Air quality, Modelling



Enabling Technologies

Nanotechnologies and new materials, biotechnologies, photonics, sensors, ICT

Agri-food, Health and Safety Technologies

Innovation for the agro-industrial chain, Radiation biology and human health, Radiation protection and metrology

Research facilities and staff

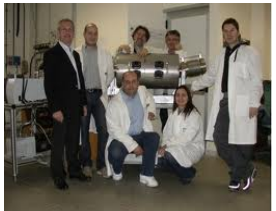
Research facilities

- **9** Research Centres
- **5** Research Laboratories
- **43** pilot plants and test facilities
- **11** local offices
- **Brussels** Liason Office
- **Headquarters** in Rome

Human Resources

2775 permanent staff (31/12/13):

- **2033** in Technical Units
- **411** in Research Centres Directorates
- **306** in Central Unit
- **25** in other staff Units




An integrated vision of sustainable development

UN Global Agenda and the Sustainable Development Goals (SDGs)

- 17 goals
- 169 targets
- 240+ indicators

The situation we want modify

800 M live in extreme poverty

250 M children are analphabet

1,400 M don't have access to electricity

800 M are undernourished, 11 M OCSE Countries

700 M don't have clean water

8% disappeared species, 22% at risk

50% of people don't have a secondary education

12 M hectars of desert increase per year

200 M are unemployed

600 M are overweight

