

The Treasury

Residential Flood Insurance Issues Information Release

December 2022

This document has been proactively released by the Treasury/Minister of Finance (Hon Grant Robertson)/ Minister Responsible for the Earthquake Commission (Hon Dr David Clark) on the Treasury website at <https://www.treasury.govt.nz/news-and-events/reviews-consultation/residential-flood-insurance-issues>

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Treasury Report: Flood insurance risk pricing

Date:	4 August 2021	Report No:	T2021/1900
		File Number:	SH-11-4-3-14-2

Action sought

	Action sought	Deadline
Minister of Finance (Hon Grant Robertson)	Indicate whether you would like to meet with the Treasury to discuss flood insurance risk pricing.	None
Minister Responsible for the Earthquake Commission (Hon Dr David Clark)	Refer this report to the Minister of Climate Change.	

Contact for telephone discussion (if required)

Name	Position	Telephone	1st Contact
Sam Thornton	Senior Analyst, Financial Markets	s9(2)(k)	N/A (mob) ✓
Dasha Leonova	Manager, Financial Markets	s 9(2)(g)(ii)	

Minister's Office actions (if required)

Return the signed report to Treasury.
Refer this report to the Minister of Climate Change.

Note any feedback on the quality of the report

Enclosure: No

Annex 3 withheld in full s9(2)(b)(ii)

Treasury Report: Flood insurance risk pricing

Executive Summary

This report seeks an indication as to whether you would like to discuss flood insurance risk pricing with the Treasury before we report to you in October 2021 on broader insurance issues related to climate change.

Ongoing sea-level rise and extreme weather events exacerbated by climate change are expected to challenge the insurability of assets exposed to those risks.

Work is underway across government to establish a clear position on the role of central government in providing support to individuals, businesses and communities affected by climate change. s9(2)(f)(iv)

Tower Insurance has told us it will begin phasing in more granular flood risk pricing for residential property insurance by the end of 2021. While around 90 percent of New Zealand homes have no exposure to river and pooling flooding, just under five percent have a level of river and pooling flood risk that, if fully risk-priced, equates to a potentially significant flood risk premium of greater than one percent of the sum insured (e.g. a flood risk premium over \$5,000 for a home insured for \$500,000).

New flood risk models, including the May 2021 flood model released by catastrophe modelling company RMS, have recently improved insurers' ability to granularly price flood risk for individual properties. The new flood models, combined with recent flooding events in New Zealand and internationally, could provide an impetus for insurers to increasingly risk-price flood insurance. Tower's pricing approach could also trigger other insurers to respond by shifting to greater use of flood risk pricing too.

The main way in which the Government directly supports property insurance affordability and availability in New Zealand is through the Earthquake Commission (EQC) scheme. EQC covers residential land damage caused by floods and storms. However, EQC does not cover flood or storm damage to buildings (which is generally covered by private insurers) or erosion damage to land or buildings (as erosion is a gradual rather than an "event" based loss).

Internationally, countries have established a range of intervention models in response to concerns about flood insurance affordability and availability. The UK's scheme, Flood Re, is generally regarded as effective at supporting insurance availability and affordability for flood-prone homes. s9(2)(f)(iv)

Ideally, we recommend that you consider flood insurance affordability and availability options in the context of climate change adaptation. s9(2)(f)(iv)

As part of the development of the National Adaptation Plan for climate change risks, the Treasury will report to you in October with an update on risks to the insurability of assets due to more granular flood risk pricing, ongoing sea-level rise and extreme weather events, and to seek feedback on the direction of travel.

Recommended Action

We recommend that the Minister of Finance and the Minister Responsible for the Earthquake Commission:

- a **note** that new flood models, combined with recent flooding events in New Zealand and internationally, could provide an impetus for insurers to more granularly risk-price flood insurance in the near-term.
- b **note** that the Treasury will report to you in October with an update on risks to the insurability of assets due to more granular flood risk pricing and ongoing sea-level rise and extreme weather events, and to seek feedback on the direction of travel.
- c **indicate** whether you would like to meet the Treasury prior to the October report noted in recommendation *b* to discuss flood insurance risk pricing, including:
- the impact of more granular flood risk pricing on residential property insurance affordability and availability,
 - the UK's insurance intervention Flood Re, and
 - the sequencing and ambition of policy work on the Government's response to risks to the insurability of assets due to ongoing sea-level rise and extreme weather events.

