

Quantitative and robust NDF making

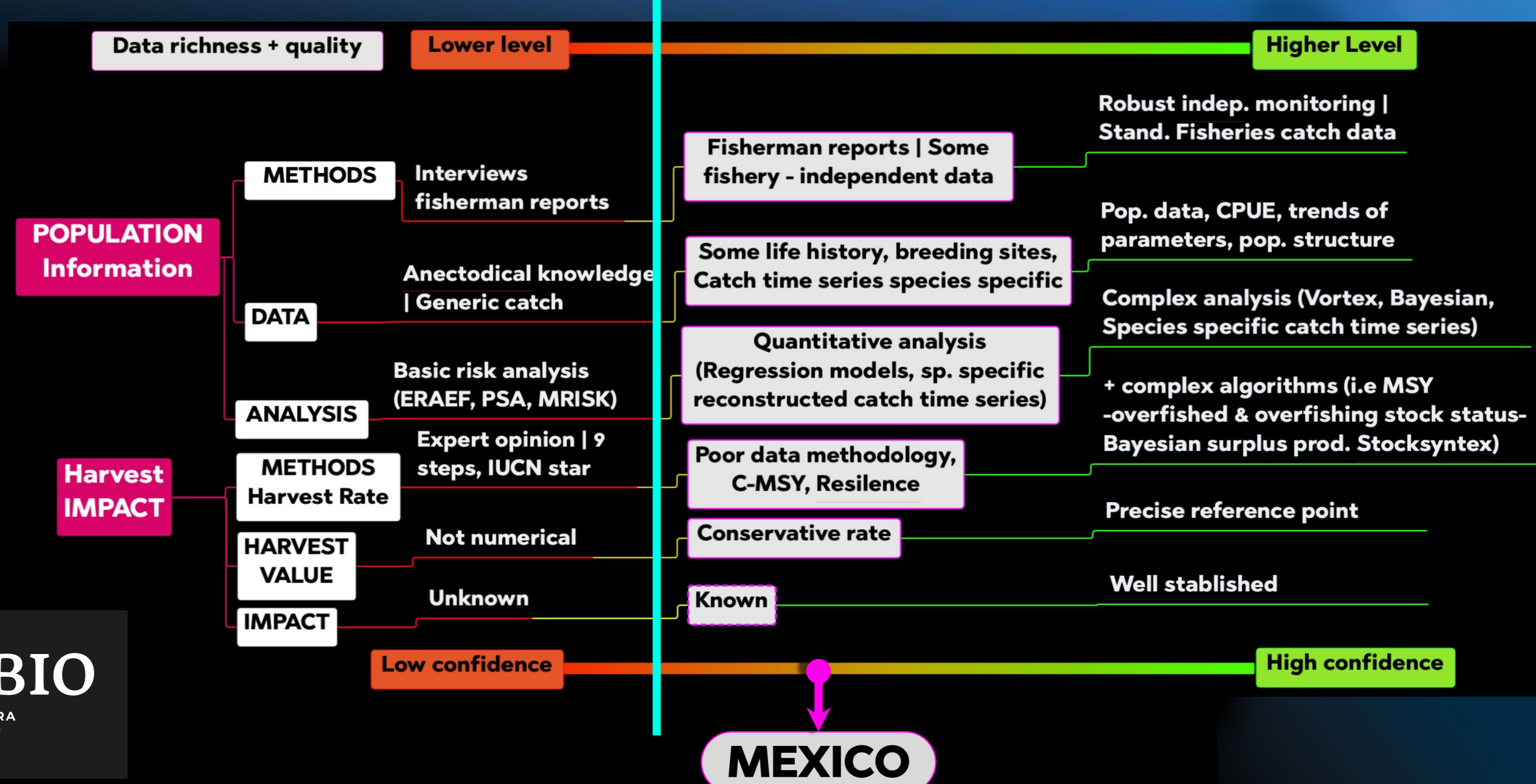
SHARK & PUMA

Conservation & sustainable trade
Case study

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DIAGNOSE
your current
population
info & harvest
impact



@James Ketchum

- POPULATION SURPLUS**
Define production potential
- ESTIMATE IMPACT**
Set sustainable harvest rate
- NDF DECISION 😊**
Type and advices

Population trends

Species specific CATCH RECONSTRUCTION
1970 - 2014
(Saldaña, 2017)

Fisheries Auth., Mexican CITES SA & Academy

SUSTAINABLE EXPORT VOLUMES (VES)

Catch Based MSY (Martel & Froese, 2013)

Set harvest rate

Atlantic 2,062 t

Pacific 1,958 t

Atlantic 0%

Pacific 46.9%

Export request (3 year trend)

