The World Coastal Forum: helping deliver evidence-based coastal ecosystem conservation

William (Bill) Sutherland, University of Cambridge

www.worldcoastalforum.org

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World Coastal Forum: background

Called for by:

- Convention on Migratory Species (CMS) Resolution, 2017
- Ramsar Convention Resolutions: 2018, 2022
- Convention on Biological Diversity (CBD) Decisions: 2018, 2022
- IUCN Resolution, 2020

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Back story of EAAFP involvement in WCF

- EAAFP has long recognised the high pressure on coastal and coastal waterbirds
- Since 2007 the EAAFP has been identifying mechanisms to promote coastal conservation, with a focus on the Yellow Sea, incl. establishment of the Yellow Sea Task Force
- Support to the Philippines Government and others to develop the CMS Resolution on Coastal Wetlands (2007) and there after the Ramsar Convention, CBD and IUCN Decisions
- Support to development of the 2012 IUCN Situation Analysis for the Yellow Sea and EAAF to spotlight importance of coastal wetlands
- EAAFP has in its current Strategic Implementation Plan recognised the importance of protection, management and restoration of Flyway Network Sites and other important coastal sites for waterbirds
- Input and support to the Yancheng Symposia of 2017, 2018 and 2019
- Participation in the Yancheng Conference of January 2021 that decided to establish the WCF.

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WCF Coordination Group members

Members (22)：

中华人民共和国自然资源部
Ministry of Natural Resources of the People's Republic of China

国家林业和草原局
National Forestry and Grassland Administration

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RSPB

EAAFP

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

futureearth coasts

MEGA-DELTA
Deltas associated with large rivers: Seeking solutions to the problem of sustainability

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ICLEI
Local Governments for Sustainability

INTERNATIONAL CRANE FOUNDATION

IUCN

Mandai NATURE

PRCM

The Nature Conservancy

UNIVERSITY OF CAMBRIDGE

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

WHSRN

Wetlands INTERNATIONAL

WWT

EAST-WEST PHILANTHROPY FORUM
東西方慈善論壇

保尔森基金会
PAULSON INSTITUTE

中国海洋发展基金会
CHINA OCEANIC DEVELOPMENT FOUNDATION

Observers (2)：

CMS

Ramsar

Advisors (2)：

Mr. Arthur Hanson

Mr. Stanley Johnson

World Coastal Forum – what will it be?

- **Umbrella** adding value by facilitating stakeholders to be more than the sum of their parts to accelerate effective on ground delivery
- **Voluntary**, **independent of treaties**, but treaties could adopt WCF products
- **Endorsed at high political level** in terms of its establishment & operation
- **Multi-stakeholder:** National/Subnational/Local gov reps engaged in coastal management, **(**not international negotiators), International organisations, NGOs, academics, business
- **Beneficial not burden to participants.**

WCF Task Teams (and leads)

Science and Evidence (Universities of Cambridge & Queenland & MNR)

- State of the World's Coastal Ecosystems Report
- World Coastal Ecosystems Conservation Toolkit

Institutional development (IUCN & MNR)

International engagement (BirdLife & MNR)

Local Government and Subnational Engagement (ICLEI)

Stakeholder Mapping (tbc)

Restoration (REST-COAST)

Communication, Capacity Building, Education, Publicity & Awareness (WWT)

Protection (tbc)

Management (tbc)

