INTEGRATED ECOSYSTEM CONDITION ASSESSMENT FRAMEWORK IECA

Australian Government - Department of the Environment and Energy
Aquatic Ecosystems Task Group – Multi-State Jurisdictional Representatives

WHAT IS IT?

The Integrated Ecosystems Condition Assessment (IECA) Framework is a tool to assess the condition of aquatic ecosystems and was developed to provide a nationally consistent framework to meet National Water Initiative requirements.

The manual has a number of audiences, primarily those who undertake aquatic condition assessments and/or develop associated policies and standards. The IECA will also be of use to Ramsar site managers and application in Environmental Impact Statements.

5th Module of National Aquatic Ecosystem Toolkit

Central to the IECA Framework is the principle of building on existing methods and programs, particularly those developed and adopted by Australian jurisdictions to determine best practice. This will enable application the framework within current operating environments while also allowing for cross jurisdictional collaboration from a common understanding and in a coordinated manner.


Current understanding
Vision
Plan
Act
Monitor, evaluate & report
National Guidelines for the mapping of Wetlands (Aquatic Ecosystems) in Australia
Interim Australian National Aquatic Ecosystem Framework (Module 2)
Guidelines for Identifying HEVAE (Module 3)
Aquatic Ecosystem Delineation and Description Guidelines (Module 4)
Intergrated Ecosystem Condition Assessment (Module 5)
Assess
Map Aquatic Ecosystms
Classify Aquatic Ecosystems
Identify purpose and scale/ regionalisation
Identify HEVAE sites
Delineate and describe aquatic ecosystems
Management Plan
Monitor
Evaluate
Community participation
Research & innovation

Part A: IECA Context and Current understanding

Framing the Question

- Articulate objective for management of the assessment unit
- State targets, triggers and thresholds (optional)
- Establish spatial scale of assessment unit – Use Module 2 & 4 where appropriate
- Undertake stakeholder identification and engagement

Achieved through existing management planning processes.

Purpose of IECA

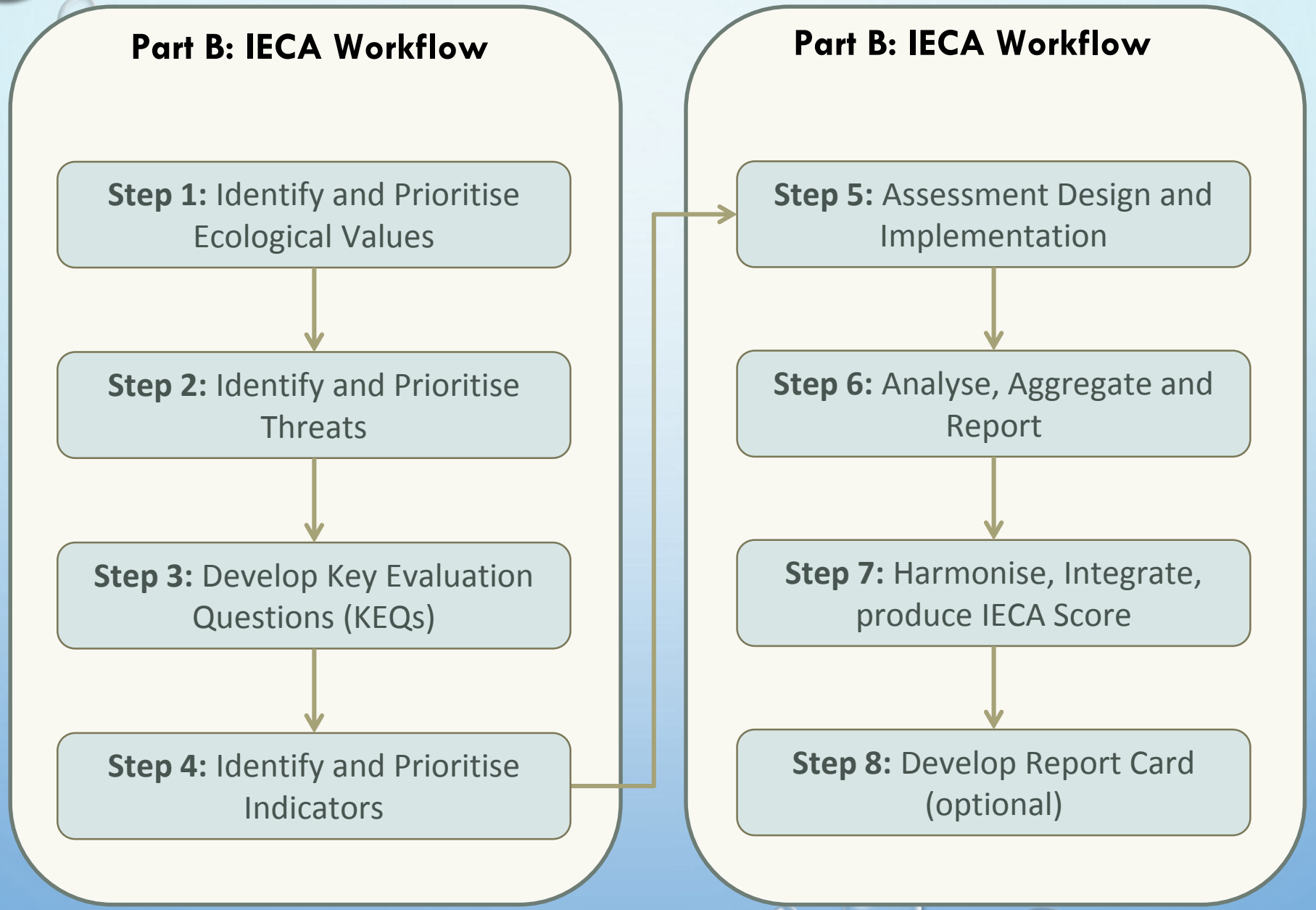
- Establish links to other reporting requirements which IECA could inform
- Articulate purpose of IECA

