IAIA21

VIRTUAL EVENT

#iaia21

Removing guess in EIA: a cross-continent analysis of fatalities at windfarms

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IAIA21 VIRTUAL EVENT

https://www.bioinsight.pt/

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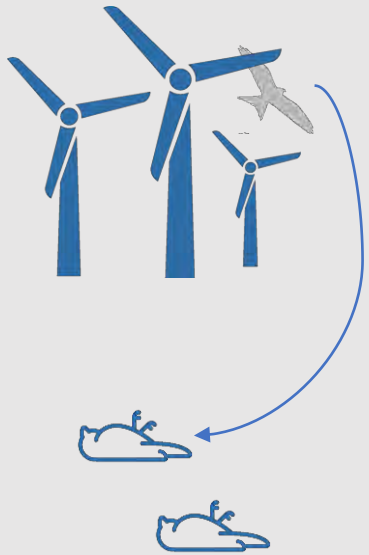

EFFECT ≠ IMPACT

Population Viability Analysis

Quantification of the impact

contribution to EIA

Valid tool

Scarcely used

Upscale evaluation

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What PVA brings?

Main advantages

- Quantification over a more qualitative (subjective) assessment

Main drawbacks

- Model requirements
- EIA stage might not be “ready” to deal with such outputs

Depends on maturing of the EIA process

The approach

Space-implicit

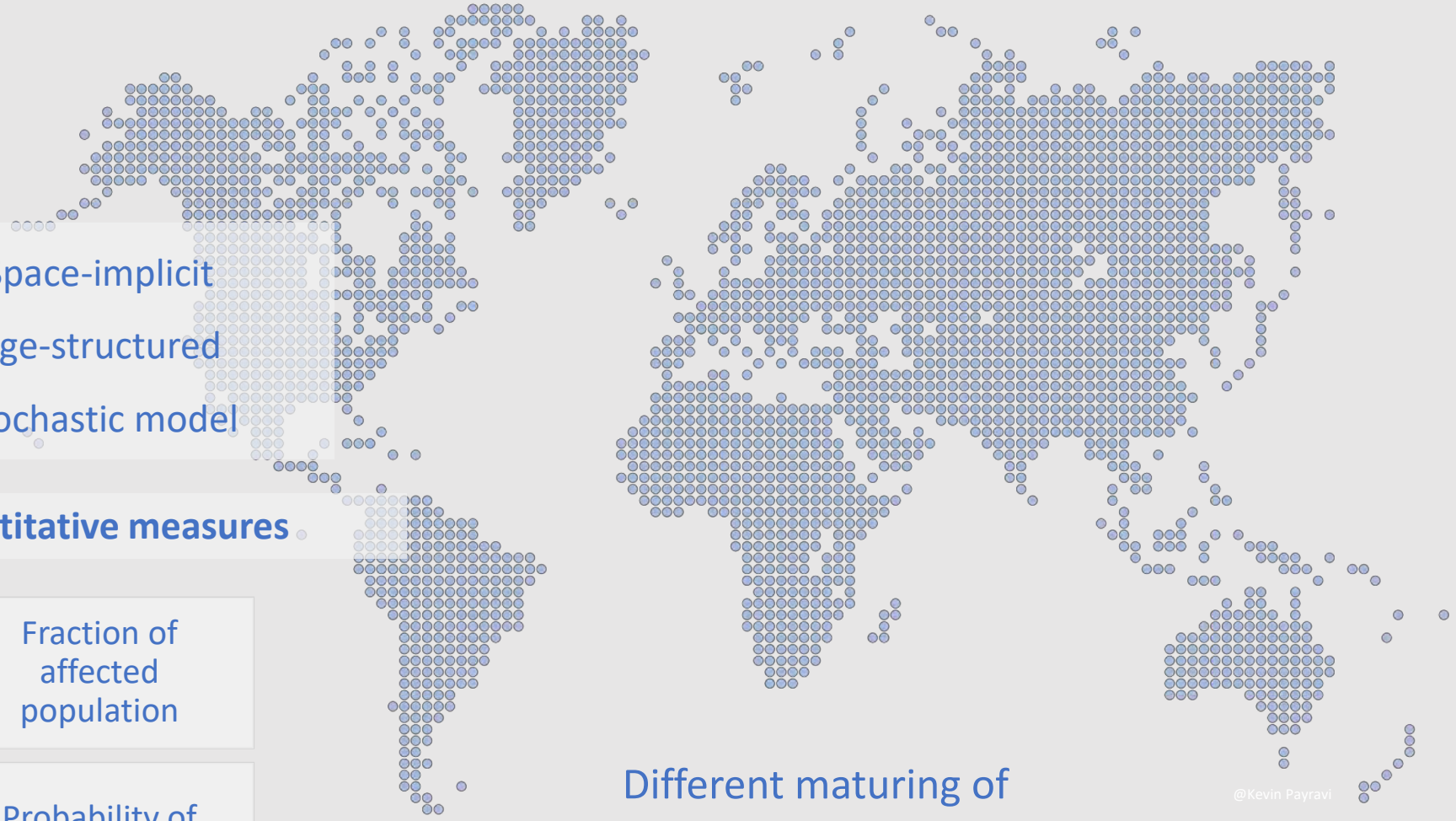
Age-structured

Stochastic model

Quantitative measures

