
Victorian Ecologically Sustainable Forest Management: Part IV – A Case Study of Current Regulation of Victorian State Forest Harvesting

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Victorian State forest harvesting regulation is given close scrutiny in its capacity to deliver ecologically sustainable forest management (ESFM). This article examines the current regulation controlling Victorian State forest harvesting from a sustainability perspective. It examines it from four perspectives: (1) balance of the elements of ecological sustainable development, (2) governance, (3) monitoring and measurement, and (4) compliance. Each are examined critically to determine efficacy in progress to the ESFM objective. Using criteria and indicators for sustainability as guidance in examining current regulation, the author provides support for a new regulatory model utilising adaptive/responsive regulatory structures.

INTRODUCTION

The research examines causal mechanisms in regulation and their capacity to achieve ecologically sustainable forest management (ESFM). The ESFM objective requires applied measurable sustainability criteria into a regulatory model. These criteria require a change mechanism to progress the ESFM objective. The research assumes regulation has a causative effect on operational forest harvesting. A Critical Realist worldview is used to bridge law and social reality, emphasising the real world causal connection between regulation and social change. The goal in assessing current regulation is to explain how regulation can impact “real” outcomes through causative links. This requires an iterative process of data collection applied to explain the effect of the change mechanism when present and its negative effect if absent. This aligns forestry governance systems and operational forestry activity with the law. This Part highlights current operational effect of regulation and its capacity to progress toward the ESFM objective.

The research aim involves assessing causal links and change mechanisms in current regulation and their impact on the ESFM objective. The research uses data for each category, assesses the strength of the causal link and change mechanism, which may be two separate things. They might be separate so that it is incumbent on the research not to assume a causal link is automatically a change agent. This requires identifying the link and the change mechanism and its effect on operational activity relevant to ESFM.

A. Balance in Public Forestry Regulation – The Balance of Ecology, Society and Economy

1. Research Question as It Pertains to Balance of Ecology, Society and Economy

This part considers balance in respect to current regulation and its capacity to effect the ESFM objective. The constituent elements of ESFM are described in the following definition, “perpetuating ecosystem integrity while continuing to provide wood and non-wood values; where ecosystem integrity means the maintenance of forest structure, species composition, and the rate of ecological processes and functions within the bounds of normal disturbance regimes”.¹ This posits biodiversity conservation alongside wood production, thereby inherently requiring a balance between both elements, while meeting social needs.² This balance requirement has been recognised in case law, for example Preston CJ stated ecological

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¹ DB Lindenmayer and JF Franklin, *Conserving Forest Biodiversity: A Comprehensive Multiscaled Approach* (Island Press, 2002).

² CA Poveda, “The Theory of Dimensional Balance of Needs” (2016) 24 *International Journal of Sustainable Development and World Ecology* 97.

sustainable development (ESD); “requires consideration, weighting and balancing of the environmental, social and economic impacts. ... The range of interests affected, the complexity of the issues and the interdependence of the issues, means that decision-making involves a polycentric problem”.³ It follows that regulation should address balance both systemically, and by adaptive response.

Principles of ESD have variable elements that impact the polycentric problem referred to in the aforementioned case.⁴ The use of ESD principles, requires some adaptive mechanism that responds to change creating imbalance. Discretionary decision-making under current regulation may not always produce the “balanced” result. Balance is a relative function that alters when circumstances change, something inherent in the polycentric nature of decision-making impacting ESFM.

Current forestry practices have operational uncertainty in daily activities, so meeting the objective of wood production while maintaining ecosystem integrity is inherently problematic as imbalance could happen daily. The balance question therefore, is examined in practical operational context that takes into account discretionary decision-making. The research question in the context of balance, is whether current regulation maintains ecosystem integrity while meeting wood production values. The definition of ESFM implicitly requires regulation to navigate an allowable level of disturbance while maintaining ecosystem integrity. Current regulation is assessed in the context of balancing wood production while maintaining ecological integrity.

2. Data Gathering and Analysis Techniques for the Balance Standard

Data gathering requires a systematic assessment describing how balance is dealt with under current legislation. This includes; (1) Sustainability Charter, (2) *Sustainable Forests (Timber) Act 2004* (Vic), (3) *Code of Practice for Timber Production 2014*, (4) VicForests ESFM Management Plan, (5) Management Standards and Procedures impacting operational activity, (6) Special Management Plans, and (7) Timber Release Plans (TRPs) and Allocation Orders.

Decision-making on public forestry is centred on three regulators, (1) Department of Environment Planning Land and Water (Department) responsible for oversight of VicForests regulatory compliance, (2) Department of Economic Development Jobs Transport and Resources (DED), responsible for the preparation of Allocation Orders, and (3) VicForests, responsible for the preparation of TRPs and harvesting. Each have some input in decision-making, particularly decision-making under the *Sustainable Forests Timber Act 2004* which is the primary regulatory instrument impacting ESFM. Discretionary and mandatory decision-making by each regulator is examined from the balance perspective, requiring interviews with senior operational staff. This is analysed in three contexts, first how the regulatory instruments address balance, second a review of decision-making processes impacting the balance requirement. The third is a review of secondary resources examining balance in Victorian public forestry including recent court cases involving VicForests, particularly the Brown Mountain case, which raises questions on balance.⁵

3. Discussion Analysis and Evaluation of Data Collected

(a) Balance within Current Regulation

The Sustainability Charter sets objectives for sustainability of public forests and timber harvesting for regulators involved in forest management. Five of seven objectives refer to biodiversity maintenance, while two cover socio-economic benefits of forests. The Charter requires VicForests to “develop initiatives and targets” that respond to and support objectives, and include these targets in a statement of corporate intent.⁶ VicForests is then required to report on the status, performance or achievement of the initiatives and targets in its report on operations.⁷ The Charter describes processes surrounding each objective in

³ *Bulga Milbrodole Progress Association Inc v Minister for Planning and Infrastructure* (2013) 194 LGERA 347, [31]; [2013] NSWLEC 48.

⁴ These principles are contained in *Sustainable Forests (Timber) Act 2004* (Vic) s 5.

⁵ *Environment East Gippsland Inc v VicForests* [2009] VSC 386.

⁶ Required under *State Owned Enterprises Act 1992* (Vic); *Sustainable Forest (Timber) Act 2004* (Vic) s 12.

⁷ Required under the *Financial Management Act 1994* (Vic); *Sustainable Forest (Timber) Act 2004* (Vic) s 12.

broad aspirational language. For example, objective 3 states, “To promote healthy forests by actively managing disturbance”. This objective describes a range of natural and human-induced disturbances which it recognises need to be “identified monitored and managed”. There is no reference to balance, or any adaptive mechanism. The emphasis is on planning, management and monitoring without a specific reference to balance between production of wood and non-wood products, while minimising impact on forest ecosystems is maintained.

The *Sustainable Forests (Timber) Act 2004* is the principle regulatory instrument for ESFM in Victoria and has, a purpose to, “provide a framework for sustainable forest management and sustainable timber harvesting in State forests”.⁸ Principles of ESD are used as guidelines to have “regard” to in decision-making.⁹ There is no procedure for their application and no balance guideline in its application. There is only an implied reference to balance in the principles when they refer to, “decision making processes should effectively integrate both long-term and short-term economic, environmental and social and equity considerations”. This recognises an implied balance requirement since economic and environmental considerations will sometimes be in tension with each other and require integration both over the short and long term.

The Act requires the Minister to determine sustainability criteria for use in the reporting obligation.¹⁰ These criteria are reflective of the seven objectives contained in the Sustainability Charter. There is no balance requirement placed on the Minister when determining the criteria. The Act authorises the Minister to make Allocation Orders detailing land for harvesting.¹¹ This includes content requirements of Allocation Orders, making no reference to any balance requirement.¹² A review of the Order may be necessary particularly where there has been “significant variation” either from fire, disease or other natural cause.¹³ In reviewing an Order, the Minister must have regard to principles of ESD and the structure and condition of the forest and its impact on future timber resource availability.¹⁴ The absence of a balance mechanism in this Act is a major omission with capacity to impact harvest activity negatively.

Forest Management Plans (FMPs) authorised under the *Forests Act 1958* (Vic) set out zoning where harvesting takes place. Special Protection Zones are managed for conservation values and harvesting is not permitted. Special Management Zones are managed to conserve specific features, allowing timber harvesting operations under specific conditions specified in the FMP. General Management Zones are managed for a range of uses and values, but timber harvesting operations will be given a high priority. Balance is a factor in determining the areas allocated to different zones. The empowering Act makes no reference to balance in the preparation of FMPs although it specifies the “maximum” by area and amount of wood taken from the forest.¹⁵ Balance is a discretionary input when FMPs are prepared by the Department.

The *Code of Practice for Forest Management 2014* (Code) sets out mandatory standards for harvesting operations. The gives direction to operational staff in delivering “sound” environmental performance when planning and conducting harvesting.¹⁶ It sets out “Principles” described as broad outcomes of intent, for sustainable forest management.¹⁷ These reflect the objectives contained in the Charter and specific clauses are grouped around each of the Principles. Each clause contains “Operational Goals” setting out Objectives, and Mandatory Actions with prescriptive requirements to meet those objectives. For

⁸ *Sustainable Forests (Timber) Act 2004* (Vic) s 1.

⁹ *Sustainable Forests (Timber) Act 2004* (Vic) s 5.

¹⁰ *Sustainable Forests (Timber) Act 2004* (Vic) s 6.

¹¹ *Sustainable Forests (Timber) Act 2004* (Vic) s 13.

¹² *Sustainable Forests (Timber) Act 2004* (Vic) s 15.

¹³ *Sustainable Forests (Timber) Act 2004* (Vic) s 18.

¹⁴ *Sustainable Forests (Timber) Act 2004* (Vic) s 19.

¹⁵ *Forests Act 1958* (Vic) s 22.

¹⁶ See *Code of Practice for Timber Production 2014*, cl 1.2.2.

