



Improving electrical safety regulations

Home electricity is very safe, if used in the appropriate manner. Unfortunately, this is not common practice in the majority of countries. The result is an unnecessary risk for electrically induced fires and electrocution. This project aims to raise awareness about these issues and demonstrate how policy and regulation can bring about a change. It was an initiative of the Copper Alliance, with the support of FISUEL and a worldwide network of experts.

The Electrical Safety Barometer

The level of residential electrical safety differs greatly between countries. However, before taking action, it is essential to understand and fully appreciate the gaps in current regulations and practice. The Electrical Safety Barometer aims to provide a benchmark to policy makers as well as guidance on how they can improve the situation.

13 major criteria

The Electrical Safety Barometer consists of 13 essential criteria. Each of these criteria has a weighting factor to enable the calculation of a general score for each country. Both FISUEL and world experts endorse these criteria and the weighting factors. With the assistance of local experts, we are applying the barometer in an increasing number of countries.

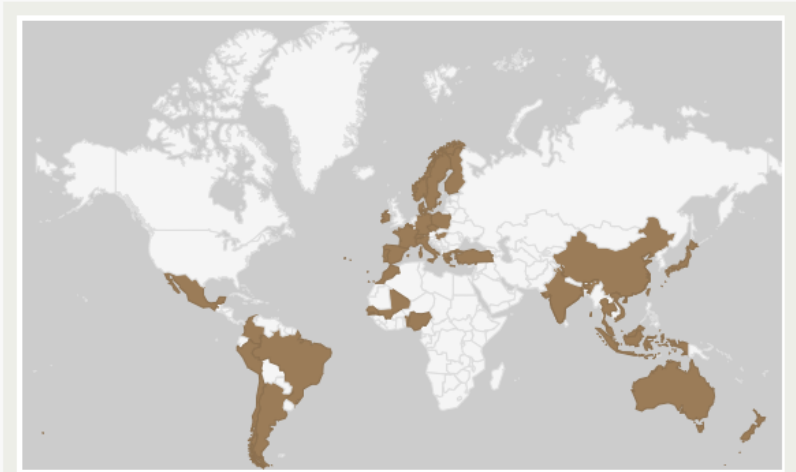
World Safety Barometer [WSB]

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Country scores

Country	Criteria unknown	Criteria not met	Partially fulfilled
South Africa	0	4	1
New Caledonia	2	0	2
Turkey	1	5	0
Côte d'Ivoire	2	3	7
Japan	0	0	4

Criteria fulfilled	Safety score
8	60%
9	70%
7	50%
1	36%
9	85%



Agenda

1. Objectives
2. Criteria and weighting
3. Contributions
4. National safety report
5. Regional levels
6. Website status & navigation

1.

Objectives

WSB Objectives

- WSB is an initiative launched by Copper Alliance / ECI in 2010 (After 5 years preparation)
- WSB is a tool which aims to increase the electrical domestic safety through an original way:
 - Benchmarking countries & regions by national experts
 - Attributing a national safety score
 - Identify gaps for countries to improve regulation and electrical safety campaigns
- To make it works, WSB needs:
 - A range of data allowing evaluation/comparison
 - A system/concept to evaluate countries status
 - **Contributors/Users**

2.

Criteria and weighting

WSB How it works

- WSB evaluation is based on **13 criteria** related to electrical safety for residential users

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- | | |
|--|--|
| 1. Standards & rules in place | 8. Active role of utilities |
| 2. Requirement for initial inspection | 9. Consumer education |
| 3. Requirement for periodic inspection | 10. Regulation imposing standards & initial verification |
| 4. Proof of inspection through inspection report | 11. Product labelling |
| 5. Mechanism to inspect existing installations | 12. Active role of manufacturers |
| 6. Qualification of inspectors | 13. Adequate market surveillance |
| 7. Qualification of contractors | |
-

WSB How it works

- Agreement on weighting these criteria

1. Standards & rules in place	10
2. Requirement for initial inspection	10
3. Requirement for periodic inspection	7.5
4. Proof of inspection through inspection report	5
5. Mechanism to inspect existing installations	10
6. Qualification of inspectors	7.5
7. Qualification of contractors	5

WSB How it works

- Agreement on weighting these criteria

8. Active role of utilities	10
9. Consumer education	5
10. Regulation imposing standards & initial verification	5
11. Product labelling	5
12. Active role of manufacturers	5
13. Adequate market surveillance	15

3.

Contributions

WSB How to contribute

- **Experts** submit a request to complete the barometer for a **given country**
- After validation by a **WSB moderator**, the **experts** receive an invitation by the **WSB moderator** to complete the questionnaire based on the **13 criteria**
- The **WSB moderator** evaluates the answers and rates them as followed:
 - Situation unknown (0%)
 - Criteria not fulfilled (0%)
 - Criteria partially fulfilled (50%)
 - Criteria fulfilled (100%)
- The **WSB moderator** is an educated expert having a global view on the topic. The **WSB moderator** can properly evaluate the level of confidence of the answers.

4.

National safety report

WSB Report

- The WSB moderator edit the barometer's report for the given country
- Then the report allows:
 - The country to benchmark itself against other countries and the region it belongs to (next slide)
 - The definition of an action plan for improvement

Country report for Norway

79%

Criteria	Question	Weight	Score
Standards & rules	Are standards and rules in place?	10	Fulfilled
Answer: Yes. The national wiring regulation (fel) refers to the Norwegian standard NEK 400 (based upon CENELEC HD 384/60364) as one way to fulfil the regulation.			
Initial verification	Is an initial inspection required?	10	Fulfilled
Answer: Yes, usually performed by the electrician/installer			
Periodic inspection	Is a periodic inspection required?	7.5	Partially fulfilled
Answer: No, but it is recommended according to NEK 400-6-62. The standard recommends intervals from 4 to 10 years depending on the type and complexity of the installation.			
Inspection report	Must there be proof of the inspection by the delivery of an inspection report?	5	Fulfilled
Answer: Yes. The report itself is the proof			
Inspection for existing installations	Is there a mechanism for inspection of existing installations?	10	Fulfilled
Answer: The authorities through the local electricity supervision, shall supervise electrical installations every 10 years or so.			
Inspector	Must the person carrying out the inspection be a qualified inspector?	7.5	Not met
Answer: No			
Electrical contractor or installer	Must the electrical contractor or installer be a qualified person?	5	Fulfilled
Answer: Yes, after being approved by the authorities they have to pass a comprehensive test.			

5.

Regional levels

WSB Regions

- 6 regions have been defined; each has been rated according to local answers
- A country can thus compare its score to the region it belongs, this gives a first level evaluation

Africa



38%

Asia



35%

Europe – Middle East



40%

South America



52%

North America



68%

Oceania



41%

WSB Overall situation

What do we have so far?



6.

Website status & navigation

WSB Status



- WSB has been transferred from Copper Alliance to FISUEL
- Data are ageing fast
- Frequent updates are key to success
- Larger deployment is required
- *What about non-residential?*

WSB navigation

<https://www.safetybarometer.org/>

The ICA logo consists of the letters 'ICA' in white, bold, sans-serif font, centered within a solid orange square.

Thank you for your attention!

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