Frameworks for Implementing Ecosystem-Based Management (EBM): NOAA's Integrated Ecosystem Assessment and the Global Large Marine Ecosystem Programs

Rebecca L. Shuford

IIFET 2018: Adapting to a Changing World – Challenges and Opportunities Special Session on Marine Ecosystem Service Valuation: Methods, Values, Policy Frameworks, and Outlook

> Tuesday, July 17th Seattle, Washington

Outline

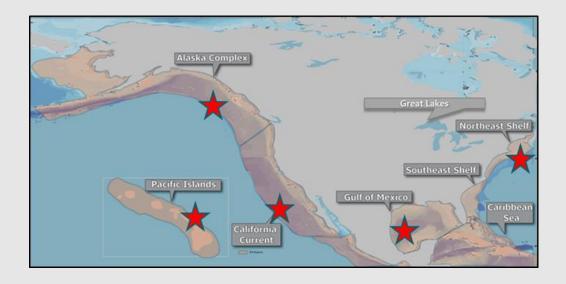
 NOAA's Integrated Ecosystem Assessment (IEA) Program – A Framework for Science-Based Ecosystem Approaches to Management

• The Global Large Marine Ecosystem (LME) Program: 2-Tier Approach for Economic Valuation of Ecosystem Services



NOAA's Integrated Ecosystem Assessment (IEA) Program

IEAs Provide an Analytical Framework to Implement EBM



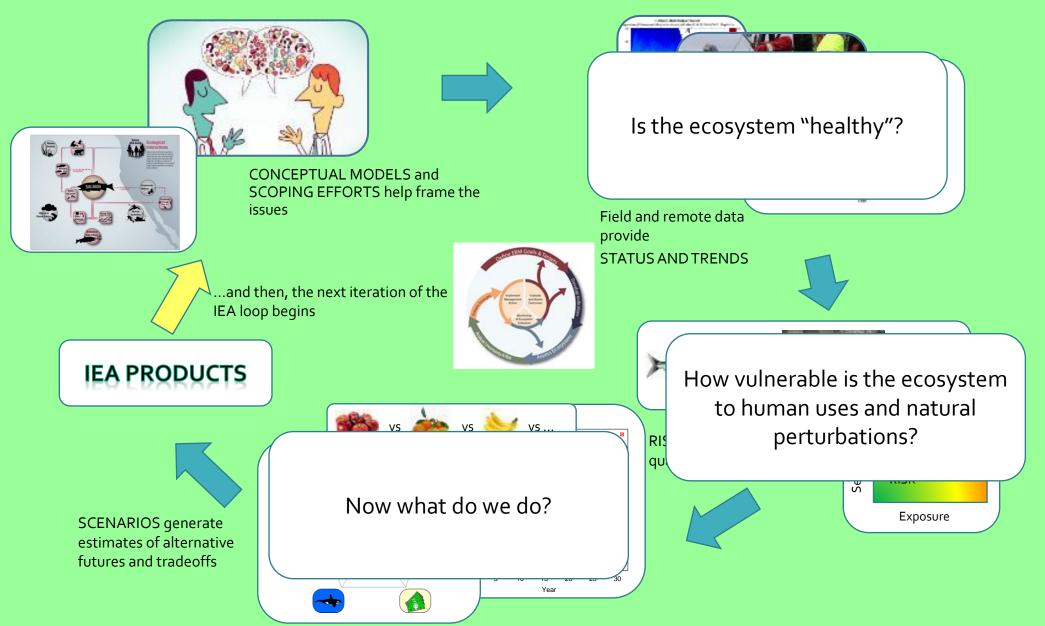


Vision:

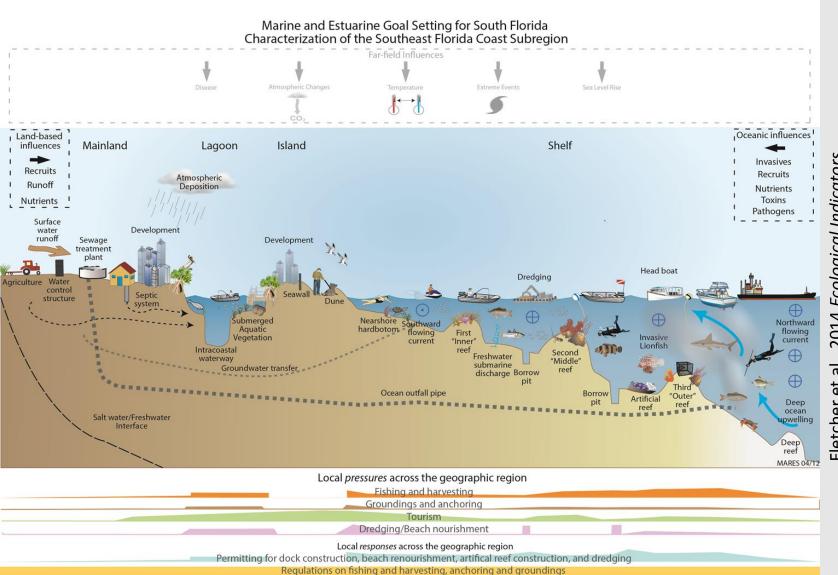
To provide the sound interdisciplinary, ecosystem-based science, tradeoff evaluation, and management advice required to ensure the sustainable delivery of a broad spectrum of benefits and services from our Nation's marine, coastal, estuarine, and Great Lakes ecosystems; thus, enhancing the well-being of current and future generations.

