

Determining the Quantity of ERs to Allocate to the Reversal Buffer and the Pooled Reversal Buffer

The “Buffer Guidelines, Version 1 from December 2015” document from the Forest Carbon Partnership Facility (FCPF, <https://www.forestcarbonpartnership.org/guidelines-and-templates>), it establishes as follow:

A certain additional quantity of ERs out of the Total ERs should be allocated as Buffer ERs to the Reversal Buffer and the Pooled Reversal Buffer account to help manage the Reversal Risk. This additional quantity is calculated as a percentage of the Contract ERs and Additional ERs designated for transfer to the CF following each reporting period under the ERPA.

The Reversal Risk assessment tool shall be used to determine the Reversal Risk Set-Aside Percentages for each of the Risk Factors listed in the first column of Table 1 below. The full Reversal Risk Set-Aside Percentage for the whole ER Program is calculated as the sum of the Reversal Risk Set-Aside Percentages for each of the Risk Factors. The Risk Indicators in the second column of Table below are indicative and non-exclusive, and are provided to assess the Reversal Risk for each of the Risk Factors. The Reversal Risk is assessed for each Risk Factor (A-D) separately as high, medium or low. Based on the default Reversal Risk Set-Aside Percentage (Table 1, column 3) and depending on the classification of the Reversal Risk for each Risk Factor (A-D) and the corresponding incremental discount (Table 1, column 4), the resulting Reversal Risk Set-Aside Percentage should be determined.

Table 1. Methodology for Determination of Reversal Risk Set-Aside Percentage

Risk Factors	Examples of Risk Indicators	Default Reversal Risk Set-Aside Percentage	Discount (increment)	Resulting Reversal Risk Set-Aside Percentage
Default risk	Not applicable, fixed minimum amount	10%	Not applicable	10%
A. Lack of broad and sustained stakeholder support	<ul style="list-style-type: none"> - Are stakeholders aware of, and/or have positive experience with FGRM, benefit sharing plans etc. or similar instruments in other contexts? - Have occurrences of conflicts over land and resources been addressed? 	10%	Reversal Risk is considered high: 0% discount; OR	10%
			Reversal Risk is considered medium: 5% discount; OR	5%
			Reversal Risk is considered low: 10% discount	0%
B. Lack of institutional capacities and/or	- Is there a track record of key institutions in implementing programs and policies?	10%	Reversal Risk is considered high: 0%	10%

ineffective vertical/cross sectoral coordination	- Is there experience of cross-sectoral cooperation? - Is there experience of collaboration between different levels of government?		discount; OR	
			Reversal Risk is considered medium: 5% discount; OR	5%
			Reversal Risk is considered low: 10% discount	0%
C. Lack of long term effectiveness in addressing underlying drivers	- Is there experience in decoupling deforestation and degradation from economic activities? - Is relevant legal and regulatory environment conducive to REDD+ objectives?	5%	Reversal Risk is considered high: 0% discount; OR	5%
			Reversal Risk is considered medium: 2% discount; OR	3%
			Reversal Risk is considered low: 5% discount	0%
D. Exposure and vulnerability to natural disturbances	- Is the Accounting Area vulnerable to fire, storms, droughts, etc? - Are there capacities and experiences in effectively preventing natural disturbances or mitigating ¹ their impacts?	5%	Reversal Risk is considered high: 0% discount; OR	5%
			Reversal Risk is considered medium: 2% discount; OR	3%
			Reversal Risk is considered low: 5% discount	0%
Actual Reversal Risk Set-Aside Percentage: 10+(Result A+ Result B+ Result C+ Result D) = 10 to 40%				

Based on this Guideline the following analysis where made for identifies risks of reversals in the Emission Reductions Program Document (ERPD) from Chile on 2016¹. Likewise, the guideline was applied to calculate the buffer of the reversal risk potential of the ENCCRV for the ER offered to GCF RBP pilot programme. Table 2 describes the determiniation of the reversal risk applied to the proposed ER for the period 2014-2016.

Table 2. Determination of Reversal Risk Set-Aside Percentage of ER offered to GCF RBP pilot programme

Risk factor	Description	Level of risk of causing regression ²	Justification for the evaluation
Default risk	Fixed minimum amount	10%	Fixed minimum amount established by the methodology.
A. Insufficient or non-sustained support from key stakeholders	<p>Risk due to</p> <ul style="list-style-type: none"> • Conflicts over land, • Poor appropriation of rights to benefits, and/or • Inadequate or negative inclusion of different stakeholders in the ER Programme. 	Medium – 5%	<p><u>Conflicts over land</u></p> <p>Most territorial conflicts nowadays arise over indigenous territories. According to an evaluation by CONAF, in conjunction with the technical assistance of the TECO Group³, problems between the Mapuche people and the Chilean state are considered a “severe obstacle” to the implementation of REDD+ activities. The Mapuche wish to reclaim their ancestral land, which is primarily located in the subnational area of the ER Programme. Conflict can also arise when already controversial projects involving natural resources, such as hydroelectricity, wish to participate in REDD+ projects.</p> <p>In order to avoid setting up REDD+ activities in disputed territories, it will be necessary to evaluate the risk of conflict posed by each proposal. Due to the nature of the Mapuche conflict, it will not be feasible to identify and avoid problematic areas in advance. However, the evaluation of the CONAF</p>

¹ Available on <https://www.forestcarbonpartnership.org/country/chile>

² Percentages represent the proportion of ERs that must be set aside as buffer stock due to its potential to cause regression. Figures are taken from Buffer Directives of the ER Programmes of the FCPF.