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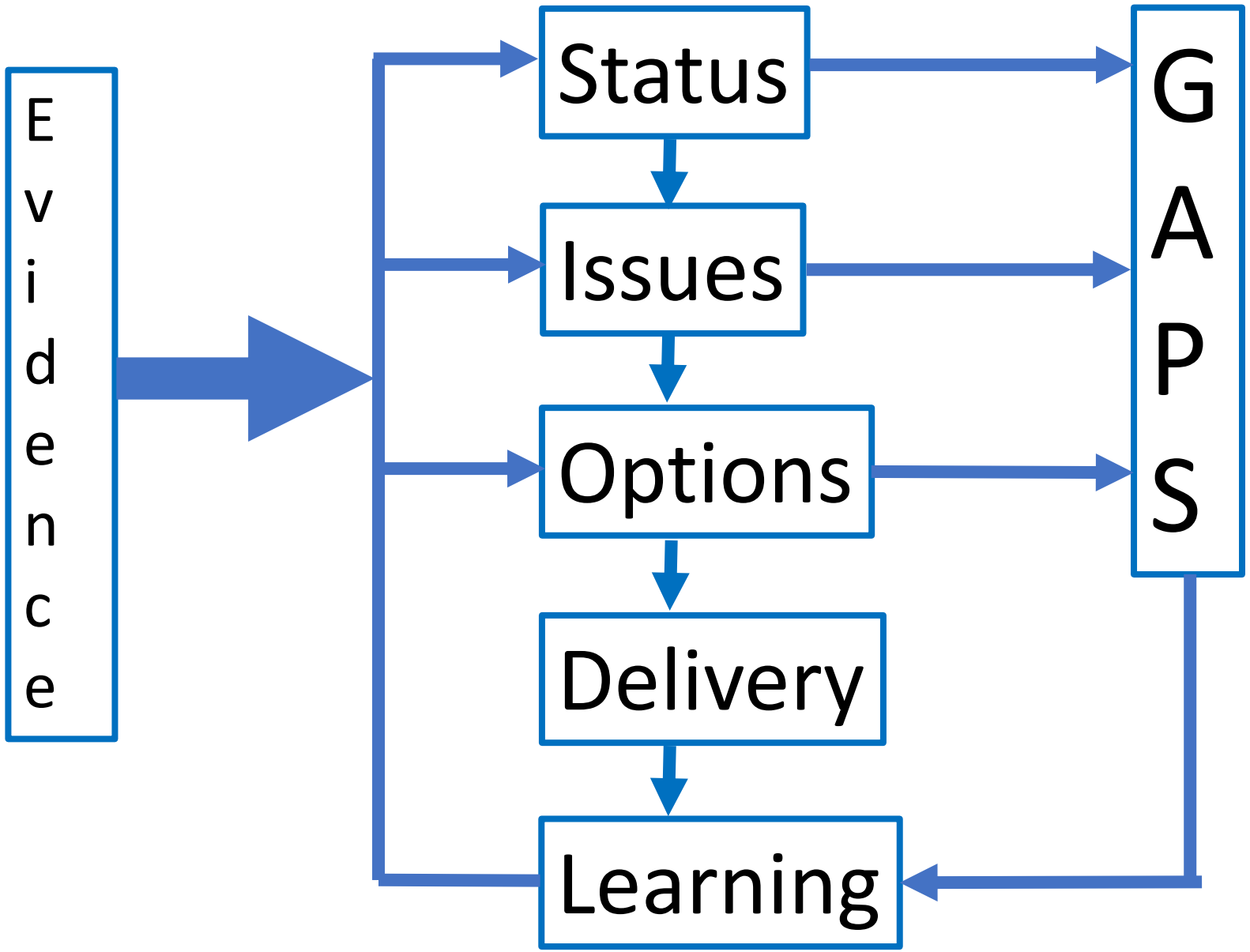
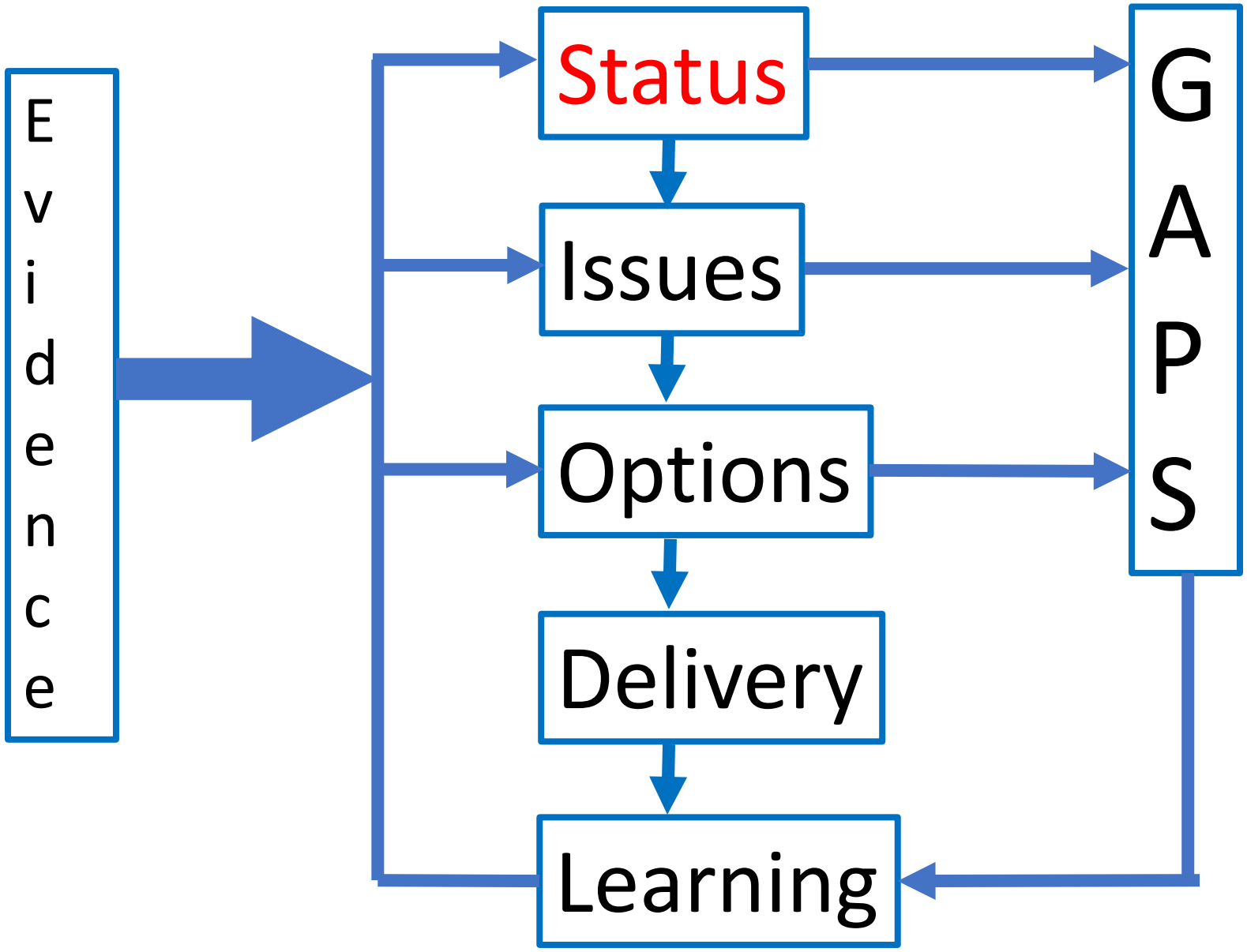
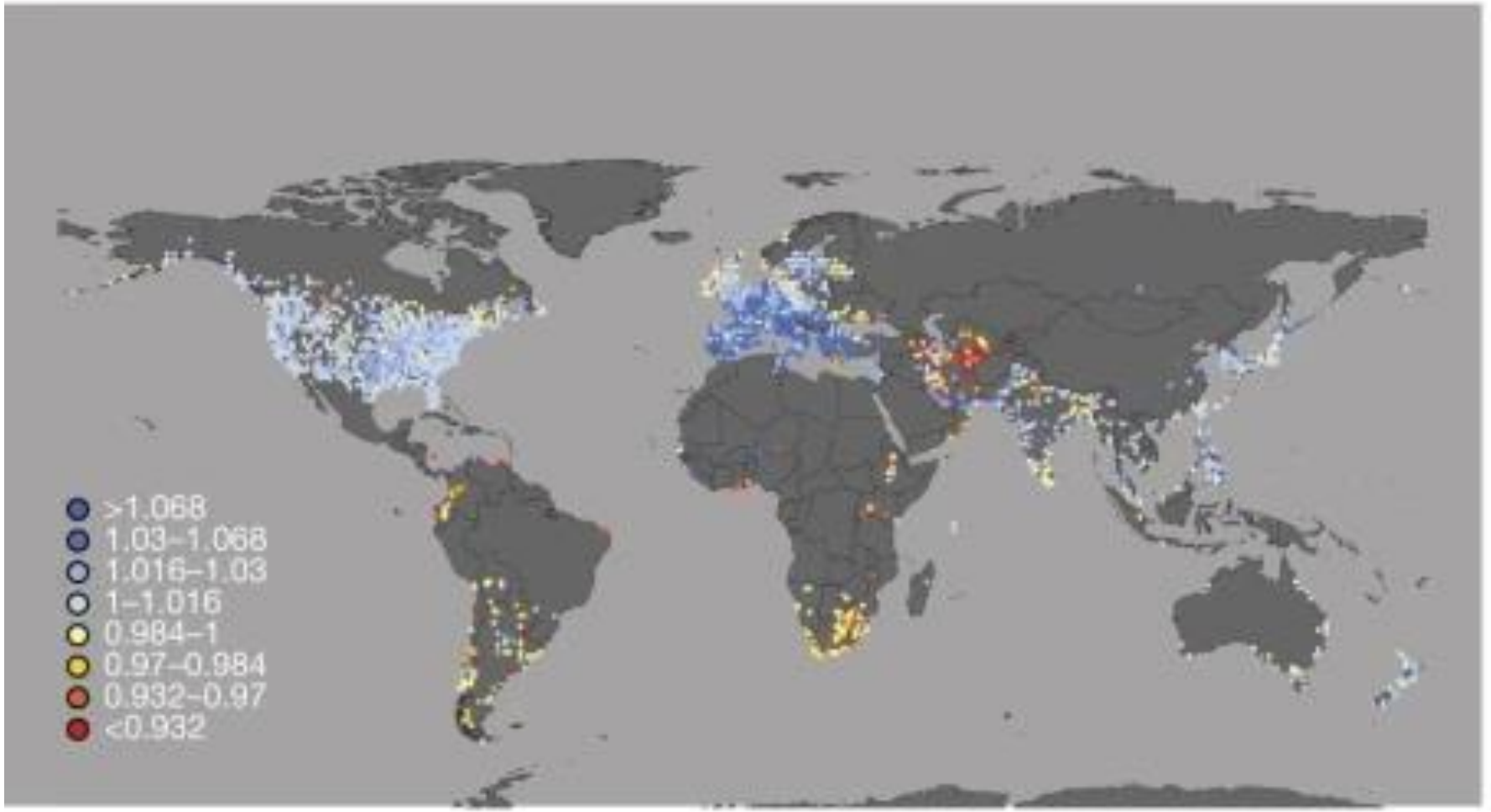
Logic behind World Coastal Forum