¹⁷ See *Code of Practice for Timber Production 2014*, cl 1.3.

example, cl 2.2 Environmental Values in State forests, contains subcl 2.2.1 Water Quality, River Health and Soil Protection setting operational goals and mandatory actions. Subclause 2.2.2 Conservation of Biodiversity states the precautionary principle must be applied to the conservation of biodiversity values.¹⁸ Subclause 2.2.2.4 requires the identification of biodiversity values and address risk to these values through “management actions consistent with the Management Standards and Procedures”, but does not address balance in applying any of the mandatory actions. Similarly, cl 2.3 Operational Planning and Record Keeping, contains an operational goal of, “Effective and inclusive planning processes are used for timber harvesting operations to meet the requirements of this Code and the Management Standards and Procedures”. There is no reference to balance when planning is undertaken. Clause 2.5 covering timber harvesting contains an operational goal where, “Timber harvesting operations are conducted in a manner appropriate to the site, and manages impacts on soil, water and other values including biodiversity and cultural heritage”. Mandatory actions specifying harvesting must be in accordance with Forest Coupe Plans, with no reference to balance or planning for protection of forest values in preparation of these plans. Clause 2.3 Operational Planning and Record Keeping simply states, “A Forest Coupe Plan which specified operational requirements is prepared in accordance with the requirements of this Code”. The Code is silent on balance making no requirements for it within Forest Coupe Plans.

The VicForests ESFM Management Plan (Plan) described as a “key strategic document” that “compliments” sustainable forest management principles established through government policy and legislation.¹⁹ The Plan aims to provide stakeholders with a “clearer strategic overview of how VicForests will manage forests”. The legal status of this instrument is ambiguous, although use of the word “Plan” implies a prescriptive application. This is supported by the inclusion of “Focus Area Objectives and Targets” that specifies target dates. Thus, it represents a combination of ESFM policy, and a plan with specific dates and objectives. VicForests describes the Plan as a commitment to implementing best practice operations, informed by science, increased stakeholder involvement and an adaptive review system. Only objective 7, Adaptive Practices, expressly refers to balance when it states an objective to, “Implement timber harvesting systems that balance silvicultural and ecological objectives”. The balance requirement in objective 7 emphasises adaptive management practice. For example, adapting silvicultural systems, including harvesting processes, to forest type and landscape context. The Plan relies on a set of triggers for adaptive practice (1) changed landscape conditions, including from bushfire; (2) stakeholder expectations and feedback; (3) government policy changes; (4) new product markets or changed market conditions; (5) new scientific knowledge or learnings from experience; and (6) internal management review outcomes. There is no prescriptive balance mechanism to address these changes when balancing silvicultural and ecological objectives. This means that decision-making on balance is discretionary with no prescriptive guidelines on application. However, three target/actions are specified around balance between silvicultural and ecological objectives in objective 7. These are (1) 50% of Ash area harvested in three years within the range of Leadbeater’s Possum is undertaken using Regrowth Retention Harvesting with a June 2017 target date; (2) review VicForests Thinning’s Strategy and Implement June 2017 target date; and (3) develop and implement an uneven aged Forest Harvesting Strategy for East Gippsland by June 2018. VicForests advised that Regrowth Retention Harvesting was introduced following the recommendations of the Leadbeater’s Advisory Group. They reported this harvesting method is now implemented in at least 50% of the area of Ash forests harvested within the Possum’s locales.²⁰ As at August 2018, VicForests state they undertake limited thinning in Western Victoria and East Gippsland and propose doing it in West Gippsland by late 2018. This demonstrated some adaptive management responses relevant to balance reliant however, on discretionary decision-making.

Management Standards and Procedures (Standards) affect actual pre-, during and post-harvest practices. They provide standards and procedures instructing operational staff in interpreting requirements of

¹⁸ See in particular subcl 2.2.2.2.

¹⁹ VicForests, *Ecologically Sustainable Forest Management Plan: Working Plan Version 1.0*, (December 2015), How to Interpret this Plan <<http://www.vicforests.com.au/static/uploads/files/ecologically-sustainable-forest-management-plan-v1-0-wfctkbfzjxk.pdf>>.

²⁰ Email from Michael Ryan, forest scientist, VicForests, 10 August 2018.

the Code.²¹ For example, they contain specific guidance on content of Forest Coupe Plans governing operational requirements on coupes where harvesting takes place. Forest coupe plans list a number of mandatory requirements relating to area, silvicultural systems and regeneration procedures, but do not specify any balance standard. Similarly, the Standards set out requirements for water quality, river health and soil protection but do not specify any balance standards. The Standards specify actions or prohibitions on actions impacting forest values, but without mechanisms to address balance. Part 7 of the Standards, for example, covering forest harvesting operations makes no prescriptive requirements on harvesting method to align with forest type. To place no prescriptions on harvesting method at an operational level in the Standards removes one further level of precautionary decision-making.

(b) Balance and Regulator Decision-making on Allocation Orders and TRPs

Allocation Orders are central to ESFM and are made by DED under Pt 3 of the *Sustainable Forests (Timber) Act 2004*. VicForests can only harvest and sell vested timber resources in accordance with the Allocation Order.²² Its effect includes legal transfer of ownership to VicForests, which is now indefinite, with the previous five yearly government review of the Allocation Orders no longer applicable.²³ The right to vary and review the Allocation Order is removed where property has passed to a third party.²⁴ This long-term access to timber resources can be varied or reviewed by the Minister under the Act.²⁵ Given the extent of power the Minister has in determining Allocation Orders, the question of balance becomes fundamental in determining the extent of the allocation of resources made.

DED bases decisions on Allocation Orders on forest zoning determined under the *Forests Act 1958* by the Department.²⁶ Forest management zoning comprise (1) General Management Zones where timber harvesting is permitted with no restriction; (2) Special Management Zones where some harvesting is allowed; and (3) Special Protection Zones where no harvesting is permitted. DED determines Allocation Orders from category (1) and (2) zones contained in FMPs. The FMP, and therefore zoning, preparation involve gathering information on natural, cultural, social, resource and economic data and are updated quarterly.²⁷ At issue is how the Department determines the different zones and whether this includes mechanisms for balance. The efficacy of the zoning process, is brought into question with recent case law. For example, litigation relating to forest harvest regions in the Kuark coupes in East Gippsland related to the presence of endangered species in harvest regions.²⁸ This highlighted the original Allocation Order covered an area containing both rainforest and the presence of endangered species that should have precluded harvesting.²⁹ The reliance on identified zones to base Allocation Orders on assumes the zoning is correct on sustainability parameters and transfers responsibility for their “correctness” back to the Department. This splits decision-making responsibility, spreads discretionary decision-making too widely and weakens any decision-making relevant to balance.

²¹ *Management Standards and Procedures for Timber Harvesting Operations in Victorian State Forests* (2014) see cl 1.2.1.1 <<file:///C:/Users/u1067051/Desktop/Management-Standards-and-Procedures-for-timber-harvesting-operations-in-Vics-State-forests-2014.pdf>>.

²² See *Sustainable Forests (Timber) Act 2004* (Vic) s 16.

²³ Property vests in VicForests pursuant to and see *Sustainable Forests (Timber) Act 2004* (Vic) s 13 relating to the power of the minister over the Allocation Order.

²⁴ *Sustainable Forests (Timber) Act 2004* (Vic) s 21A.

²⁵ *Sustainable Forests (Timber) Act 2004* (Vic) s 17.

²⁶ *Forests Act 1958* (Vic) s 22. This section authorises the development of working plans specifying the maximum area for which forest produce may be taken annually.

²⁷ This includes data from Comprehensive Regional Assessments (CRA) and Statements of Resources, Uses and Values.

²⁸ Litigation initiated by Environment East Gippsland sought an urgent interlocutory injunction on 13 February 2016 which was granted. One of the subject coupes had substantial areas of rainforest in it which meant it should never have been included in a harvest region; see Environment East Gippsland, *Kuark Forests documents* (2016) <<https://eastgippsland.net.au/kuark-forests-documents/>>.

²⁹ This is reinforced in *Conservation, Forests and Lands Act 1987* (Vic) Pt 5 which states FMPs are fundamental for the sustainable management of forests which relies on how forest is zoned, and *Sustainable Forests (Timber) Act 2014* (Vic) s 18 dealing with reviews of allocation of timber resources. It makes clear that a review can arise where there has been significant “increase or reduction in the land base which is zoned as available for timber harvesting”.

Once land is allocated under an Allocation Order title is transferred to VicForests, who has complete autonomy in preparation of the TRP. This TRP is prepared internally by VicForests and approved at board level.³⁰ The TRP must be in compliance with the Code.³¹ The TRP includes a schedule of coupes selected for harvesting, location and approximate timing of harvesting in these coupes, and location of access roads. VicForests has power to review a Plan at any time, although it cannot be changed where property has passed to a third party.³² VicForests states their planning process determines where future harvesting occurs.³³ It considers a range of operational, environmental, economic and business constraints. This includes desk top and field assessments to assess presence of forest biodiversity, social, historical, cultural, soil and water issues that may require management prior to and during harvesting. Decisions on TRPs take account of Regional Forest Agreement and zoning requirements.³⁴ Planning processes includes long range “100 year” and five yearly or longer resource modelling. VicForests has recently adopted software modelling, described as “tactical resource planning,”³⁵ that takes account of balance when assessing the whole forest estate, net area, volume and species composition.

The success of this balancing process in TRP planning has been placed at issues in a series of high profile expose of alleged illegal or unsustainable logging activity. For example, Victoria has been described as the largest logger of native forests by volume accounting for a third of all native forest logged in 2016.³⁶ This was based on more than 1,300,000 m³ of wood from Victorian native forests in 2016. In October 2016 VicForests released its TRP identifying approximately 67,000 ha of publicly owned State forests available for logging over three to five years. This plan was described as “alarming” by the Victorian National Parks Association, since it opened up at least 10,000 ha of high conservation value forest in the Central Highlands to logging. In East Gippsland it targeted 12,000 ha of forest that was identified by conservation groups as of high priority for interim protection from logging. In this context VicForests was described as “unwilling or unable” to make a serious effort at protecting conservation values.³⁷ The efficacy of the balance process when planning for the TRP, has been questioned by environmental groups who argue they are forced to take action against VicForests to protect regions rich in threatened wildlife that should have precluded or at least temporarily halted harvesting and been better accounted for in the planning process.³⁸ These examples suggest the planning for TRPs can be improved to account for the balance requirements more rigorously.

