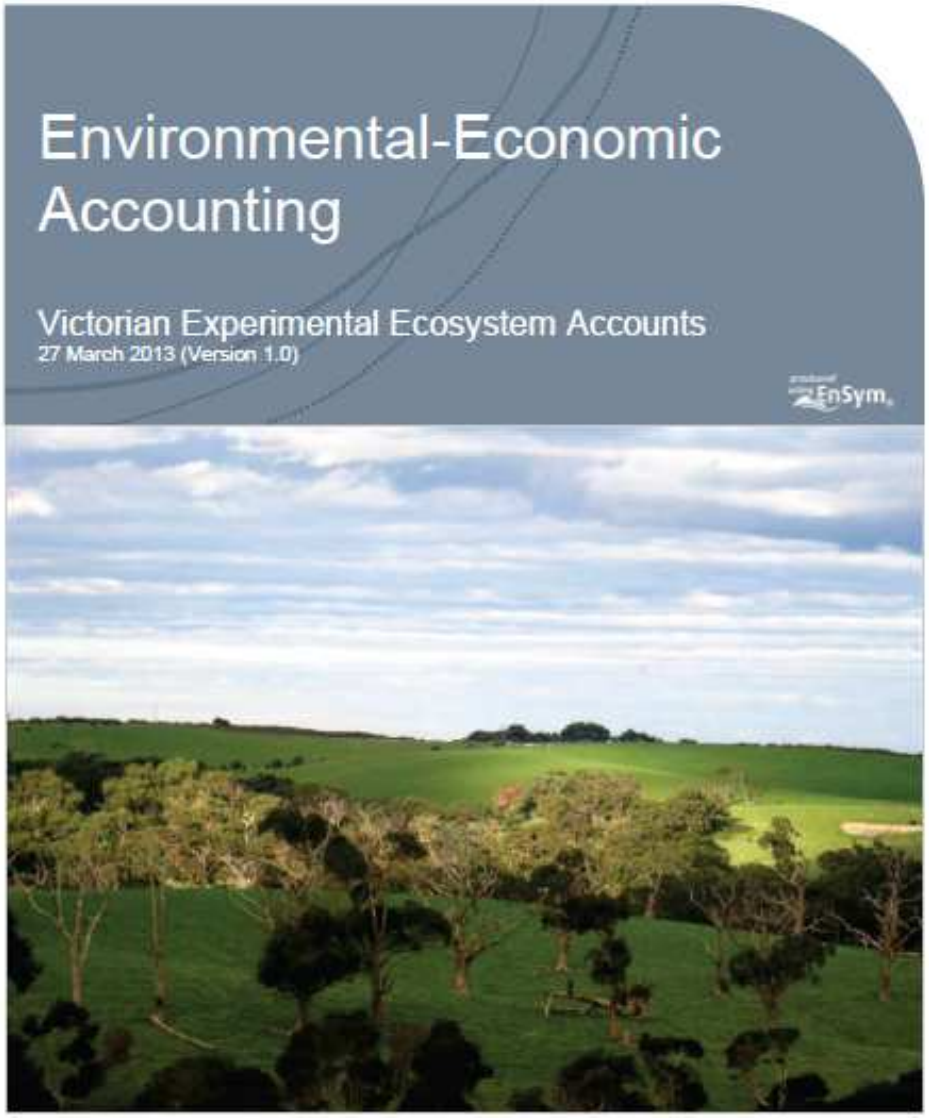
Environmental-Economic Accounting

Victorian Experimental Ecosystem Accounts

Mark Eigenraam, Joselito Chua, Jessica Hasker

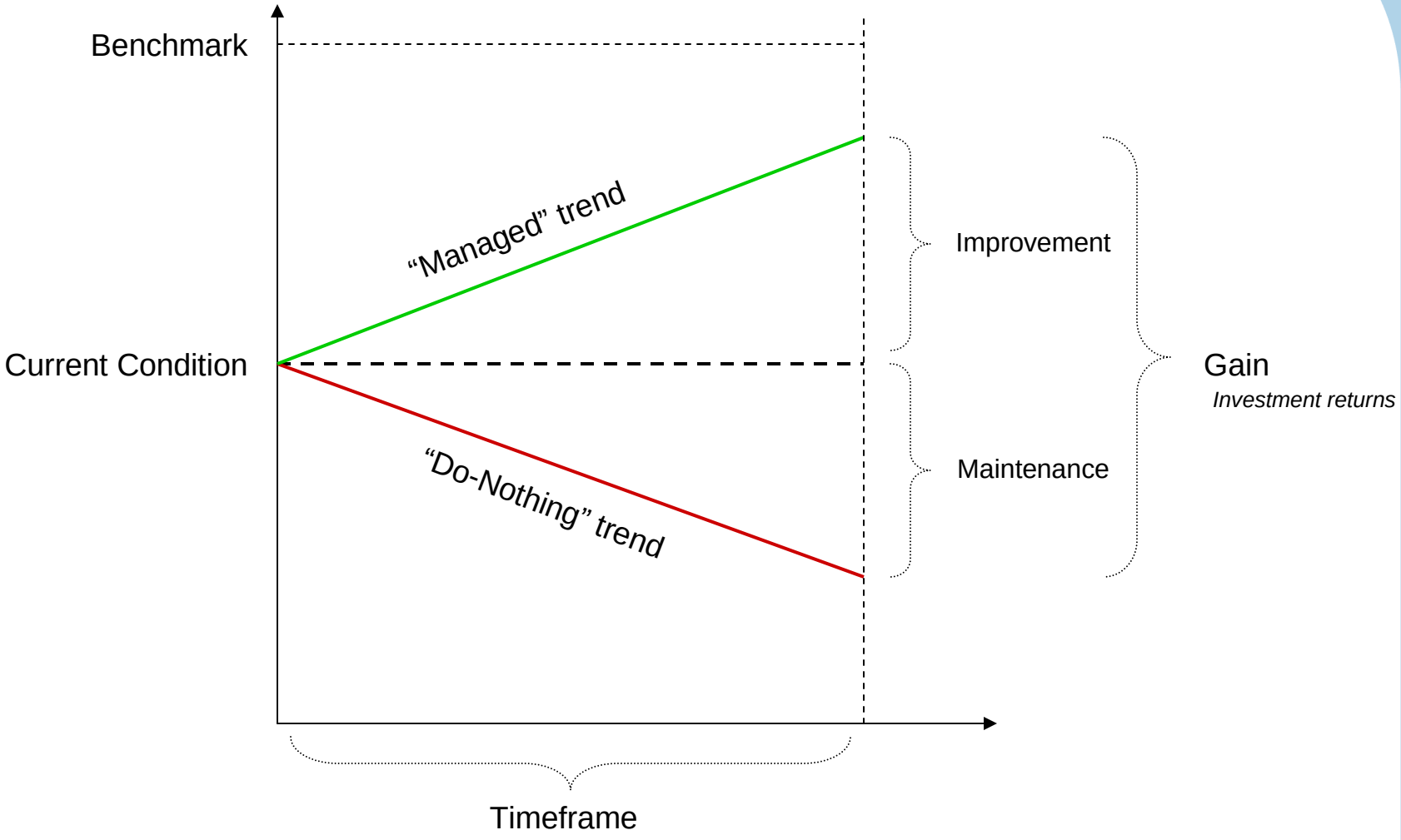
Department of Environment and Primary Industries



ecoMarkets

Department of Sustainability and Environment Victoria

Accounting for Trends and Gains



ecoMarkets
VALUING OUR ENVIRONMENT

‘Accounting’ for our environment

- *‘Sustainable environmental management’*
  - Effective environmental policy, investment and regulation
  - Making our trade-offs transparent
- With a focus on
  - Governance and investment in environmental programs
  - Policies for environmental outcomes and resource efficiency
- Environmental Markets
  - Public and private market participation
  - Climatic variability (drought, fire, flood)

ecoMarkets
VALUING OUR ENVIRONMENT

Victorian Environmental Assets

- Over 60% of land and water resources are in private ownership
  - Government uses regulation, grants, education and markets to influence behaviour
  - Accounts can be used to report on the impact of each approach
- Aligning our objectives
  - Providing incentives to manage the land for environment purposes
  - Managing our land and water assets to produce ecosystem services