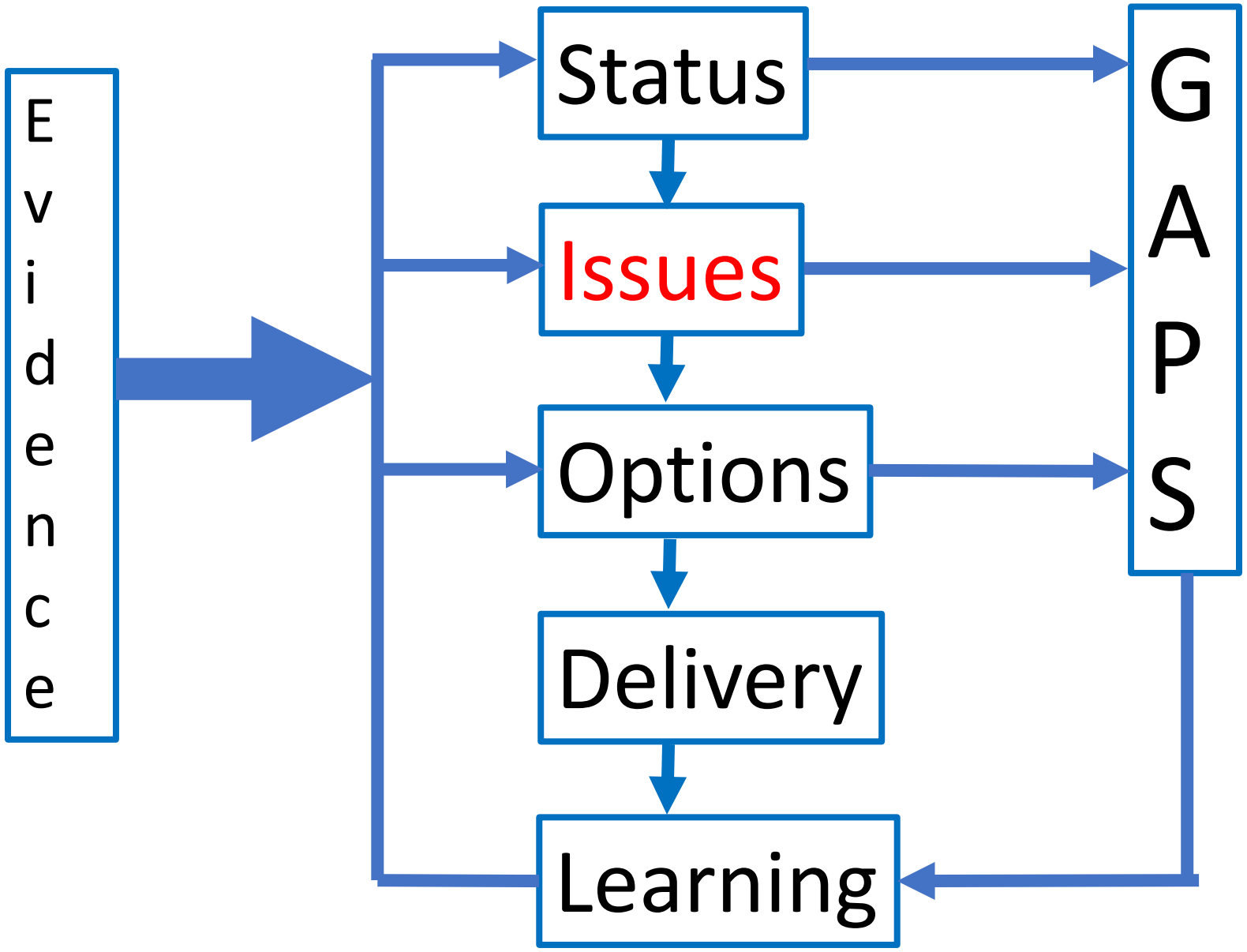



Evidence
Status
Issues
Options
Delivery
Learning
GAPS

Aim: collaboratively collating studies on status and change for habitats and species.
For example waterbird count data showing changes.



Nature 553, 199-202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Aim: collaboratively collecting information on threats and opportunities

ENVIRONMENT

China battles alien weed at unprecedented scale

"Mammoth" plan to control a coastal invader would benefit migratory birds

By **Erik Stokstad**

Along its 18,000 kilometers of coastline, China has been taken over by a green invader. Smooth cordgrass (*Spartina alterniflora*) grows tall and thick across tidal mudflats, depriving endangered migratory birds of habitat, clogging shipping channels, and ruining clam farms. Now, China aims to beat back 90% of the weed by 2025. "This is a mammoth undertaking," says Steven Pennings, a coastal ecologist at the University of Houston. "It's audacious."

The nationwide effort, launched last month, "is by far the largest action plan for wetland invasive species control in China and even in the world," says Bo Li, an invasion ecologist at Fudan and Yunnan universities who was not involved in creating the plan. It won't be simple or cheap, costing hundreds of millions of dollars, Li estimates. And schemes to dig up, drown, or poison the weed all have side effects. "It's going to be really difficult," says Sam Reynolds, a biologist at the University of Cambridge.