(c) Balance and Recent Case Law and Secondary Sources Pertaining to Victorian Public Forestry

The Brown Mountain case highlighted a number of balance failings by VicForests.³⁹ The plaintiff, Environment East Gippsland,⁴⁰ sought to restrain logging in four coupes of old-growth forest near Brown

³⁰ See *Sustainable Forests (Timber) Act 2004* (Vic) s 37.

³¹ See *Sustainable Forests (Timber) Act 2004* (Vic) s 37(3)(b).

³² See *Sustainable Forests (Timber) Act 2004* (Vic) s 43(1), (4).

³³ See, eg, its description the planning processes at <<http://www.vicforests.com.au/planning-1/timber-release-plan-1/timber-release-plan/>>.

³⁴ VicForests input here was obtained from Ms Andrea Wandek, Manager for Tactical Planning in relation to Timber Release Plans, interviewed on 10 September 2018.

³⁵ Remsoft software modelling.

³⁶ Victorian National Parks Association, *Logging Plan Put Squeeze on Victoria's High-value Native Forests* (26 November 2016) <<https://vnpa.org.au/logging-plan-puts-squeeze-on-victorias-high-value-native-forests/>>.

³⁷ Victorian National Parks Association, n 36.

³⁸ See, eg, *Legal Action Forces VicForests to Survey* (4 February 2016) <<https://www.eastgippsland.net.au/news/legal-action-forces-vicforests-to-survey/>>; *Logging Inside Site of National Significance for Rainforest* (4 March 2013) <<http://www.eastgippsland.net.au/news/logging-inside-site-of-national-significance-for-rainforest/>>; *VicForests Banned from Logging Greater Glider Habitat Pending Legal Challenge* (10 May 2018) <<https://www.theguardian.com/australia-news/2018/may/10/vicforests-banned-from-logging-greater-glider-habitat-pending-legal-challenge/>>.

³⁹ *Environment East Gippsland Inc v VicForests* (2010) 30 VR 1, 96; [2010] VSC 416 which is discussed in Part IV D of this article.

⁴⁰ Environment East Gippsland Inc is a community forest group working for the protection of ancient forests in East Gippsland, see <<http://www.eastgippsland.net.au/about-us/>>.

Mountain Creek East Gippsland. They alleged VicForests failed to meet an obligation under law to provide habitat reserves for endangered species and failing to apply the Precautionary Principle as a result of not providing that protection, something mandated under the *Code of Practice for Timber Protection 2014*. The case highlighted confusion over whether the Department or VicForests was responsible for application of the Principle. VicForests argued that in the absence of clarity over this issue, they were entitled to proceed with harvesting in accordance with the TRP derived from land in the Allocation Order. The court decided VicForests did not apply the Precautionary Principle when they should have.

The court referred to the statutory framework governing forestry as “labyrinthine”, and commented on the lack of alignment between different regulatory instruments. The court halted logging in the coupes because of the lack of reserves for endangered species.

The foregoing exposed regulatory gaps in dealing with balance requirement in ESD. This pertained to nonalignment between different regulatory instruments on the balance between conservation and wood production, and confusion over lines of authority, particularly VicForests argument that the Department, not VicForests, was responsible for Special Protection Zones for endangered species. Even if this argument was accepted, this should not have meant VicForests could proceed without referral back to the Department for clarification. They were arguing against being responsible to monitor for the presence of endangered species once an Allocation Order and TRP were approved. This raised issues over the efficacy of current regulation, and its capacity to demarcate lines of authority and assign responsibility for balance. VicForests did not understand where authority lay for the application of the Precautionary Principle. The application of the Precautionary Principle is relevant to the question of balance since it refers to proportionate response to environmental risk, which means an adaptive management response when the question of balance is at issue between environmental risk and wood production. The multiple obligations derived from separate regulatory instruments were ignored in this instance, which highlights: (a) a lack of prescriptive process in applying regulatory obligations such as the precautionary principle; and (b) a general lack of awareness of the extent of obligations and how they are applied.

Reports that assess the economic viability of Victorian State forestry impliedly reference balance. For example, a report by PwC (PricewaterhouseCoopers) concluded that State forestry took more than \$5 million of investment in roads machinery and equipment to create a single timber job.⁴¹ It concluded that continuing with native forestry could be uneconomic compared to other industries including plantation forestry. The report concluded that for every one dollar of investment in native forestry there was a return of \$0.14c in direct and indirect benefits to the State economy compared to \$1.63 for the forestry sector as a whole and \$2.65 for the manufacturing sector. This is in contrast with a report by Deloitte Access Economics, commissioned by VicForests, concluding the native timber industry in the Central Highlands added \$357 million to the State economy in 2013–2014, resulting in the equivalent of 2,117 full-time jobs.⁴² These contrasting results use data selectively, and therefore are not directly comparable, however they highlight that State forest wood production is relatively low in profitability. Current regulation does not allow for adaptive use of forests to more profitable areas, and emphasises the economic component on occasions, thereby creating imbalance.⁴³

The Fenner School of Environment and Society prepared a report on economic indicators of different forest values.⁴⁴ The report highlighted the importance of ecosystem accounting as a means to assess balance between the value of wood production compared to value of other forest services and land uses.

⁴¹ PwC, *Rethinking Victoria's Approach to Forestry* (June 2016) <https://d3n8a8pro7vhnmx.cloudfront.net/friends-of-earth/melbourne/pages/2765/attachments/original/1520234386/PwC-Rethinking-Victorias-approach-to-forestry_FINAL-markup%281%29.pdf?1520234386>.

⁴² VicForests, *Deloitte Access Economics, Economic Assessment of the Native Timber Industry in the Central Highlands RFA Area, Report 1 – Economic and Financial Impact* (October 2015) <<http://www.vicforests.com.au/static/uploads/files/dae-vicforests-report-1-economic-and-financial-impact-final-wfwgmkukqj.pdf>>.

⁴³ VicForests has acknowledged that some regions of East Gippsland are not economic to harvest compared to the more profitable Central Highlands Forest Region, see <<http://www.vicforests.com.au/planning-1/area-statement>>.

⁴⁴ H Keith et al, *Experimental Ecosystem Accounts for the Central Highlands of Victoria* (Australian National University, July 2017).

Current regulation provides no means to assess relative values of ecosystem services, and thus has no means to adapt use of ecosystem services to more profitable areas. The failure to address valuation of ecosystem services therefore represents an impediment to decisions relating to balance.

(d) Balance and Operational Decision-making

Operational decision-making includes regeneration of harvested stands.⁴⁵ The extent and quality of the regenerative process has been directly challenged by a number of environmental groups.⁴⁶ The regeneration process involves replanting with seed local to the area. This process is cited as a “conversion to intensively managed single aged, single species tree crops”.⁴⁷ This process has been described as industrialisation of native forests, growing only native tree species and nothing else. Even this has been cited as failing, with a Department report on logging finding that VicForests was significantly behind in regeneration.⁴⁸ A recent example involved a regenerated coupe in the Cottonwood Range. A logged site had not been properly regenerated after 11 years after harvest. This was compounded by the intention to undertake further logging within 2 km of the failed regeneration site.⁴⁹ The latest independent audit commissioned by VicForests made reference to the quality and extent of the regeneration process in four coupes selected for audit whose regeneration status was of concern to the Department.⁵⁰ Two of the coupes were found to be adequately stocked and two were not. It noted the two understocked coupes had been hand seeded indicating that the initial regeneration attempts were unsuccessful. While this result was in coupes where regeneration was of concern and identified as such by the Department, this does not mitigate the result. VicForests aims to regenerate 95% of harvested areas on first attempt which has not occurred in the subject coupes.⁵¹

At an operational level, the foregoing examples highlight balance favouring economic interests over ecosystem protection. Current regulation does not have an adaptive response at an operational level, where an adjustment is made when regeneration levels fails to meet a sustainable standard. VicForests does have a policy of regenerating 95% of harvested areas on first attempt. This is more problematic when VicForests has a monopoly on harvesting and the regulator (the Department) responsible for oversight does not strictly enforce standards. Current policy uses independent audit in a few select areas undergoing regeneration, and no defined environmental management system relating to regeneration. The selective audit commissioned by VicForests found two of four coupes understocked after regeneration. If this 50% regeneration failure rate occurred across all harvested coupes that would be a significant regulatory balance failure.

4. Conclusion on Balance

This part examined the question of balance between sustainable forest management and sustainable harvesting. There is a lack of balance mechanisms in regulation, which places too much emphasis on discretionary decision-making to effect balance in forest management. The lack of transparency in determining how balance is dealt with in discretionary decision-making in the preparation of the Allocation Order and the TRP, make assessing balance difficult in relation to inputs into discretionary decision-making. While decisions must accord with the Sustainability Charter and Code requirements

⁴⁵ See VicForests, n 19, 63.

⁴⁶ *Cottonwood Range – Showcase of Cataclysmic Clearing* (8 November 2015) <<http://www.eastgippsland.net.au/news/cottonwood-range-showcase-of-cataclysmic-clearing>>.

⁴⁷ See n 46.

⁴⁸ Victoria, Department of Sustainability and Environment, *Monitoring of Annual Harvesting Performance in Victoria’s State Forests 2007-8* (2008).

⁴⁹ GECO Goongerah Environment Centre, *Cottonwood Range of Forest Failing to Regenerate, More Logging Planned* (11 November 2015) <http://www.geco.org.au/cottonwood_range_forest_at_risk_of_failing_to_regenerate>.