0,5 M control 90% of resources

80% untreated used water

1,5 M has 5% world GDP

Half of agriculture production is wasted

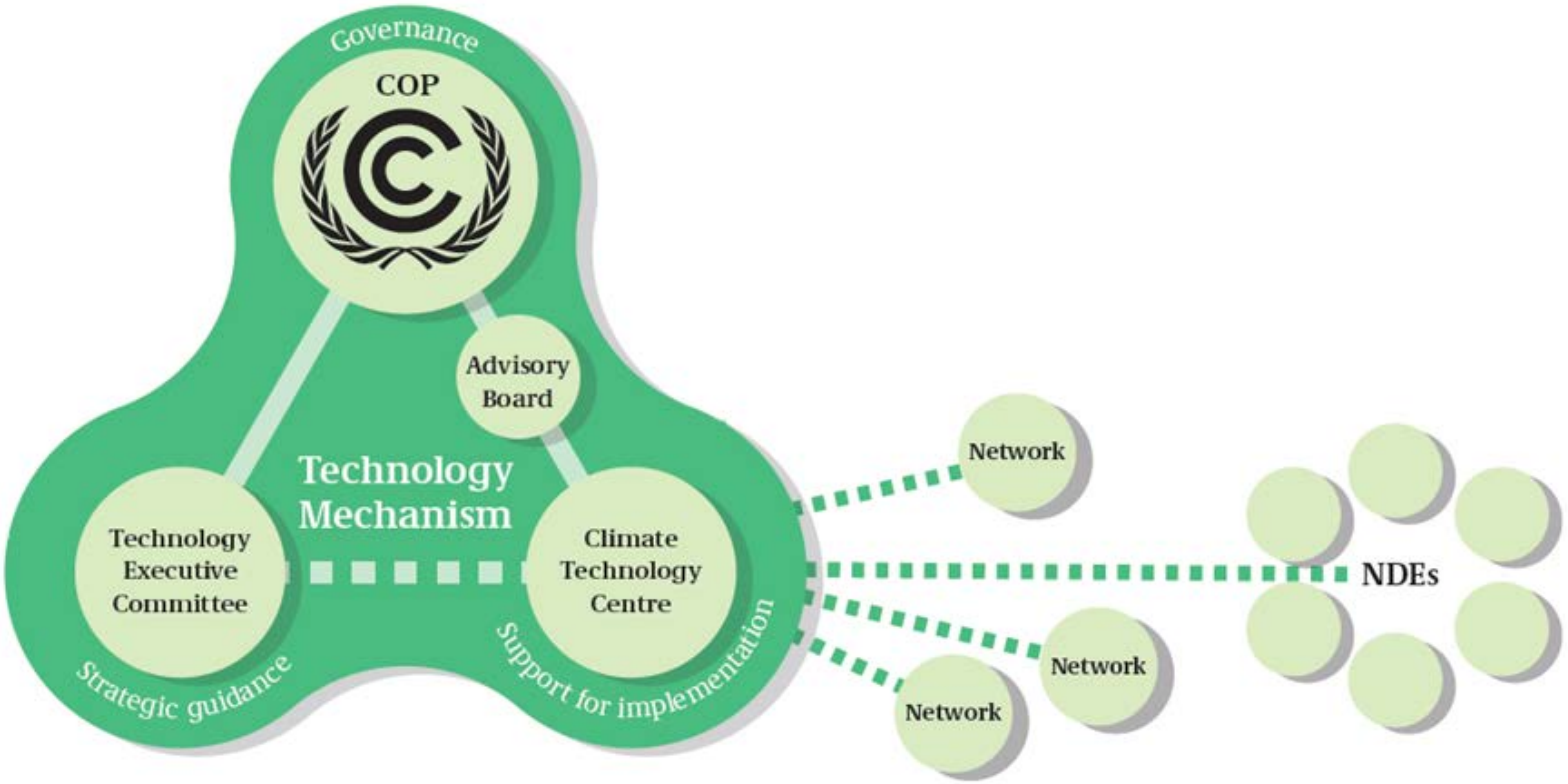
THE TECHNOLOGY MECHANISM FOR SGDs

Paragraph 123 of the Addis Ababa Action Agenda and paragraph 70 of the Post 2015 Development Agenda Outcome Document called for establishing a Technology Facilitation Mechanism.

The mechanism will comprise:

- a UN interagency task team on STI for SDGs;
- a collaborative annual multi-stakeholder forum on STI for SDGs;
- an online platform as a gateway for information on existing STI initiatives, mechanisms and programs.

THE TECHNOLOGY MECHANISM UNDER UNFCCC



CTCN Mandate, Services and Structure

Mandate

CTCN mission is “Stimulating technology cooperation and enhance the **development and transfer of technologies** to developing country Parties at their request”

Services:

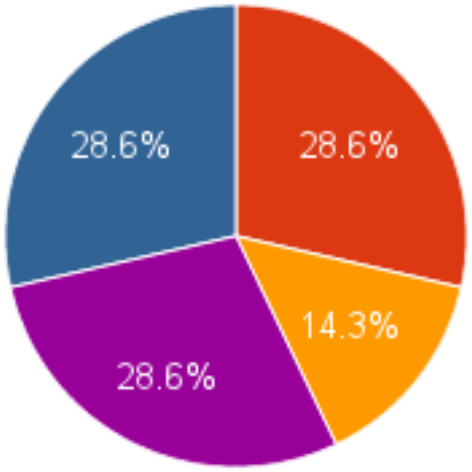
1. Technical assistance to developing countries
2. Knowledge sharing and training
3. Fostering collaboration on climate technologies (including linking climate technology projects with financing opportunity”)

Structure:

CTCN hosted by UNEP in collaboration with UNIDO and supported by 11 partner institutions with expertise in climate technologies