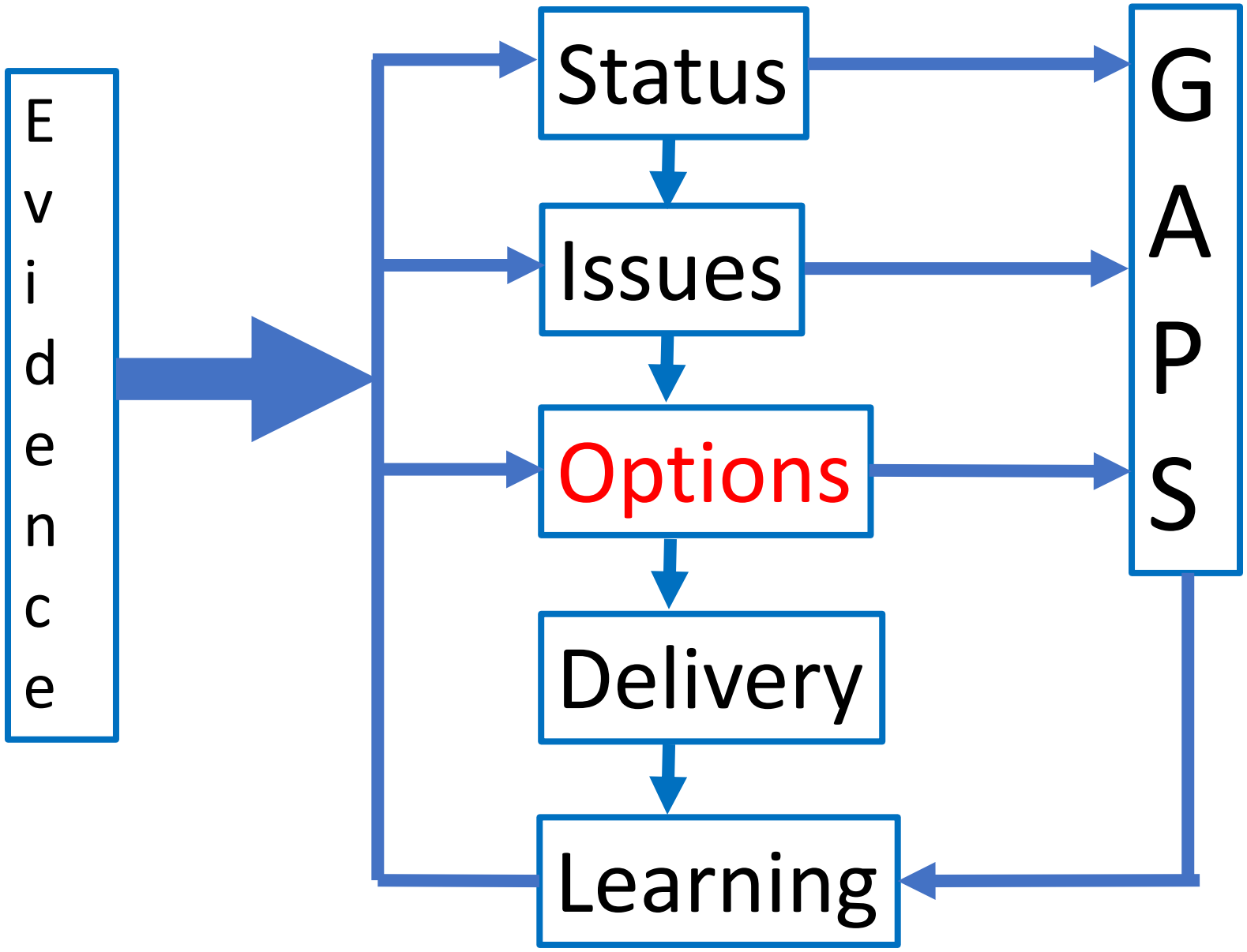
Spartina, native to eastern North America, was brought to China starting in 1979 to stabilize tidal mudflats and turn them into land for agriculture or development. The plan from gathering food, Crockford says.

China has already launched smaller scale *Spartina* control projects. Li was involved in a well-known success at the Chongming Dongtan National Nature Reserve. After *Spartina* was planted there in 2001, it ruined habitat for dozens of fish species and migratory birds. To remove the weed, engineers built a seawall and flooded the wetland to drown the grass. By 2018, the project had eliminated 95% of the *Spartina* in 2400 hectares, and native plants and bird populations began to recover. But the price tag was steep: about $150 million, largely for erecting the sea-

China is scaling up small projects to remove *Spartina alterniflora*, such as this one in Qingdao, which dug up the weed over 1312 hectares and buried it.

Spartina has invaded. None of the possible methods is a sure thing. Releasing insects that eat weeds, a technique called biocontrol, has worked against other plants, but so far researchers have not found anything that can be used against *Spartina* in China. Other techniques have limitations. Flooding, for instance, can starve the sediment of oxygen, which can kill worms and other animals that live in it. Baoshan Cui, an expert in wetland protection and restoration at Beijing Normal University, says waterlogging causes more problems than other strategies, so it should be avoided. But backhoes and other construction equipment, which can drive onto firm mudflats to dig up and bury *Spartina*, compact the mudflats, disturbing the habitat of sediment-dwelling creatures. And herbicides have rarely been used against *Spartina* in China.