Yes/no.

- d **refer** this report to the Minister for Climate Change.

Yes/no.

Dasha Leonova
Manager, Financial Markets

Hon Grant Robertson
Minister of Finance

Hon Dr David Clark
Minister Responsible for the Earthquake Commission

Treasury Report: Flood insurance risk pricing

Purpose of Report

1. This report provides information requested by the Minister Responsible for the Earthquake Commission on:
 - potential changes to the price and supply of residential property insurance if insurers adopt more granular risk pricing for river and pooling flood risk; and
 - the UK's insurance intervention Flood Re.
2. This report seeks an indication as to whether you would like to discuss flood insurance risk pricing with the Treasury before we report to you in October 2021 on broader insurance issues related to climate change.

Background

3. The Minister Responsible for the Earthquake Commission met Tower Insurance in May 2021 to discuss Tower's plans to increasingly differentiate residential property insurance premiums based on flood risk (i.e. more granularly risk-price flood insurance). Following that meeting, the Minister Responsible for the Earthquake Commission requested further information from the Treasury on:
 - how many properties could be affected by more granular flood risk pricing and how significantly those properties could be affected;
 - the effectiveness of the UK's flood insurance intervention Flood Re at supporting flood insurance uptake, and any challenges the scheme faces; and
 - whether New Zealand should consider regulations to require insurers to disclose risk factors for individual residential properties used to price insurance.
4. This report covers the first two points above. The Treasury will separately brief the Minister of Finance and the Minister Responsible for the Earthquake Commission on our work to improve consumer information and understanding of insurance and risk.

Flood insurance in New Zealand

Alongside earthquakes, floods are one of New Zealand's top natural hazard perils

5. Insurance Council of New Zealand (ICNZ) data shows that since 1968 flooding has accounted for around half of New Zealand's approximately 200 significant natural disasters. While earthquakes are the cause of New Zealand's top three costliest natural disasters since 1968 in terms of insured losses, damaging floods occur more frequently. Globally, severe weather events (including wind, hail and flooding) are by far the most significant driver of natural catastrophe losses.
6. The Reserve Bank's latest Financial Stability Report noted that the cost of weather-related catastrophes in New Zealand over recent years has been consistently higher than long-term averages. ICNZ reported that 2020 was New Zealand's costliest year

for insured losses from severe weather, which included flooding in Napier (November 2020), the upper North Island (July 2020) and Southland (February 2020).

7. Ongoing sea-level rise and extreme weather events exacerbated by climate change are expected to continue to increase the risk of such natural disasters in New Zealand.

Insurance plays a significant role in managing the impact of flood risk in New Zealand

8. Insurance plays a significant role in managing the financial impact of natural disasters by pooling and transferring the financial risk. Insurance contributes to New Zealand's resilience, reduces uncertainty for property owners and the Crown, and reduces the implicit liability to the Crown (e.g. of providing *ad hoc* financial assistance after an event). However, it is not economically efficient to insure all risks at any cost.

A feature of the New Zealand insurance market is that private flood insurance is readily available and offered as part of the standard "all risks" insurance offering

9. The main way in which government directly supports property insurance markets in New Zealand is through the Earthquake Commission (EQC) scheme. EQC covers residential land damage caused by a flood and storm.¹ However, EQC does not cover flood or storm damage to buildings (which is generally covered by private insurers) or erosion damage to land or buildings (as erosion is a gradual rather than "event" based loss).
10. The Treasury examined the availability of flood insurance in 2020 when advising the Minister Responsible for the Earthquake Commission on whether EQC cover should be extended to flood risk and other perils exacerbated by climate change [T2020/3782 refers].
11. Our advice noted that there was no issue with either the availability or affordability of private flood cover at that time that warranted extending EQC cover to residential buildings for storm and flood damage. The Treasury found that no areas were subject to blanket flood insurance exclusions. However, we are aware that insurers apply higher flood excesses or decline flood cover on an individual property basis. The Treasury recommended, and the Minister Responsible for the Earthquake Commission agreed, not to extend EQC cover to residential buildings for storm and flood damage.

