

Attachment 2.2

Proposed provisions – Amendments to the Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2017

National direction consultation – Package 2: Primary sector

Instrument topic: Proposed amendments to National Environmental Standards for Commercial Forestry (NES-CF)

- The proposal is for consultation purposes and does not represent the proposed National Environmental Standards (NES) wording, which will be drafted after the consultation phase.
- The table below provides some illustrative wording (in italics or underlined text) to help you understand the proposed definitions and the intent of the proposed amendments to the NES-CF.
- Changes to the existing NES-CF are referenced using the existing clause number.

Application	Proposed provisions	Reasons			
Where is the proposal intended to apply?	The whole of New Zealand consistent with the application of the current NES-CF.	Commercial forestry occurs across the country and the NES is a national instrument.			

PART 1: PRELIMINARY PROVISIONS Regulation 3 Interpretation		
Regulation	Proposed provisions	Reasons
Cutover definition	Means the area of land that has been harvested.	The definition of cutover was inserted in 2023 as part of the previous amendment to regulation 69. Proposed amendments to regulation 69 are likely to entail changes to the definition of cutover. The change in definition will clarify interpretation of the standards.
Regulation 6 Relationship between rules and	these regulations	
Regulation 6(1) National instruments	 Amend regulation 6(1)(a) to clarify the conditions under which a rule that is more stringent than the NES-CF can be included in a council plan. Specifically: a) if it is required to manage the risk of severe erosion from commercial forestry from a defined area that will have significant adverse effects on receiving environments, including the coastal environment; downstream infrastructure; or property; and b) the effect cannot be managed through the rules in the NES-CF; and c) there is an underlying risk within the defined area that has been identified through mapping this area at a 1:10,000 scale or using a 1 m² Digital Elevation Model. 	National rules manage the effects of commercial forestry. The use of stringency is proposed to be an exception where it can be demonstrated that rules more stringent than the NES-CF are required to meet a specific localised risk. Being more specific about when and how, based on evidence, councils can impose more stringent rules. This helps councils understand when this provision should be used and is intended to create greater operational certainty for foresters.
Regulation 6(4A) Afforestation	Remove regulation 6(4A) that enables a rule in a plan for afforestation to be more stringent or lenient than in Subpart 1 of Part 2 of these regulations.	Regulation 6(4A) provides very wide discretion over afforestation, because it is not limited to specific objectives or a national policy statement. Removing regulation 6(4A) will mean national criteria apply to afforestation, providing greater certainty to the forestry sector, with stringency limited to specified matters in regulation 6 of the NES-CF.

PART 2: REGULATION OF COMMERCIAL FORESTRY ACTIVITIES

Subpart 1 – Afforestation

Permitted activities	Proposed provisions	Reasons			
Regulation 10A Permitted activity conditions: afforestation management planRemove regulation 10A, which requires an afforestation management plan for all afforestation activities as a permitted activity cond plan for all afforestation activities as a permitted activity cond		Afforestation management plans set a redundant regulatory requirement for those planting or replanting a commercial forest because issues relating to the environmental impacts of afforestation and replanting are managed through existing standards. Furthermore, the provisions require documentation of future forest effects that may not be reasonably known and impose costs on foresters that are not clearly justified.			
Regulation 11 Permitted activity conditions: wilding tree risk and control	 Amend regulation 11(4) to: "The relevant regional council and territorial authority must be given the following at the same time as notice is given under regulation 10: (a) the score required under subclause (1) and the calculations used for the final wilding tree risk calculator score and supporting evidence for each calculation." 	The current provision decouples the calculation sheet from the assessment sheet that should be submitted (ie, it does not introduce the new requirement sought to provide both the assessment and the calculations underpinning it). Clarifying the wilding conifer regulations 11(4)(b) and 79(5)(b) will make the intent clear and implementation easier for both foresters and councils.			

Subpart 6 – Harvesting Plantation forests Permitted activities	Proposed provisions	Reasons
Regulation 66 Permitted activity conditions: harvest plan	Amend regulation 66 to include a requirement for a slash mobilisation risk assessment as set out in Schedule 6.	This is a consequential change due to the proposal to amend regulation 69.
Regulation 69 Permitted activity conditions: slash and debris management	Amend regulation 69 to include a new requirement for a slash mobilisation risk assessment for all forest harvest as part of the existing harvest management plan, carried out in accordance with requirements set out in a slash mobilisation risk assessment template incorporated by reference as item 15 in Schedule 2. An alternative would be to include the slash mobilisation risk assessment template in the NES itself, possibly as item 15 in Schedule 2. Amend existing requirements for removal of slash on the forest cutover (regulation 69(5)–(7)) to apply only to those who have	The intent is to triage the forest harvest site during harvest planning to determine areas where risk of mobilisation is low and exempt them from removing slash, while increasing identification of areas of high mobilisation risk that require a high standard of slash management or removal. Options proposed through this consultation include setting a permitted activity standard for removal of material on high-risk cutover or requiring controlled resource consent where high mobilisation risk is identified.

