

Group members:

- ▶ Line Henri Nono Ngankou
- ▶ Martsinouski Kanstantsin
- ▶ Melis Sofia
- ▶ Palmieri Arianna
- ▶ Panayiotou Petros



Object	Area	Air temperature increase	Rainfall change	Average wind speed change	Sea level rise	Storms	Flooding	Wild fire	Air quality
Solar installation	Mechanical damage to installations	Yellow	Light Green	Light Green	Light Green	Red	Red	Red	Yellow
	Energy production from installations	Yellow	Yellow	Light Green	Light Green	Red	Red	Red	Red
	Access to the installation	Light Green	Light Green	Light Green	Light Green	Red	Red	Red	Yellow

The sensitivity matrix under consideration

- ▶ Our task: verify the sensitivity matrix to reject the climate change effects that are not significant for the installation
- ▶ Our assumption : the installation is located in the Bologna countryside



Air temperature

Mechanical damage
not really affected

→ **Medium risk**

Energy production can
be severely reduced by
10-25% by the heat
(source : [cedgreentech](#))

→ **High risk**

Access to the location
is not impacted by Air
temperature increase

→ **Low risk**



Rainfall change

Mechanical damage
Installations prepared
to resist to rain
→ Low risk

Energy production
Two issues:
- less sunlight
- cleaning problems due to
drought solar-panel-cleaners.com
→ Medium risk

Access to the location
cannot be harmed by
rainfall change
→ Low risk



Average wind speed change

Mechanical damage
Considering the average
speed
→ **Medium risk**

Energy production
→ **Low risk**

Access to the location
→ **Low risk**



Sea level rise

Mechanical damage
→ Low risk

Energy production
→ Low risk

Access to the location
→ Low risk

Storms

Mechanical damage -
High winds can tear off a solar panel and send debris puncturing others
→ **High risk**

Energy production
installations are extremely well built, many of them come out of a storm without any damage
→ **Medium risk**

Access to the location
ex. traffic for example can slow down due to trees that have fallen
→ **High risk**



Floodings

The presence of Reno, Santerno, Sillaro, Idice, Savena, Samoggia in the region leads to **High risk** in all categories



**Mechanical
damage**
→ **High risk**

**Energy
production**
→ **High risk**

**Access to the
location**
→ **High risk**

Wild fire

Mechanical
damage
→ High risk

Energy
production
→ High risk

Access to
the location
→ High risk



Air quality

Mechanical damage
→ Low risk

Energy production
source: weforum
→ High risk

Access to the location
→ Low risk

From the original matrix to the verified matrix:

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	Energy production from installations	Red	Yellow	Light Green	Light Green	Yellow	Red	Red	Red
	Access to the installation	Light Green	Light Green	Light Green	Light Green	Red	Red	Red	Light Green

Our conclusions:

We **reject** the following climate change effect of climate on the installation:

- *Rainfall change*
- *Average wind speed*
- *Sea level rise*