The ubiquity and apparent affordability of flood insurance in New Zealand is unusual internationally and may not last

12. Globally, the costliest natural disasters are weather events, not earthquakes. In response to concerns about insurance unaffordability and limited availability, countries have established a range of intervention models.

The UK's flood insurance intervention Flood Re

13. Flood Re is a UK insurance scheme that ensures the availability of flood insurance for eligible homes, caps flood insurance premiums, and cross-subsidises flood insurance costs between homeowners. The purpose of the scheme is to:
 - promote the affordability and availability of flood insurance for homes with the highest risk of flood (expected to be 1-2 percent of UK homes); and
 - manage the transition of the household flood insurance market to risk-reflective pricing.

¹ Land cover has never been provided by insurers. EQC cover was extended to land following the 1979 Abbotsford landslide.

14. Flood Re is funded by a mix of compulsory levies on all residential property insurers (approximately £10 per insured home), combined with reinsurance premiums on flood-prone homes reinsured with the scheme.
15. Flood Re includes two key features to mitigate the perverse incentives Flood Re creates for development in flood-prone areas and other flood risk adaptation measures (e.g. under-investment in flood protection):
 - Flood Re is only available to homes built before 1 January 2009. New homes face full market pricing and the corresponding incentives to make decisions that manage flood risk appropriately.
 - Flood Re is planned to end by 2039. The end date creates an incentive for continued investment in flood risk reduction by governments and individuals for homes built before 2009. As part of the establishment of Flood Re, the UK government made commitments to increase spending on flood defences.
16. Flood Re is generally regarded as effective at supporting insurance availability and affordability for flood-prone homes. However, the long-term success of the scheme relies on the scheme providing enough time for flood defences to be completed. The scope and scale of public investment required may influence the success of Flood Re and its perceived credibility as a *temporary* intervention. s9(2)(f)(iv)
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
17. Further information on Flood Re is outlined in Annex 1.

Australia's Cyclone Reinsurance Pool Taskforce

18. Over the past decade Australia has held several government inquiries over concerns about the affordability and availability of insurance in cyclone and flood-prone areas in northern Australia.
19. In May 2021, the Australian Federal Government announced the establishment of a reinsurance pool for cyclone and related flood damage to improve the availability and affordability of insurance for properties in cyclone and flood-prone areas. Public consultation on the design of the scheme is currently underway. Further information on the proposed cyclone reinsurance pool in Australia is outlined in Annex 2.

As flood risk information and modelling improves, flood insurance will increasingly be risk-priced more granularly to reflect the risk, putting upward pressure on flood insurance

20. The contrasting treatment of flood risk between New Zealand's and Australia's insurance markets is particularly striking given the two largest general insurers operating in New Zealand both have Australian parents (IAG and Suncorp). Insurers have previously told us that the difference is mainly due to Australia having better flood maps than New Zealand.
21. In May 2021, US-based company RMS released a river flood catastrophe risk model for New Zealand. Catastrophe models are built to assess losses to an insurer at a portfolio level. Catastrophe models are typically used to support regulatory capital requirements such as reinsurance purchasing decisions. Underwriting models draw on many of the same inputs but are built to risk rate at an individual property resolution. As well as a detailed understanding of the peril risk at a site, underwriting models include a more granular understanding of a location's construction and peril mitigation initiatives.

22. The RMS model enables insurers to better assess the flood risk for specific areas and properties, creating upward pressure on insurance premiums for properties subject to higher flood risk. RMS has stated that the model provides a 10-metre resolution grid in urban centres, enabling insurers to differentiate risk (and therefore premiums) between nearby locations with different flood risk. The model uses data obtained from local government and research institutions (e.g. NIWA)².
23. CoreLogic, an international property data and analytics company, also offers a New Zealand flood risk model. CoreLogic says its model provides a relative flood risk score for every address and location in New Zealand.
24. Both the RMS and CoreLogic models cover river flooding and pooling from rainfall (pluvial and fluvial flooding). Neither model currently includes coastal flooding.
25. Both models also include flood defences. This can make a major difference to the risk (refer to Box 1 below).