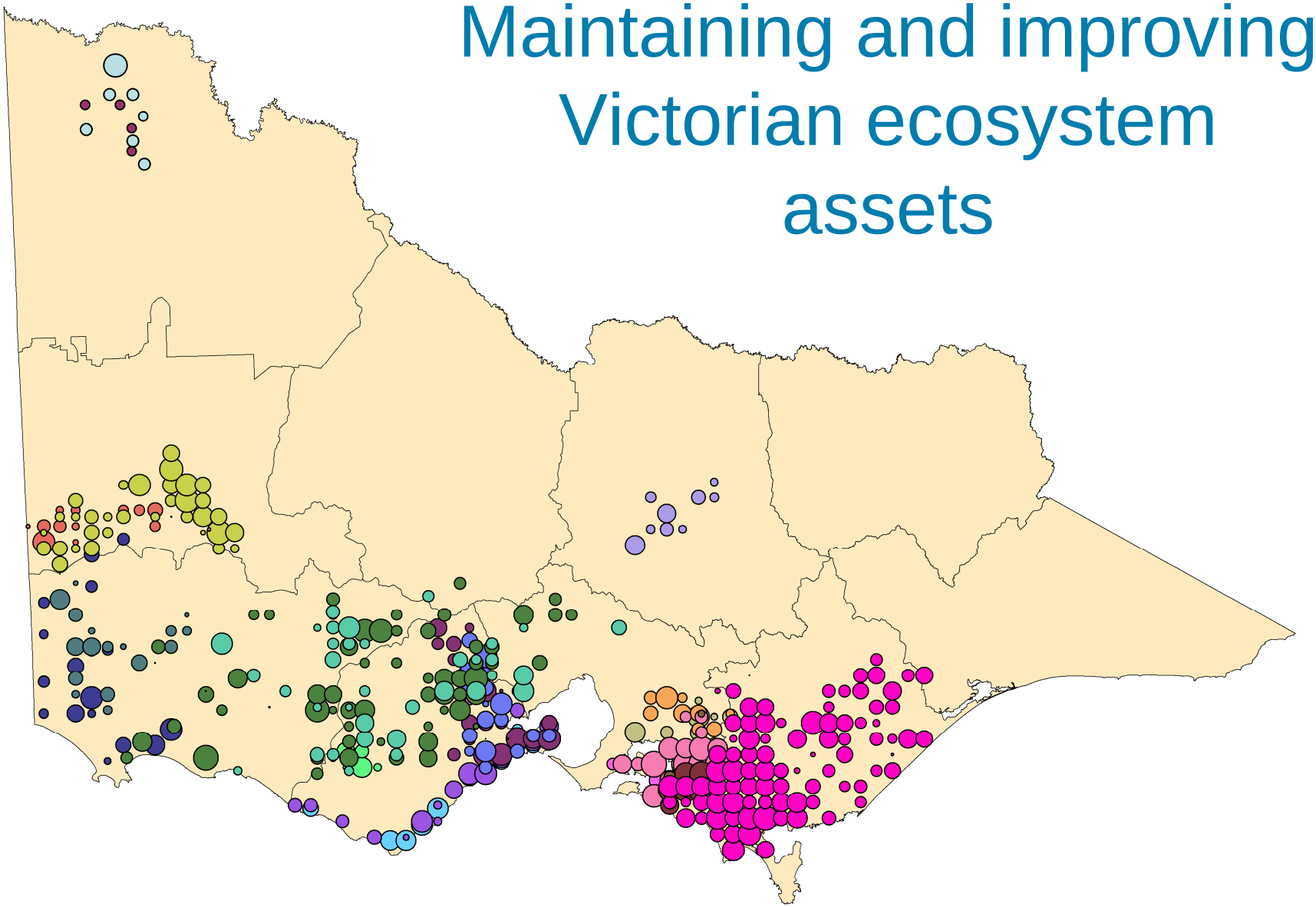
ecoMarkets
VALUING OUR ENVIRONMENT

Victorian Environmental Markets

- Competitive allocation of conservation contracts
  - Focus on works to maintain and improve the condition of ecosystem assets
  - Allocation based on change in intra- and inter-ecosystem flows
    - Aligns well with SEEA: EEA
- Environmental-Economic Accounting
  - Linking ecosystem asset condition to investment
  - Accounting for local, regional, state changes in our ecosystem asset base

