

Establishing a vitality assessment protocol for rays within the INTERREG 2-SEAS SUMARIS-project

Noémi Van Bogaert¹, Sven Sebastian Uhlmann¹, Els Torreele¹

Institute for Agricultural and Fisheries Research (ILVO), Ankerstraat 1, 8400 Oostende



Goal

Score vitality, reflexes, injuries of 4 different ray species (*R. clavata*, *R. brachyura*, *R. montagui*, *R. undulata*) discarded by English Channel and North Sea active (otter-and beamtrawl) and passive (trammel- and gill net) fisheries → based on these data a survival range for each species/gear combination will be quantified. This research contributes to a species-specific and sustainable management strategy for rays.

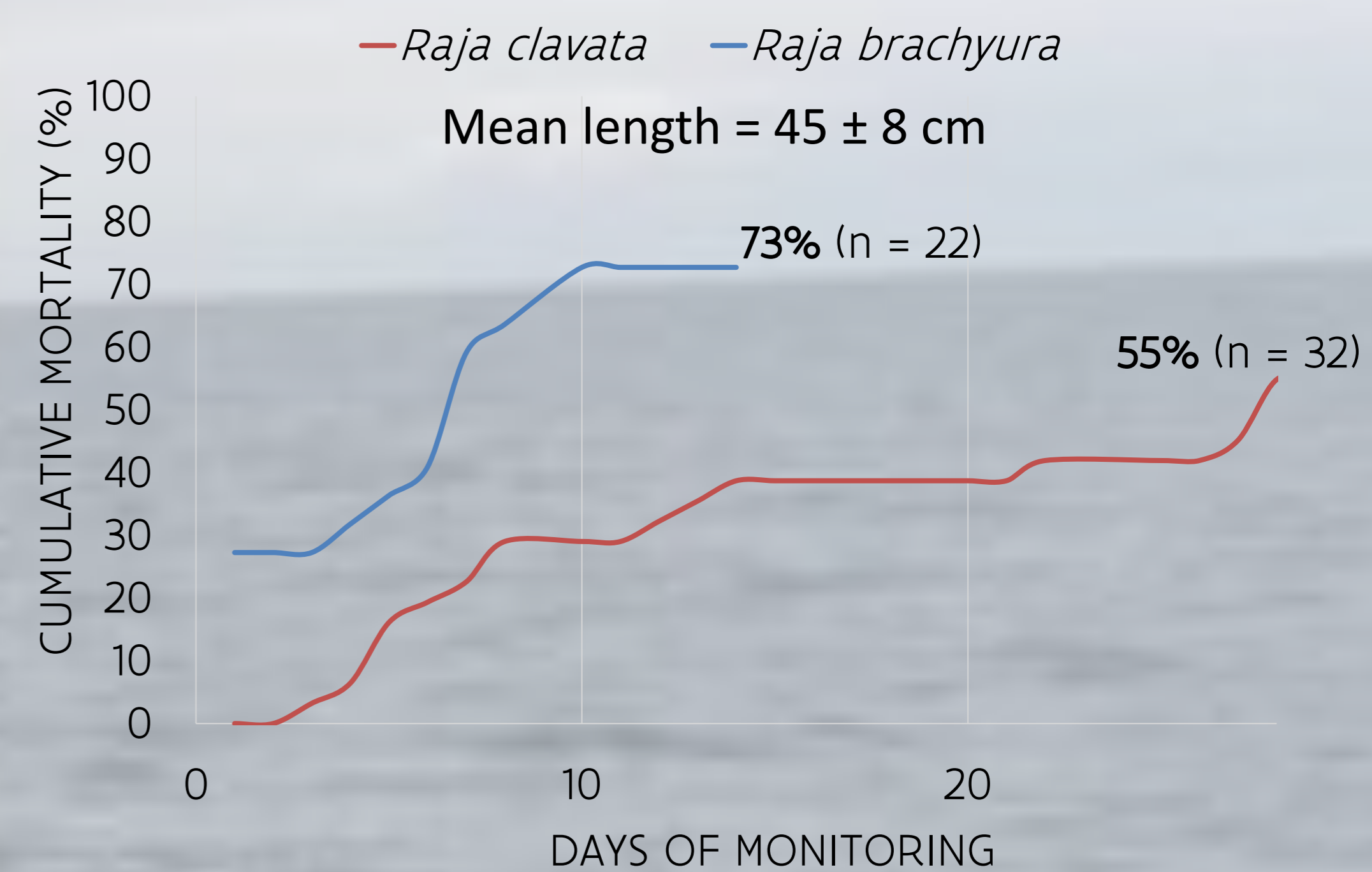
Pilot study: selection of reflexes and injuries