² In 2020 the MBIE-administered Endeavour Fund for scientific research awarded \$15m over five years to NIWA to produce New Zealand's first consistent national flood map, showing where flooding is likely to occur and identify the vulnerability of assets.

Box 1: CoreLogic New Zealand Flood Map – Impact of flood defence data

Key: Red = relatively higher flood risk. Green = relatively lower flood risk

Before including flood defences



After including existing flood defences



Source: CoreLogic

Just under five percent of New Zealand homes have a level of river and pooling flood risk that may lead to high insurance premiums

26. EQC, via its brokerage relationship with Aon, has provided general information on modelled river and pooling flood risk. Of the two million residential homes in New Zealand, around 90 percent have no exposure to river flooding. This is consistent with indications from Tower that around 90 percent of its customers would see no increase in their premiums from more granular flood risk pricing. The table below indicates the number of homes with different levels of flood risk, and the associated flood risk technical premium. The technical premium is the modelled expected claims cost of insuring the home for flood risk.

Flood risk (river and pooling) for New Zealand homes		
Stylistic relative risk rating	Definition	Proportion total and estimated number of homes
No flood risk	No flood risk.	89.8 percent (around 1,810,000 homes)
Low flood risk	Flood risk technical premium less than one percent of the sum insured.	5.4 percent (around 109,000 homes)
Medium flood risk	Flood risk technical premium between one percent and two percent of the sum insured. (e.g. a technical flood risk premium between \$5,000 and \$10,000 for a home insured for \$500,000).	2.9 percent (around 58,000 homes)
High flood risk	Flood risk technical premium greater than two percent of the sum insured. (e.g. a flood risk premium over \$10,000 for a home insured for \$500,000).	1.9 percent (around 38,500 homes)
<i>Source: Aon flood risk model.</i>		

27. s9(2)(b)(ii) and s9(2)(ba)(i)

28. Tower has told us that full flood risk pricing could result in around s9(2)(b)(ii) and s9(2)(ba)(i) percent of their customers facing major affordability challenges (e.g. home insurance premiums over s9(2)(b)(ii) and s9(2)(ba)(i), but we do not have information on how this relates to sum insured).

Insurers may start phasing in greater flood risk pricing by the end of 2021, but the timing and extent is uncertain

29. When setting insurance premiums, insurers consider a wide range of factors alongside the technical risk-based premium, such as their risk tolerance and local risk concentrations, competition dynamics, and business strategy.

30. Tower has told us it will begin phasing in more granular risk-based pricing by the end of 2021. Tower’s pricing approach could trigger other insurers to respond by shifting to

more granular flood risk pricing too. Tower was the industry first-mover to adopt greater risk pricing for earthquakes in 2019, which precipitated similar moves by other insurers. The new flood models, combined with recent flooding events in New Zealand and internationally, could create an impetus for insurers to increasing risk-price flood insurance.

31. Tower has indicated that more granular flood risk pricing redistributes the cost of flood risk, rather than increasing the aggregate flood risk across the market. This implies some properties could receive lower premiums if found to have no or low flood risk.