Subpart 6 – Harvesting		
Plantation forests		
Permitted activities	Proposed provisions	Reasons
	assessed mobilisation risk as 'high' or require those with risk assessed as 'high' to seek controlled resource consent. There may be consequential changes to terms, including 'residual	
	material' and 'sound wood' but precise wording will depend on the eventual form and drafting of a new standard.	
	Amend the title of regulation 69 to remove the words 'and debris management', in line with intent of removing 'woody debris' from schedules 3, 4, 5 and 6.	

Exotic continuous-cover forests					
Permitted activities	Proposed provisions	Reasons			
Regulation 71A(b) Permitted activity exotic continuous-cover forests	Amend regulation 71A(b) to remove the word 'not' so that an activity is permitted if "any relevant forest planning requirement is complied with". Currently, regulation 71A incorrectly states that: "Low-intensity harvesting is a permitted activity in all erosion susceptibility classification zones if—	Fixing this error will make the regulation clearer to interpret and enforce.			
	 a) regulations 64 to 69 are complied with; and b) any relevant forest planning requirement is not complied with 				

Subpart 8 – Replanting					
Permitted activities	Proposed provisions	Reasons			
Regulation 77A Permitted activity conditions: replanting management plan	Remove regulation 77A that requires replanting plans.	Replanting management plans set a redundant regulatory requirement for those planting or replanting a commercial forest because issues relating to the environmental impacts of afforestation and replanting are managed through existing standards. Furthermore, the provisions require documentation of future forest effects that may not be reasonably known and impose costs on foresters that are not clearly justified.			

Subpart 8 – Replanting		
Permitted activities	Proposed provisions	Reasons
Regulation 79 Permitted activity Amend regulation 79(5) to reduce extraneous wording in 79(5)(b) and conditions: wilding tree risk and control Ink the required activity to the notice requirement: • Regulation 79(5) The relevant regional council and territorial authority must be given the following no more than 8 months before replanting is carried out at the same time as notice is given under regulation 78A:		The existing drafting decouples the calculation sheet from submission of the assessment sheet (ie, it does not introduce the new requirement sought to provide both the assessment and the calculations underpinning it). Clarifying the wilding conifer regulations 11(4)(b) and 79(5)(b) will make the intent clear and implementation easier for both foresters and councils.
	 a) the score required under subclause (1) and the calculation sheet used to provide that score calculations used for the final wilding tree risk calculator score and supporting evidence for each calculation. 	

Schedules	Proposed provisions	Reasons		
Schedule 2 References for material incorporated by referenceAmend Schedule 2 to add a new item (a slash mobilisation risk assessment template) incorporated by reference.		To provide a process that must be followed for assessing slash mobilisation risk (per changes to clause 66 and clause 69, and Schedule 6) and enable changes over time as research and risk settings improve without having to change the regulations.		
Schedule 3 Afforestation and replanting plan specifications	Remove Schedule 3, which sets out the requirements for afforestation and replanting plans required in regulations 10A and 77A respectively.	The plans set a significant requirement for paperwork when planting or replanting a commercial forest but do not add an additional regulatory purpose or enforcement powers for councils. They require documentation of future forest effects that may not be reasonably known and impose costs on foresters that are not clearly justified.		
Schedules 4, 5 and 6	Remove the undefined term 'woody debris' from all forest planning requirements (schedules 4(4)(2), 5(4)(2) and 6(4)(2)).	The term 'woody debris' is undefined in the regulations and does not appear anywhere other than the schedules. Woody debris is a colloquial term that incorporates debris that is outside of the regulatory requirements and not associated with forestry activities. There are defined terms in the regulations, including 'slash', which should cover what woody debris means for forestry activities. The use of 'woody debris' has caused confusion and regulatory uncertainty and the policy intent is unclear.		