ecoMarkets
VALUING OUR ENVIRONMENT

Maintaining and improving Victorian ecosystem assets



SEEA: EEA – Experimentation

- A coherent framework provides a foundation for experimentation and testing
  - Methods
  - Data types and resolutions
  - Clarity of terminology
  - What works and what doesn't?
  - How do others deal with specific issues problems
  - Tools
  - Critical and constructive review

ecoMarkets
VALUING OUR ENVIRONMENT

Victorian Experimental Accounts

- Link with ABS Experimental Land Accounts
  - Land Value, Production, Ownership and management, Demographics
- Ecosystem classification & condition
  - Native Vegetation Information System (HH)
  - Wetland system type and origin (IWC)
  - River reaches (ISC)
- Reporting units
  - CMA, Bioregion, SA4
- Linked to government payments
  - Change in land classifications, ecosystem condition & services

ecoMarkets
VALUING OUR ENVIRONMENT

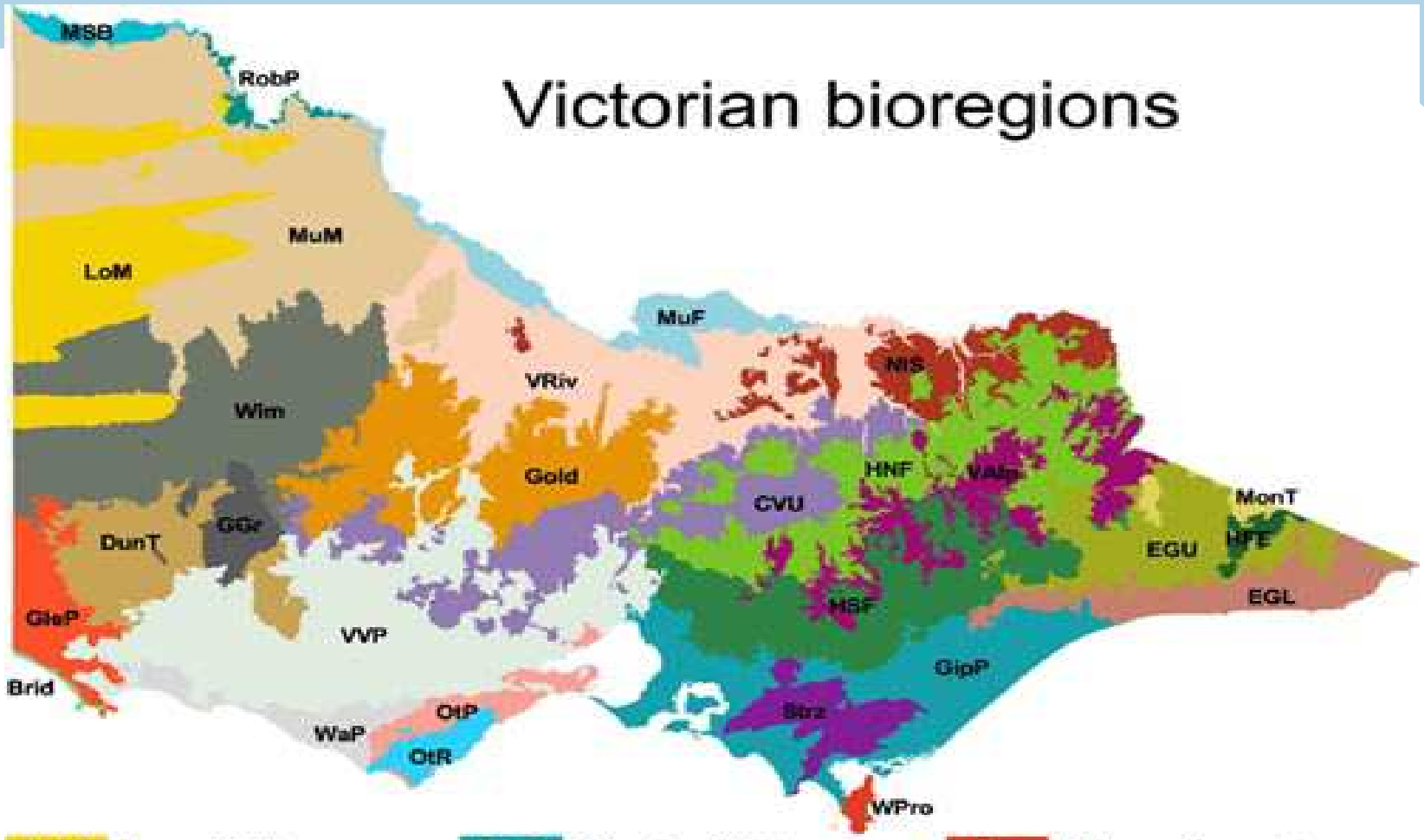
Victoria's Catchment Management Authorities