Method

- 22 blonde rays (*Raja brachyura*) and 32 thornback rays (*Raja clavata*)
- tested for different reflexes & injuries
- monitored in captivity for delayed mortality between 10-20 days

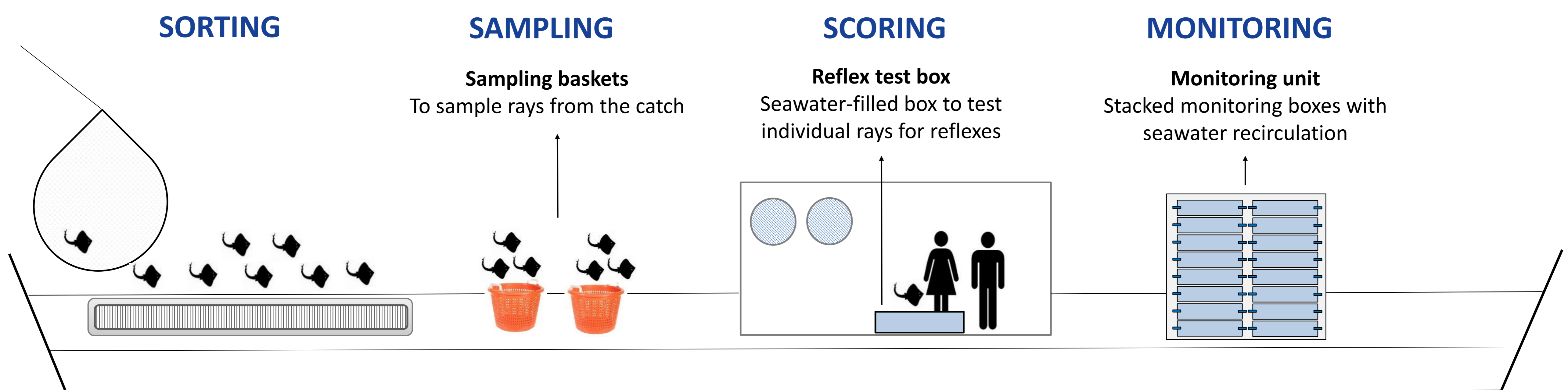
Outcomes

- Mean reflex impairment score = 0.13
- Bleeding injury covering on average = <10%
- Selection of:
 - 4 reflexes: tailgrab, startle touch, spiracles, startle touch & bodyflex
 - 5 injuries: bleeding head/body/tail, fin damage and open wounds.
- Protracted mortality → increase monitoring period & optimize holding conditions