Schedules	Proposed provisions	Reasons			
Schedule 6 Harvest plan	Amend Schedule 6, clause 4(4) to add the process required for a slash mobilisation risk assessment to the Harvest Plan requirements. Include specific reference in Schedule 6, clause 6(c) to the need for post- harvest monitoring until risk reverts to pre-harvest levels.	To set out the process required for assessing slash risk and documenting management actions and mitigations using the slash mobilisation risk assessment template located in attachment 2.2.1 as part of the harvest plan (per changes to regulation 66 and regulation 69). Consequential changes due to the proposal to amend regulation 69.			

Implementation	Proposed provisions	Reasons		
NES-CF implementation	Statutory implementation	Statutory implementation		
	Changes to regulation 6(1)(a) and regulation 6(4A) will require some councils to carry out plan changes to create alignment of more stringent rules with the new intent and wording. Section 44A of the Resource Management Act 1991 enables this work to be undertaken without a Schedule 1 plan change, either in accordance with a specification in the NES, or as soon as practicable after the date it comes into force. Non-statutory implementation Te Uru Rākau – New Zealand Forest Service will update NES-CF user guidance following amendment of the NES-CF. Guidance on new slash requirements may include workshops and webinars with industry and councils to ensure they understand how to apply the slash mobilisation risk assessment appropriately and with common understanding of intent and the practical issues in addressing slash risk, and of monitoring risk until it reverts to pre-harvest levels.	 Plan changes may be required to achieve consistency in plans. The Resource Management Act 1991 requires district, unitary and regional plans to be amended to deal with any duplication or conflict with the NES without using a Schedule 1 process. Non-statutory implementation Options for applying the new stringency and slash proposals will vary across sites and regions. Increasing understanding of forestry effects and effects management, and 'risk management' and 'risk reduction' over absolute standards through guidance will be essential to stakeholders implementing the changes. Guidance on stringency provisions will create additional certainty for users. No additional implementation provisions are required because remaining provisions clarify regulations or remove confusing requirements. 		

Attachment 2.2.1: Draft slash mobilisation risk assessment

Attachment 2.2 outlines the proposed provisions to amend the National Environmental Standards for Commercial Forestry (NES-CF). Table 1 provides a *draft* for consultation on proposed amendments to regulation 69(5)–(7) of the NES-CF as part of the proposal. This draft assessment is not intended to be the final form of a template but to test the concept and criteria.

Table 1: Draft Slash Mobilisation Risk Assessment

How do I use the slash mobilisation risk assessment template?

- 1. Start with the first risk indicator and work through to the action. For example, starting with the Erosion Susceptibility Classification (ESC) indicator, if the site being assessed is in a green zone, your mobilisation risk is low and you do not need to take any further action. If the site is in the orange zone, you need to do further assessment so move to the second risk indicator.
- 2. At each point, assess which category you fit into: Low risk No further action or Further assessment required. If the latter applies, move to the next line and repeat.

Criteria and action				Suitability of criteria for a regulation				
Risk indicator	Proposed means of measurement	Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?
1. ESC rating	Erosion Susceptibility Classification	Green (low)→ Yellow (medium) → Orange ² (high) → Red ³ (very high) →	 → Low risk – No further action → Low risk – No further action → Higher risk – Further assessment → High risk – Resource consent 	Yes. ¹	Yes.	Yes.	Yes.	Only as a drafting gate to further assessment

¹ Rock type has a major influence on slope, soil stability and natural fertility in New Zealand, LUC Handbook, p.14; Smith et al 2023.

² 'Orange', for the purposes of this consultation, includes red zone that is not of Land Use Capability Class 8e, where it involves no more than 2 ha of harvesting in any 3-month period.

³ 'Red', for the purposes of this consultation, *does not include* land that is not of Land Use Capability Class 8e, where it involves no more than 2 ha of harvesting in any 3-month period.

Criteria and action				Suitability of criteria for a regulation				
Risk indicator	Proposed means of measurement	Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?
 Orange zone ESC unit LUC erosion rating 	LUC dominant erosion type ⁴ as recorded on the Land Use Capability map.	Surficial erosion → (sheet, wind, scree) Fluvial erosion → (rill, tunnel gully, streambank) Gully erosion ⁵ → Mass movement erosion→	 → Low risk – No further action → Low risk – No further action → Further assessment required → Further assessment required 	Yes, though LUC is recorded at 1:50,000 scale so this indicator should only exclude LUC units where any risk of slash mobilisation is low.	Yes.	Yes.	Yes, but it requires a process to be set out detailing different erosion types and how to identify them in the LUC map.	Only as a drafting gate to further assessment
 Mass movement erosion type 3a. Gully erosion 	LUC dominant erosion type as recorded on the Land Use Capability map.	Earthflow → Slump → Rock fall → Soil slip → Debris flow/avalanche → Gully erosion is not established → Gully erosion is	 → Low risk – No further action → Low risk – No further action → Further assessment required → Further assessment required → Further assessment required → Low risk – No further action → Further assessment required 	Yes.	Yes.	Yes.	Yes, but it requires a process to be set out detailing different erosion types and how to identify them in the LUC map.	Only as a drafting gate to further assessment

⁴ Lynn et al, 2009.