Department of Sustainability and Environment

Victoria
The Place To Be

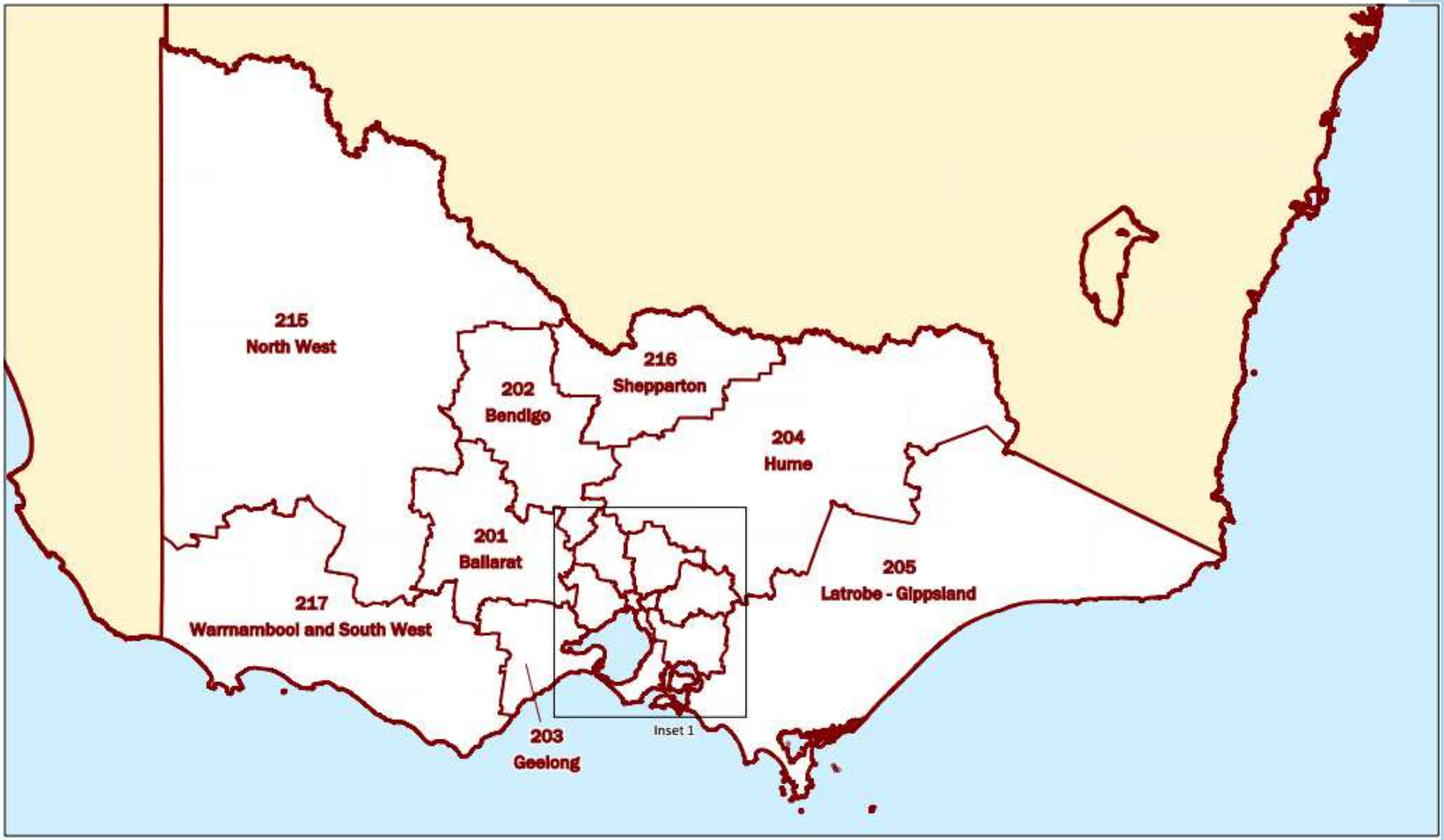
VALUING OUR ENVIRONMENT

Victorian bioregions



LoM	Lowan Mallee	GipP	Gippsland Plain	WPro	Wilsons Promontory
MuM	Murray Mallee	OtP	Otway Plain	HSF	Highlands - Southern Fall
Wim	Wimmera	WaP	Warrambool Plain	HNF	Highlands - Northern Fall
GleP	Glenelg Plain	Gold	Goldfields	OtR	Otway Ranges
Brid	Bridgewater	CVU	Central Victorian Uplands	Strz	Strzelecki Ranges
VVP	Victorian Volcanic Plain	GGr	Greater Grampians	MonT	Monaro Tablelands
VRiv	Victorian Riverina	DunT	Dundas Tablelands	HFE	Highlands - Far East