NOAA IEA in action





Why NOAA IEA: We need to consider the full Socio-Ecological System

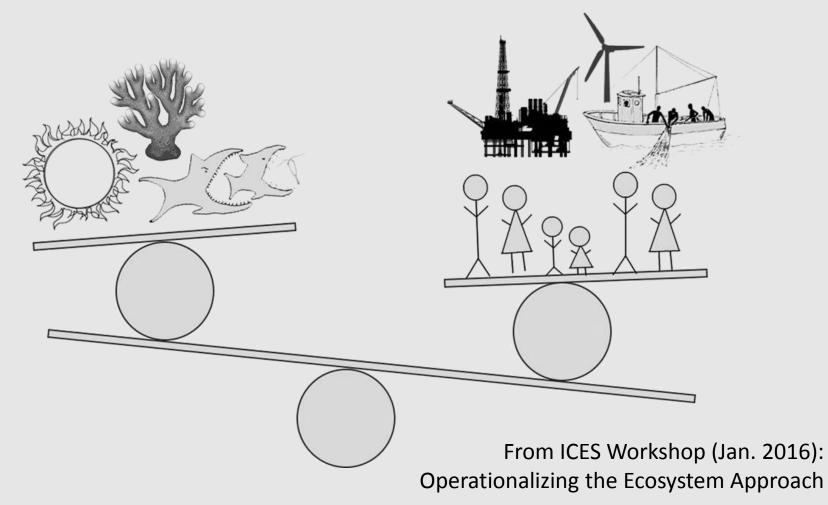


Fletcher et al., 2014 *Ecological Indicators*

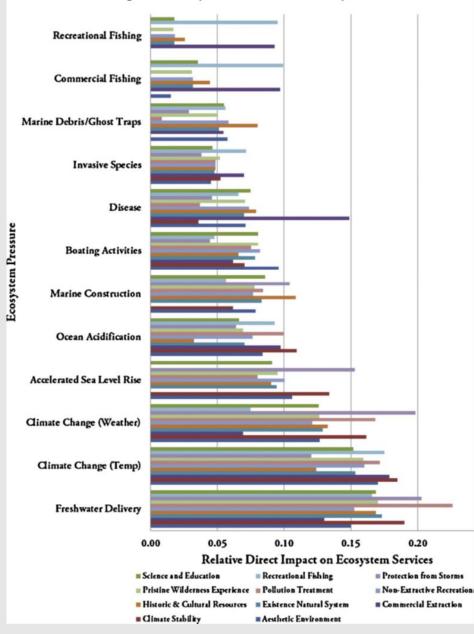


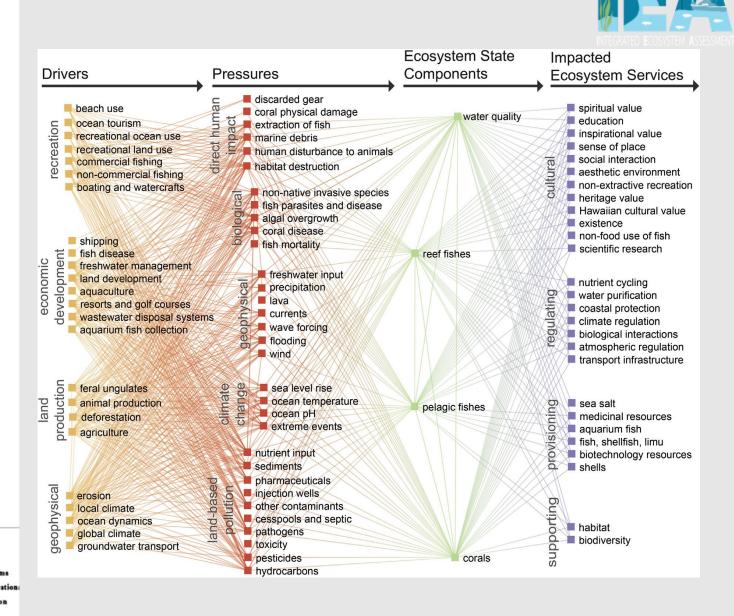


Why NOAA IEA: Balancing Social, Cultural, Economic and Ecological Services



Direct Impact of Ecosystem Pressures on Ecosystem Services



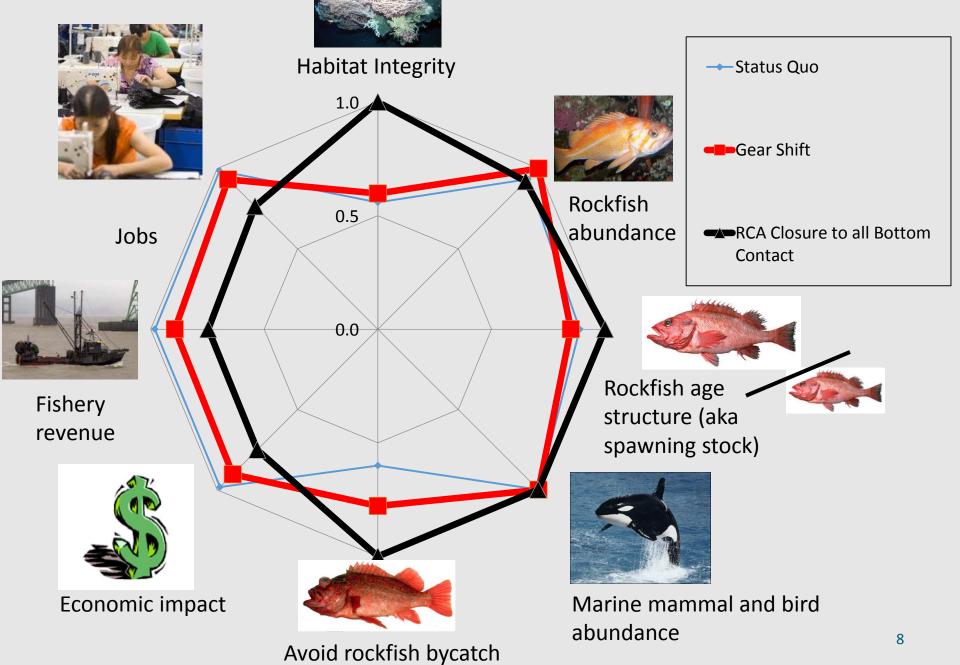


2014 Ecological Indicators Cook et al.,

Ingram et al., 2018 Marine Policy

Kaplan et al. 2012 *Prog. Oceanography* Kaplan and Leonard 2012 *Marine Policy*





Outline

 NOAA's Integrated Ecosystem Assessment (IEA) Program – A Framework for Science-Based Ecosystem Approaches to Management

• The Global Large Marine Ecosystem (LME) Program: 2-Tier Approach for Economic Valuation of Ecosystem Services

Global Network of Large Marine Ecosystems

US\$285 million

Cumulative LME GEF Grants



Invested in 124 Countries



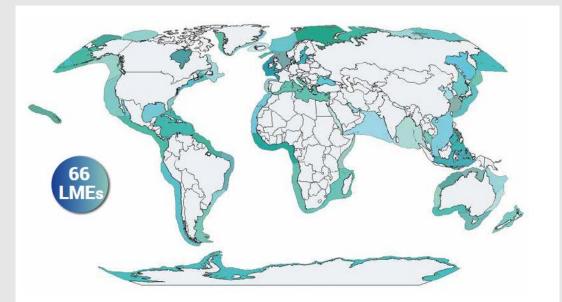
GLOBAL ENVIRONMENT FACILITY

The adoption and long-term commitment of the Global Environment Facility (GEF) to LME-based programming has in several cases been transformational in supporting efforts of countries sharing LMEs to move them toward sustainable use, and highly catalytic in terms of leveraging both public and private financial resources for LME restoration and protection.