⁵ The Gisborne/Tairāwhiti region experiences significant issues from gully erosion and there are ongoing discussions about the role of forestry on land subject to gully erosion. However, in most cases, gully erosion is a gradual process that does not cause sudden slope failure that delivers slash to waterways or nearby infrastructure.

Criteria and action				Suitability of criteria for a regulation				
Risk indicator	Proposed means of measurement	Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?
4. Slope	Measured by predominant slope X degrees from horizontal) for each part of the harvest area. Measurement options include: • field measurement using a clinometer or app • GIS, using topographic map or LiDAR data.	< 25 degrees ⁶ → > 25degrees → > 30degrees ⁸ →	 → Low risk – No further action → Medium risk – Further assessment required → High risk – Further assessment required 	Yes. ⁷	Yes.	Yes. Almost all councils have LiDAR, and forestry companies have access to DEMs and LiDAR.	Yes. Harvest management plans already require inclusion of contour lines at intervals less than or equal to 20 m.	Yes. Harvest management plans already require inclusion of contour lines at intervals less than or equal to 20 m.
5. Direct connectivity of the erosion feature to a stream or river	Is the slope connected to a waterway so that a landslide on the slope could run out into the waterway?	No → Yes →	 → Low risk but further assessment on direct proximity required → High risk – Further assessment required 	Yes.	Yes.	Not readily without clearer identification of an objective assessment measure that doesn't require	If modelling ⁹ is available, easy to use and can be overlaid on a harvest plan. Where not available,	Yes. Harvest management plans require inclusion of contour lines at intervals less than or equal to

⁶ Dymond et al, 2014; Marden and Rowan, 2015; Rosser et al, 2020.

⁷ Slope is a fundamental physical control on landslide susceptibility. Slope is second only to land cover as a coefficient for probability of shallow landslides (Smith et al, 2023).

⁸ Marden and Rowan, 2015.

⁹ For example, modelling such as the morphometric connectivity layers developed by Manaaki Whenua – Landcare Research for Gisborne District Council (2024) and subsequently for other organisations.

Criteria and action				Suitability of criteria for a regulation				
Risk indicator	Proposed means of measurement	Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?
						additional modelling.	assumptions about length of slope, size of rain event and volume of soil lost are required.	20 m. Assumptions about length of slope, size of rain event and volume of soil lost are required.
6. Direct proximity to offsite 'infrastructure', a significant natural area, or a lake, wetland or estuary	Mark on the harvest plan infrastructure on adjacent properties (including roading and rail networks) below slopes greater than 25° that would be directly affected by a landslide or debris flow, including roads, bridges, dwellings and other buildings, significant natural area, and waterbodies that are not streams or rivers.	Infrastructure or a waterbody that is not a stream or river is present on a neighbouring property below a slope greater than 25°: - No → - Yes →	 → Low risk – No further assessment → High risk – Further assessment required 	Yes, if the connection between a slope and the feature is direct.	Some, but largely inferred because focus is often on waterways.	Yes, property boundaries, significant natural areas and water bodies must be marked on the harvest plan. Because the requirement is for direct proximity, the features should be visible and well known to harvest planners.	Yes.	Yes, insofar as it requires marking on the harvest map. Slope information should already be provided as above.

Criteria and action				Suitability of criteria for a regulation				
Proposed mear Risk indicator measurement	of Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?	
 7. Connectivity to downstream infrastructure (roads, bridges, settlements) and sensitive areas such as beaches and fisheries used by people Mark on the ha plan, for sites whigh-risk slope connects to a waterbody (as a whether there a any of the follow downstream: robridges, settlem significant natu area, and beach and fisheries us people. 	est One or more of the following is downstream of the high-risk slope that connects to a waterbody: roads, bridges, settlements, significant natural area, and beaches and fisheries used by people. - No → I by - Yes →	 → Medium risk – Determine mitigation measures to manage risk → High risk – Remove slash from slope and/or seek resource consent to manage risk (TBC on outcome of consultation) 	Yes.	Yes, though the immediacy and intensity of consequences depend on slash loading and weather events.	Yes. Features may not be obvious but where a high- risk area has been identified maps and features of the downstream area are readily available on topographical maps and Google Earth [™] .	Yes.	It is somewhat subjective in determining the sensitivity of an area (for example, most waterways will terminate in a beach but not all beaches are used by people).	