⁵⁰ Department of Environment, Land, Water and Planning, *Audit of Timber Harvesting and Forest Regeneration in State Forests in Eastern Victoria: Report on the 2016-17 Forest Audit Program* <https://www.forestsandreserves.vic.gov.au/data/assets/pdf_file/0023/330098/is206000_fap2016-17_audit-report-revD-11042018.pdf>.

⁵¹ See n 43.

there is no accountability when balance is not properly effected. The Fenner report highlights the importance of a proper system of ecosystem accounting to value ecosystem services, enabling a means to assess different forest use options from an economic perspective and account for balance in a more assessable and comparable way. At an operational level balance is also lacking, whereby a failure to meet a target level in regeneration, triggers no adaptive regulatory response. This suggests the overall balance requirement is not met in current regulation.

B. Governance in Public Forestry Regulation – The Structures Regulating ESFM

1. Research Question as It Pertains to Governance

Governance in this part refers to the exercise of power over public forestry through laws, policy, and decision-making.⁵² It focuses on the process of decision-making by stakeholders involved in forestry regulation, including operational staff. This part looks at the extent of the regulator’s power under current regulation and how they exercise it in furtherance of the ESFM objective.

Since decision-making must align with the principles of the Sustainability Charter, all public forestry stakeholders must adopt its sustainability focus. The *Code of Practice for Timber Production 2014* (Code) is directed at operational activity in public forestry and its requirements are also mandatory.⁵³ The exercise of governance powers must be in accordance with Code requirements. However, it is the extent of divergence from these mandatory requirements which is the true test of governance strength. The extent to which decision-making does not follow the requirements set down in these instruments is a determinant of the efficacy of governance powers under current regulation.

The key governance regulators are; the Department of Environment Land Water and Planning (Department), which is responsible for monitoring compliance by VicForests with the Code, The DED and VicForests. Each has a governance role examined in this part. The research question looks at current performance of the regulators and stakeholders and their capacity to address ESFM. By focusing on performance of regulators, it is possible to address how power is exercised, how effective it is in furtherance of the ESFM objective and whether it reveals gaps or inefficiencies in the decision-making process.

2. Data Gathering and Analysis Techniques for the Governance Standard

The regulators power over public forestry derives from legislation and the extent of administrative discretionary decision-making power. This part is limited to the specifics of decision-making pertaining to ESFM. It is a review of existing power structures within the three regulators, the extent of that power and how they exercise it.

The power of Victorian Government departments over public forestry is not clearly defined within legislation. The *Sustainable Forests (Timber) Act 2004*, for example, refers to “the Minister” without further definition or specification of departmental power represented through the Minister.⁵⁴ This reference to executive power is examined in a governance context, along with the growing authority from “soft law” or decisions made in a non-legislative context. The emphasis is from the perspective of “what are the limits of the power”, rather than “what is the scope of the power”. These limits primarily relate to legislation and grounds of judicial review. The question of limits of power is relevant to the exercise of power by DED in determining Allocation Orders, and with VicForests in preparation of TRPs. While legislation and discretion conferred may be broadly drawn, a court, is arguably entitled to critically test proper purpose in terms of exercise of that power. This includes taking account of jurisdictional elements, policy flexibility, and ministerial discretion. Thus, a key aspect of data gathering is where decision-making by regulators, particularly VicForests, has been challenged in the courts.

⁵² M Bevir, *Governance: A Very Short Introduction* (OUP, 2013).

⁵³ This may be accessed at <https://www.forestsandreserves.vic.gov.au/_data/assets/pdf_file/0016/29311/Code-of-Practice-for-Timber-Production-2014.pdf>.

⁵⁴ For example, s 6(1) refers to “The Minister must determine criteria and indicators for sustainable forest management”.

Secondary sources such as State government reports, and critical reviews of governance powers by stakeholders, are examined from a governance context. This considers the way departments and VicForests use their powers across a broad range of governance areas relevant to sustainability.

3. Discussion Analysis and Evaluation of Data Collected

The evaluation in this part covers governance and decision-making impacting ESFM, therefore much of this relates to decision-making at operational level.

(a) Department of Environment Land Water and Planning

The Department is responsible for ensuring timber harvesting and associated operational activities are planned and conducted in accordance with the *Code of Practice for Timber Production 2014* and Management Standards and Procedures for timber harvesting operations in Victoria's State forests. It is responsible for the preparation and amendment of FMPs which establish three categories of zoning, (1) General Management Zones where harvesting is permitted; (2) Special Management Zones where harvesting is permitted in some areas; and (3) Special Protection Zones that harvesting is not permitted. The preparation of FMPs containing zoning, forms the basis upon which Allocation Orders made by the DED. Thus, discretionary decision-making on preparation of zones impacts further discretionary decision-making on preparation of Allocation Orders, effectively dividing a governance function.

The Department operates as an environmental regulator monitoring timber harvesting operations conducted in State forests to ensure compliance with the Code, requiring investigations, field inspections and forest audits at regular intervals. Investigations involve authorised officers investigating compliance arising from non-compliance reports and allegations from different sources. This is prioritised to give greater weight to matters with risk of significant environmental impact. If non-compliance is confirmed the response for minor breaches is addressed through education and training, warning letters and voluntary undertakings. Serious breaches may warrant prosecution or require enforceable undertakings, but this is rarely undertaken.

The preparation of FMPs is arguably the most important governance function of the Department. They are designed to meet objectives for conservation, management and uses of forests. The FMPs are based on the biological, social and cultural data from Comprehensive Regional Assessments, and from Statements of Resources Uses and Values.⁵⁵ The East Gippsland Forest Management Plan purpose, for example, is to "establish strategies for integrating the use of State forest for wood production and other purposes, with conservation of natural, aesthetic and cultural values across the whole forest management area".⁵⁶ Chapter 2 of the Plan sets out forest management zones in accordance with the three zone categories. Chapter 3 of the plan covering biodiversity conservation states, "conservation guidelines are key biological values in State forest", setting minimum levels of protection to be provided by the zones and conservation reserves. Part 3.1 of the Plan states, "a precautionary approach of protecting areas of undisturbed forest is foraging habitat will be adopted" for the Spot-tailed Quoll, with the aim to protect a "network of areas within the likely home range of the animal recorded", which may include conservation reserves and larger Special Protection Zones. It notes, "well documented sites that are particularly rich in mammal species will be included in the Special Protection Zones or Special Management Zones where practicable". This means that where densities of endangered species are located the area must be zoned as Special Protection with 100 ha around the sites in which they were found. The Plan is a governance instrument designed to effect control over decisions on Allocation Orders based on zoning in the plan.

The use of FMPs as a governance instrument is problematic where claims of non-compliance with Plan specifications arise. This was highlighted in the legal action relating to the Kuark forest in East Gippsland. Here local environmental groups identified the presence of Greater Gliders and Yellow – bellied Gliders in areas planned for logging. These species were identified in three coupes in the Kuark forest. One coupe had not been surveyed despite the likely presence of threatened species.⁵⁷ Another

⁵⁵ Prepared by the federal Department of Agriculture and Water Resources.

⁵⁶ See: <<https://www.forestsandreserves.vic.gov.au/forest-management/forest-management-plans>>.

⁵⁷ Tin shed coupe no 830 – 507 – 0023 hello.

coupe had a substantial area of rainforest within it with major disturbance from transport tracks across half the area.⁵⁸ Despite clear guidelines in the East Gippsland Forest Management Plan in relation to the gliders, logging continued in these coupes. Environment East Gippsland applied for and was granted an urgent interlocutory injunction 13 February 2016. Further, VicForests had logged in rainforest buffer zones where endangered species had been identified.⁵⁹ This was in breach of the requirement to create a 250 m management zone that restricts logging around identified species. This case exposed flaws in the operation of FMPs as a governance instrument since the breaches indicate the use of FMPs as a governance instrument is problematic, due to the failure of VicForests to observe its requirements in some forest landscapes. When this is considered in conjunction with low levels of prosecution of VicForests for Code breaches, it is reasonable to conclude a more rigorous governance process by the Department is required around plan preparation and compliance enforcement.

(b) Department of Economic Development Jobs Development and Natural Resources

The Minister for Agriculture through DED is responsible for the determination of Allocation Orders.⁶⁰ These are based on forest zoning contained in the FMPs made by the Department pursuant to the *Forests Act 1958*. Staff in the Forest Industry Policy unit, Agriculture Department, which is part of DED, prepare the Allocation Order based on forest zoning schemes prepared by the Department. It does not engage in a separate process of assessment of factors that might be used in relation in determining zones.⁶¹ This division of authority, where decisions on zones is made by the Department and Allocations Orders by DED, separates at departmental level, sustainability-related decision-making from operational decision-making. VicForests must follow the conditions under the Allocation Order when preparing the TRP, and this relies on the accuracy of the zoning classification since they prepare the zoning. If zoning is inaccurate this will have a multiplier effect on determinations of both VicForests and DED at an operational level.

(c) VicForests

VicForests' governance role relates preparation of the TRP, harvesting, and regeneration. The TRP are five-year "rolling" plans identifying areas for harvest in the next three to five years. It identifies coupes, location, type of forest and harvesting method. They are reviewed and amended annually, unless exceptional circumstances require earlier review. TRPs are prepared by a checklist process involving an initial desk audit using existing data identifying forest suitability, with identified risk categories including biodiversity risk, historical overlays and aboriginal sites that may require management prior to and during the operational activity. Then a field assessment is undertaken to verify this data. All coupes proposed for the TRP are evaluated by stakeholders including the Department and DED, Parks Victoria and Aboriginal Affairs Victoria. The public can view initial plans and provide comment on timing of harvesting, use of haulage routes, proximity of harvest areas to private property or public use areas and protection of forest values. VicForests states all feedbacks are reviewed and "where appropriate" the plan is amended.⁶² After stakeholder consultation, and the TRP is verified as compliant with regulation, it is submitted to the VicForests board for approval. VicForests refers to the TRP planning process as ongoing to identify environmental issues, whereby planners "modify operations with appropriate protections measures and amend the rolling plan in the next TRP review".