Over the course of more than 25 years, the GEF has invested in 124 countries through projects in 23 LMEs. These projects, implemented through strategic partnerships with national, regional and international entities, have encouraged governmental and non-governmental stakeholders around the world to embrace the LME Approach as a mechanism to address issues in relation to overfishing, habitat degradation and loss, and pollution, among other serious threats.



Through Projects in 23 LMEs



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The LME framework to implement Ecosystem Approaches





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Services



REGIONAL NETWORKING

The LME:LEARN project, supports a series of regional networks, to improve regional governance and cooperation within respective LME regions, as well as coordination between LME, MPA, MSP and ICM projects.



MANAGEMENT CAPACITY BUILDING

LME:LEARN encourages capacity development and South-to-South / North-to-South exchanges through twinning and learning exchanges, workshops and training among LMEs and similar initiatives.



KNOWLEDGE MANAGEMENT

LME:LEARN is dedicated to everimproving knowledge management processes in view of further enhancing the management effectiveness of LMEs and integration of ICM and MPAs.



LME HUB The Large Marine Ecosystem Hub: Outreach and Visualization of LMEs.

LME:LEARN project is managed by the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organisation (UNESCO), implemented by the United Nations Development Programme (UNDP) and funded by the Global Environment Facility (GEF)".

LME:LEARN 2018 - Powered by GRID-Arendal



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

IW











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LME:LEARN 🗹 | 🔒

MANUALS > ECONOMIC VALUATION > Economic Valuation of "wet" ecosystems

Economic Valuation of "wet" ecosystems

The GEF Guidance Document for Economic Valuation in IW Projects is a reference source and a guide for GEF IW projects. It contains step-by-step guidance on the economic valuation of ecosystem services of inland and marine "wet" ecosystems, with a focus on easily applicable and pragmatic valuation approaches. The guidance is usable for both screening and indepth analyses.

Besides, the Guidance Document contains templates for reports, ToRs for experts to support the valuation work, a checklist for the valuation itself, and a full set of training materials including exercises for a better understanding of crucial steps in the economic valuation methodologies.

Please download the current version of the guidance:

T GEF Guidance Document to Economic Valuation 🛓



Content navigation

Media

> Economic Valuation of "wet" ecosystems

- > Introduction to the Guidance Documents
- > Accompanying Documents and Training Materials