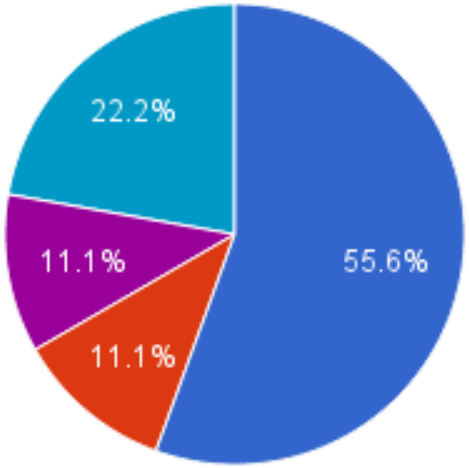
CTCN Technical Assistance

Adaptation Requests by Sector



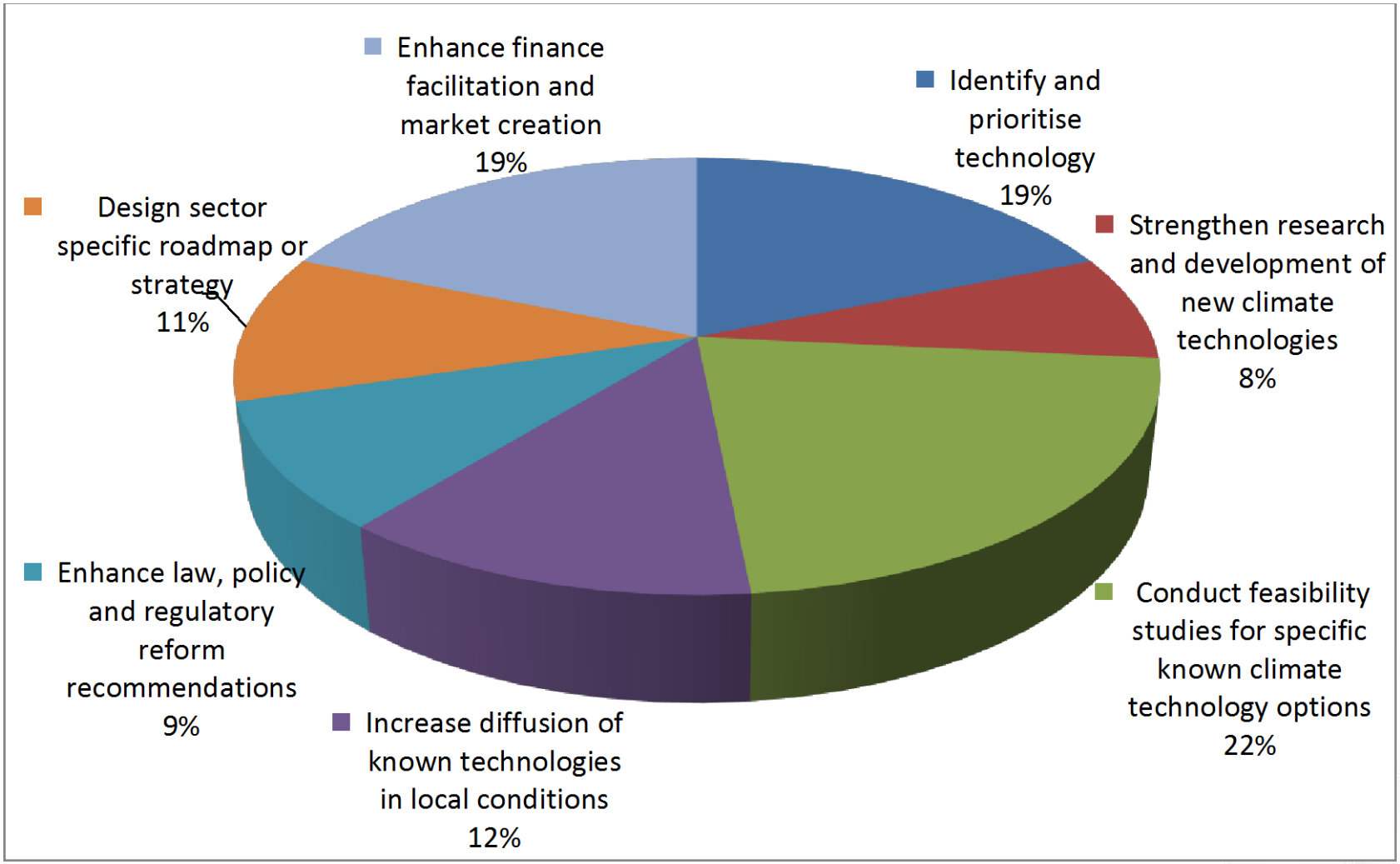
- Agriculture/Fisheries
- Water
- Ecosystems
- Monitoring

