

# International Workshop

## Environmental impact of the network infrastructures

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SC C3 Chairman

Stresa, 27th August 2015



# SC C3 Mission

- To facilitate and **promote the progress** of engineering and the **international exchange of information and knowledge** in the field of system environmental performance.
- To add value to this information and knowledge by means of **synthesizing state-of-the-art practices and developing recommendations.**

# SC C3 Technical Directions

## TD 1

### Assets management and environment

- **Assets life cycle (*from cradle to grave*):** from planning to decommissioning

- **C3-09** Corridor management
- **C3-14** Impact of Environmental liability on transmission and distribution activities
- **C3 - XX** *Grid and Wildlife*

## TD 2

### Global environmental changes an power sector

- **New tendencies and concepts evaluation**
- **Future challenges and its implications**

- **C3-12** Methodologies for Greenhouse gas inventory and reporting for T&D utilities

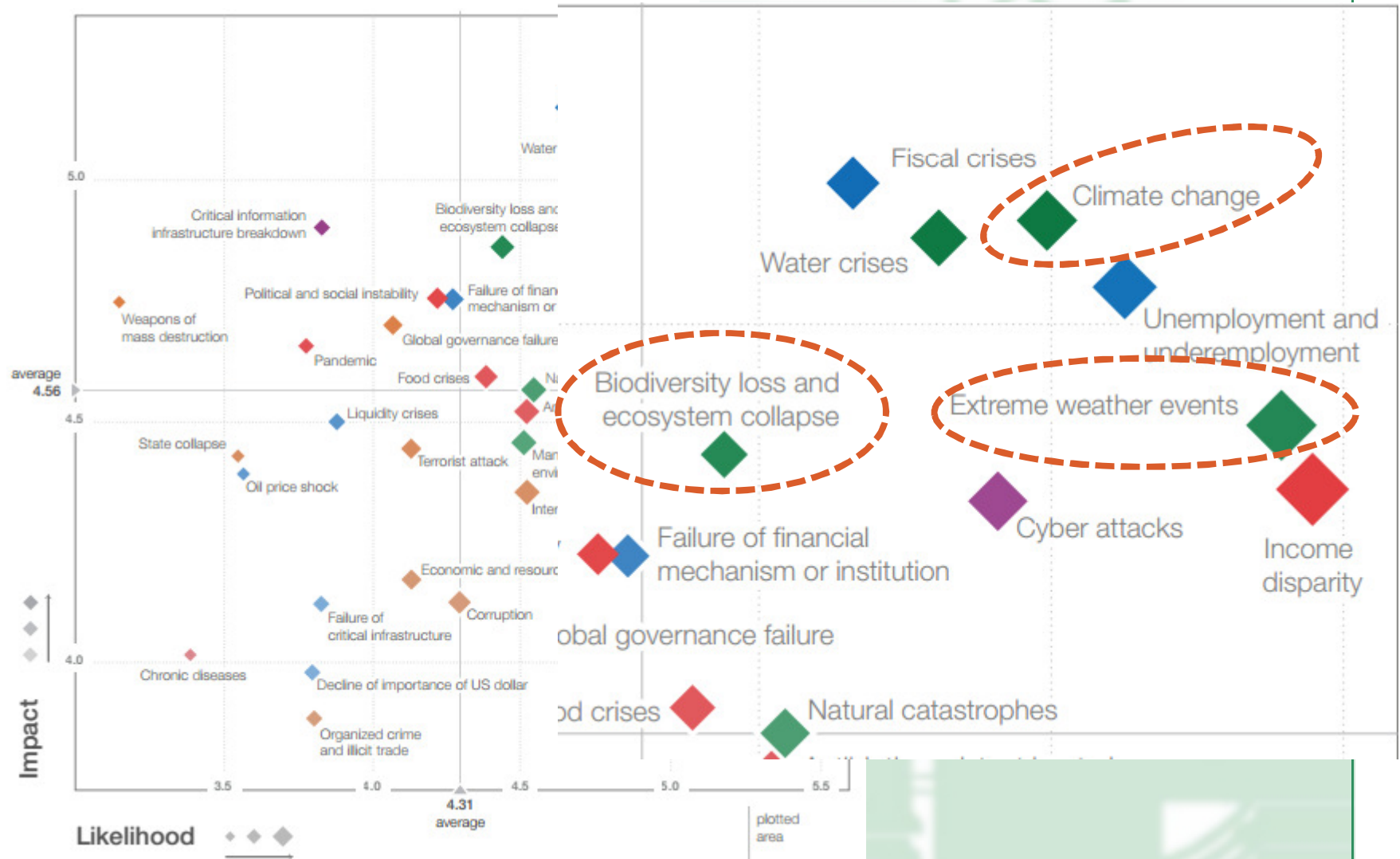
## TD 3

### Stakeholders engagement ad public acceptance

- **Communication strategies**
- **Improvement of decision making process**

