



**Barcelona
Supercomputing
Center**

Centro Nacional de Supercomputación



EXCELENCIA
SEVERO
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RESILIENCE: seasonal wind speed predictions for winter 2015/2016

Isadora Jiménez

Earth System Services – Earth Sciences Department





Winter 2015/2016 prediction

www.project-ukko.net

User: ukko

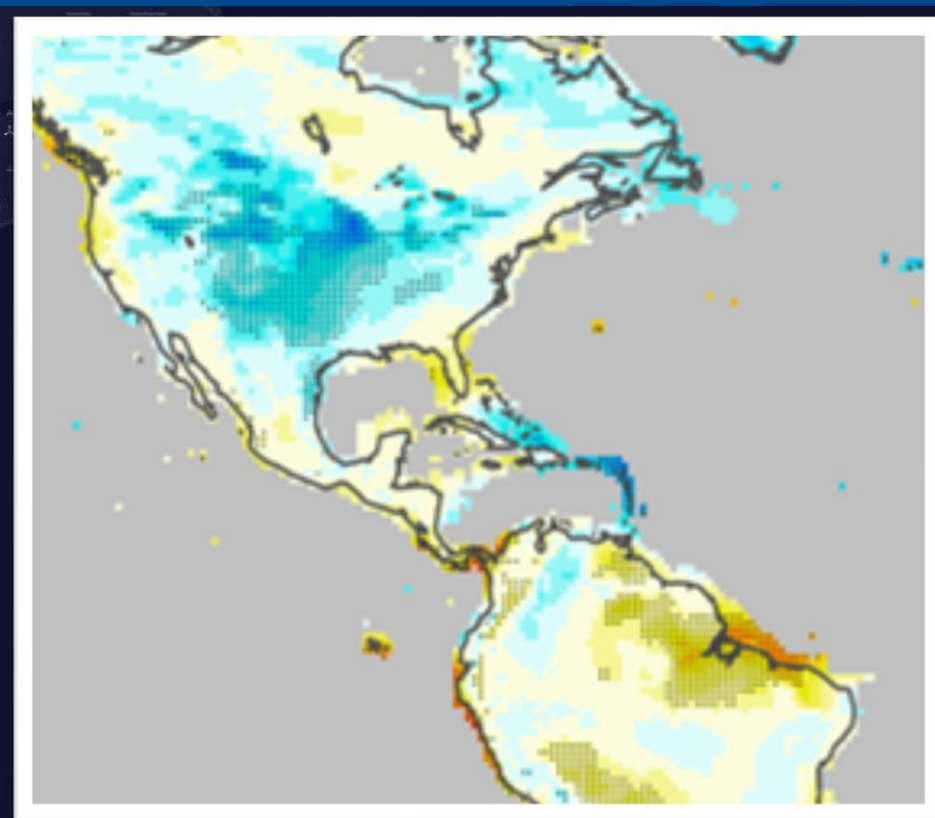
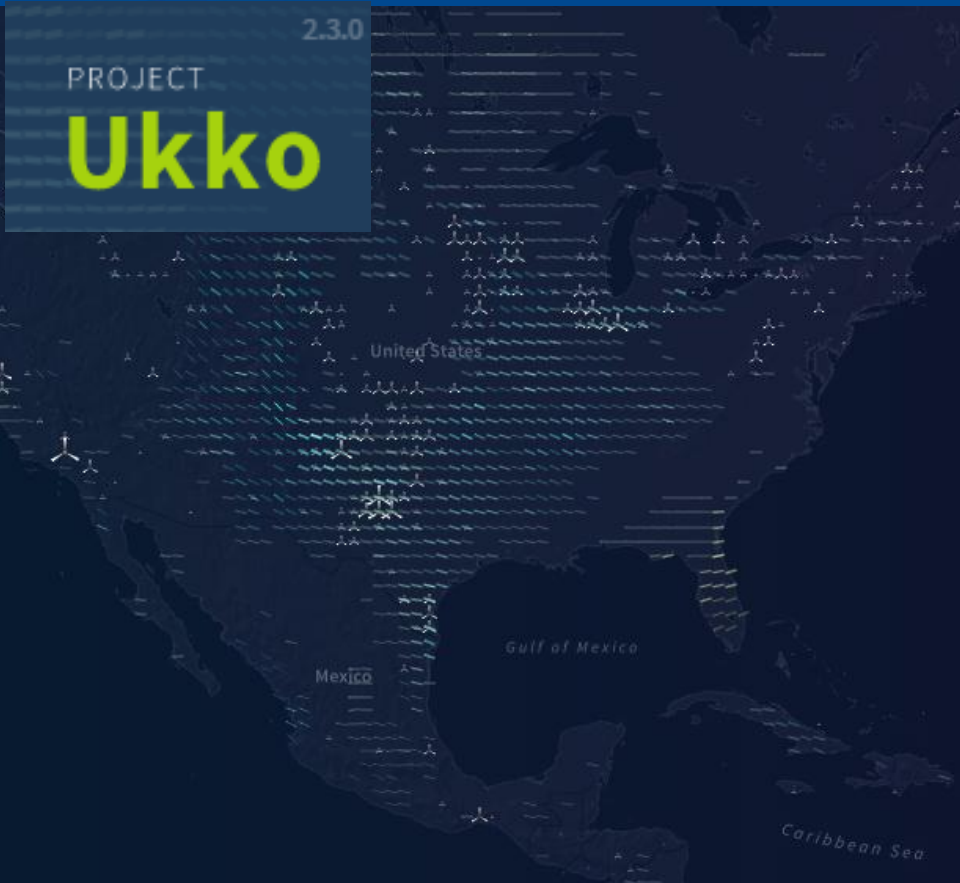
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2.3.0