VicForests currently harvest approximately 3,000 ha per year representing 0.05% of Victoria's native forests authorised under TRPs. In preparing the TRP it must be in accordance with the Allocation Order,

⁵⁸ Webbed feet coupe no 507 – 0020.

⁵⁹ *DELWP to Investigate VicForests for Logging Protected Rainforest* (1 April 2016) <<http://www.eastgippsland.net.au/media/delwp-to-investigate-vicforests-for-logging-protected-rainforests>>.

⁶⁰ Made under *Sustainable Forests (Timber) Act 2004* (Vic) Pt 3.

⁶¹ Confirmed by a DED representative on 11 September 2018: Justin Wong Acting Policy Manager, Forestry Industries, Fisheries and Game Policy.

⁶² *VicForests Timber Release Plan Factsheet* <<http://www.vicforests.com.au/static/uploads/files/trp-factsheet-2017-wfivwahqvud.pdf>>.

and the FMP. It states that a “thorough multilayered planning processes undertaken to consider the management of the many environmental and other values present in the forest”. VicForests claims to regrow all harvested areas with the same type of forest originally there.⁶³ The TRP planning process represents a significant governance responsibility and the extent of harvesting is defended by reference to the small amount of forest harvested, with the implication that it is within “acceptable” boundaries has been criticised by conservation bodies.⁶⁴ They argue Victoria’s 7.8 million ha of native forests has 5,500 ha logged annually, or less than 0.07% of the total forest estate. The forest estate includes unproductive forests that the industry does not want. Approximately 40% of that 7.8 million ha is State forests, of which 3.2 million ha of State forests has a loggable area of 740,000 ha. Conservation bodies argue that much of this area of 740,000 ha has being clear felled and converted to pulp farms over the past 50 years. What remains as original forest means that the annual 5,500 ha clear felled is a very large percentage of the area of high-quality forest that remains unlogged. So, the exercise of decision-making over harvest area must be addressed from a more spatial level taking into account area, forest type and the percentage of harvest from viable forest regions.

This process demonstrates VicForests has total control over preparation and approval of a TRP. The Department and DED only make stakeholder feedback and do not have actual authority to unilaterally modify it. The main legal constraint over the TRP is compliance with Allocation Order conditions, and Code requirements. Given a lack of transparency over how feedback from stakeholders is accommodated into the TRP, if at all, there is no accountability for areas chosen in the TRP. This level of control over TRPs represents an actual conflict of interest, since VicForests is responsible for commercial harvesting. It also represents a devolution of power to a regulator that is solely responsible for the harvesting process. Control of the TRP planning process should remain with the Department since they are responsible for audits over VicForests for environmental compliance.

(d) Governance and Operational Decision-making

The connection between governance and operational decision-making is examined at two levels, (1) the control of operational decision-making through regulatory instruments, particularly the Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014 (standards); and (2) the level of governance control over operational activity on a discretionary day-to-day basis. The standards instruct operational staff interpret the requirements of the Code. Operations that comply with the standards are deemed to comply with the Code.⁶⁵ The standards set out prescriptions for coupe management, including coupe boundaries and exclusion areas where timber harvesting cannot take place. These provisions are designed to aid interpretation and compliance with the Code, so they are read together, but where conflict arises the Code prevails. The question is how effective the standards are as a governance mechanism, in their ability to ensure Code requirements are met. To answer this question the Code and Standards are considered in this part from the governance perspective.

The Code requires harvesting in accordance with the Forest Coupe Plan. The operational goal is to conduct harvesting in a manner appropriate to the site, while managing impacts and soil water and other values including biodiversity. Mandatory actions include compliance with the Standards and Special Management Zones where harvesting may occur in limited circumstances. Location of coupe boundaries, Special Protection Zones, buffers and exclusion areas must be easily distinguishable in the field. Harvesting excluded from Special Protection Zones or other exclusion areas must be identified in the Coupe Plan. Disturbance to vegetated strips of land adjacent to waterways (filter strips) from harvesting must be minimised. Coupe infrastructure must be rehabilitated on completion of harvesting operations. Rehabilitation techniques must ensure suitable soil conditions are provided for the regeneration and growth of vegetation existing on the site prior to harvesting. Rehabilitation of coupe infrastructure must be assessed within three years of initial treatment and, where found inadequate, remedial action must be taken.

⁶³ See its website at: <<http://www.vicforests.com.au/about-vicforests/our-organisation>>.

⁶⁴ See Environment East Gippsland, *MythBusters*, “Myth on Tiny Area Logged” <<http://eastgippsland.net.au/q-a/myth-busters/>>.

⁶⁵ See cl 1.3.1.1 of the standards.

Prescriptions in the standards tend to repeat code requirements. For example, coupe boundaries must be identified in the field, and harvesting operations are excluded from Special Management Zones when excluded in the coupe plan. There is limited prescription in the coupe rehabilitation process, and nothing on meeting Code requirement of ensuring suitable soil conditions are provided for the regeneration and growth of vegetation existing on the site prior to harvesting. The absence of prescriptive process is also lacking in relation to mandatory application of the Precautionary Principle. For example, cl 4 of the Standards covering biodiversity, contains no prescription for the application of the Precautionary Principle, something also lacking in the Code. The standards do provide for application for protection of an identified at-risk species of flora or fauna, prior to the commencement of harvesting.⁶⁶ This does not help to meet Code compliance with the Precautionary Principle that requires a more prescriptive set of actions which has become apparent in carrying out operational duties.

Current regulation allows VicForests control over coupe management with limited input from the Department, except in post-harvest audit and compliance monitoring. A number of questionable operational decisions at a governance level can be identified including (1) VicForests agreed to stop logging in a high habitat value stand of forest north-east of Orbost Victoria highlighting illegal logging,⁶⁷ and (2) VicForests agreed to halt logging and survey for rare wildlife and plants in an East Gippsland forest containing threatened species.⁶⁸ Arguably the most serious operational failure is not identifying rainforest which has a blanket prohibition against harvesting.⁶⁹ These examples are indicative of governance failure by VicForests in meeting Code and Standards compliance over operational activities. This suggests that as prescriptive documents aiding interpretation and compliance, they are unable to consistently ensure sustainability-related standards are met.

4. Conclusion on Governance Power

There is considerable dispersal of government responsibility between regulators for preparation of zoning, Allocation Orders and TRPs. The Allocation Orders are based on zoning prepared by the Department, thereby creating a division of authority between two government departments. Determining Allocation Orders is relegated to a perfunctory administrative process by DED, reliant on zoning prepared by the Department. This increases the importance of accurate determination of zones by the Department. A failure to implement and enforce zoning enhances VicForests discretionary control over operational harvesting. VicForests is solely responsible for TRPs, which must be based on the Allocation Orders. This means that VicForests has a self-regulatory role in relation to preparation and application of TRPs. They control coupe management with limited input from the Department. This self-regulatory process has given rise to number of governance failures by VicForests in Code and Standards compliance. The division of authority between three regulators, and conflicts between monitoring compliance and regulatory decision-making suggest that governance in Victorian native forest harvesting is operating sub-optimally.

C. Measurement and Monitoring in Public Forestry Regulation

This part evaluates current measurement and monitoring regulation of harvesting in State forests and its ability to track progress toward the ESFM objective. Measurement and monitoring represent the means by which the overall success of regulation's capacity to deliver a sustainability objective is objectively rated. Conversely the absence of measurement and monitoring prevents assessing this capacity and reaching a sustainability objective becomes problematic since there is no objective measurement process.

⁶⁶ See cl 2.1.1.3 of the standards.

⁶⁷ See, *VicForests Stops Logging 24 Hours after EEG Legal Action* (15 December 2015) <<https://www.eastgippsland.net.au/news/vicforests-stops-logging-24-hours-after-eeg-legal-action%21>>.

⁶⁸ See, *Legal Action Forces VicForests to Survey*, n 38.

⁶⁹ *Logging Inside Site of National Significance*, n 38, coupe no 840 – 504 –01. Harvesting in rainforests is prohibited: see *Code of Practice for Timber Production 2014*, cl 2.2.2.7.

1. Research Question as It Pertains to Measurement and Monitoring

Reaching the ESFM objective in public forestry involves progressive steps toward that goal, which needs a clear method to monitor and measure progress using sustainability criteria. If absent, it is difficult to determine progress towards the ESFM objective, let alone its achievement. Determining whether current regulation in Victorian public forestry successfully monitor and measure progress toward the ESFM objective is essential in evaluating regulatory efficacy.⁷⁰ Currently, the State of the Forest Report meets the VicForests reporting obligation.⁷¹ This report details VicForests performance against each of the Criteria and Indicators of Sustainability for public forestry in Victoria.⁷² This assesses sustainability performance at the end of a five-yearly cycle, but there is no consequence for failing to meet the requirements in each criteria. Ideally, regulation should contain adequate measuring and monitoring capability, as an adaptive regulatory mechanism, to respond to any indicated deficiencies. The aim is to identify measurement functionality, and any regulatory gaps or inefficiencies pertaining to measurement and monitoring and their impact on the ESFM objective. By examining current measurement and monitoring performance it is possible to (a) understand how current regulation addresses progress toward the ESFM objective; (b) clarify what level of discretionary decision-making may obscure or hinder sustainability performance; and (c) where there are deficiencies in monitoring and measurement, address improvements to the regulatory model, particularly in the area of adaptive responsive regulation.

2. Data Gathering and Analysis Techniques for the Measurement and Monitoring Standard

Current performance in measurements and monitoring requires gathering data on current forest audits and forest monitoring. Forest audits examine the condition of the forest from a silvicultural and environmental perspective, including meeting standards for certification purposes. It is necessary to analyse what regulation requires in measurement and monitoring through audits and how this is used, and what impact this has in both mandatory and discretionary decision-making.