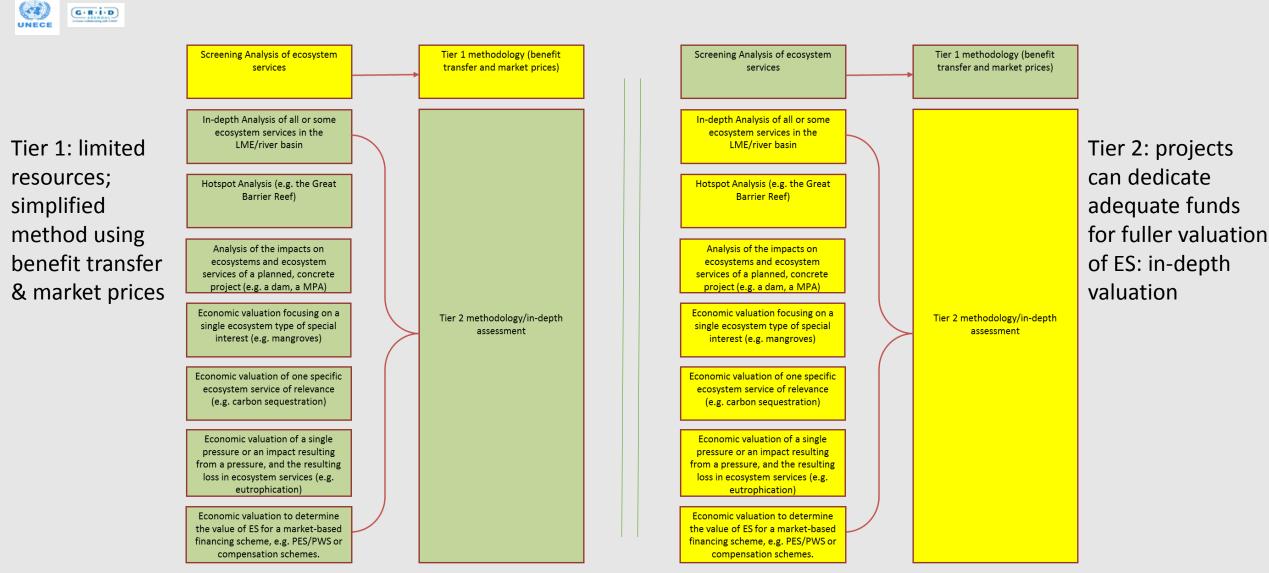
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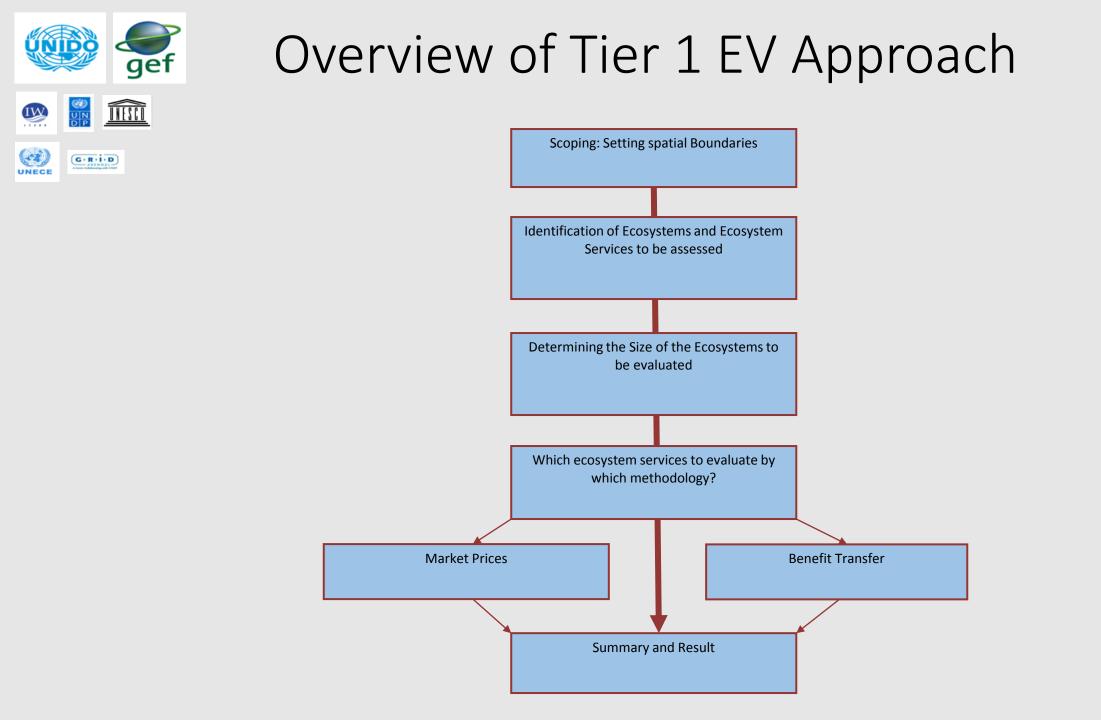
- > The Repository of Economic Valuation Studies
- Further reading supporting the Economic Valuation Guidance