Researchers who reviewed 116 studies of *Spartina* control—all of them much smaller than China's plan—found that physical controls such as digging and burying are highly effective in the short term, but the weed grows back. Herbicides worked very well at controlling *Spartina*, but only when applied year after year. Overall, combined methods worked best, Reynolds and other researchers conclude in a preprint. Shengyu Wang of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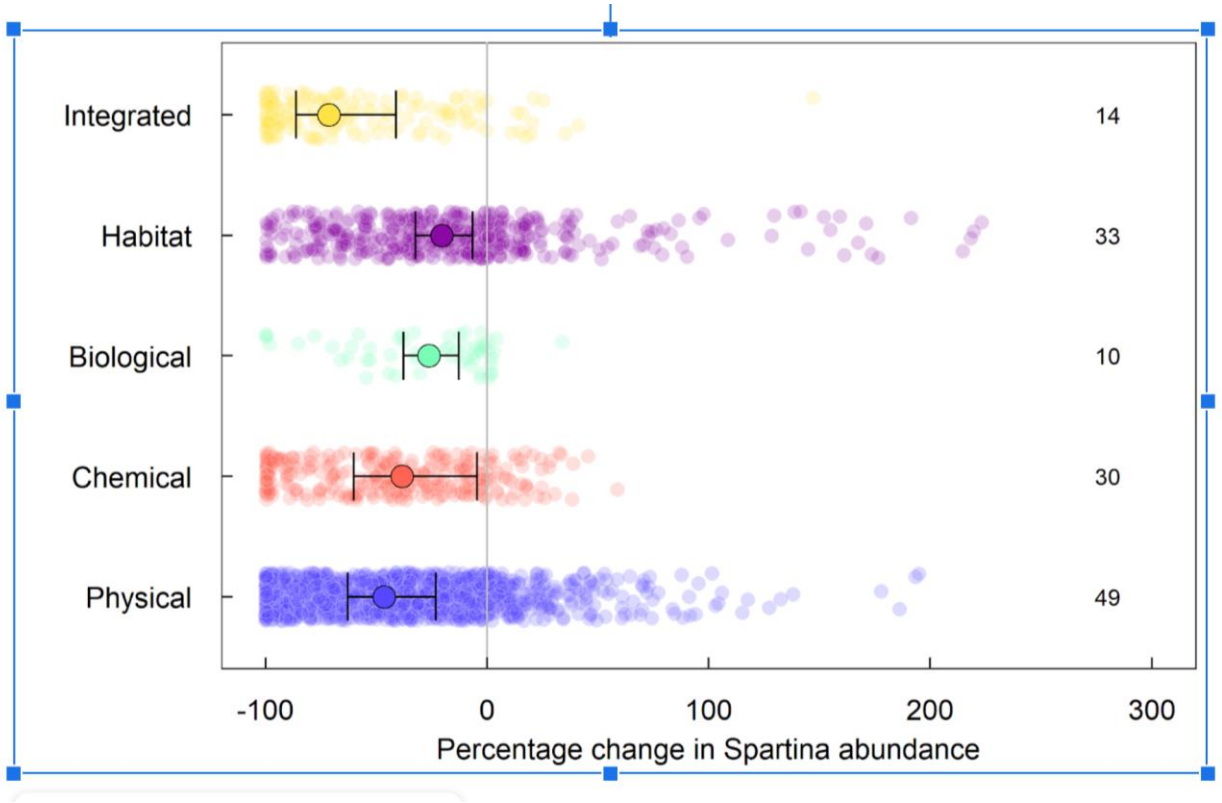
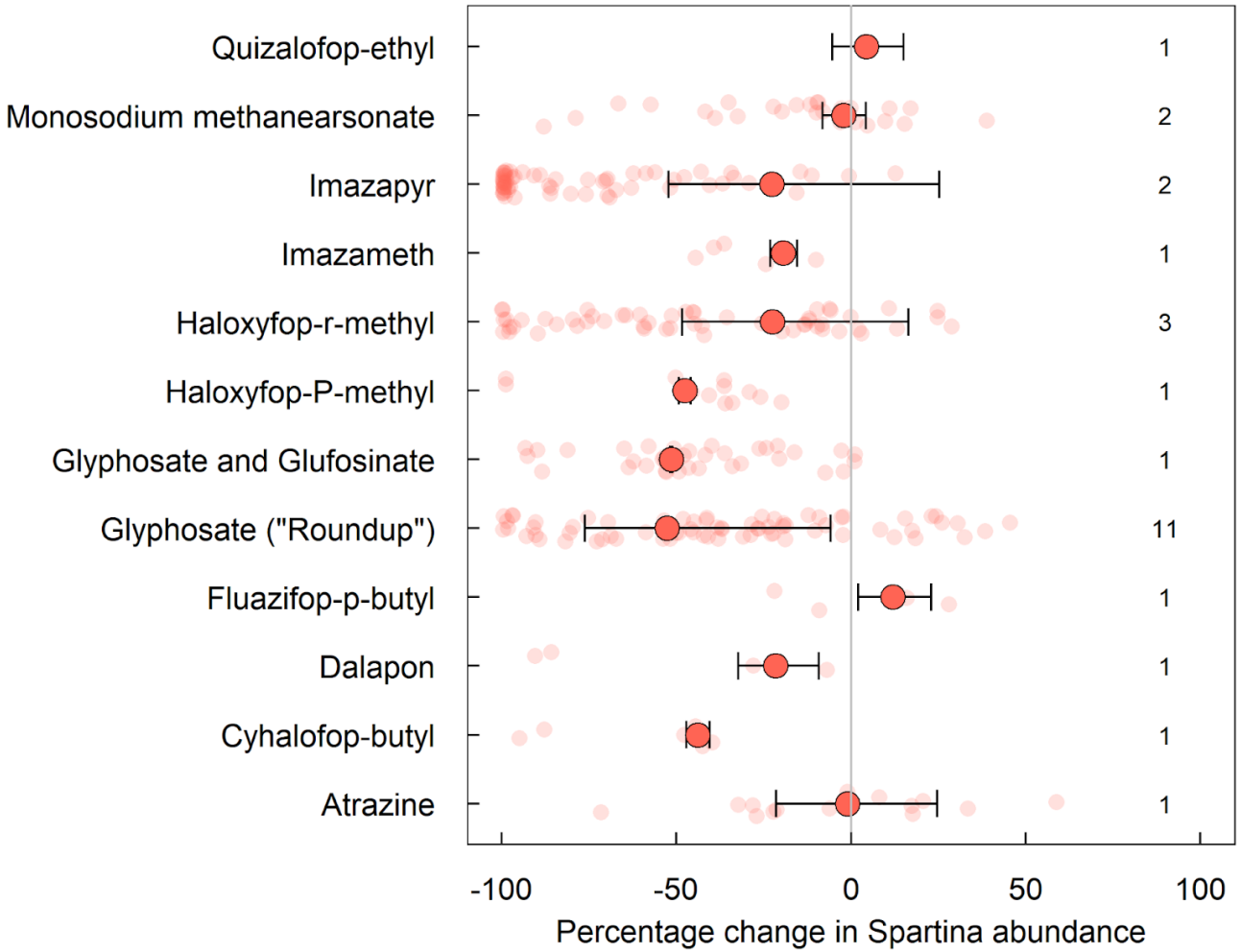
Aim: collaboratively collecting information on threats and opportunities