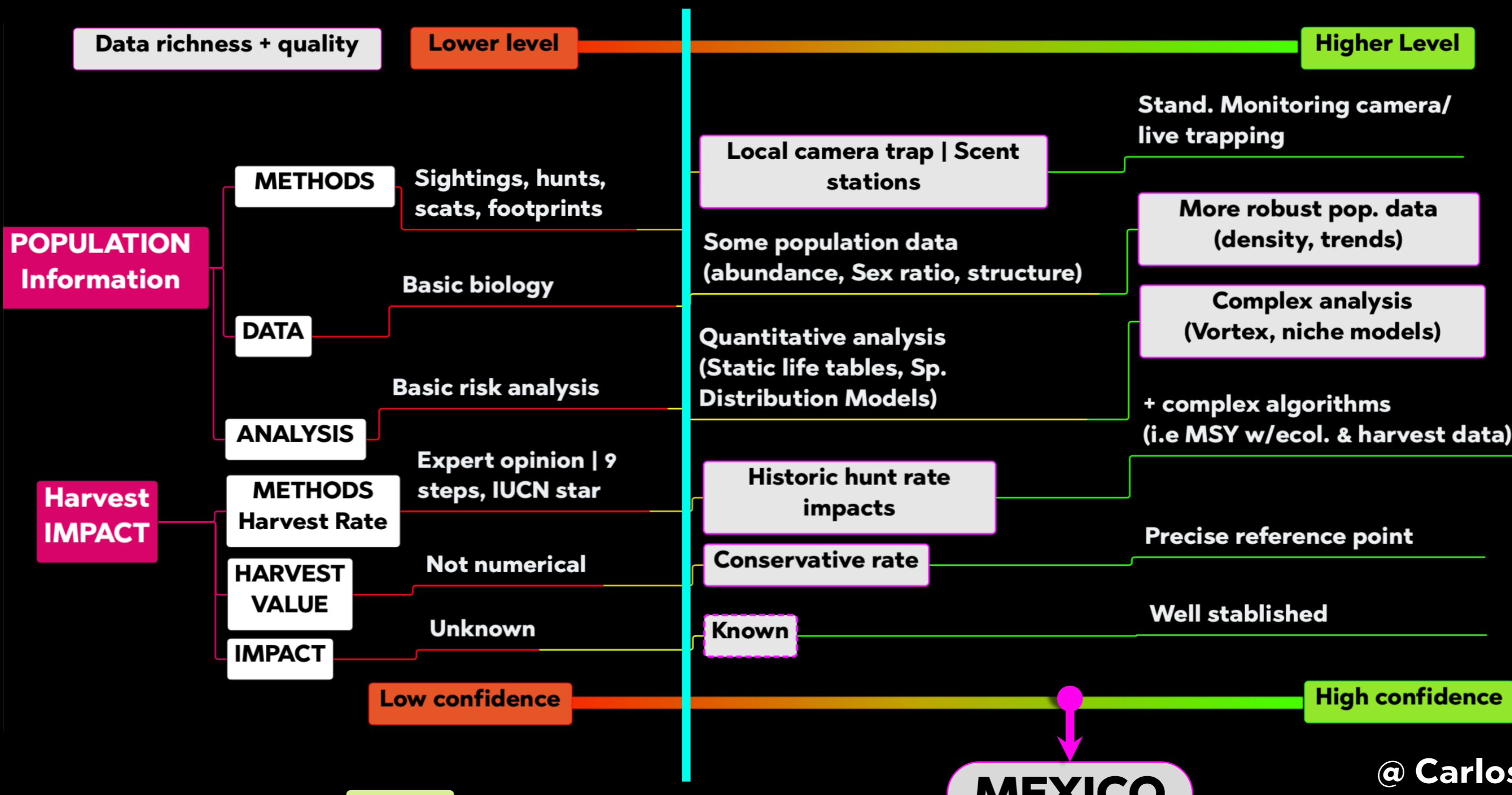
Positive Conditioned

Manag. Measures in RST database

From reconstructed catch time series at a species specific level, MSY analysis were carried out to determine the Sustainable Export Volumes. In the last three years **in the Pacific, the export amount has not go beyond 46.9% and 0% of VES in the Atlantic**



DIAGNOSE



@ Carlos Javier Navarro Serment
CONABIO

- POPULATION SURPLUS**
Species Density Distribution Model
- ESTIMATE IMPACT**
System of Carnivora Manag. Units
- NDF DECISION 😊**

SDM – Random forest; density from cam traps + regression model SPSS

Roads >80km/hr

Areas >100 k Ha

Harvest 10% adult males

Export request 1 ind/yr (3 year trend)

Positive Conditioned

- Harvest rate & SDM under review
- Collect & analyze pop. info from harvest
- Increase Cam trap to Regional level

From a Species Density Distribution Model, we estimated nation. Wide densities of puma (max density 2.38 ind/100km²) within a System of Carnivora Management Units, we set up a harvest rate of 10% of adult males **and the export request has been 1 indv/yr.**