Current regulatory requirements on monitoring and measurement are assessed with actual data from a representative sample of audits covering environmental, silvicultural and certification categories and the reporting obligation, particularly in relation to the five yearly State of the Forest report. The *Sustainable Forests (Timber) Act 2004* (Vic) authorises the Minister to arrange audits.⁷³ However, the Act also requires VicForests to provide information about their functions using the criteria and indicators of sustainability.⁷⁴ The net effect is regulatory focus on the criteria for audit reports, although in practice they are used primarily for compilation of the State of the Forest report. Thus, the Act allows for a general audit function with use of the criteria, although it does not prescribe specific audit standards or how audit information is used to progress ESFM. Thus, the data gathering involves both what is reported and audited, how it is used and includes assessment of what is not audited or limitations on the use of information.

3. Discussion Analysis and Evaluation of Data Collected

VicForests operations are subject to internal, external, and forestry certification audits. The Australian Forestry Standard certification audits take place every three years and VicForests' surveillance audits every six months. The Department conducts recurrent annual audits of VicForests' operations as part of its Forest Audit Program (FAP). VicForests is also subject to Victorian Auditor General Audits, covering both financial and operational activity. In addition, the Victorian Forest Monitoring Program (VFMP) collects and analyses data to detect trends in the extent, state and condition of Victorian State forests

⁷⁰ C Coglianese, *Measuring Regulatory Performance: Evaluating the Impact of Regulation and Regulatory Policy* (Expert Paper No 1, August 2012, OECD).

⁷¹ *Sustainable Forests (Timber) Act 2004* (Vic) s 6.

⁷² *Criteria and Indicators for Sustainable Forest Management in Victoria: Guidance Document* <https://www.forestsandreserves.vic.gov.au/_data/assets/pdf_file/0022/30865/Vic_Indicators_for_SFM_Guidance.pdf>.

⁷³ *Sustainable Forests (Timber) Act 2004* (Vic) s 10.

⁷⁴ *Sustainable Forests (Timber) Act 2004* (Vic) s 9.

against Criteria and Indicators for Sustainability (criteria). The data collected allows the Department to assess trends in forest health including biodiversity protection. The audit process helps test compliance to regulations governing harvesting.

(a) Victorian Auditor General Performance Audits

The 2013 Auditor General report was critical of VicForests lack of protection for environmental values.⁷⁵ It noted both the Department and VicForests did not have processes and data to apply the precautionary principle “systematically and consistently”. This included a lack of specific guidance on applying the principle, sufficient plans to manage the recovery of threatened species, and sufficient quality data limiting to understand which species are threatened or recovering. The report noted VicForests did not always document risk-weighted consequences of potential actions relating to its management decisions thereby limiting transparency and accountability. It noted that while VicForests has a specific policy on interpreting and applying the precautionary principle, it does not always document its assessment of risk-weighted consequences relating to threatened species in making management decisions for selected harvesting areas.

In wood production the Auditor General’s report noted VicForests burning 16% of the trees they log because they cannot sell all low value logs.⁷⁶ It stated East Gippsland forests were becoming less economically viable and had been over logged with mills guaranteed quality saw logs that are not there, requiring good logs trucked from the Central Highlands to East Gippsland at a cost to the taxpayer, while most of Victoria’s low quality wood chip logs end up sitting in log dumps with no buyer.⁷⁷ This was enough to prompt environmental groups to question why the logs were cut down in the first place.⁷⁸ This suggests that, on this occasion at least, there was no monitoring of production levels against demand. A sustainable forest management system must align production levels with demand, and current regulation does not provide an adaptive mechanism to do this.

The Victorian Government parliamentary inquiry into VicForests’ operations in 2017 made a number of recommendations.⁷⁹ These included, (1) that a robust oversight mechanism be established to ensure VicForests’ compliance with regulations governing its operations in relation to coupe utilisation and environmental obligations; (2) that government ensures VicForests works closely with operational staff and customers enabling resource applied match mill capacity; (3) VicForests improve its management of timber contracts in relation to fluctuations in resource supply, to ensure effective planning; (4) government work with VicForests and the Forest Industry Task force to establish an industry transition plan focusing on the use of plantation timber; and (5) examine landscape scale protection of the Leadbeater’s Possum habitat for improved environmental compliance.

The Auditor General’s report and the recommendations of the parliamentary inquiry indicate problems in measurements and monitoring. In particular measurement in applying principles of ESD including the precautionary principle, tracking the recovery of threatened species, and dealing with risk weighted response to precautionary risk management. The government inquiry highlighted problems in measuring production and ensuring it was commensurate with demand.

(b) Australian Forestry Standard Re-certification Audit Reports

The 2015 Australian Forestry Standard Audit Report renewed the certification of VicForests for compliance with AS 4708–2013 Forestry Management System. In doing this it noted “areas of concern”

⁷⁵ See in particular *Auditor General Report* (2013) 36 <<http://www.vicforests.com.au/static/uploads/files/20131211-timber-resources-wfsdlrklejji.pdf>>.

⁷⁶ *Auditor General Report*, n 75, 46.

⁷⁷ *Auditor General Report*, n 75, 46.

⁷⁸ See, *Overdue Auditor General’s Report on VicForests* (18 March 2014) <<http://www.eastgippsland.net.au/news/overdue-auditor-generals-report-on-vicforests>>.

⁷⁹ Economy and Infrastructure Committee, Parliament of Victoria, *Inquiry into VicForests Operations*, October 2017 <https://www.parliament.vic.gov.au/file_uploads/Economy_and_Infrastructure_Committee_-_Inquiry_into_VicForests_Operations_xwWZmkQz.pdf>.

included (1) lack of training in the identification of listed endangered plants and implementation of appropriate management action; and (2) mandatory training for field personnel in relation to field activities is still to be fully outlined. Opportunities for improvement included greater consistency in coupe file records.

The AS 4708–2013 Forestry Management System standard covers principles for sustainable forest management covering, (1) environmental, (2) economic, (3) social, and (4) cultural sustainability. While comprehensive, the standard does not set site-specific requirements for particular forest types, communities or individual operations which may vary between bioregion. However, it does include requirements for monitoring and evaluating the outcomes of management decisions in relation to forest management. The forest manager is required to monitor and evaluate activities and their outcomes to ensure that requirements of the Standard are met. The latest Australian Forestry Standard Surveillance Reports focused on the East Gippsland region.⁸⁰ It reported no major non-conformances identified as part of the audit. Four minor non-conformances were noted being (1) content of the FMP; (2) consistency across the region in relation to landing and coupe rehabilitation technique; (3) documentation for the community forestry section of the business; and (4) use of certification logos. Overall, it concluded that the management system could ensure the organisation meets its identified applicable statutory, regulatory and contractual obligations relevant to the scope of certification. This meant it had sufficient monitoring and measurement capability to conform to the Standard.

(c) Forest Audit Program (FAP) Reports – VicForests and the Department

The FAP assesses compliance with regulatory framework for forestry operations identifying and assessing any risk of harm they pose the environment. The 2016–2017 FAP report conducted by the Department engaging an independent auditor, audited 30 coupes covering environment, roading and regeneration.⁸¹ The audit approach involves selecting coupes from the current TRP. This targeted coupes with high-risk features or special values, such as presence of endangered species. Coupes selected for assessment of regeneration were based on areas where there had been concerns about the success of regeneration. The focus of the audit was based on compliance criteria around environment, roading and regeneration. On average the audited coupes fully complied with 86% of applicable environmental and roading criteria, with the following averages: (1) protection of forest soils 83% compliance; (2) protection of water flows, water quality and river health 85% compliance; and (3) protection of biodiversity values 90% compliance. Incidents with major potential for environmental impact were associated with waterway crossings. The auditors noted that evidence from the current audit on previous audit suggested that the design, construction and rehabilitation of waterway crossings by VicForests were consistently deficient and in need of improvement. This indicated no risk monitoring in this area, and no follow up management response as a result.

Audit reports discussed in this part, examine regulatory performance at one point in time. They are more concerned with compliance efficacy, than measurement and monitoring for sustainability outcomes. In that respect it is arguably better to compare changes between yearly audit reports as a means to measure change over time. However, this does not provide a complete measurement and monitoring capability relevant to ESFM. For example, there is no audit of how principles of ESFM are applied. Comparing compliance monitoring over time is not a substitute for sustainability-related monitoring. In that regard the current audit processes cannot be seen as adequate for audit of sustainability-related performance.

(d) VFMP

The VFMP is a statewide Forest monitoring information system assessing and monitoring the extent, state and sustainable development of Victorian forests. Its aim is to provide baseline data for long-term trend detection to anticipate future changes in forests to structure suitable management responses. Data is used in the State of the Forests Report which assesses progress toward sustainable forest management

⁸⁰ *AFS Surveillance Report* (July 2017) <<http://www.vicforests.com.au/static/uploads/files/2017-afs-surveillance-report-july-2017-wfchgmuncgaq.pdf>>.

⁸¹ Department of Environment, Land, Water and Planning, n 50.

according to Criteria and Indicators for Sustainable Forest Management. Currently, approximately 800 field plots have been installed and measured by specialists. In October 2015 ground plot measurement commenced, with re-measurement occurring in five yearly cycles, with approximately 160 field plots assessed annually.⁸²

The 2013 State of the Forest Report is the only publicly available data for information obtained from the VFMP.⁸³ Using this report to examine the efficacy of the FMP process is problematic because of its age and because some data presented does not address sustainability performance. Indicator 2.5, for example, deals with the proportion of timber harvest area successfully regenerated by forest type. Successful regeneration would be an inherent requirement for a successful ESFM system. Coupes assessed for regeneration success come from Department coupe finalisation audit reports. The indicator shows forest coupes that have been successfully regenerated and transferred back to the Department between 2007/2008 and 2011/2012. While the data shows an increasing regeneration rate between 2007 and 2012, it does not give regeneration data relative to the overall harvest area. To get this it is necessary to cross-reference to indicator 2.3 giving the total area of state forest harvested over the same period. Total area of regenerated coupes over this five-year period was approximately 23,000 ha. This compares to a total area of State forest harvested over the same period of approximately 46,800 ha. Assuming the accuracy of the data this represents an unsustainable position. The relevance of this from a reporting and measurement perspective is that the State of the Forest Report does not present data from a purely sustainability perspective, with data assessed separately from a primarily performance and compliance perspective. This does not denigrate the importance of the report, but highlights it is not designed to address measurement of progress toward the ESFM objective. It does, however, highlight a regulatory gap when a policy of regenerating all harvested coupes is not occurring, regulation should require a particular management response to address the deficit.