For example, studies of Spartina

Effectiveness of means of controlling Spartina

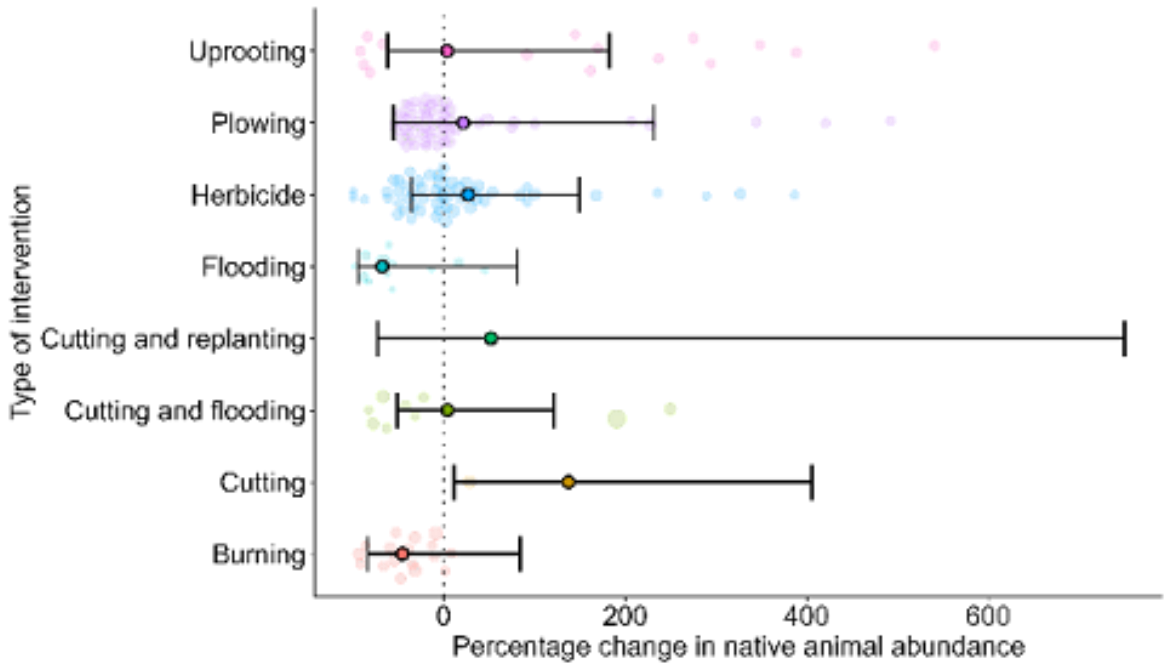


Effectiveness of different herbicides

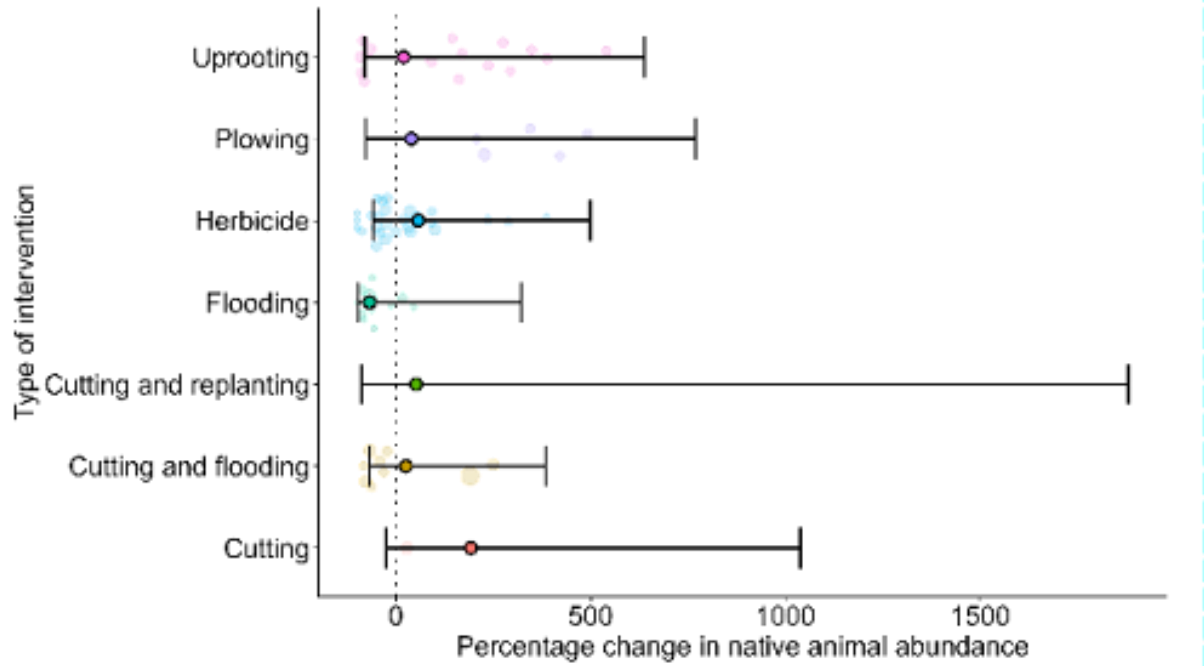