MSB	Murray Scroll Belt	NIS	Northern Inland Slopes	VAlp	Victorian Alps

ABS – Statistical Areas Level 4



ecoMarkets
VALUING OUR ENVIRONMENT

TABLE 2: SUMMARY OF MAIN AND GCCSA UNITS AT 1 JULY 2011

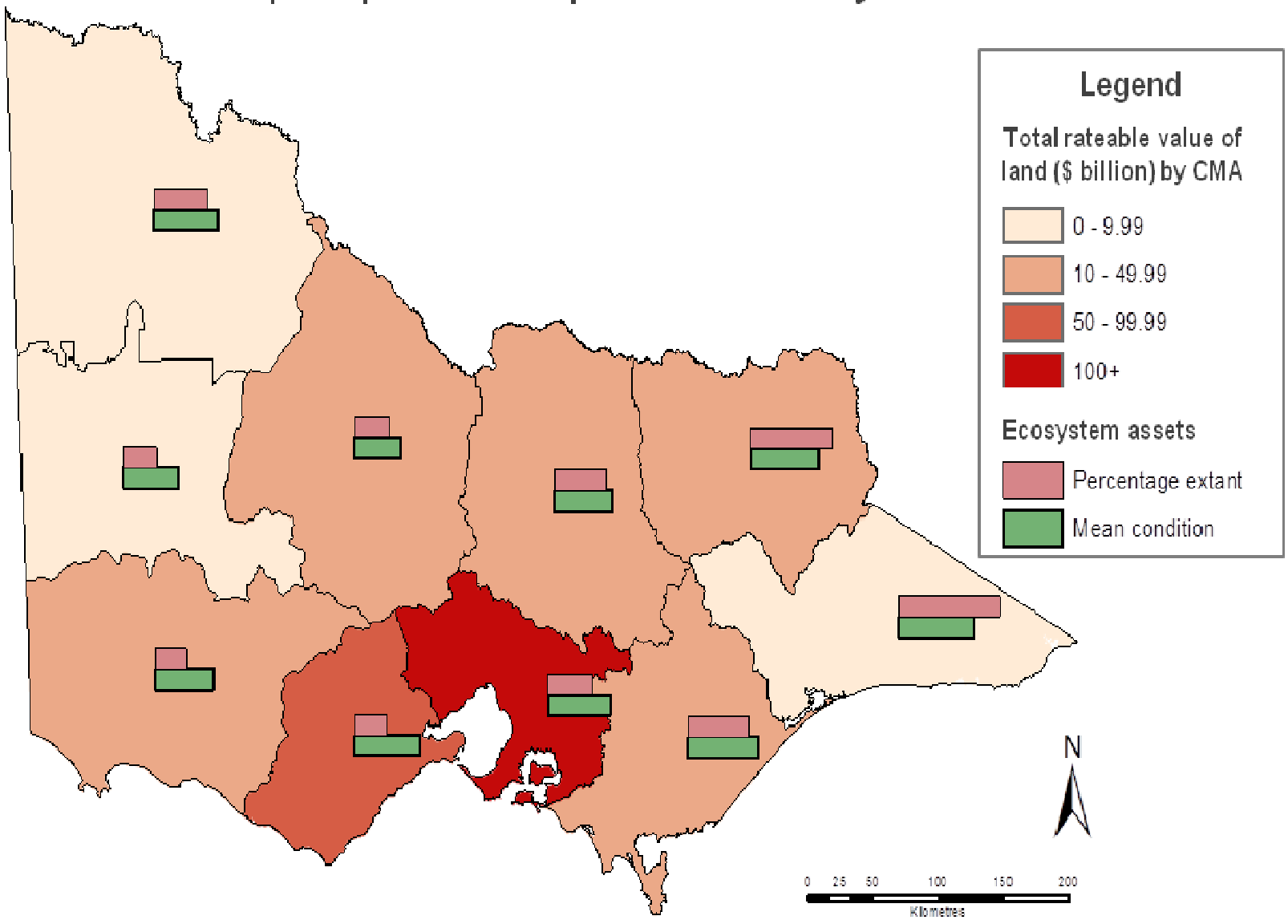
Spatial Unit	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
S/T	1	1	1	1	1	1	1	1	1	9
GCCSA	4	4	4	4	4	4	4	3	3	34
SA4	30	19	21	9	11	6	4	3	3	106
SA3	93	67	82	30	35	17	11	11	5	351
SA2	540	435	528	172	252	100	70	112	5	2 214
SA1	17 895	13 339	11 043	4 091	5 512	1 450	541	920	14	54 805
MB	107 325	81 377	67 900	28 209	40 534	12 992	3 198	6 013	79	347 627