4. Conclusion on Monitoring and Measurement

Measurement and monitoring of forestry operations in Victoria is subject to external and internal audit. External audit, in particular the Auditor General report 2013, highlighted an absence of process and data to “systematically and consistently” apply, at least one of the principles of ESD. The difficulties of application arose primarily from a lack of quality data. This applied to both the collection of data, to determine whether the application is required, and the post-application follow-up to determine success of the application procedure. The report also noted a gap in aligning the level of production with demand, creating the indication that production levels were not adequately monitored. These factors suggest efficacy and measurement and monitoring sub-optimal in relation to measuring the application of principles of ESD and measuring production is commensurate with demand.

The Australian Forestry Standard Recertification audit reports highlighted “areas of concern” including improvement required in monitoring and measurement in species identification with appropriate management action.

Since its inception in 2010 The VFMP has collected data on forest health and to date reported only in the 2013 State of the Forests Report. Presentation of data does not demonstrate measurement and monitoring of sustainability performance holistically, although some insight into sustainability performance can be obtained by cross-referencing different indicators included in the report. This suggests that current measurement and monitoring capability is limited in its capacity to report on progress toward the ESFM objective.

D. Compliance Regulation in Public Forestry Regulation

Compliance in this context means regulatory interventions that ensure conformance to a rule of law, policy or standard relevant to the ESFM obligation. Compliance includes a range of actions that extend

⁸² Information obtained from Mr Andrew Clark, Ground Plot Operations Manager, Department of Environment Land Water Planning, interviewed on 14 September 2018.

⁸³ The next State of the Forest Report is due out in early 2019.

to enforcement, including sanction- and non-sanction-based actions designed to encourage or educate in order to comply.

1. Research Question as It Pertains to Compliance

This part examines how regulation addresses compliance by enforcing compliance and deterring non-compliance by encouraging participants to comply with aspirational standards in ESFM. Compliance is not just about prosecution and deterrence but includes adaptive responses processes applying to changing factual circumstance.⁸⁴ Efficient compliance embraces multifaceted elements, including guidance on compliance using education, persuasion and negotiation. Thus, compliance is analysed from different perspectives, including deterrence, enforcement, punishment and encouragement. The requirement of encouragement, is relevant when talking about steps toward a particular sustainability objective. Sustainability may require encouraging participants to act in a certain way over time. Thus, compliance should address a “carrot and stick” approach employing both command orders and incentives to meet compliance objectives. Therefore, the current regulatory structure is examined in both categories, for its capacity to advance the ESFM objective.

Compliance methodology addresses both technical “rule compliance” and “substantive compliance” with the collective goals of ESFM.⁸⁵ By assessing current compliance regulation it is possible to assess (1) how different compliance perspectives are accommodated under current regulation; (2) compliance efficacy measured by reference to criteria and indicators of sustainability; and (3) gaps in compliance regulation that currently hamper progress toward the ESFM objective. By highlighting current compliance performance, it is possible to address what is required in an efficient ESFM regulatory model.

2. Data Gathering and Analysis Techniques for Compliance

Data collection includes examining regulation and its use of compliance mechanisms. This focuses primarily on the Code and the *Sustainable Forests (Timber) Act 2004*, since they are the primary regulatory instruments relating to ESFM. Data on compliance audits carried out by the Department on VicForests compliance with the Code, including enforcement action and penalty imposed will be examined.

The enforcement action taken by the Department is analysed on the basis of (1) the seriousness of the breach; (2) the penalty or sanction imposed; and (3) whether there is subsequent action to ensure future compliance. This examines the compliance obligation, compliance type such as penalty or educative/advisory encouragement of compliance, and outcome. In each case the focus is on the effect of compliance action on progress toward the ESFM objective.

Compliance and enforcement behaviour of the Department may be influenced by the relationship between the Department and VicForests, which may influence compliance outcomes. They have close levels of communication and cannot be described as operating fully at arm’s length from each other on all occasions. This can influence and potentially distort the process of enforcing compliance, such as where terms of settlement taken against VicForests by the Department are made confidential or enforcement action has been dropped by agreement.⁸⁶ Thus, it is necessary to gather data on the nature of the relationship including lines of communication between these regulators that may have the capacity to distort and even circumvent the compliance/enforcement process.

3. Discussion Analysis and Evaluation of Data Collected

The 2013 State of the Forest Report (report) indicator 7.2 examines rates of compliance with sustainable forest management regulations.⁸⁷ Compliance include auditing and response to identified breaches,

⁸⁴ B Hutter, *Compliance: Regulation and Environment* (OUP, 1997).

⁸⁵ This point was emphasised in: K Yeung, *Securing Compliance* (Hart, 2004) 11.

⁸⁶ On 10 August 2012 the Age newspaper reported the Department has dropped a court case against VicForests for alleged illegal harvesting of rainforest. The Department and VicForests agreed on an out of court settlement which strongly implied avoidance of a potential fine of \$29,000 see: <<http://www.theage.com.au/national/state-drops-illegal-harvesting-case>>.

⁸⁷ Department of Environment and Primary Industries, Victoria, Australia, Victoria’s State of the Forests Report 2013, indicator 7.2 <https://www.forestsandreserves.vic.gov.au/_data/assets/pdf_file/0019/52705/VIC_SFR2013_lowres.pdf>.

patrols, investigations, negotiated improvement arising from audit, undertakings and prosecution. The compliance audit covered 2006/2007, 2008/2009, 2010/2011 and 2011/2012 and covered roading, harvesting and coupe closure activities. There is no explanation why regeneration was not covered in the audit. The audit is a sample of coupes, so is not comprehensive of all operational activity. The FAP audit assesses a sample of coupes in each target year for compliance with the Code and other regulation. Identified non-compliance is categorised as, (1) severe – irreversible or extensive impact to the environment; (2) major – significant impact the environment; (3) moderate – moderate impact to the environment; (4) minor – minor impact to the environment with further risk reduction opportunities existing; (5) negligible – negligible impact to the environment and/or provides for continuous improvement; and (6) no impact – poses no impact to the environment. Audit results for harvesting and coupe completion operations covering environmental impact between 2006 and 2012 are detailed in Table 1 below.

TABLE 1. Environmental Impact Compliances 2006–2012

	Environmental impact	2006/2007	2008/2009	2010–2011 2011–2012
% Compliant		94%	93%	96%
% Non-compliant	Severe	0	0	0
	Major	1	0	0
	Moderate	1	1	1
	Minor	1	1	1
	Negligible	2	2	1
	No impact	1	2	1

The aforementioned results indicate a high level of compliance – 93% plus – with timber harvesting and coupe closure regulation over the reporting period. On average, 74% of non-compliance had nil to minor environmental impact. The report notes most audits identified at least one non-compliance with either potential or actual major environmental impact. They involved rain forest management, harvesting outside planned coupe boundaries, waterway protection and log landings and dumps.⁸⁸

Data collected included the number of reported allegations of non-compliance with timber production regulations conducted between 2010 and 2012. This indicates the Department received 55 alleged timber production non-compliances, reported by stakeholders, including the public and/or self-reported by industry. Nineteen provided sufficient evidence to reasonably conclude that a non-compliance with the regulatory framework may have occurred warranting investigation. Subsequent investigations confirmed six allegations relating to rain forest management and incursion into national parks and Special Protection Zones. This is detailed in Table 2 below:

TABLE 2. Reported Allegations of Non-compliance 2010–2012

Year	Allegations	Investigated	Confirmed	Still under investigation
2010	18	8	1	0
2011	15	5	3	0
2012	22	6	2	2
Total	55	19	6	2

⁸⁸ At the time of writing the 2018 State of the Forest Report is due to be released in February 2019. A delay noted as being caused by the Victorian State election in November 2018.

The 2016–2017 Forest Audit Program covered a number of categories of audit compliance. They included; (1) water quality, river health and soil protection; (2) conservation of biodiversity; and (3) road design. Overall compliance levels ranged between 71% and 100% with an 86% average. Of the 30 coupes audited eight had no non-compliance with potential for environmental impact. Eight of the 30 coupes had major environmental impact non-compliances primarily relating to waterway crossings.

Soil protection examined 21 audit criteria, dealing with avoidance of erosion or mass movement of soils and minimising the risk of entry of settlements into waterways. The average level of compliance was 83% over a 56% and 100% compliance range. All non-compliance having major environmental impact, and most non-compliance assessed for moderate environmental impact were associated with movement of sediments into waterway crossings. Compliance for water flows, water quality and river health had an 85% average over a 60% and 100% range. Non-compliances were assessed to have major environmental impact in eight coupes, all relating to waterway crossings. There was high incidence of non-compliance with waterway crossings involving 8 of 17 coupes with crossings having non-compliances assessed as having major environmental impact. Compliance relating to protection of biodiversity values involved 51 audit criteria. The average level of compliance was 90% over a 70% and 100% range.

Forest regeneration compliance elements considered four coupes that were identified as being of concern by the Department.⁸⁹ Two of the coupes had adequate stock with two not adequately stocked pursuant to a stocking rate.⁹⁰ Regeneration was found to be 81% compliant with Code requirements, with only 48% of assessed coupes fully compliant. These regeneration statistics were not included in the State of the Forest Report. Thus, while general levels of compliance were relatively high compared to previous years, they must be considered in the light of how they are interpreted and, with respect to regeneration, omitted in the State of the Forest Report by the Department.