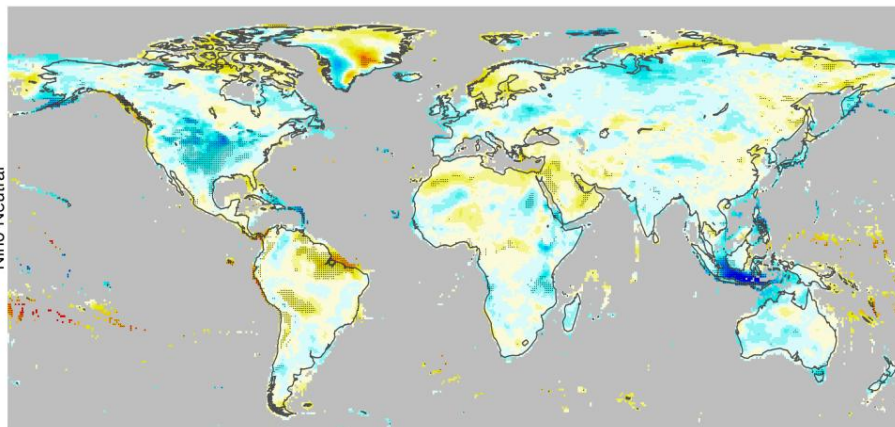
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DJF Wind difference (ONI), 1981-2014 (m/s)