Fraction of affected population

Probability of extinction



Different maturing of the EIA process

Real scenarios of fatalities of birds at wind turbines

Planning

EIA process
Fatality estimates

Real scenarios of fatalities of birds at wind turbines

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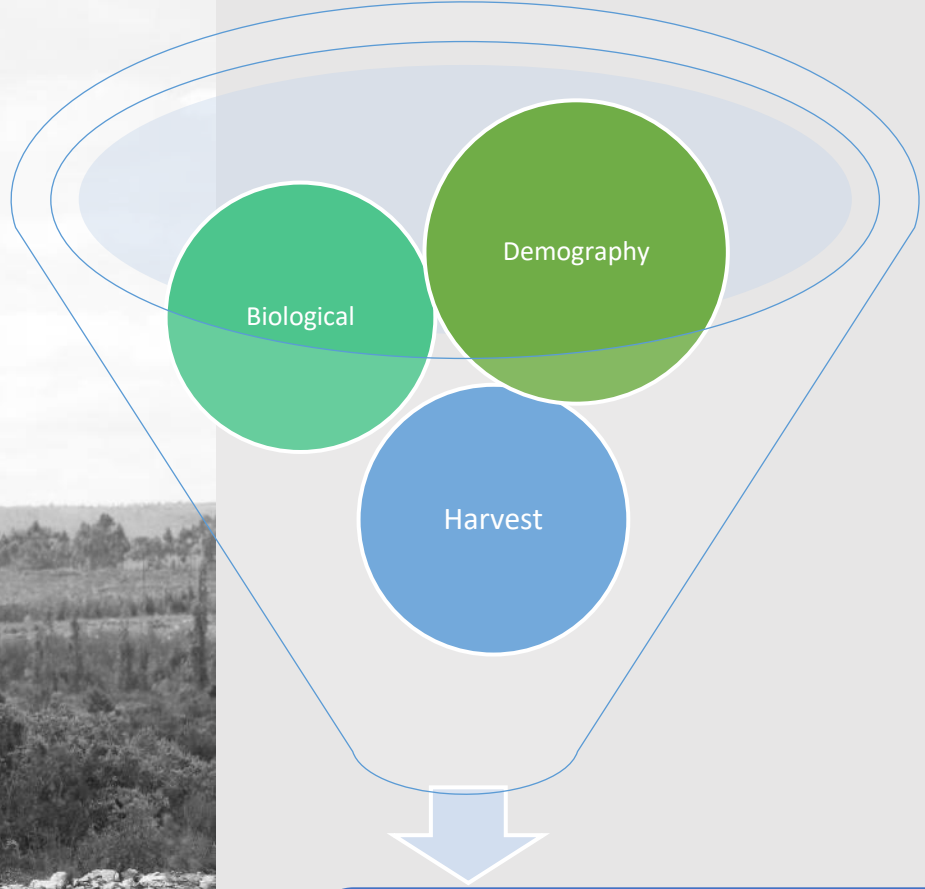
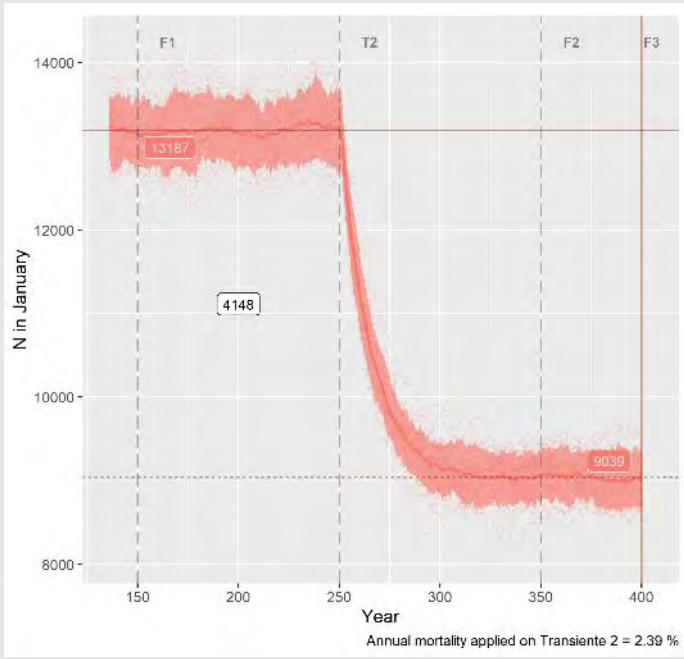
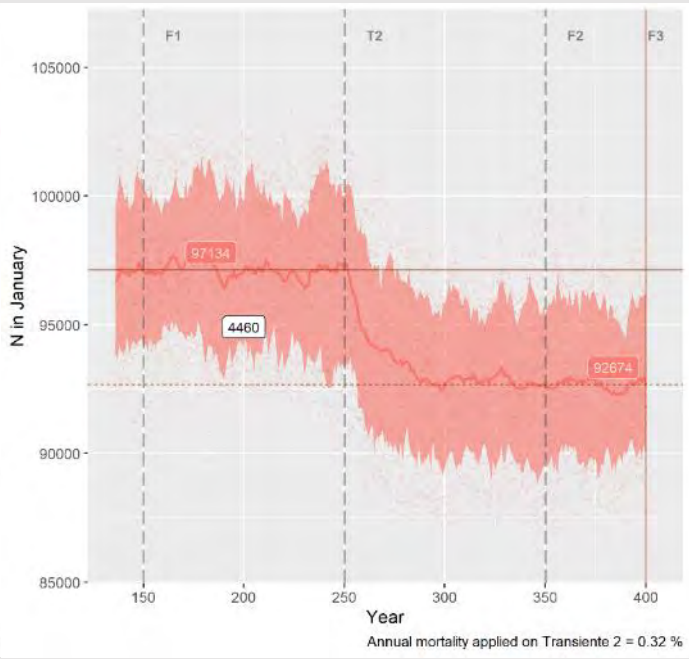