³ TECO Group SpA. 2016. An analysis of the technical and legal components and procedures required for the conception and future implementation of a system to transfer carbon reduction rights and share profit associated with payments for environmental services, with an emphasis on carbon. Prepared in conjunction with the CONAF.

			<p>recommended the creation of conflict categories and risk indicators according to community, based on the history of the area. Chile has also taken measures to resolve conflicts over indigenous land, such as passing Indigenous Communities Law No. 19.253 in 1993, which recognizes indigenous communities and the need to create land restitution systems. This led to the creation of the Land and Water Fund, administrated by the National Indigenous Development Corporation (CONADI). This fund provides indigenous peoples or communities with subsidies to acquire land, including the restitution of ancestrally occupied land.</p> <p><u>Experiences of profit-sharing plans</u></p> <p>Chile has experienced problems in terms of profit sharing, which is being implemented in accordance with the Decree of Law No. 701 (DL 701) and the Native Forest Act. First of all, environmental liabilities were accrued, causing certain social displacements to impede the extension of DL 701. Secondly, the resources given to certain (private) sectors became concentrated, as these were allocated by hectare. This meant that it was mainly large-scale owners who benefited from this. The environmental impact caused by the spread of monoculture was brought about by problems in the system's design and the fact that the system was conceived to create an industry and strengthen industrial stakeholders, not as a redistribution mechanism.</p> <p>In order to avoid these problems in the future, a "profit-sharing mechanism" is currently being drawn up that will not only integrate economic and monetary returns but that will also encompass cultural, social and environmental returns according to a fair, equitable and transparent approach.</p>
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			<p><u>Participation of key stakeholders</u></p> <p>Chile hopes to involve a large number of key stakeholders by means of the Social and Environmental Safeguards Implementation Plan. Within the Social and Environmental Safeguards (SESA) framework being devised in Chile, the Public and Indigenous Consultation and Self-Evaluation system has been developed, which includes a participatory process involving a group of key stakeholders (see Chapter 5 for more details on this process). Through the MGAS, Chile hopes to continue this participatory process throughout the ER Programme implementation phase so as to reduce the possibility of any negative impacts and regression.</p>
<p>B. Lack of institutional capacity and/or ineffective vertical/cross-sector coordination</p>	<p>Risk due to the insufficient knowledge and skills of the various institutions involved and the lack of coordination between them</p>	<p>Low – 0%</p>	<p>Chile has taken various measures to ensure that the several governmental institutions involved in the subject of climate change concerning land use are included. According to the UNFCCC, the REDD+ focuses on the CONAF, which is answerable to the Ministry of Agriculture (MINAGRI); more specifically the Climate Change and Vegetation Resources Unit (UNCCRV), a sub-department of the CONAF, which has taken on the role of coordinating the various other institutions and leading the implementation of the ENCRRV. In order to improve institutional coordination, the Intra-Ministerial Technical Committee on Climate Change (CTICC) was founded. This committee is coordinated by the Office of Agricultural Studies and Policies (ODEPA), which will be represented in all 15 regions of the country. The Forestry Institute (INFOR) and the Natural Resources Information Centre (CIREN) have also played a part in defining technical aspects of the REDD+ and will continue providing support throughout the MRV phase.</p>