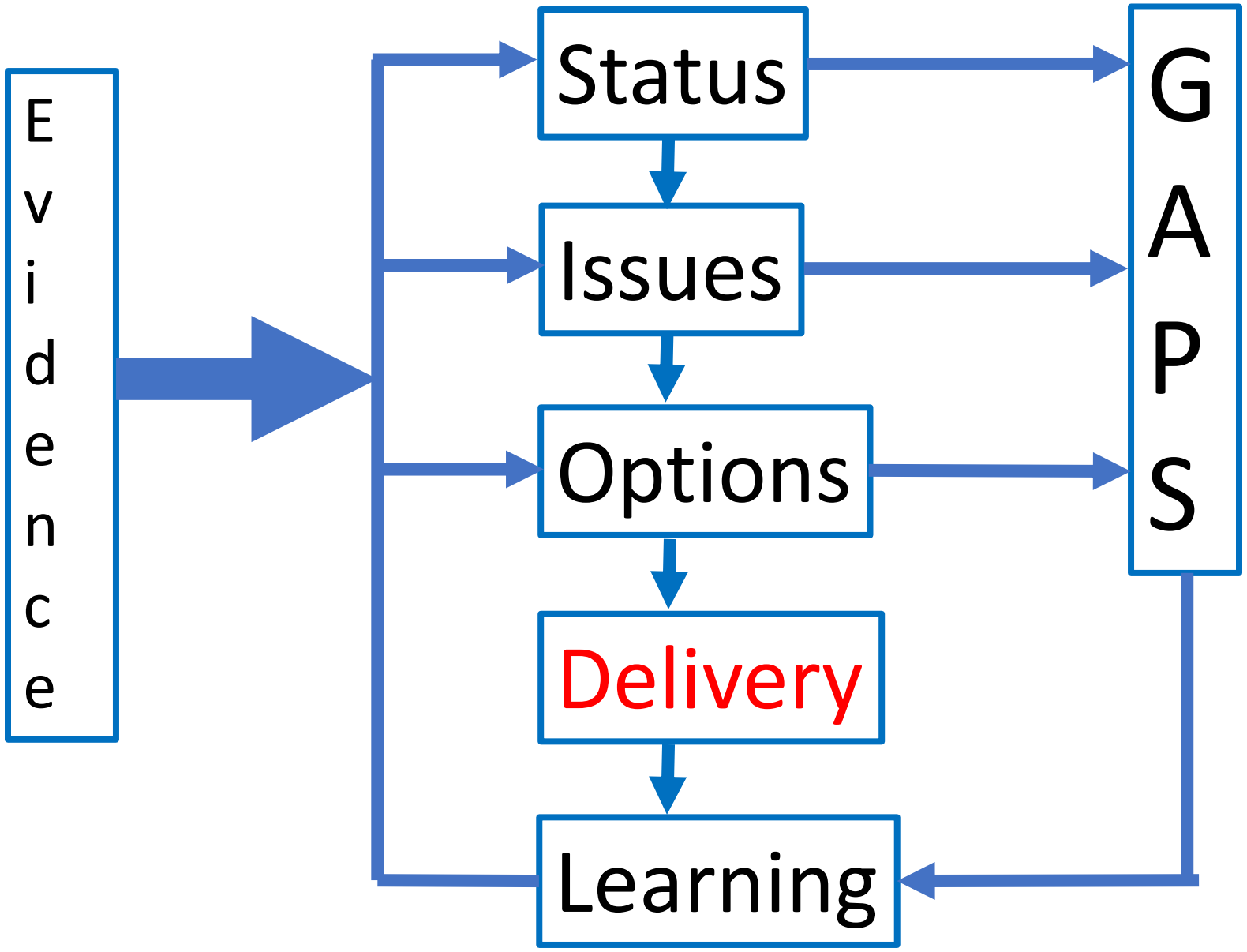
Side effects of Spartina management

Global Data



China Data

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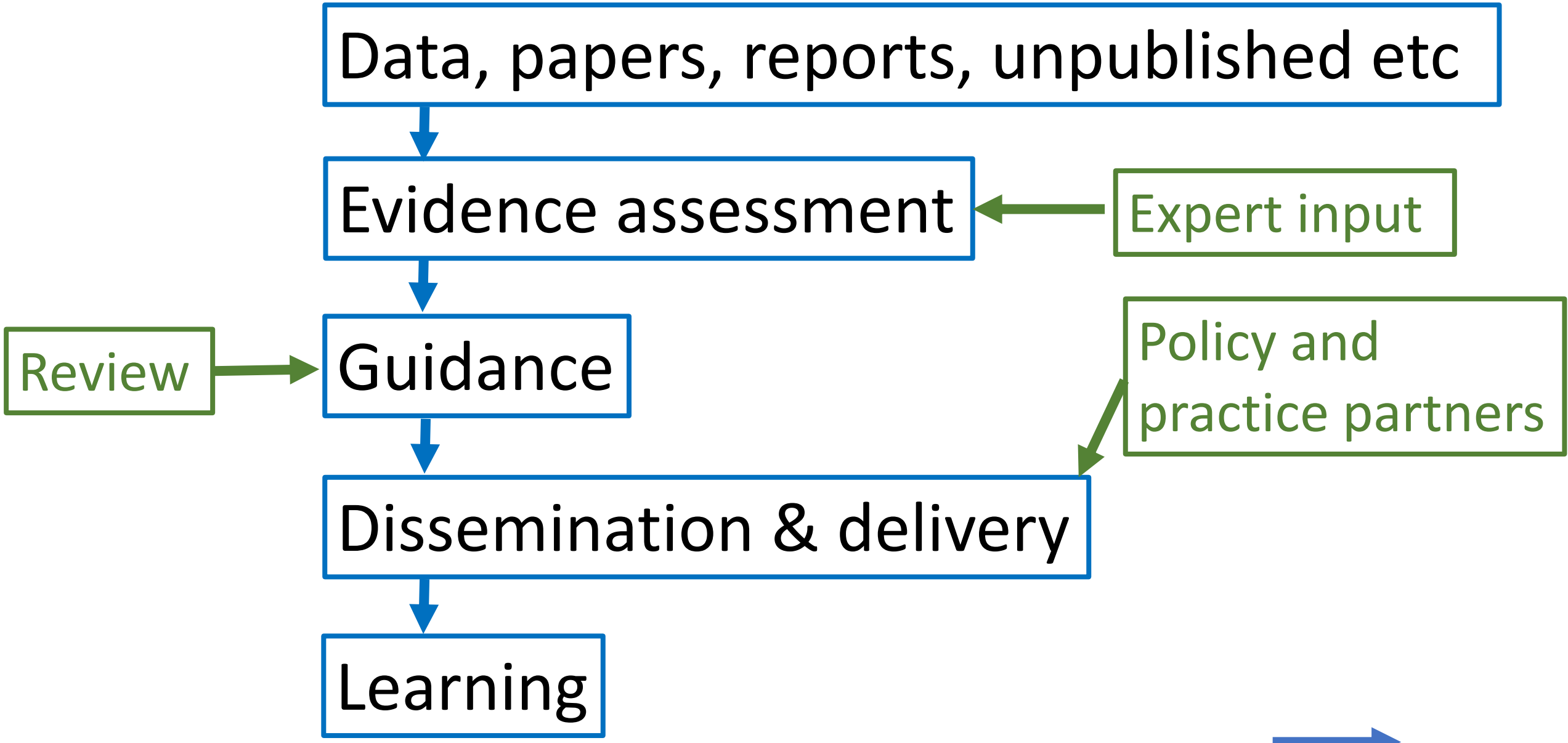
米草入侵管理——基于已有证据的综合分析*