Demography
Biological
Harvest

RUN PVA

01 Extent
02 Demography
03 Mortality
04 Population size
05 Model run
M
W
F
U





SPECIES	MORT. RATE	N BEFORE IMPACT	N AFTER IMPACT	POP. REDUCT. (%)	PROB. EXTINC.
Coragyps atratus	0% - 2%	13187 - 98578	9039 - 97134	5% - 31%	0%

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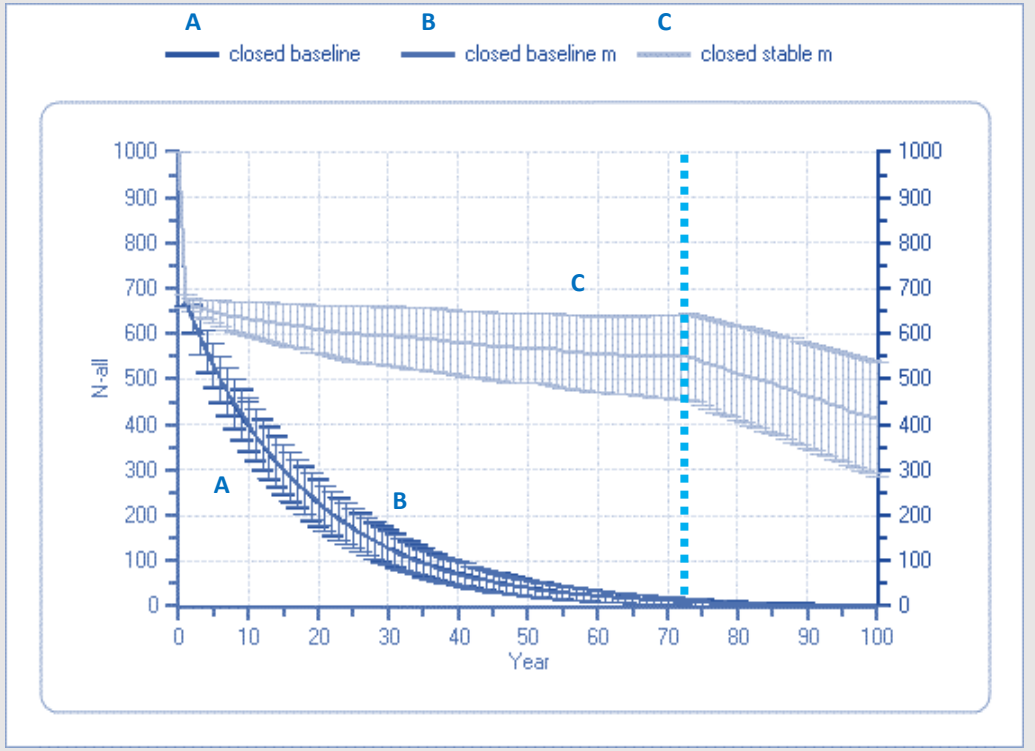
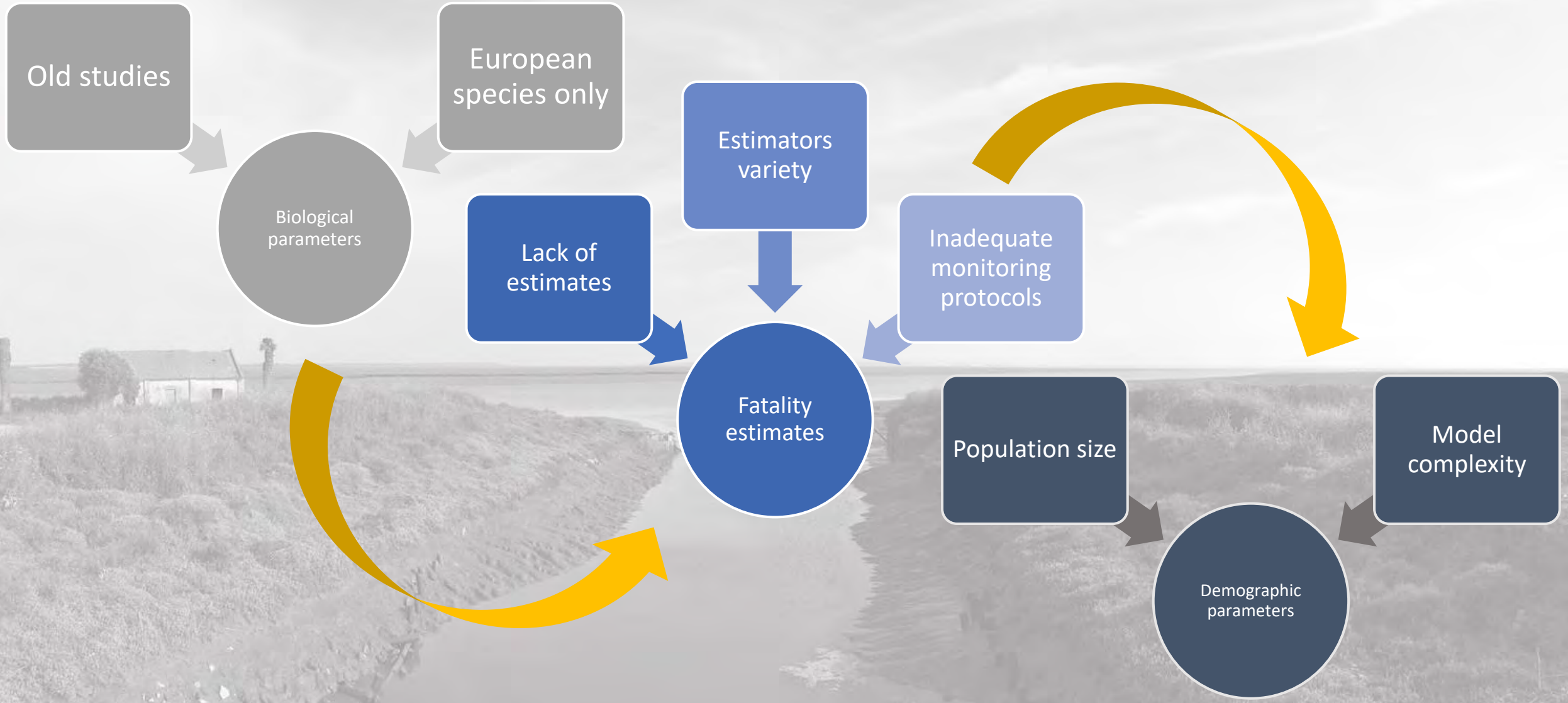
@ Jason Wrench