B. Lack of long-term effectiveness in confronting underlying factors	<p>Risk due to inadequate laws, legislative changes, the design of the ER Programme, which does not sufficiently address the causes and agents of deforestation and degradation, corruption and ineffective governance, lack of execution and a lack of continuous funding.</p>	<p>Medium – 3%</p>	<p>Chile receives a fair amount of political backing for the ENCCRV, including by virtue of Law 20.283 and Decree 259, which encourage activities conducive to the reduction of deforestation and the sustainable management of forests. There are confirmed plans to pass another act on forest development, which will act to extend this support. However, there is currently a distinct lack of legal instruments being implemented to enforce the prevention of forest degradation.</p> <p>There is a project concerned with the traceability of firewood and other projects, which will be integrated into the CONAF audit plan. This project will help differentiate between products from deforested or degraded areas and those from sustainably managed forests.</p> <p>In terms of the lack of permanence of this legislative framework, there is always the possibility of a change in government, leading to less of an emphasis on emission mitigation. Nevertheless, the political environment is conducive to REDD+ objectives, given that there is a certain charge on parliamentary and ministerial commissions to prevent any drastic changes in the future.</p> <p>Action measures developed in the ENCRRV framework have been carefully drawn up by experts. Those experts know well the country's situation and the causes and agents of deforestation and degradation. These measures aim to address the underlying causes of deforestation and degradation to provoke permanent change in the way forests are used, without the risk of reversals once the ER Programme period comes to an end. One way in which the measures hope to directly tackle the underlying causes is by valuating forests and organising the firewood market, as this is the main product associated with degradation. In this way, the measures</p>
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			<p>will create new opportunities and regularise subsistence for agents of deforestation and degradation instead of simply blocking subsistence with bans on the extraction of the product.</p> <p>Chile is currently in the process of seeking funding to maintain mitigation measures following the ER Programme in order to preserve the sustainability of emission reduction and removal. Although there is no fixed funding for the future, there are various other potential sources, including the Green Climate Fund of the UNFCCC, World Bank funds, a domestic system created through the EFF and private company funds, among others.</p>
D. Exposure and vulnerability to natural disturbances	Risk of natural disturbances and disasters	Medium – 3%	<p>Subnational areas of the ER Programme are at a medium risk of natural disasters due to earthquakes, volcanic eruptions and drought in the country. Most disasters will not cause extensive damage to forests. Volcanic eruptions can cause deforestation in the area immediately surrounding the volcano. For example, 16% of annual deforestation in relation to the subnational Forest Reference Emission Level (FREL) was the result of volcanic eruptions. This occurred in the Los Ríos and Los Lagos regions. According to the Significant Volcanic Eruptions Database⁴, 19 significant eruptions have taken place in regions encompassed in the subnational FREL/FRL (Forest Reference Level) since the year 1800. This figure corresponds to a recurrence interval of 13.5 years and a 37% probability of occurrence during a five-year ER Programme.</p> <p>Forest fires cause more degradation, although all forest fires in Chile are classed as being 100% anthropogenic and are addressed by means of mitigation measures. However, there could be more</p>

⁴ National Geophysical Data Center/World Data Service (NGDC/WDS). Significant Volcanic Eruptions Database. National Geophysical Data Center, NOAA. doi: 10.7289/V5JW8BSH

			<p>natural fires in the future due to climate change. Earthquakes also cause forest degradation, although the recurrence interval of significantly strong earthquakes affecting forests is over 100 years (the last such earthquake recorded was in 1960 in Valdivia) and the risk is therefore low⁵.</p> <p>Climate change can also exacerbate degradation caused by drought and outbreaks of pests or disease. In the 20th century, south-central Chile had less rainfall and lower water levels^{6,7} and models indicate that this declining tendency will continue into the 21st century⁸. Finally, according to Alarcón and Cavieres (2015)⁹, climate change can alter the size of habitats of various species living in moderate forests in Chile. This can, in turn, have negative or positive effects on the forests' capacity to sequester and store carbon. This factor is deemed to pose a medium risk in light of the high risk of various types of natural disaster, even though only one type of natural disaster actually causes extensive damage to forests (volcanic eruptions).</p>
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⁵ Carbon Decisions International, Universidad Mayor, Ernst Basler+Partner. 2015. Managing leakage and non-permanent risk. Final report – Part 2/3 of RG-T2357-SN1 - Drafting a JBD for the Mediterranean Administrative Area of Chile.

⁶ Lara A, Villalba R, Urrutia RA. 2008. 400-year tree-ring record of the Puelo River streamflow in the Valdivian rainforest Eco-region, Chile. *Climatic Change*. 86(3-4): 331-356.

⁷ Villalba R, Lara A, Masiokas MH, Urrutia RB, Luckman BH, Marshall GJ, Mundo IA, Christie DA, Cook ER, Neukom R, Allen K, Fenwick P, Boninsegna JA, Srur AM, Morales MS, Araneo D, Palmer JG, Cuq E, Aravena JC, Holz A, Le Quesn C. 2012. Unusual Southern Hemisphere tree growth patterns induced by changes in the Southern Annular Mode. *Nature Geoscience* 5, 793–798.

⁸ Department of Geophysics of the University of Chile (DGF). 2007. Climate Variability Study in Chile over the 21st Century. Regional Climate Changes in the 21st century obtained using the PRECIS model. Santiago, Chile. National Environmental Committee (CONAMA, Chile). Available at: www.dgf.uchile.cl/PRECIS (Consulted on 4 January 2016).

⁹ Alarcón D, Cavieres LA. 2015. In the Right Place at the Right Time: Habitat Representation in Protected Áreas of South American Nothofagus-Dominated Plants after a Dispersal Constrained Climate Change Scenario. *PLoS ONE* 10(3): e0119952. doi:10.1371/journal.pone.0119952.