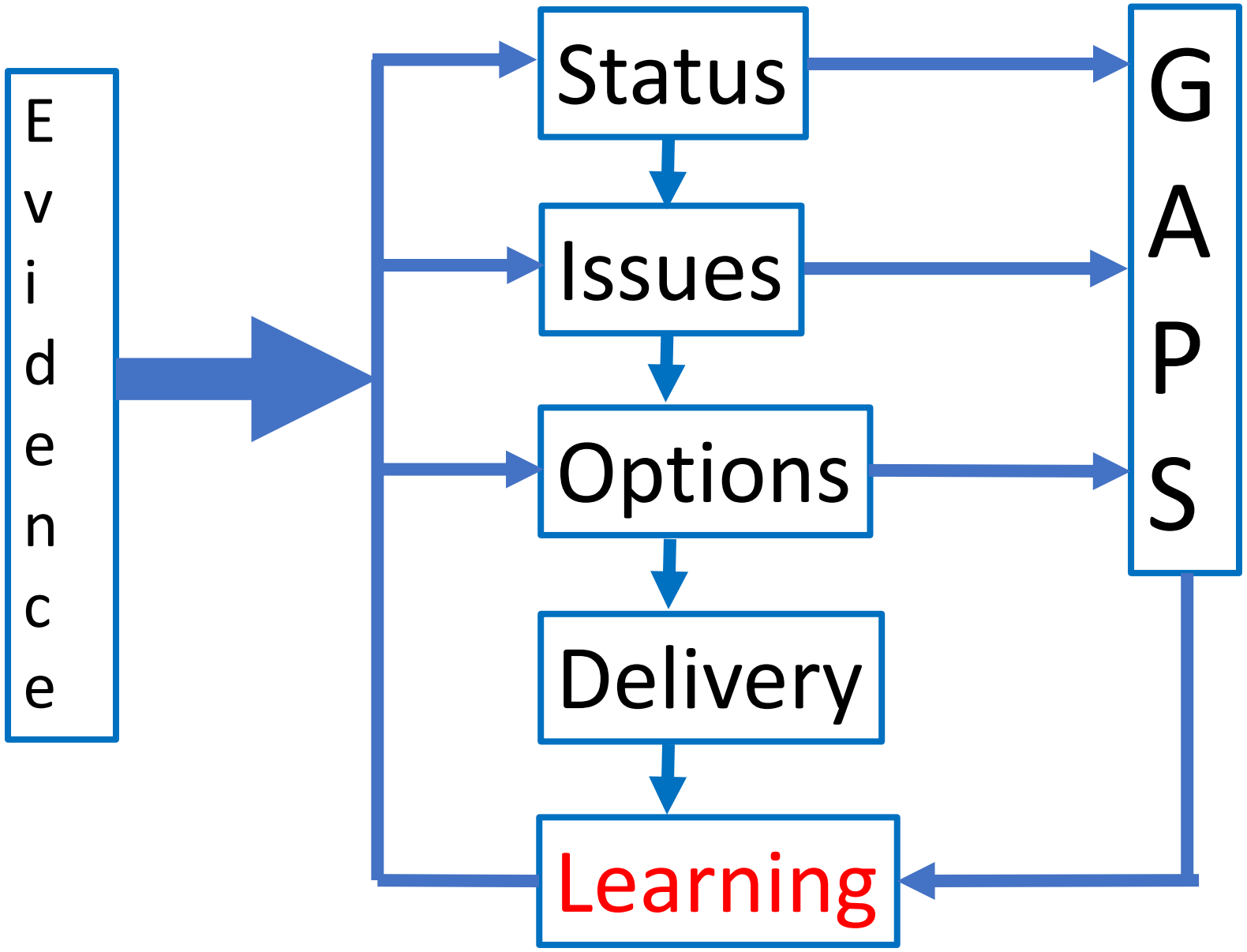
Spartina invasion management - a review of the evidence

Sam Reynolds[1,2], David Aldridge[1,2], Alec Christie[1,2,3], Chi-Yeung Choi[4,5], Micha V. Jackson[6], 鞠瑞亭 [7], Katherine K-S Leung[8], 李博 [7,9], Roy Lowe[10], Philip Martin[11], David S. Melville[12], Taej Mundkur[13], Silviu O. Petrovan[1,2], Rebecca K. Smith[1,2], 王声钰 [7], Tom White[1], Kate Willott[1,2], William J Sutherland[1,2]


Data, papers, reports, unpublished etc
Evidence assessment
Expert input
Review
Guidance
Policy and practice partners
Dissemination & delivery
Learning

Coastal high-tide shorebird habitat management guidelines

Guidelines for maintaining and managing natural or artificial (i.e. human-created) coastal wetlands to provide suitable high-tide roosting conditions for shorebirds in the East Asian-Australasian Flyway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Next steps

- **1230-1400 hrs 15 March, Brisbane EAAFP MOP11 Side event**
  The World Coastal Forum: how can it help you?

- **26-28 Sept. 2023, Yancheng, PRC, 1st World Coastal Forum Conference**
  Host Institutions: MNR, NFGA, Jiangsu Government
  Hybrid, Ministerial segment, 400 onsite participants incl. 150+ from overseas

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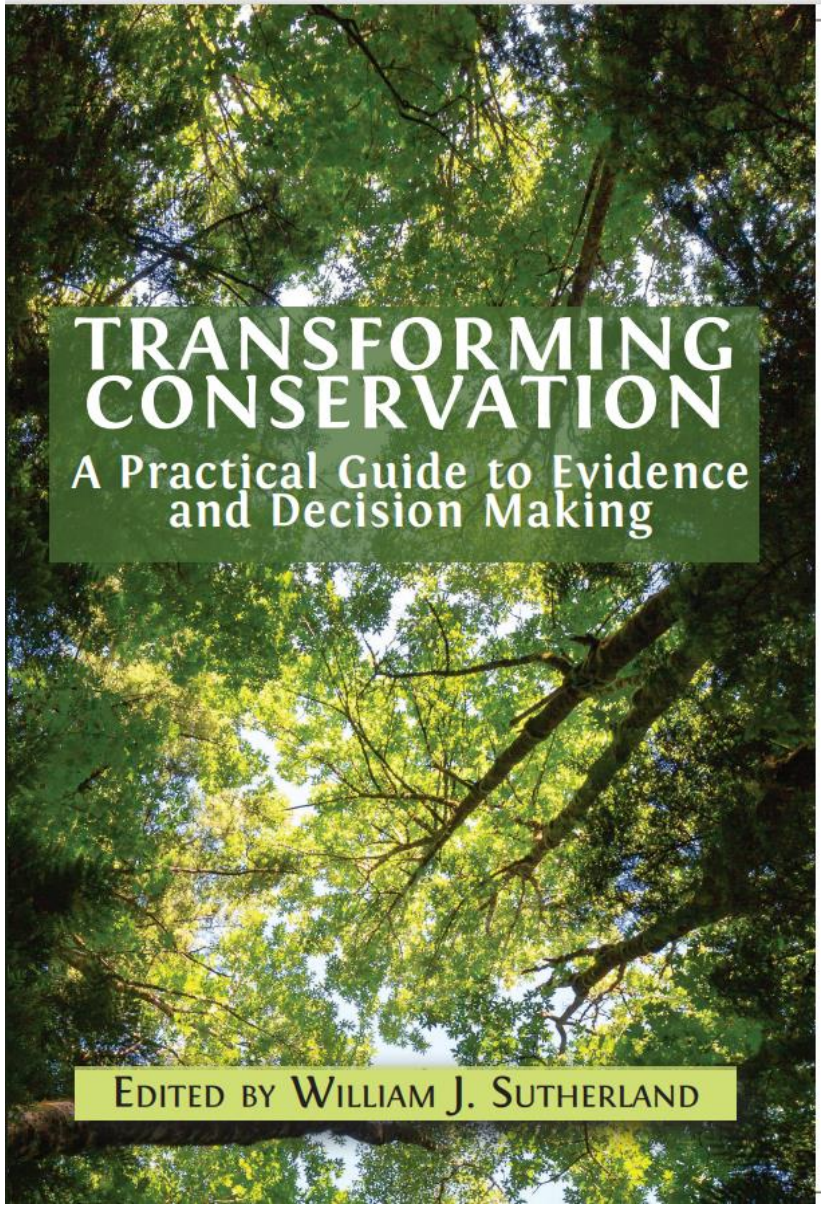

https://bit.ly/3TqteY9

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