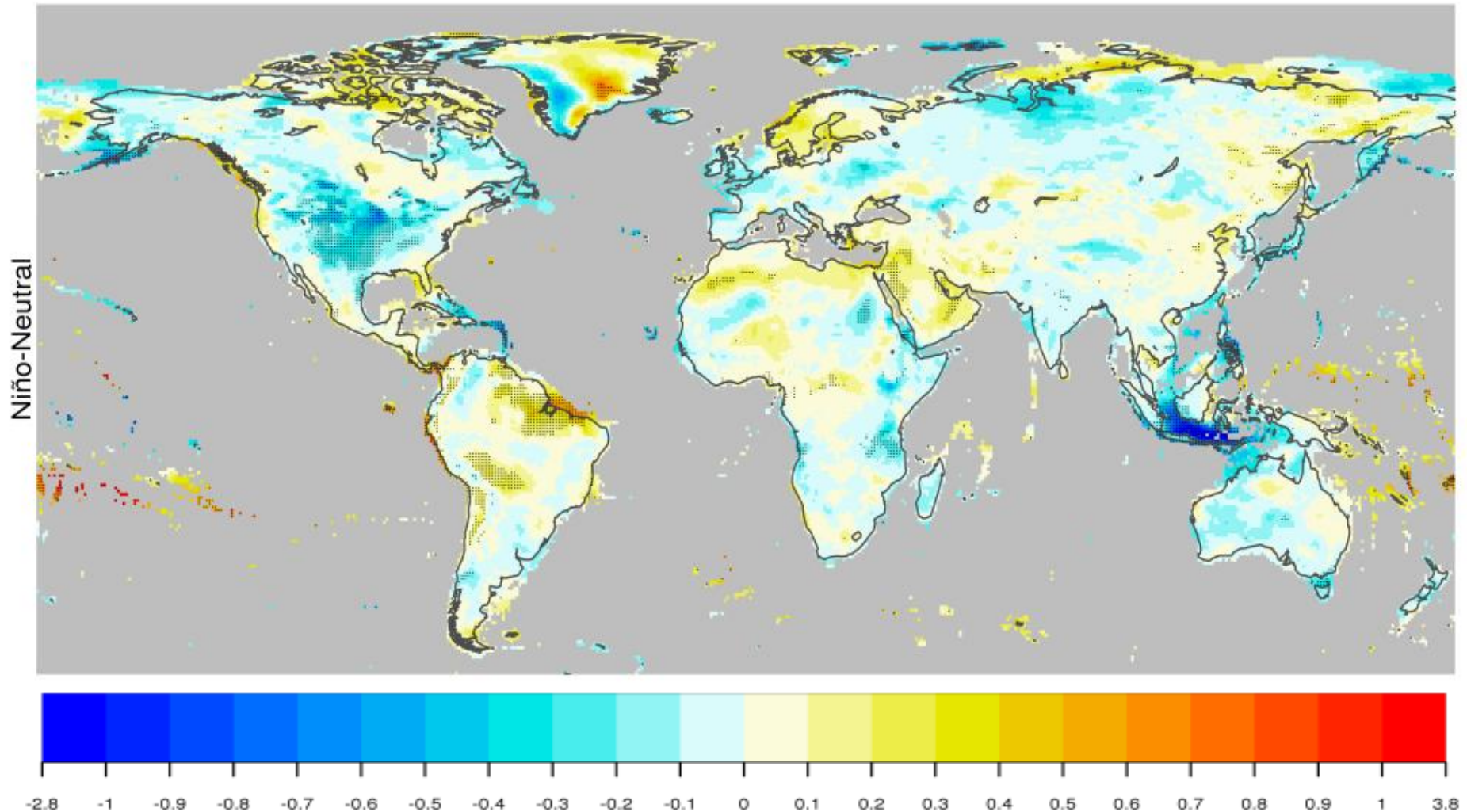


Nino-Neutral



El Niño effect on wind speed