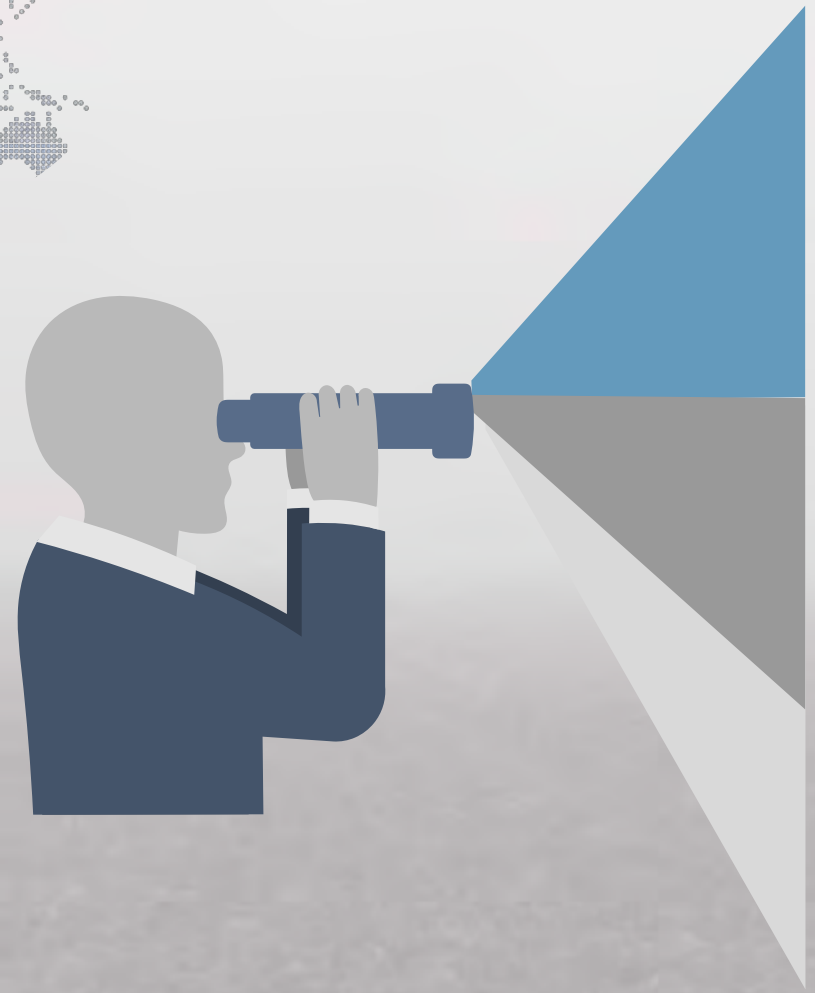
Scenarios of population reduction for *Aquila verreauxii*