Gauge knowledge base and level of assessment required.

Groundwork

- Establish a appropriate oversight body/TAG
- Collate existing information
- Define the spatial and temporal scale of the assessment
- Identify any externalities that may affect condition assessment
- Develop a conceptual understanding of the assessment unit based on the data in hand

Build knowledge base from existing information and planning processes


Part B: IECA Workflow
Step 1: Identify and Prioritise Ecological Values
Step 2: Identify and Prioritise Threats
Step 3: Develop Key Evaluation Questions (KEQs)
Step 4: Identify and Prioritise Indicators
Part B: IECA Workflow
Step 5: Assessment Design and Implementation
Step 6: Analyse, Aggregate and Report
Step 7: Harmonise, Integrate, produce IECA Score
Step 8: Develop Report Card (optional)

GUIDELINES MANUAL

Aim	Clear statement of the intent of each step in the framework
Task	Detailed description of what is required to achieve the stated aim • This may include a number of ordered tasks which may be illustrated with a workflow graphic • Guidance on how to complete each task
Inputs	What inputs are needed to complete all tasks
Other resources	Links to key resource documents which provide additional guidance of elements of the tasks
Outputs	Will include a checklist and minimum requirements/standard output
Knowledge gaps	Advice on how to consistently document knowledge gaps in a useable and informative format.
Case study example	Case study illustration of data poor and data rich

REPORTING

All data must be converted to a measurement of condition status.

By comparing raw data point to a reference value for each sub-indicator

Conversion to a condition score is essential because it is the only way that scores can be compared across assessment units or ecosystem types within units through time

Recommend a banding system for a report card.

- *scores scaled from 0 to 1 across five bands as follows:*
  - *1 – 0.8 = Largely unmodified*
  - *0.79 – 0.6 = Slightly modified*
  - *0.59 – 0.4 = Moderately modified*
  - *0.39 – 0.2 = Substantially modified*
  - *0.19 – 0 = Severely modified*

REPORT AVAILABLE

The Aquatic Ecosystems Toolkit Modules from 1 to 4 are available on:

Aquatic ecosystems toolkit

Module 5 IECA Framework is currently in draft and will be available in ***June 2017***

IECA FRAMEWORK AND DRAFT TOC FOR GUIDANCE MANUAL