Mitigation Requests by Sector

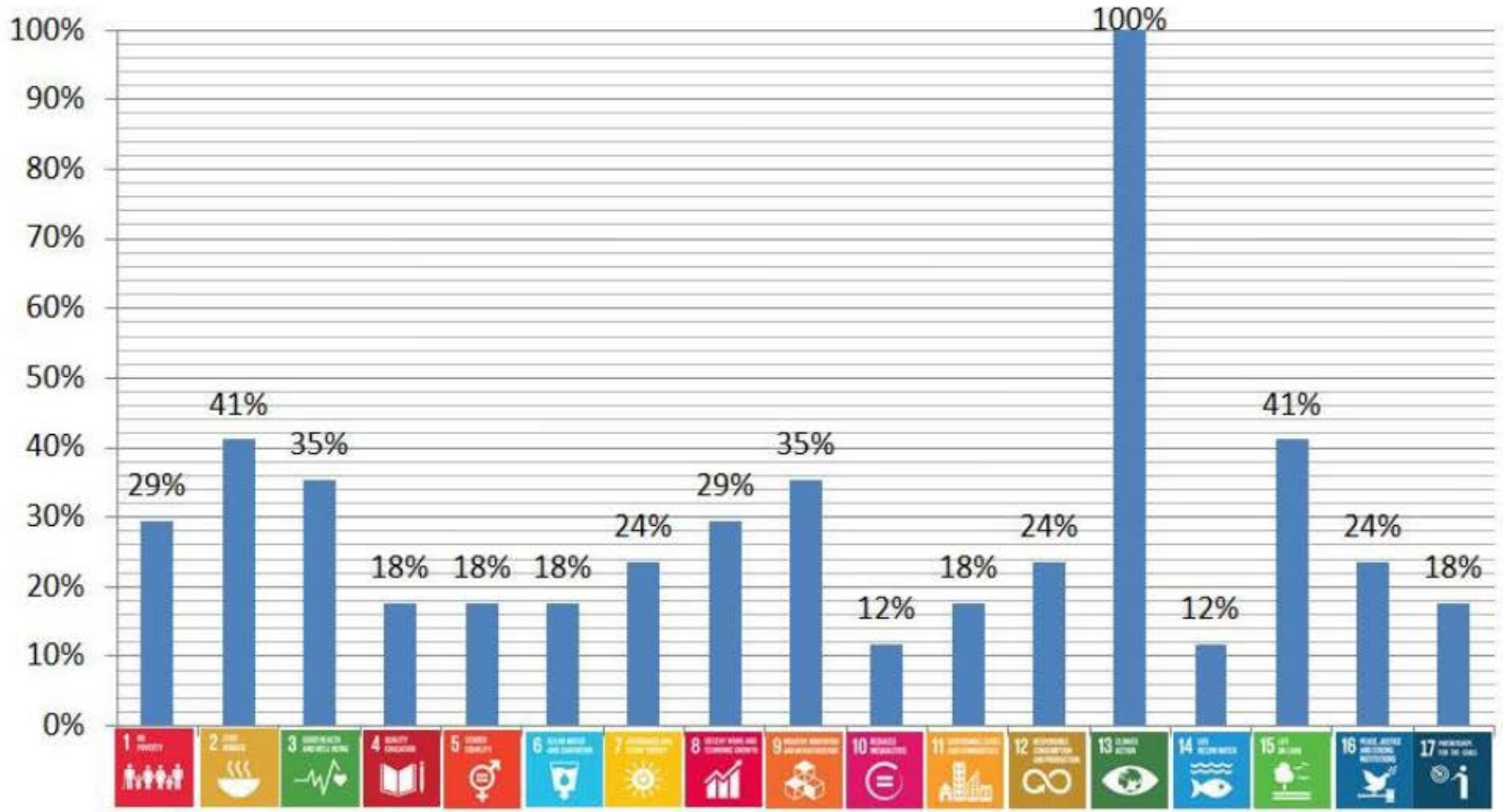


- Energy
- Transport
- Waste
- Cross-sectoral

WHAT PVS ARE ASKING FOR



IMPACT ON SDGs



SOURCE: CTCN, 8° AB Meeting

Impact sometimes can be predicted: the technological cycle

Industrial Demonstration plant

2010

2009

2008

Demo design and construction

Industrial role

Test facility PCS

2007

2006

2005

Components test and qualification

2004

Prototype Operation start-up

Prototype Operation start-up

Lab R&D

2003

Prototype Design

2002

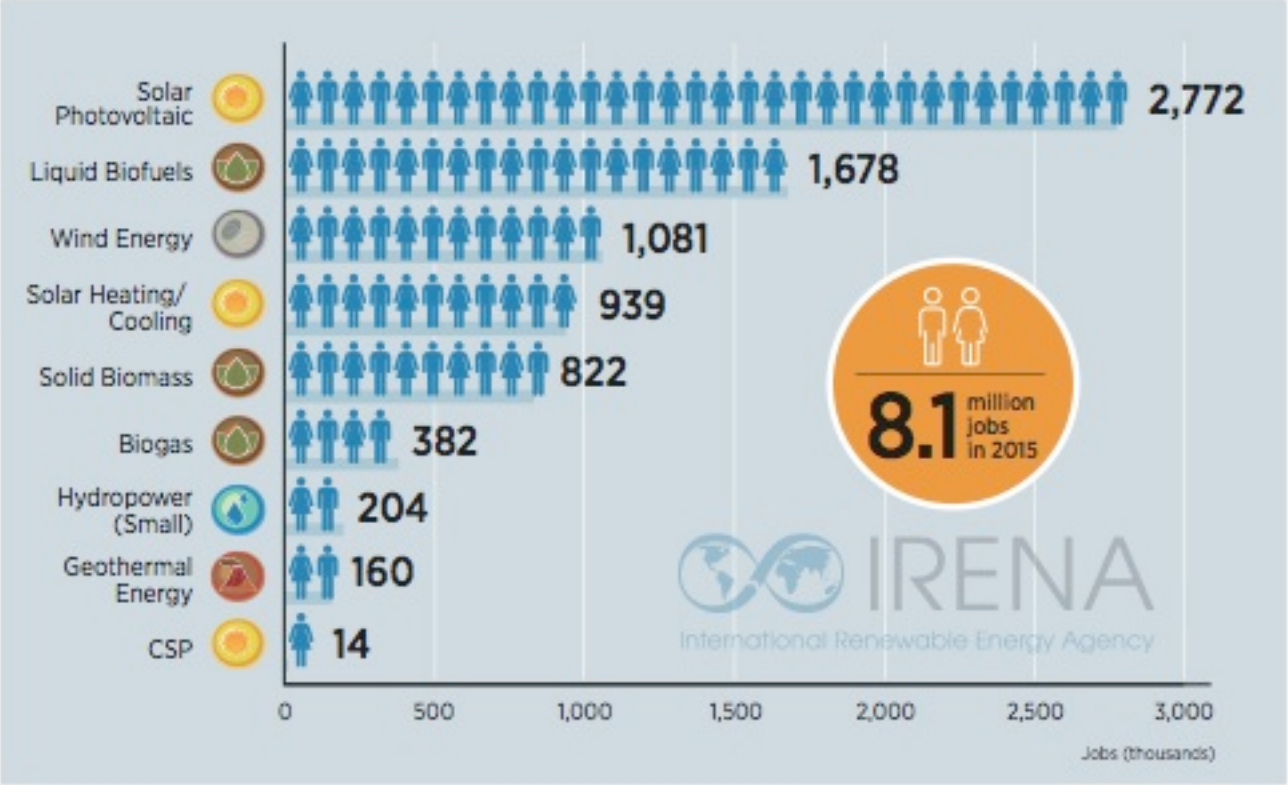
2001

Project Start-up

Government role

70 employers

Sometimes some astonishing results of research can be observed over time: Renewable Energy Employment by Technology



Conclusions and considerations for the roundtable

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- Paris Accord has been deeply a Science based set of decisions. Needless to restate the role of science in SGDs attainement; a world without science, technologies and innovation would be a boring repetition of always the same dynamics (the contrary of what the SDGs process is asking for);
- Technology Mechanism could be a mean to foster STI but is not the silver bullet, research needs more focused financing (labs, human resources, need for a adequate and predictable level of financing);
- the STI we are looking for involves a multitude of disciplines and **their integration** (physics, chemistry, biology, medicine and pharmaceutics, economy, statistics, social and political science) and also some transdisciplinary science – transitional science;
- A worldwide action plan on STI, adequately financed and evaluated, should be set;
- The UN interagency task team on STI for SDGs could help in drafting a program trying to match demand and offer of research

