

- Product and Indicators Group A



Ideas for consideration:

- Reduce number of algorithms (Blake); Testing of algorithms (Mark M)
- Are current indicators the best indicators? E.g., chl for eutrophication (e.g. Erin)
- *Are there other indicators to consider; role of proxies?*
- *Explain to users concept of reprocessing; uncertainties*
- State of maturity and criteria to assess, esp to move into operations (Mark D)
- What is needed to “ Define specific requirements of the water quality system components and develop a plan to implement an integrated end-to-end water quality monitoring and forecasting service”

- Provider driven bottom up vice user-driven top down??
 - Start with reqs, then figure out obs needed, models needed, etc to determine product and indicator requirements.



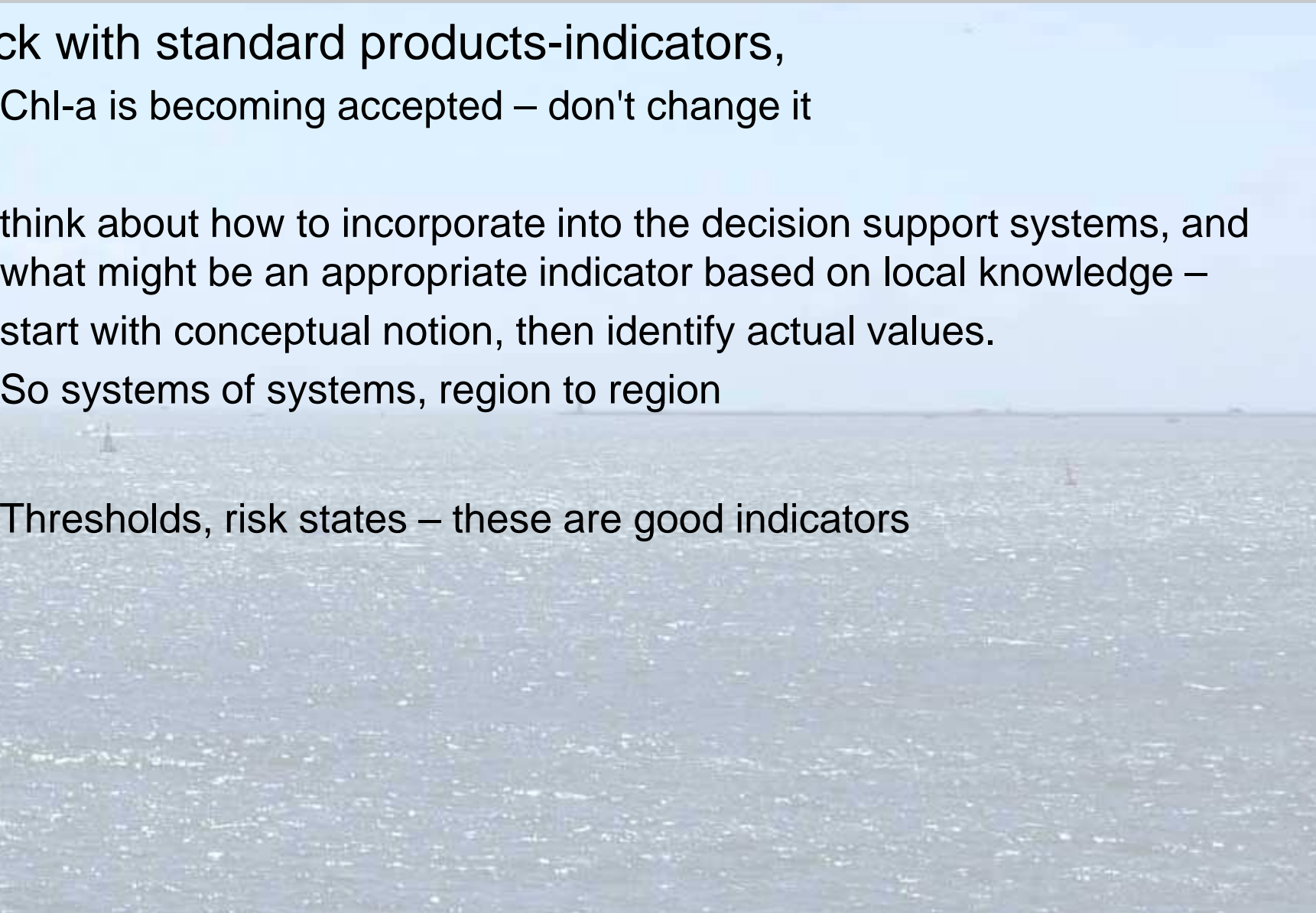
- Global core services; but also system of systems – so allow for regional algorithms?
- Get global (multi-lake) estimates based on certain criteria, but with uncertainties
 - Systematic subset of standard global products – generally fit for purpose “everywhere”
 - Select list of standard products: Chl-a, turbidity, temp, trophic status, heat max, etc etc
 - Suitable level of maturity, eg chl, TSM – but also with levels of uncertainty associated so we don’t oversell – likelihoods of working – both sat and in situ obs
 - But maturity not necessarily associated with accuracy – talking more about system maturity – is product well understood, described, etc
 - Focus on “fit for purpose”, but also need to consider continuity of operations

Stick with standard products-indicators,
Chl-a is becoming accepted – don't change it

think about how to incorporate into the decision support systems, and
what might be an appropriate indicator based on local knowledge –
start with conceptual notion, then identify actual values.

So systems of systems, region to region

Thresholds, risk states – these are good indicators



Indicators - outreach

Provide best approach, best practices, outreach and forums,
perhaps recipes or roadmaps – esp for non EO expert to
aid their utilization

Examples of success in GEO context:

Clean water act (US);

Water framework directive (Europe);

Aussie strategy

- all have identified meaningful indicators/numeric values assigned.

Upscale this globally?

Use this for global coastal eutrophication for example?

But need to be careful about the interpretation – also need plenty of
metadata, indicators of quality – perhaps start with anomalies, then can
move to 90 percentile etc.

Suggested Approaches

Global capability: processing system for standard parameters –
default algorithm included (e.g., OC3) for non-expert user,

System allows for processing on the fly, again with either standard
“global” approach, but also allowing for regional or local
parameterization or tuning

but also allow for expert user algorithm tailoring using different
approaches, coefficients etc.