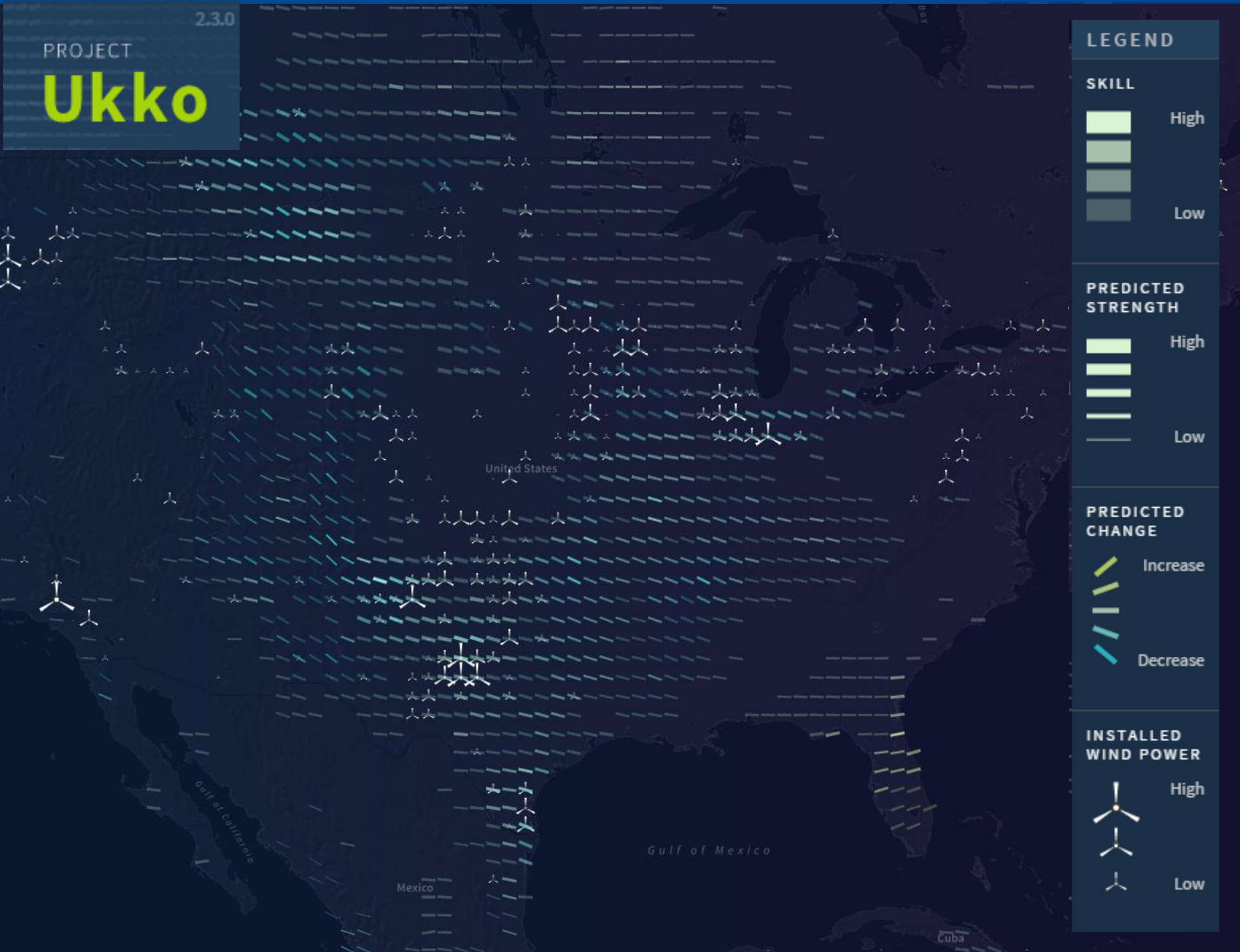
DJF Wind difference (ONI), 1981-2014 (m/s)