Links to climate change and next steps

Climate change is expected to exacerbate flood risk

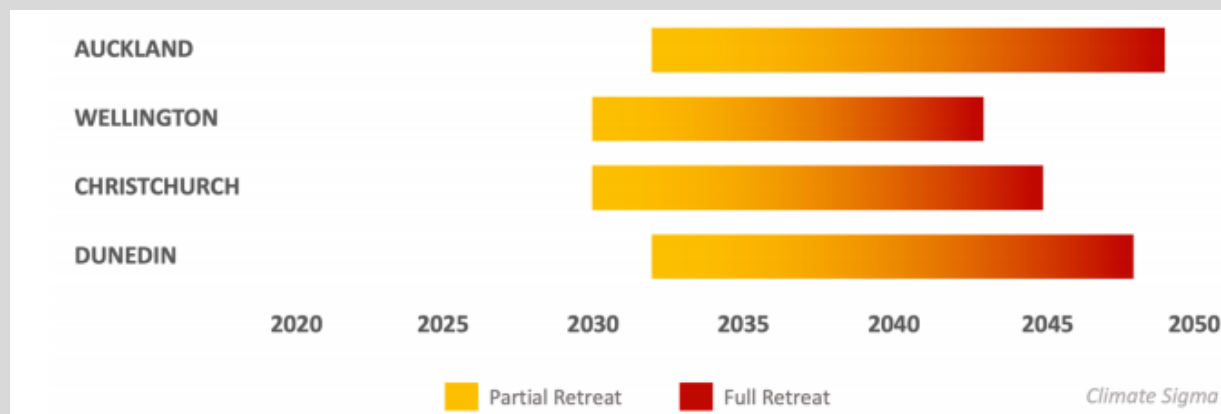
32. Climate change is expected to increase the severity and frequency of extreme rainfall events as the water-carrying capacity of the atmosphere increases with temperature, increasing the risk of river and pooling floods. Research has found that a proportion of the costs major flooding events in recent years can be attributed to anthropomorphic climate change.³
33. Ongoing sea-level rise will also continue to increase flood risk in coastal areas. It is a near certainty that the sea will rise 20-30 centimetres by 2040. Relatively small increases in the sea-level can drive significant increases in the frequency of coastal flooding.
34. The 2020 National Climate Change Risk Assessment identified risks to the insurability of assets due to ongoing sea-level rise and extreme weather events. The Risk Assessment found that projected changes in the frequency and intensity of natural hazards, such as flood, fire, storm-surge, landslide, hailstorm and tsunami, are causing the insurance industry to reassess their product offerings. In addition to buildings, all types of insurance that currently cover losses from climate change exacerbated risks could be affected (e.g. contents, vehicle, business interruption, private and government-owned infrastructure, crop and forestry).
35. The extent of insurers' response to higher or more frequent losses from a climate change exacerbated risks is not known, but could include higher premiums, withdrawal of cover generally, exclusions for specific perils, higher excesses or more limited caps on coverage. While climate change will play out over decades, the timing of the insurers' responses could be sudden, triggered by both improved risk modelling and significant natural disasters. The actions of one insurer, particularly in New Zealand's relatively concentrated property insurance market, could drive others to follow suit to maintain the diversity of their portfolios and avoid insuring a disproportionately large share of high-risk properties.
36. Research⁴ published in 2020 as part of the Deep South Science Challenge estimated that homes in Wellington and Christchurch that currently have a one percent probability of coastal inundation are expected to face partial insurance retreat from 2030. Across Auckland, Wellington, Christchurch and Dunedin, full insurance retreat was estimated to occur for at least 10,000 properties by 2050. The research estimates the timing and nature of insurers' responses to increased risk based on anecdotal evidence that:

³ Frame, D.J., Rosier, S.M., Noy, I. et al. *Climate change attribution and the economic costs of extreme weather events: a study on damages from extreme rainfall and drought*. Climatic Change 162, 781–797 (2020).

⁴ Storey, B., Owen, S., Noy, I. & Zammit, C. (2020). Insurance Retreat: Sea level rise and the withdrawal of residential insurance in Aotearoa New Zealand. Report for the Deep South National Science Challenge, December 2020.

- partial insurance retreat (e.g. increased excesses or exclusions) begins to occur when a risk reaches a two percent likelihood of occurring each year (i.e. a two percent annual exceedance probability or AEP), and
- full insurance retreat (e.g. insurers stop offering or renewing insurance cover) occurs by the time a risk reaches a five percent likelihood of occurring each year (i.e. a five percent annual exceedance probability or AEP).

Estimated timing of insurance retreat for homes that currently face a one percent probability of coastal inundation



Source: Insurance Retreat, Sea level rise and the withdrawal of residential insurance in Aotearoa New Zealand (refer footnote 4 for full source citation).