The main non-compliance activity related to waterway crossings, pertaining to construction or removal not complying with the Code. The auditors considered the frequency of non-compliant waterway crossings reflected a “systematic issue or at least a consistent deficiency with VicForests and/or their contractors approach”.⁹¹ The 2016–2017 compliance audit had an average 14% non-compliance level in the 30 audited coupes, with 8 of the 30 coupes having major environmental impact non-compliances. Part or non-compliance was recorded on more than 50% of applicable coupes for nine audit criteria. Two out of four audited coupes for regeneration were assessed as not meeting regeneration requirements on restocking.⁹²

How are these non-compliances dealt with by the Department? Where non-compliances are identified in the audit, VicForests is required to give a compliance-related response. The 2016–2017 audit, for example, contained VicForests responses to the prior year audit findings on non-compliance. One of the prior year audit recommendations required VicForests to set up checks to ensure rainforest identification checks are happening in the field and stored in the Forest Coupe Plan for ease of access. VicForests response was that they would review the coupe folder contents form and provide clarity to staff as to where rainforest identification forms are stored. The auditor noted that the recommendation did not appear to have been addressed.⁹³ Out of a total of 35 recommendations from the FAP program in 2015, VicForests had either not yet met the requirement, not satisfactorily met the recommendation, had room for improvement or not yet met the recommendation in 17 instances by the time of the 2016–2017 audit, which represents a 50% non-compliance of prior year recommendations. The Department advised it had streamlined its protocols for dealing with VicForests responses to audit recommendations.⁹⁴ This aimed

⁸⁹ The auditors noted that this “cannot be considered to be representative of VicForests operations overall”.

⁹⁰ Stocking rate: number of stocked sampling points as percentage of productive sampling points.

⁹¹ See n 50.

⁹² It should be emphasised that the auditors did state they were specifically audited to reflect concerns of the Department, thereby suggesting they were problematic to start with and not necessarily reflective of VicForests’ total regeneration performance.

⁹³ A number of other recommendations were noted by the auditor as “response to recommendations still to be implemented”.

⁹⁴ Telephone interview with Ms Jeanette Newport, Senior Project Officer Compliance – Forest Audits, Department of Environment Land Water and Planning conducted on 20 August 2018.

to address a stricter reporting framework with improved response times, but the outcome of this process is still to be determined, as at the time of writing, the 2017–2018 audit report had not been released.⁹⁵ In terms of punitive action the Department noted that all decisions following acts of non-compliance were published in the audit reports. A representative of the Department further noted, “to date no breach has required litigation towards VicForests”.⁹⁶

The 2016–2017 FAP audit referred to how VicForest did not explicitly disagree with many of the recommendations, but proposed few specific actions in response. Many recommendations were referred to the Department, something described as part of its routine practices, or the recommendations were referred to reviews for internal audit processes. This process of referral of recommendations back to the Department, or for internal audit process review, allows VicForests to avoid, or at least defer, accountability. In addition, the failure to initiate prosecution against VicForests, particularly where Code breaches have the potential for serious environmental impact, arguably lessens the impact of the Code in ensuring regulatory compliance. It also highlights the nature of the relationship between the Department and VicForests from a compliance perspective. If recommendations from an independent audit can be referred back to the body that commissioned the audit (the Department), or otherwise deferred or sent to internal review, the accountability of VicForests is lessened and the rigour of the compliance process consequently weakened.

4. Conclusion in Relation to Compliance in Current Regulation

The 2013 State of the Forest Report covering the period 2006–2012 in Table 1 indicates a high level of compliance at a 94.75% compliance average. Two areas of concern arise from the data in Table 1. The only reported major non-compliance occurred in the year 2006/2007 which had an independent audit conducted by the Environmental Protection Authority of Victoria. Audits conducted in the period 2008/2009 and 2010/2012 not conducted by the authority revealed no major non-compliances. The presentation of data also misses the 2007/2008 and 2009/2010 year. This absent data is not explained in the Report itself other than a reference to audits conducted in the “target harvesting year”. The Report noted that:

Most audits identified at least one non-compliance with either potential or actual major environmental impact. These related to rain forest management, harvesting outside planned coupe boundaries, waterway protection and log landings and dumps.

However, the foregoing indication of major non-compliances is not reflected in data contained in Table 1 extracted from the report. The report noted that 74% of non-compliances had a nil to minor environmental impact, highlighting that 26% must be within the moderate and major non-compliance categories. It is important to note that the Report acknowledges the difference in FAP methodology introduced in 2010 and as a result warns that direct comparisons between audit results pre- and post-2010 should not be made. These factors suggest that the selective nature of the audit target year, changes in audit methodologies and the lack of information about how the Department calibrates environmental impact between minor to major, require some caution on definitive conclusions on compliance. For example, allegations and investigations of non-compliance with timber production regulation was sourced from Department internal records and thus conducted internally without independent verification. The Report did not contain data on regeneration which is a major omission given the focus on sustainability in forest management.

The latest FAP audit 2016/2017 revealed an 86% compliance average, which is down from the earlier 94.75% compliance average reported in the 2013 State of the Forest Report. The 2016/2017 compliance audit had an average 14% non-compliance level in the 30 audited coupes indicating an increase in non-compliances. These figures suggest improvements are necessary in ensuring compliance by VicForests against risk of major environmental impact. Current compliance enforcement involves a dialogue between the Department and VicForests, requiring the latter to give a response to compliance issues raised

⁹⁵ Time of writing 24 August 2018.

⁹⁶ Interview with Mr Liam Costello, Team Leader, Forest Monitoring and Evaluation, Policy and Planning Division, 20 August 2018.

in the audit report. The process demonstrates inadequate response rates, ranging from not meeting or satisfactorily meeting the compliance requirement. The 2016/2017 audit revealed an approximately 50% non-compliance response from the prior year recommendations. While the Department has indicated they have streamlined protocols for dealing with responses to audit recommendations this is yet to be demonstrated. The low rates of prosecution by the Department against VicForests is concerning given the relatively high level of major environmental non-compliances indicated in the audit findings. The current compliance dialogue between the Department and VicForests is arguably inadequate, since it allows for the latter to avoid or at least defer accountability. This supports a conclusion that the compliance regime under current regulation requires improvement in both prosecution and educative forms of compliance regulation.

E. Summary and Conclusion

This article has examined current regulation in Victorian public forestry and its capacity to progress an ESFM objective using four evaluative categories. The strength of causal change mechanisms in regulation were evaluated. The balance category highlighted some regulatory instruments contained no, inadequate or only partial balance mechanisms. Significant planning decisions on harvest regions pertaining particularly to TRPs allow considerable discretionary decision-making without any prescription of balance. The Brown Mountain case demonstrated the risks involved in this level of discretionary decision-making. The lack of an adaptive balance mechanism is reflected in operational activity, such as in regeneration. Current regulation does not apply an adaptive mechanism to address balance.

The division of the governance function by the Department and DED create ambiguity over who is responsible for decision-making, potentially weakening the efficacy of discretionary decision-making. Decisions on zoning by the Department, and the decisions on Allocation Orders by DED unnecessarily divide governance responsibility and risk operational inefficiencies. In the field. This is compounded by examples of non-compliance with FMPs prepared by the Department, particularly in relation to conservation and endangered species requirements. This is compounded by the transfer of responsibility over harvest sites to VicForests who have total control of the TRP planning process. The governance obligation extends to regulatory instruments, including the Code and Standards, which set out mandatory requirements but limited prescriptions on how they are applied. This is particularly evident in relation to the precautionary principle, resulting in non-application of the principle. The current governance arrangements for public forest harvesting are too widely dispersed with limited forms of prescription in regulatory instruments, resulting in non-compliance with Code and Standards.

Measurement and monitoring involves both internal audits (by VicForests) and external audits independent of VicForests. Independent audit by the Victorian Auditor General in 2013 noted VicForests had inadequate process for consistent and systematic application of the precautionary principle. The Auditor General also noted wood production levels higher than demand. The foregoing examples highlighting a failure of regulation in balancing both economic and conservation because of inadequate measurement facilitation. In contrast the re-certification audit report AS4708-2013 noted VicForests had sufficient measurement and monitoring capability to warrant re-certification.

Independent audits conducted by the Department on VicForests activities indicated non-compliances between 10–17% against audit criteria for protection of forest soils, water flows, water quality and protection of biodiversity values. This demonstrated non-compliances impacting on sustainable forest management and impliedly acknowledged inadequacies in measurement and monitoring. It highlighted the audit process represented a “moment in time” and this differed from capability addressing progress over time. This inadequacy was partly addressed through the implementation of the VFMP. Data gathered from this program has, at the time of writing only been presented in the 2013 State of the Forest Report. While the data in this report can aid understanding in sustainability performance, some criteria are not reported on statistically or at all, and some reporting requires cross referencing between criteria to gain a sustainability perspective. Data presented in this report, while very important to assessing sustainability performance it is not presented in a format that holistically addresses sustainability performance. Overall, measurement and monitoring does not extend to addressing sustainability performance, which extends to application and outcome of principles of ESD.

Compliance data is hampered by the historicity of the 2013 State of the Forest Report. Data from this report indicated a high level of compliance with harvesting and coupe closure regulation. However, the period covered revealed at least one major non-compliance with potential or actual environmental impact. This included rain forest management and harvesting outside of coupe boundaries. More recent compliance data from the 2016/2017 FAP indicated an 86% average compliance with regulation of soil protection, conservation of biodiversity and road design. There was an approximately 26% of audited coupes had major impact non-compliances., something described by the auditor as a “systemic” problem within VicForests.

A key issue arising from the 14% average non-compliance rate is how the Department enforces compliance. The 2016/2017 audit revealed no prosecutions, and approximately 50% of recommendations to fix up non-compliance by VicForests from the previous year were not met by the following year. This indicated a poor compliance methodology with little enforcement rigor, allowing VicForests to defer or even avoid accountability. This is further confirmed by a non-arm’s length relationship on enforcement action between the Department and VicForests. The issues arising from low compliance rates ultimately focus on how regulation structures a compliance regime. Where there is limited inclusion of a compliance/enforcement methodology in the regulation itself, it is unsurprising that there is little enforcement action. This supports the case for fundamental reform in Victorian public forestry regulation.