- **C3-01** EMF and Human Health
- **C3/B2/B1-13** Environmental issues of high voltage transmission lines for rural and urban areas (JWG with SC B1 and B2)
- **C3-10** Sustainable development performance indicators for electric power generation
- **C3-15** *Best environmental and socio-economic practices for improving public acceptance of high voltage substations*

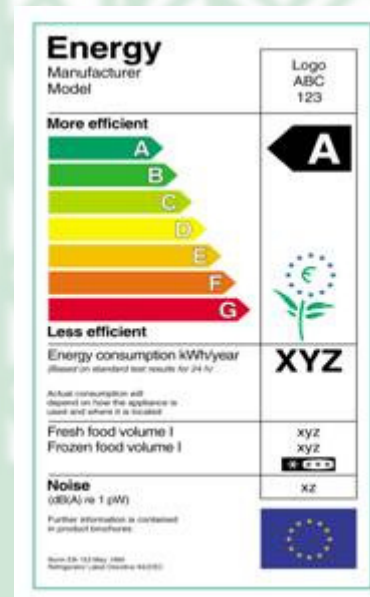
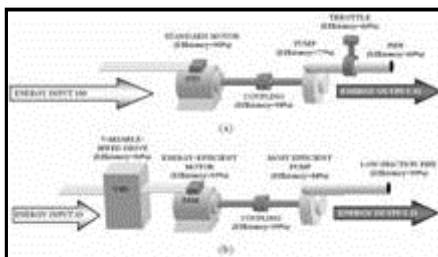
# New challenges and new opportunities



Source: Global Risks 2014 – World Economic Forum



# New challenges and new opportunities



**LESS ELECTRICITY**  
**WHERE IS POSSIBLE**  
 (consumption reduction)

**MORE ELECTRICITY**  
**WHERE IS NEEDED**  
 (energy efficiency; new uses)

## New challenges and new opportunities

**How the industry is  
prepared to address all  
these challenges?**

# Life cycle approach

## Planning

- Strategic Environmental Assessment



## Engineering and Construction

- Environmental Impact Assessment Studies
- Monitoring and compensation
- Legal compliance auditing



## Operation, Maintenance, Decommissioning

- Environmental Risk Assessment
- Monitoring and compensation
- Legal compliance auditing