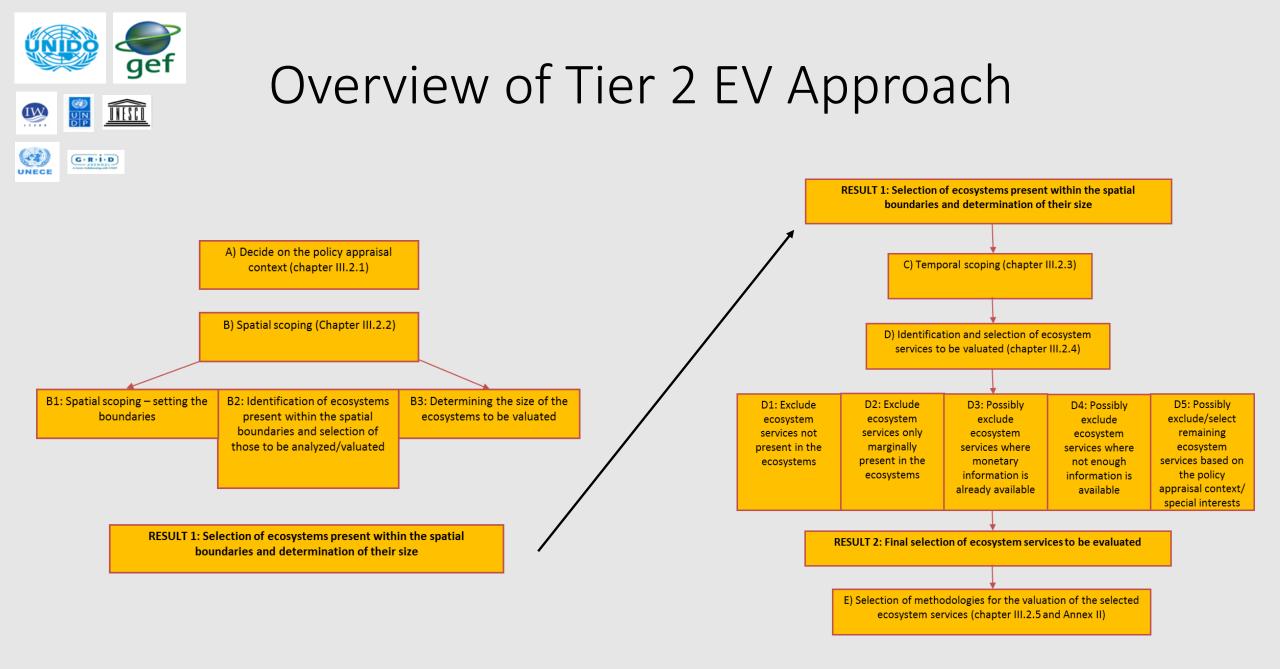
https://iwlearn.net/manuals/economic-valuation/overview

👺 薪 Two "Tiers" of Economic Valuation of **Ecosystem Services INESCO** IW

GIRID







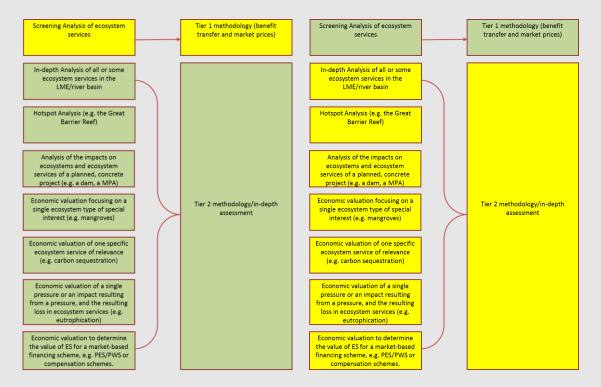
Thanks and Questions

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For more information on two tier EV approach, please contact:

- Eduard Interwies interwies@intersus.eu
- Christian Susan <u>c.susan@unido.org</u>



https://iwlearn.net/manuals/economic-valuation/overview

New site under development – should be online soon

Direct links to some of the Tiered EV materials

- Economic Valuation page: https://iwlearn.net/manuals/economic-valuation/overview
- GEF Guidance Document to Economic Valuation (includes two parts tier one guidance and tier two guidance): <u>https://iwlearn.net/documents/25198</u>
- Introduction to the Guidance Documents: <u>https://iwlearn.net/manuals/economic-valuation/introduction-to-the-guidance-documents</u>
- Accompanying Documents and Training Materials: <u>https://iwlearn.net/manuals/economic-valuation/economic-valuation/accompanying-documents-and-training-materials</u>
- The Repository of Economic Valuation Studies: <u>https://iwlearn.net/manuals/economic-valuation/the-repository-of-economic-valuation-studies</u>
- Further reading supporting the Economic Valuation Guidance: <u>https://iwlearn.net/manuals/economic-valuation/further-reading-supporting-the-economic-valuation-guidance</u>





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