2.3.0

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LEGEND

SKILL



High

Low

PREDICTED STRENGTH



High

Low

PREDICTED CHANGE



Increase

Decrease

INSTALLED WIND POWER



High

Low

2.3.0

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LEGEND

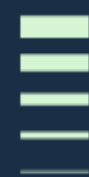
SKILL



High

Low

PREDICTED STRENGTH



High

Low

PREDICTED CHANGE

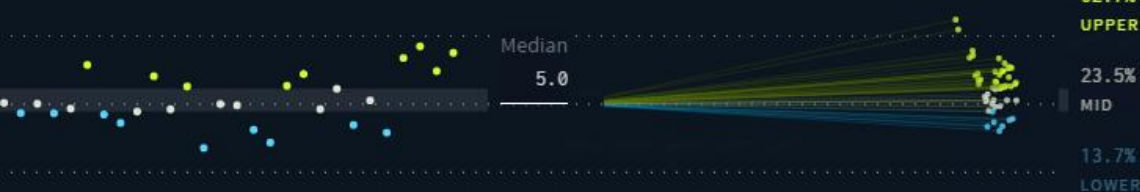


Increase

Decrease

IS ?
wind speeds in m/s

PREDICTIONS



2014

Winter 2015

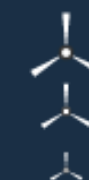
SKILL

15.0%

INSTALLED WIND POWER

518,400 KW

INSTALLED WIND POWER



High

Low

2.3.0

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LEGEND

SKILL



High

Low

PREDICTED
STRENGTH

High

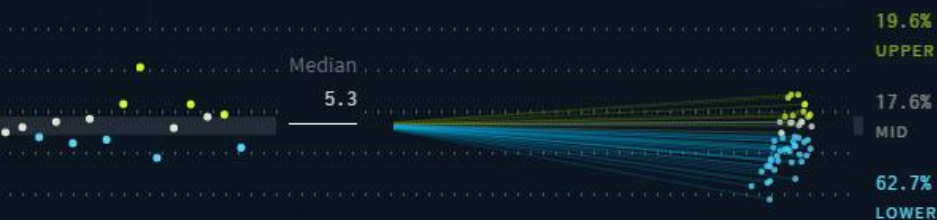
Low

PREDICTED
CHANGE

Increase

Decrease

PREDICTIONS



2014

Winter 2015

SKILL

28.0%

INSTALLED WIND POWER

1,565,000 KW

2.3.0

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LEGEND

SKILL



High

Low

PREDICTED STRENGTH



High

Low

PREDICTED CHANGE



Increase

Decrease

INSTALLED WIND POWER



High

Low

2.3.0

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LEGEND

SKILL



High

Low

PREDICTED
STRENGTH

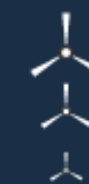
High

Low

PREDICTED
CHANGE

Increase

Decrease

INSTALLED
WIND POWER

High

Low

2.3.0

PROJECT

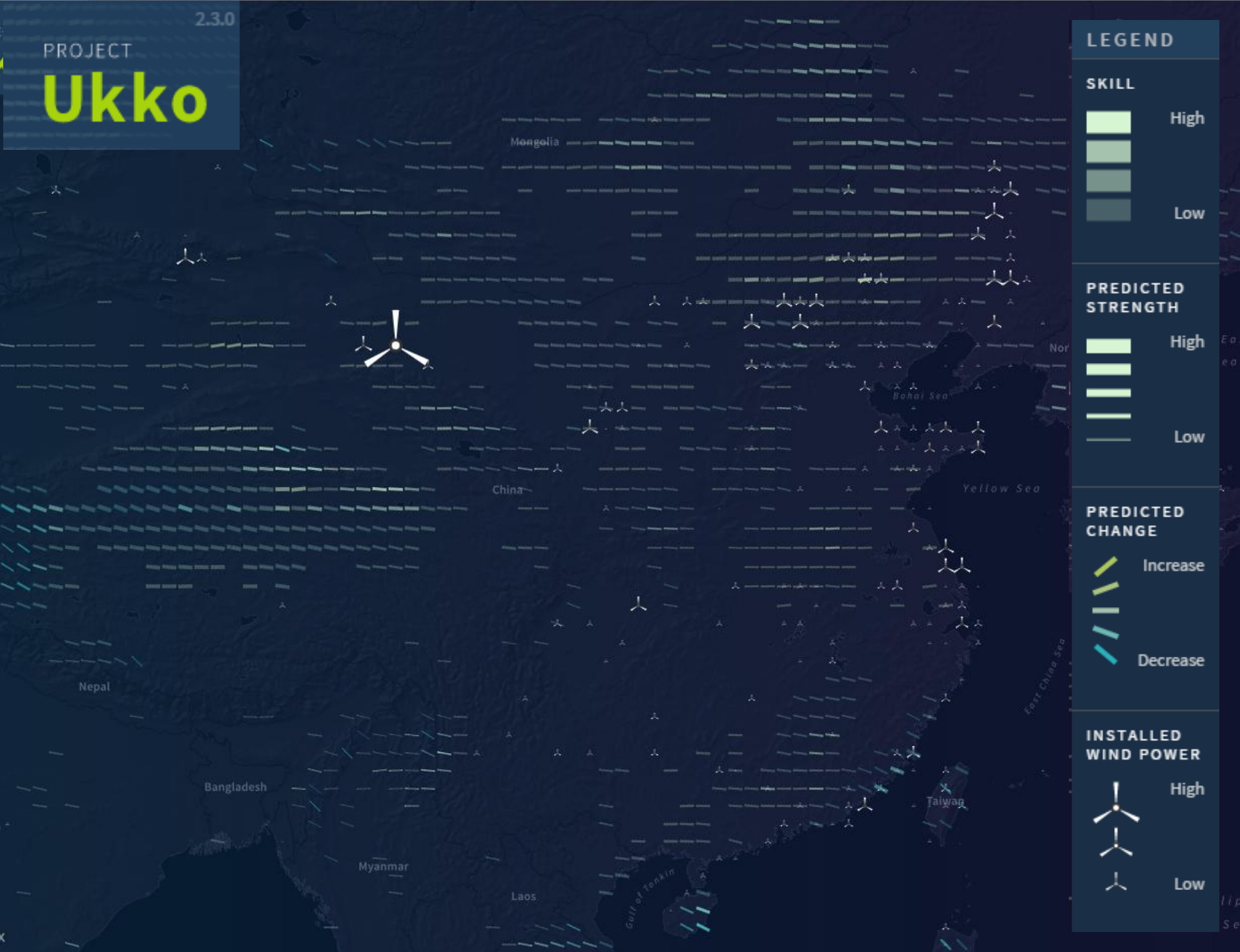
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2.3.0