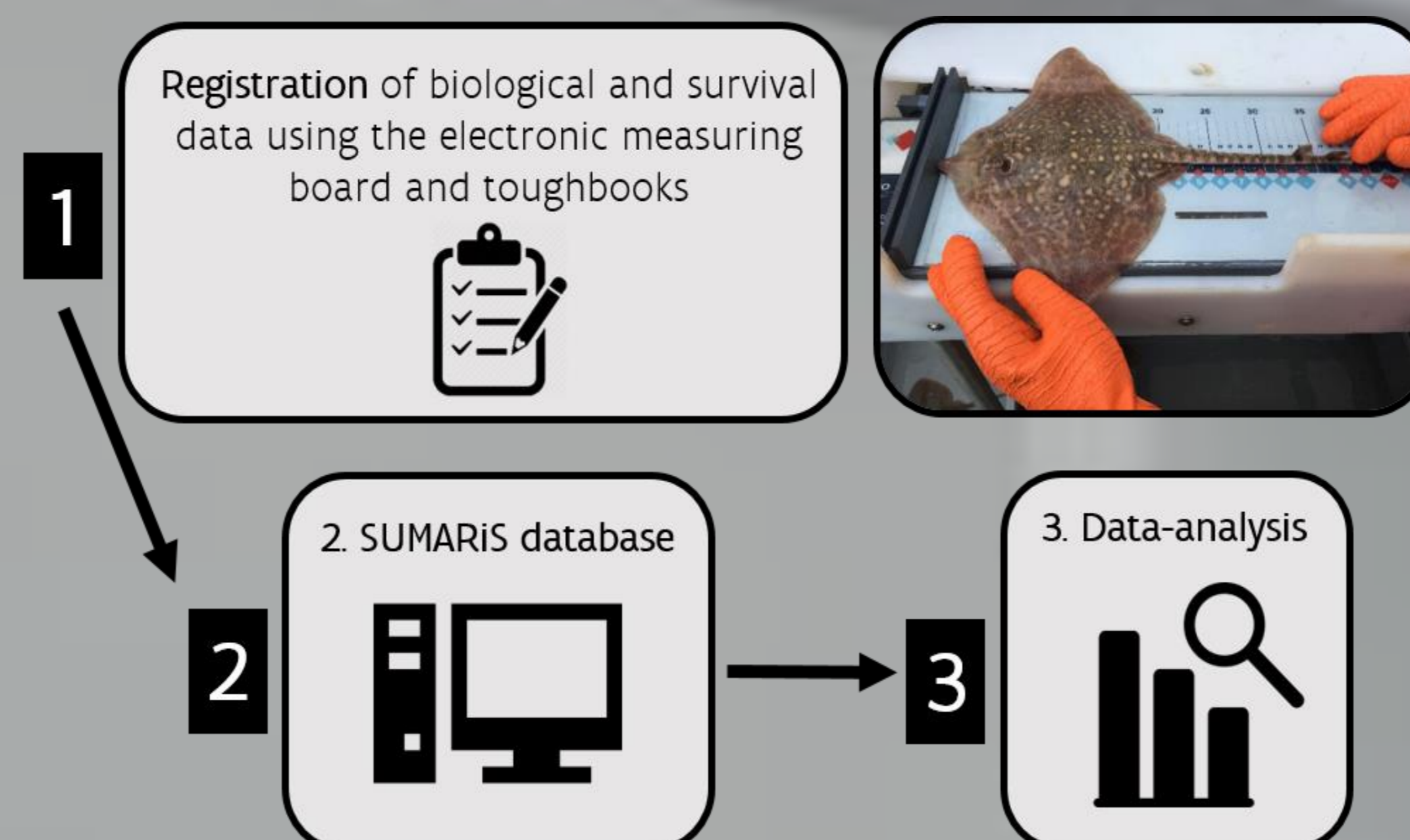
On-board protocol

Conforms to WGMEDS-guidelines and consists out of 4 main steps: 1) sorting, 2) sampling, 3) scoring for vitality (and immediate mortality), reflexes and injuries, and 4) monitoring of delayed mortality



Data-entry and storage

During the Belgian BTS-survey of 2018, 82 blonde, spotted and thornback rays were scored for vitality, injuries and reflexes using the SUMARIS protocol to test the electronic registration of survival data using toughbooks. Data will be stored in the SUMARIS database.



Planning for 2018-2019

- ± 20 seatrips with Belgian and French beam-and ottertrawls & trammel netters
- ± 10 seatrips with English gillnetters (using tagging instead of vitality + survival monitoring)

Acknowledgements

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