Work is underway to consider the role of central government in supporting climate change adaptation, including options for how the costs of adaptation could be shared

37. Climate change raises policy issues regarding the appropriate role of central government in providing support to affected individuals, businesses and communities (e.g. contributing funding for flood protection or floodplain retreat, supporting insurance affordability and availability).
38. Work is underway across government to establish a clear position and framework on climate change adaptation, including the Ministry for the Environment-led Climate Adaptation Act (CAA) and National Adaptation Plan (NAP).

Climate Adaptation Act

39. The CAA will set out the framework for managed retreat, including how the costs and risks of managed retreat are shared. The CAA is intended to be introduced to Parliament in 2023, with public consultation on the draft CAA alongside consultation on the NAP in early 2022. In the lead up to Cabinet’s consideration of the draft CAA consultation material in early 2022:

- The Ministerial Oversight Group for the Resource Management Act reform is due to consider an overview of the decision making and processes for the proposed CAA at their meeting on 20 October 2021.
- The Ministry for the Environment intends to take a discussion on high-level issues and options for managed retreat (focusing on how the risks and costs of managed retreat should be shared) to the Prime Minister’s Climate Response Ministerial Group in November 2021.

Please note, this did not occur

National Adaptation Plan

40. The National Adaptation Plan is an all-of-government plan that will set out the actions the Government will take over the next six years to address the risks identified in the

National Climate Change Risk Assessment published in August 2020. The NAP will also include indicators that the Climate Change Commission will use to measure the effectiveness of actions.

41. The NAP is considering a wide range of adaptation options, including funding mechanisms and how the costs of adaptation will be shared. We expect Climate Change Ministers will consider the draft National Adaptation Plan actions in December 2021 with direction on scope being sought in September 2021.

Resource Management Act Reforms

42. The MfE-led Resource Management reforms are developing a National Planning Framework (NPF) under the proposed Natural and Built Environment Act. The NPF would include principles and rules for local government decisions on land use, including how local government should consider conflicts between pressure for development and natural hazard risk.
43. The resource management reforms are the key lever for the management of natural hazard risk. Avoiding and controlling risk through land-use rules supports the long-term affordability and availability of insurance. Most countries spend far more on response and recovery from natural disasters than they do on mitigation of natural hazard risk. NZIER research commissioned by the Department of Internal Affairs (DIA) suggested shifting investment towards mitigating known hazards (particularly flood risk) for which measures can materially reduce expected future costs.
44. DIA has also developed initial principles and rules for flood risk management that could be given effect in the NPF [refer DIA report LG202100790]. For example, local land-use plans could be required to avoid development or intensification in areas with current or future significant flood risk to life or property or establish appropriate flood risk reduction mechanisms, including requiring homes to be rebuilt with higher minimum floor levels post-event (where rebuilding is appropriate).

Ideally, flood insurance affordability options are best considered in the context of climate change adaptation

45. The Government's response to more granular flood risk pricing in the near-term, and potential flood insurance affordability and availability issues, will be difficult to separate from its broader response to flood risk exacerbated by climate change.

46. s9(2)(f)(iv)

47. The different characteristics of flood risk compared to most EQC-covered perils (e.g. earthquakes, volcanic eruptions) mean a different treatment by government may be justified. Compared to earthquakes, there is arguably a stronger role for avoiding and controlling flood risk, and greater costs from relying on insurance, because:
 - flood risk may be more amendable to targeted preventative adaptations with broader community benefits (earthquake adaption is less easily targeted because almost all properties in New Zealand face some risk); and
 - flood risk affects a more distinct set of properties compared to earthquake risk, creating clearer winners and losers from government support (almost all properties in New Zealand face some seismic risk, but only around ten percent face some flood risk).

- 48. Close monitoring of the insurance market will allow the Government to keep an eye on the speed and extent of insurer responses to increasing risks due to climate change. The Treasury will shortly brief the Minister of Finance and the Minister Responsible for the Earthquake Commission on proposals for regular monitoring of residential property insurance premiums and penetration. While this work is for the purpose of monitoring the impact of the increase to the EQC cap, it could have the added benefit of enabling more regular and comprehensive monitoring of property insurance pricing and insurance penetration generally.