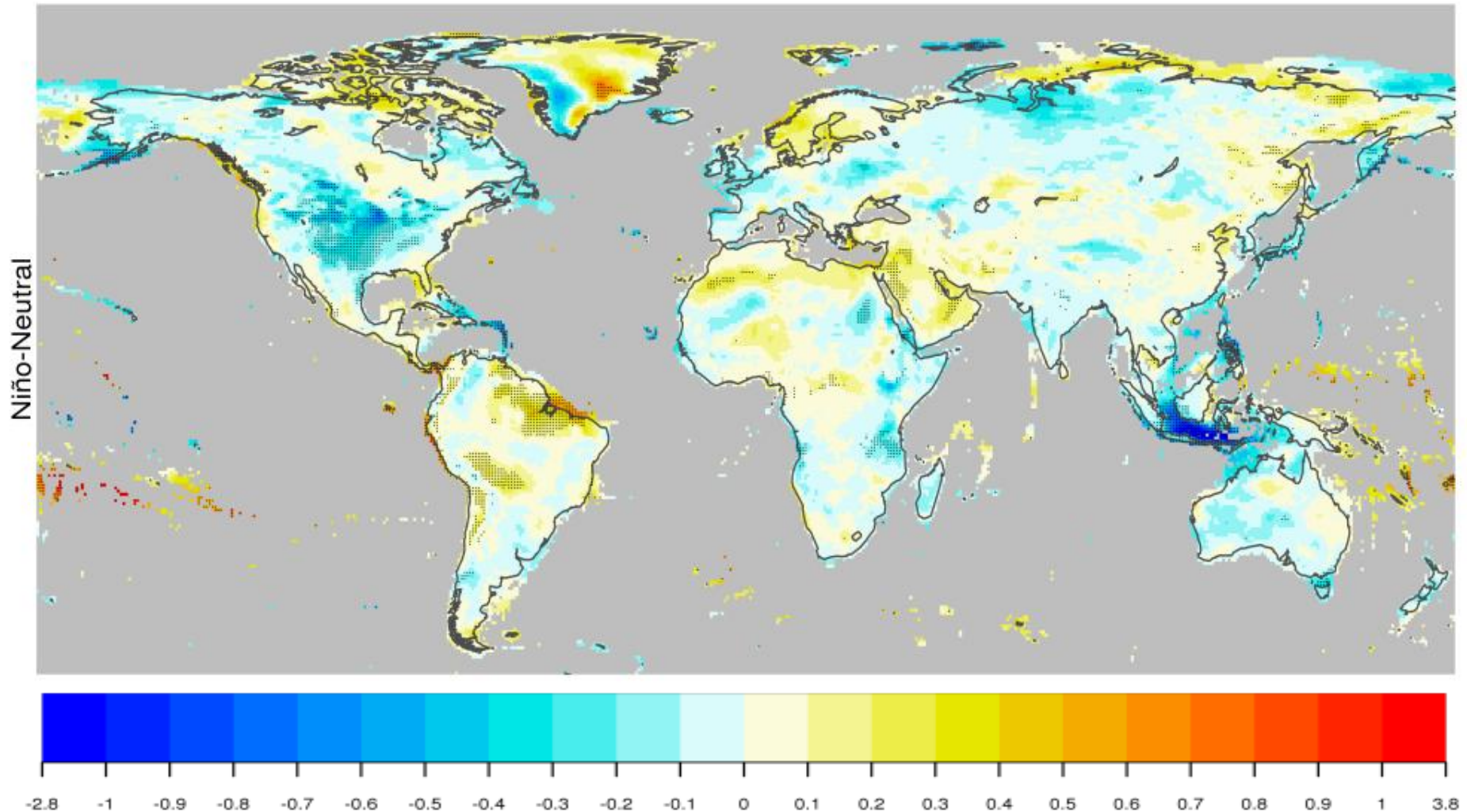
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El Niño effect on wind speed

DJF Wind difference (ONI), 1981-2014 (m/s)