Criteria and action				Suitability of criteria for a regulation					
Risk indicator	Proposed means of measurement	Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?	

The following criteria are considered relevant but not sufficiently reliable for a regulation. However, they are important indicators of site-specific risk assessment and planning for risk mitigation.

8.	Rainfall – high	HIRDS is an online	Thresholds will vary	Harvest planners should	Yes, as a	Yes. ¹²	Yes.	lt requires	No. HIRDS
	intensity or	tool that can estimate	according to a site.	consider expected accumulated	trigger, but the			some skill and	provides a range
	extended rainfall is	the magnitude and	Although an individual	and event rainfall during the	size of the risk			experience to	of estimates but
	strongly correlated	frequency of high	harvest planner can	period of the window of	depends on the			interpret.	as a predictor in a
	with increased	intensity rainfall at	learn a lot about site risk	vulnerability, and use it with	size of the				regulation we
	susceptibility to	any point in New	from HIRDS (and already	soil, slope and connectivity	event and				would need to
	landsliding; ¹⁰	Zealand. It estimates	uses this for planning	information to assess slash	every site is				specify the
	strong flood flows	high intensity rainfall	infrastructure) it would	management needs on the	different.				appropriate
	will mobilise and	at ungauged locations	be difficult to set a	cutover.					return period and
	transport slash in	for a range of return	national threshold that						event duration,
	waterways	periods and event	is meaningful for slash						which would
		durations.	mobilisation risk.11						require
									additional
									assumptions.
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¹⁰ De Vilder et al, 2024; Phillips, 2017; Smith, 2023.

¹¹ Areas across New Zealand have different susceptibilities to rainfall-induced landslides due to different geology, topography, physiography and land cover, therefore, the amount of rainfall required to trigger landslides varies across the country (De Vilder et al, 2024).

¹² "Land cover followed by slope and rainfall had the largest influence [on landslide susceptibility] ...pasture, slope and harvested forest had the largest positive coefficient values (increasing landslide susceptibility). In contrast, indigenous and exotic forest had the largest absolute coefficient values with a negative effect (decreased susceptibility)" (Smith et al, 2023).

Criteria and action				Suitability of criteria for a regulation				
Risk indicator	Proposed means of measurement	Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?
9. Catchment factor	Melton's Ratio (R), ¹³	Catchments with a		Not for an	Some.	No. The forest	No. It requires	No.
to signal how	is an index of	Melton's Ratio (R) > 0.5		individual		owner only has	understanding	
mobilised material	catchment	are capable of		property.		information	how to	
from a single site	ruggedness. It is one	generating debris flows.				about their	measure	
may contribute to	index that gives a					intentions not	catchment	
cumulative harm.	useful indication of					the actions or	ruggedness and	
This is a function	which catchments					intentions of	catchment	
of:	have the potential to					other land	area.	
 size of harvest 	generate debris flows					owners.		
site	and their runout fans.							
 proportion of 	Melton's Ratio (R) is							
catchment	equal to catchment							
within window	relief (highest altitude							
of vulnerability	minus lowest altitude							
	in metres) divided by							
	the square root of							
	catchment area.							

¹³ Rosser et al, 2020.

Criteria and action				Suitability of criteria for a regulation					
Risk indicator	Proposed means of measurement	Threshold for action	Action	Is this a certain predictor of risk? (noting risk is on a continuum)	Relevant evidence of cause or consequence?	Is information available to all parties	Is this information easy to use?	Is the indicator readily measurable to a meaningful level of accuracy?	
10. Slope features that indicate increased risk ¹⁴	 Are any of these features present: gully with headwall slope break gully that could intercept and channel landslide to waterway convex slope convergent slope Are these present: concave slope divergent slope 	 → Indicates increased risk → Indicates decreased risk 		No. Individual features are associated with risk but are highly site specific.	Some.	Yes, the features are on the site being assessed.	Yes, if you have the knowledge and experience to interpret the information.	No. Too many variables involved in assessing risk.	

Note: DEMs = Digital Elevation Model; ESC = Erosion Susceptibility Classification; GIS = Geographic Information System; HIRDS = High Intensity Rainfall Design System; LiDAR = Light Detection and Ranging; LUC = Land Use Capability.

¹⁴ For example, MPI, 2024; Smith et al, 2023.

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