Main challenges



Main challenges

Location is not an impediment



Timing has to be aligned with licensing process

Not all species will be equally impacted

Accommodate Uncertainty

PVA still scarce in EIA assessment

Complex methodology

ability to **recognize the limits** of the analysis

Improving the approach

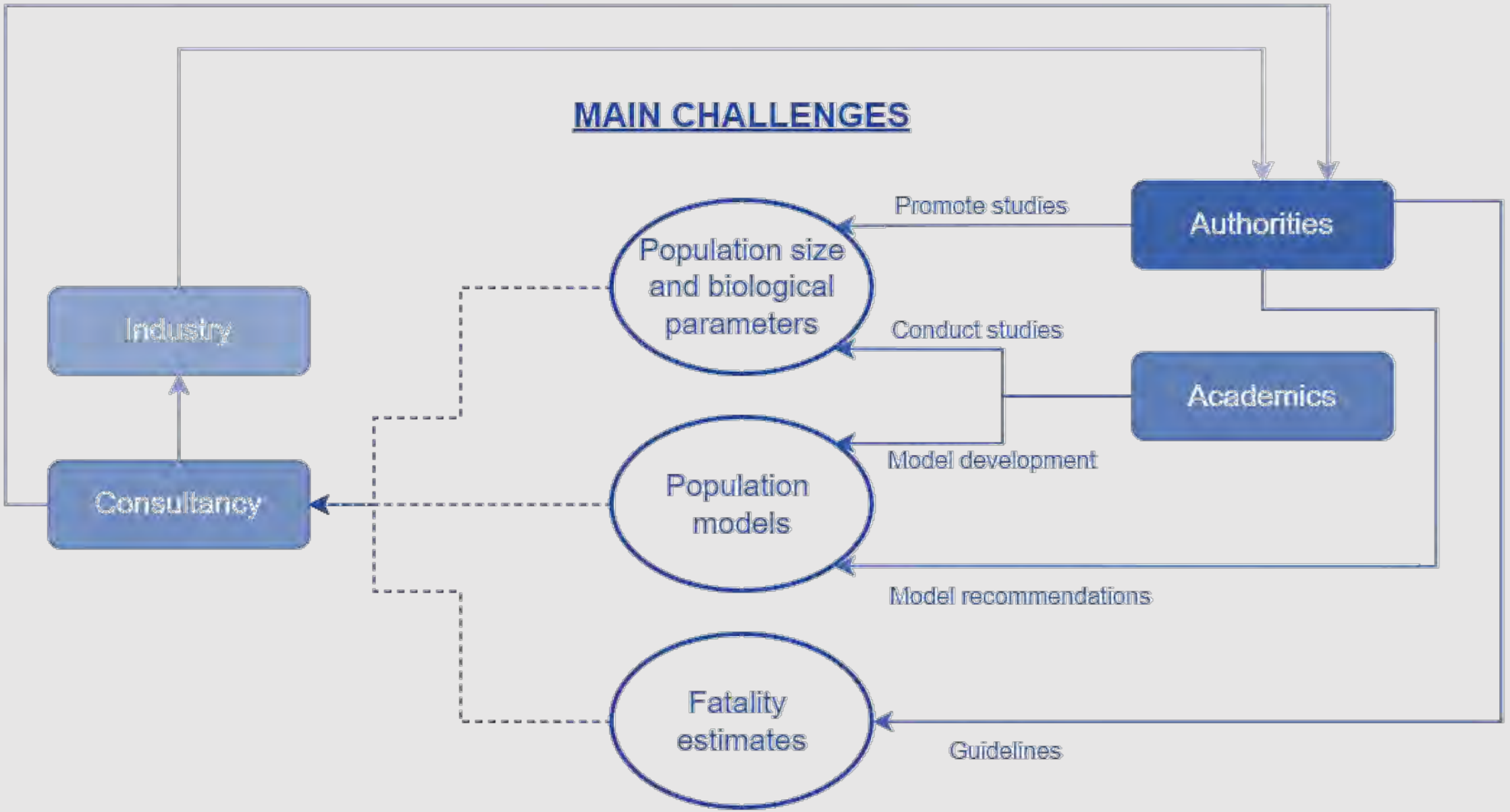
requires collaboration

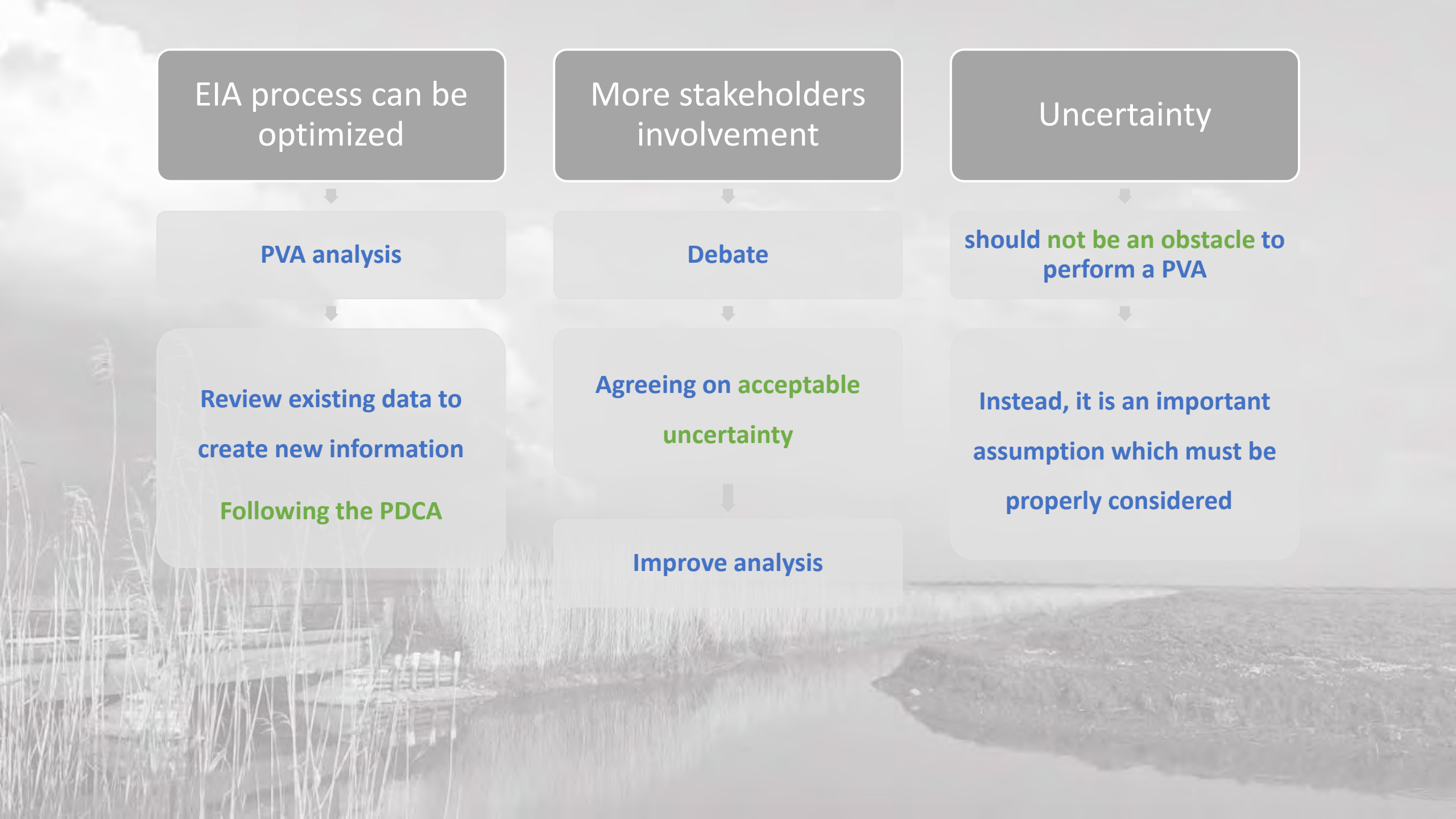
Effects remain

population reduction

Important to not neglect

Deal with residual impacts


MAIN CHALLENGES
Authorities
Promote studies
Population size and biological parameters
Industry
Conduct studies
Academics
Model development
Consultancy
Population models
Model recommendations
Fatality estimates
Guidelines



EIA process can be optimized

PVA analysis

Review existing data to create new information

Following the PDCA

More stakeholders involvement

Debate

Agreeing on acceptable uncertainty

Improve analysis

Uncertainty

should not be an obstacle to perform a PVA

Instead, it is an important assumption which must be properly considered

Thank you !

Let's continue the conversation!

Post questions and comments via chat in the IAIA21 platform.

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