Note: Includes Migratory - Offshore - Shipping and No Usual Address

List of Tables

ecoMarkets
VALUING OUR ENVIRONMENT

Terrestrial vegetation extant and condition superimposed on map of land values by CMA



VALUING OUR ENVIRONMENT

Table 14. Ecosystem service flow account, by land use, 2010 and 2015 (forecasted)

Environmental Benefits Index (EBI)	Agriculture	Forestry	Aquaculture	Use of built up and related areas	Land used for maintenance and restoration of environmental functions	Other uses of land	Land not in use	Total
Annual EBI Flow to 30 June 2010	271,304,904							271,304,904
Increase in EBI flow due to:								
Improved management					35,855,034			35,855,034
Reclassification					270,155,361			270,155,361
Reduction in EBI flow due to:								
Natural losses	(84,838)							(84,838)
Reclassification	(270,155,361)							(270,155,361)
Annual EBI Flow to 30 June 2015	1,064,706				306,010,395			307,075,101
Change in annual flow								***35,770,196***

ecoMarkets
VALUING OUR ENVIRONMENT

Lessons

- Communication for each audience is different
  - What do they need?
  - What are the benefits for them?
- The accounts are a set of information
  - They can be used for many purposes and development needs to be lead by the *needs of users*
  - They will not solve all policy problems
- What is the “value add” of accounting?
  - Real and tangible examples are needed

ecoMarkets
VALUING OUR ENVIRONMENT

Future work

- Victorian accounting in practice
  - Working with regional partners to refine reporting approaches and tools
  - Continuous improvement of systems to increase cost effectiveness and reduce program overheads
- Expand the use of tools for data collection, analysis and reporting
- Support ongoing experimentation
  - Biodiversity, carbon, biophysical
- Continue working with ABS and others
  - Linking Victorian market data to SNA and SEEA: CF transaction (functional) accounts

ecoMarkets
VALUING OUR ENVIRONMENT

Conclusion

- SEEA provides an important framework for ecosystem accounting, and a solid foundation for experimentation
- National (international) support and leadership is required
  - Sharing knowledge is not costless
  - Formalised projects with clear deliverables and benefits for participating parties is required.
- Victoria will continue to pilot and experiment ecosystem accounts

ecoMarkets
VALUING OUR ENVIRONMENT