# Many and different topics to address...

**EMF**

**Audible noise**

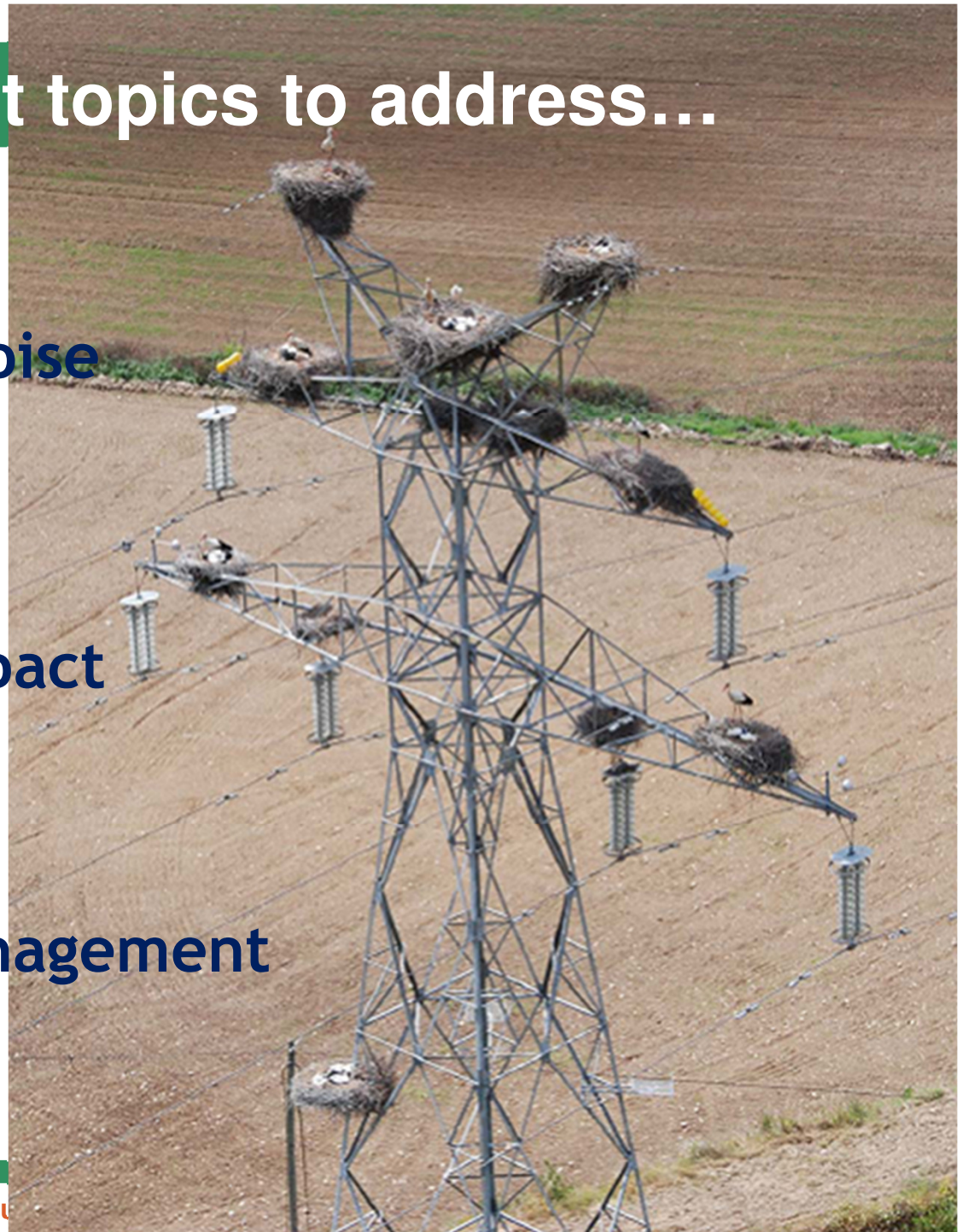
**SF<sub>6</sub> emissions**

**Visual impact**

**Biodiversity**

**Corridor management**

...

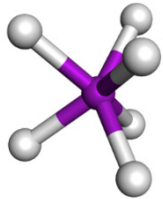




# Technical solutions



**New design**



**New materials**



**New toolkits**



**New skills**

## Stakeholders engagement

**How to engage  
stakeholders in this  
process?**

# Different ways to access information...

## NEW PLATFORMS



## INTERNET USE INCREASE

### Worldwide broadband subscriptions

	2007	2010	2014 <sup>a</sup>
<b>World population<sup>[3]</sup></b>	6.6 billion	6.9 billion	7.2 billion
<b>Fixed broadband</b>	5%	8%	10%
Developing world	2%	4%	6%
Developed world	18%	24%	27%
<b>Mobile broadband</b>	4%	11%	32%
Developing world	1%	4%	21%
Developed world	19%	43%	84%

<sup>a</sup> Estimate.

Source: International Telecommunications Union.<sup>[4]</sup>

More informed  
stakeholders?

or

**NIMBY**

Not In My Backyard

**NIMEY**

Not In My Election Year



# Stakeholder engagement

PARTICIPATION



+

STAKEHOLDER  
LIASON



+

ORGANIZATIONAL  
READINESS



+

COMMUNICATION



+

TECHINICAL  
PLANNING



## TRUST IS A MUST!!

\* Adapted from Perras, S., "Electricity transmission line planning: Success factors for transmission system operators to reduce public opposition, Technische Universität Dresden, February 2014.

## In conclusion...

- Environmental challenges are demanding the best of our skills and techniques.
- Knowledge and information sharing is of paramount importance to succeed on these demanding challenges.
- Develop and promote state-of-the-art practices and recommendations helps companies to achieve their targets.
- CIGRÉ must continue to be an worldwide reference in this field and **SC C3** should continue to have a significant role in this mission.



**Thank you.**

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