The Treasury will report to you in October with an update on risks to the insurability of assets due to ongoing sea-level rise and extreme weather events and to seek feedback on the direction

- 49. As a component of the NAP, the Treasury is working to better understand risks to the insurability of assets due to ongoing sea-level rise and extreme weather events, the nature of the problems created, and the scope of options available to the Government to respond to those problems. This is part of the broader cross-government work, the Treasury, MfE and other agencies are developing advice on the appropriate role of central government providing support to individuals, businesses and communities affected by climate change exacerbated perils. The Government has a range of possible options, such as regulatory actions to avoid or control development or intensification in high risk areas, funding support for adaptation and/or insurance affordability support.
- 50. The Treasury will report to you in October with an update on risks to the insurability of assets due to more granular flood risk pricing, ongoing sea-level rise and extreme weather events, and to seek feedback on the direction of travel.
- 51. At this stage we do not anticipate the October advice covering concrete options for new government interventions to support insurance affordability and availability. Instead, we anticipate focusing on areas of further research and policy work, including the nature, timing and impacts of changes to insurability from different perils, the Government's potential objectives for insurance markets, and the plan for developing options to meet those objectives over the six-year timeframe of the NAP.

- 52.  s9(2)(f)(iv)

Annex 1: The UK Flood Re insurance scheme

What is Flood Re?

53. Flood Re is a UK insurance scheme that ensures the availability of flood insurance for eligible homes, caps flood insurance premiums, and cross-subsidise flood insurance costs between homeowners. Flood Re is owned and operated by the insurance industry and is funded by a mix of compulsory levies on all residential property insurers, combined with reinsurance premiums on flood-prone homes reinsured with the scheme.
54. The scheme began operating in 2016 in response to a rapid increase in flood risk premiums. The purpose of the scheme is to:
 - promote the affordability and availability of flood insurance for homes with the highest risk of flood (expected to be 1-2 percent of UK homes), and
 - manage the transition of the household flood insurance market to risk-reflective pricing.

How did Flood Re come about?

55. Flood Re began offering reinsurance in 2016 following two years of design and implementation.
56. For decades prior to Flood Re, concerns about flood insurance availability underpinned arrangements between the UK Government and insurers that committed:
 - insurers to continue to offer cover to existing homes, and
 - the UK Government to invest in flood protections.
57. As the arrangements effectively only applied to existing insurers (not new entrants), they were considered unsustainable. In 2008, the UK Government and the Association of British Insurers renewed the arrangements, committing insurers to continue to make flood insurance available to high-risk homes, in return for the UK Government providing flood risk data and effectively managing flood risk. During that time, the UK Government and insurers continued to explore options to assess flood insurance availability and affordability in a more sustainable way.
58. Flood Re was established in legislation in 2014 to replace the arrangements to ensure all relevant insurers paid an equitable share of the cross-subsidy required to maintain affordability, levelling the playfield between the insurers.

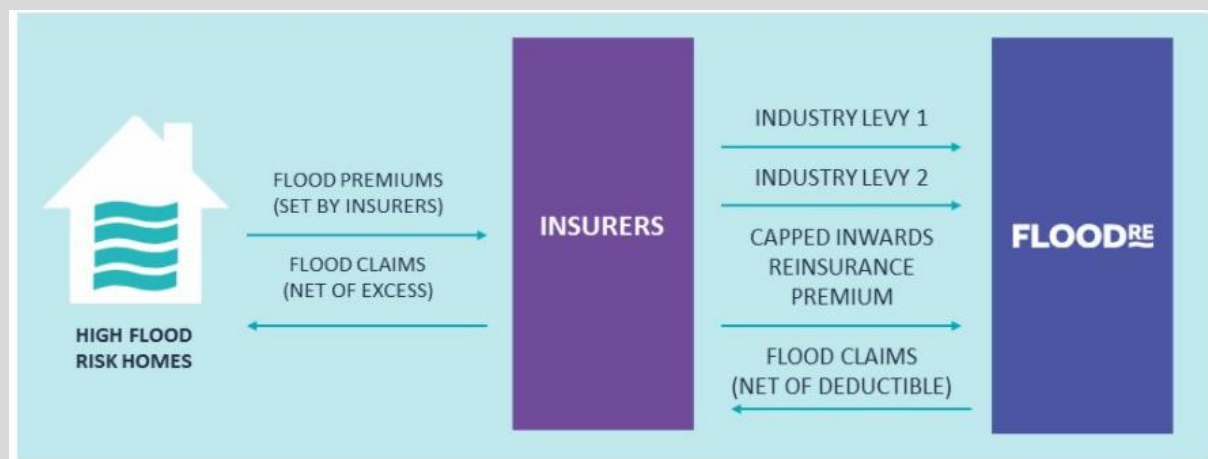
How does Flood Re work?