Main issues to be treated during the round table

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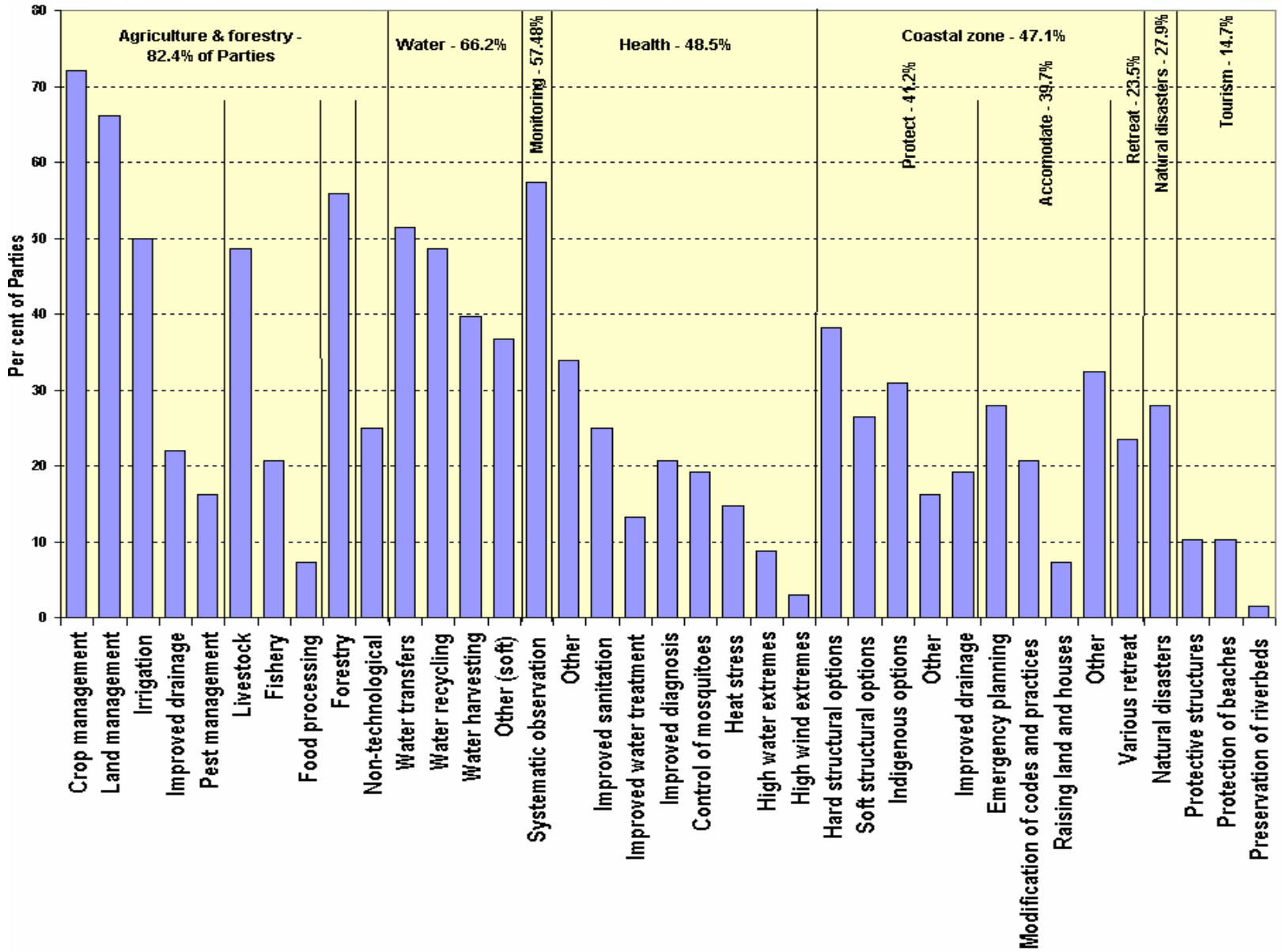
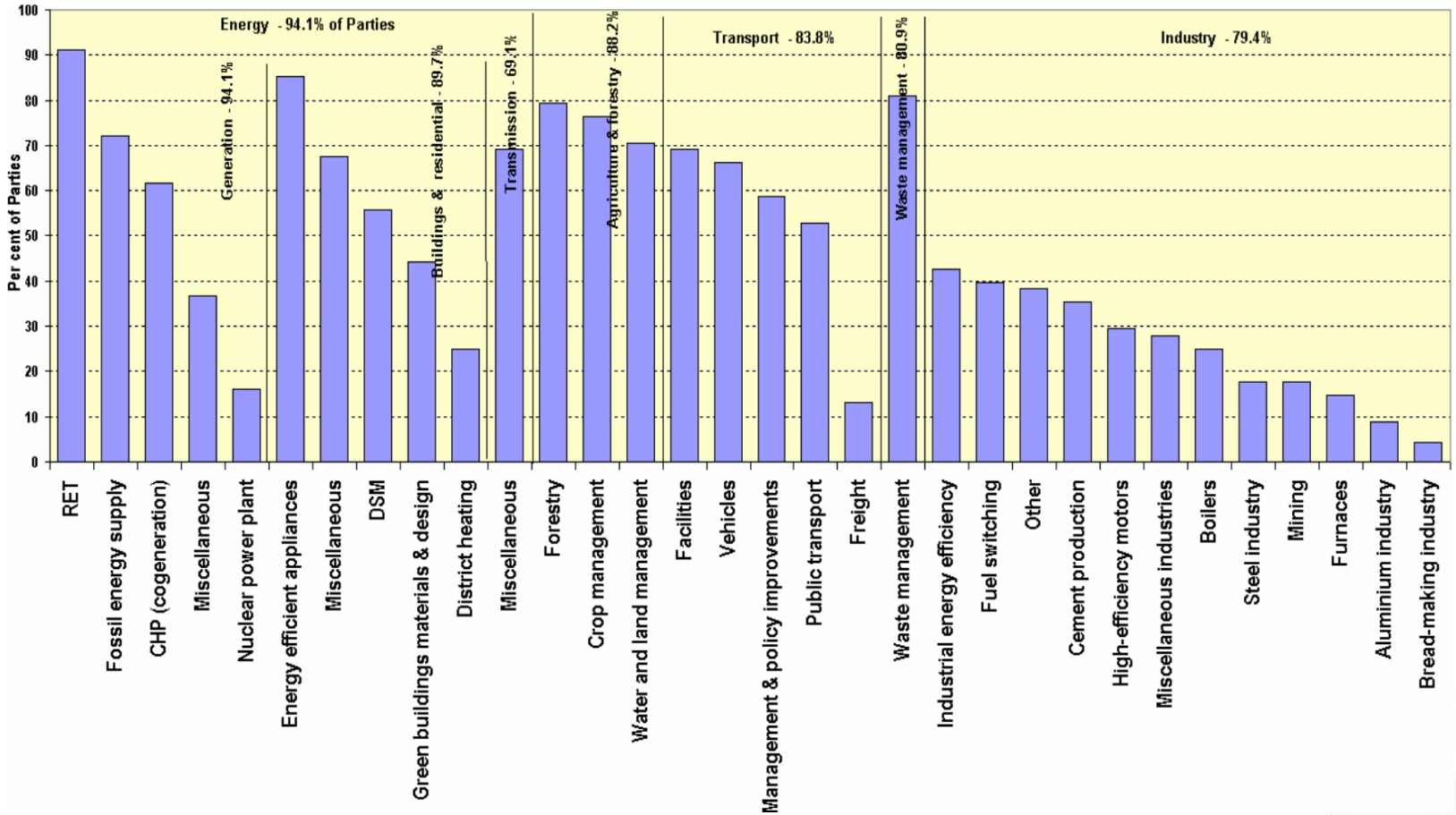
- Why are science, technology and innovation essential for the achievement of SDGs
- Main opportunities and challenges for maximizing the contribution of science to SDGs
- Main elements for action plans and roadmaps for science for SDGs
- Deployment of existing and new solutions
- What LCS-Rnet can do to help the process