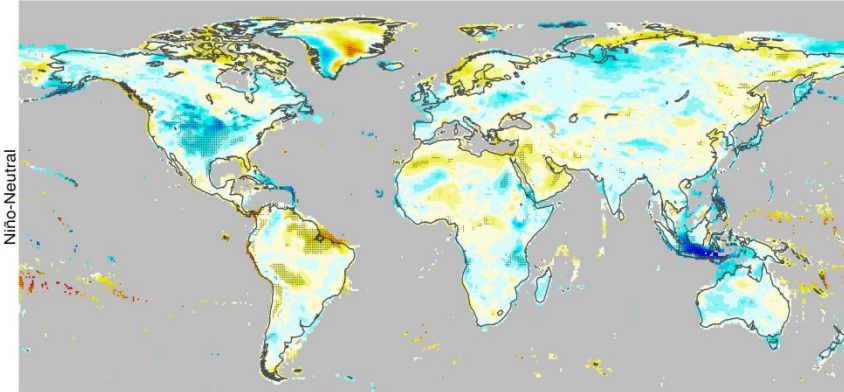


Climate drivers of seasonal variability

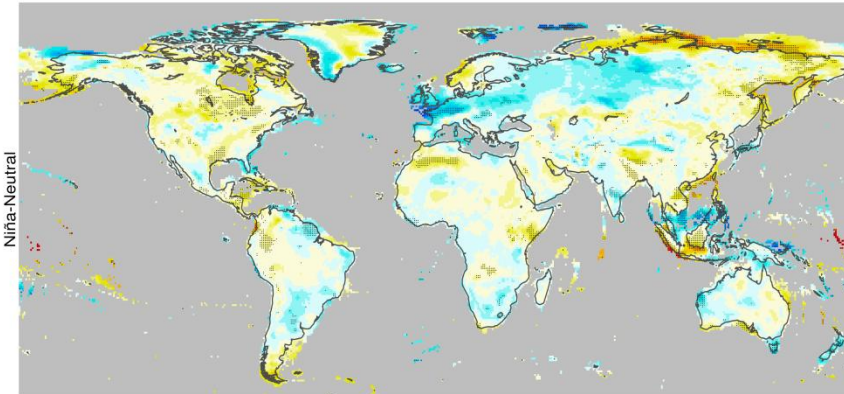


DJF Wind difference (ONI), 1981-2014 (m/s)

Niño



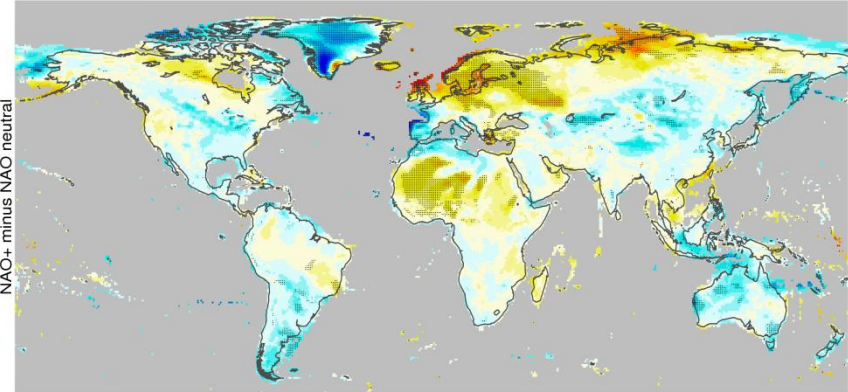
Niña



DJF Wind difference (NAO), 1981-2014 (m/s)

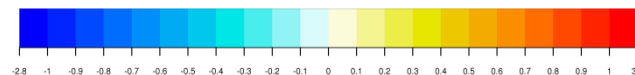
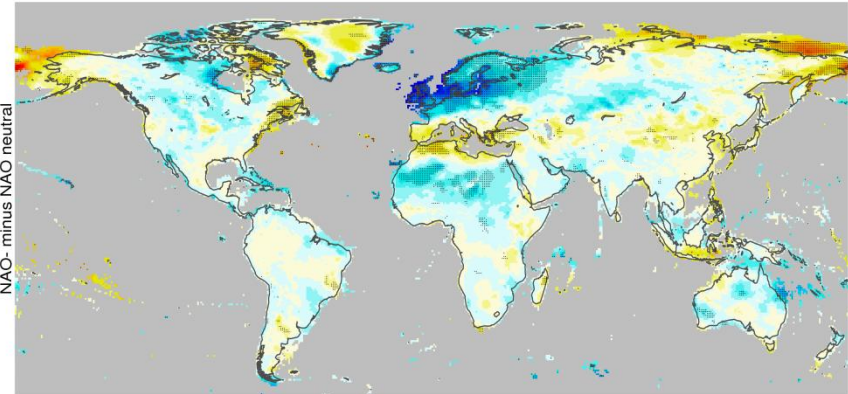
NAO +

NAO+ minus NAO neutral



NAO -

NAO- minus NAO neutral





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Thank you!

Isadora.jimenez@bsc.es