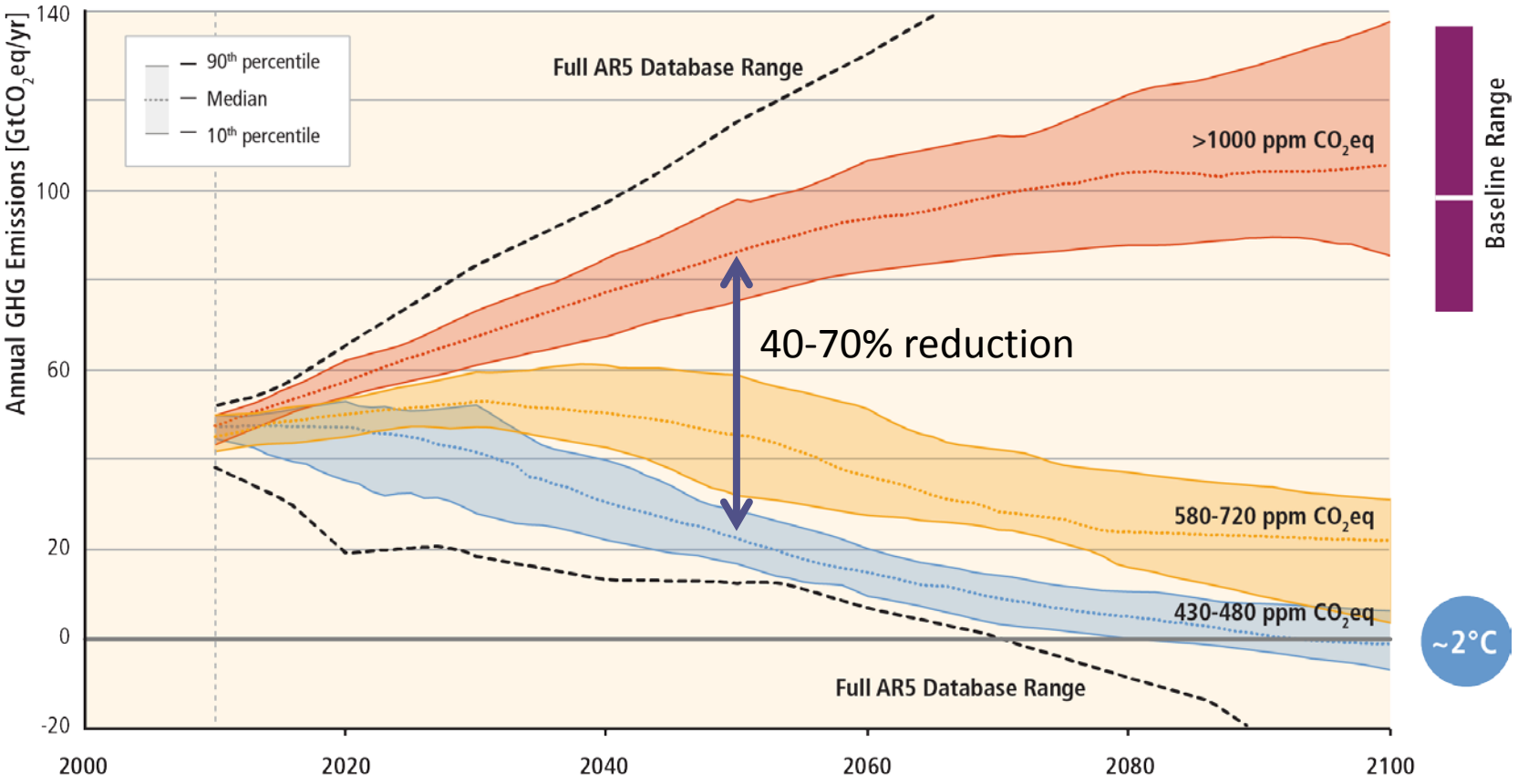
Technologies considered in TNAs in relation to adaptation



Technologies considered in TNAs in relation to mitigation



Research Community as a MAP MAKER



Ex-ante impact of research almost unpredictable

Charles Townes