59. Flood Re offers per-home flood reinsurance to insurers. An insurer can choose to reinsure a home's flood risk with Flood Re. The insurer continues to be responsible to the homeowner for claims. Flood Re reimburses insurers for flood claims costs arising from homes reinsured with Flood Re. Flood Re is a private company owned by its member insurers. It is not-for-profit but is commercially run.

How is Flood Re funded?

60. Flood Re is funded by:
- a capped reinsurance premium (based on council tax bands) on each home an insurer chooses to reinsure with Flood Re, and
 - a levy on all homeowner insurance premiums.
61. The capped reinsurance premium is set below the technical risk-price. It effectively sets a maximum price on home flood insurance given the UK's competitive home insurance market, the capped reinsurance costs provided by Flood Re, allows the insurer to charge lower insurance premiums for flood prone homes.
62. The levy on all homeowner insurance premiums (industry levy 1 in figure 1 below) subsidises the scheme, enabling the capped reinsurance premiums to be set below cost. The levy is approximately £10 per home per year, generating around £180m in annual levy revenue. Overall, the revenue of the scheme (made up of the capped reinsurance premiums and the levy on all homes) is intended to cover its claims costs. Flood Re can apply an additional levy on insurers (industry levy 2) should claims exceed Flood Re's available funds.

Figure 1: Flood Re Funding



Source: World Forum of Catastrophe Programmes

Who is eligible for Flood Re reinsurance?

63. Flood Re is only available to homes built before 1 January 2009. New homes face full market risk-pricing and the corresponding incentives to make decisions that manage flood risk appropriately (e.g. incentives to build in high flood-risk locations).
64. Flood Re is planned to end by 2039. Flood Re's pricing is intended to manage the transition to market prices in 2039. The end date creates an incentive for flood risk reduction by government, and for individuals for homes built before 2009. By 2039, a greater proportion of UK homes are expected to be located in lower flood risk areas and subject to full market risk-pricing, further reducing the transition shock from ending Flood Re.

Has Flood Re supported affordability and availability of flood insurance in the UK?

65. The 2019 quinquennial review of Flood Re found that:

- 80 percent of homes with previous flood claims saw price reductions of more than 50 percent.
- 93 percent of homes with previous flood claims could receive quotes from five or more insurers. Prior to Flood Re, only nine percent could get two or more quotes and none could get five quotes.

66. A UK government survey in 2018 found that those in areas of high flood risk considered household insurance to be more affordable and readily available than it had been in 2015. One percent of owner-occupiers in flood prone areas had no household insurance, compared with three percent in areas not subject to flood risk.

What challenges or risks have been identified since the scheme started?

67. The key challenge for Flood Re relates to the credibility of Flood Re as a *temporary* intervention, and the associated impact of the scheme on flood risks management, including:

- **Risk of reduced incentives for investment in flood protection and adaptation.** Flood Re is intended to support the transition to risk-reflective premiums before the scheme ends in 2039. However, the scheme's success at improving the affordability of flood insurance has reduced the incentives to invest in flood protection and adaptation by homeowners and government. Flood Re itself has no direct role in flood protection and adaptation decisions. Changes to the scheme are currently being considered to improve adaptation incentives, including premium discounts for properties that have taken resilience measures and the ability for Flood Re to make additional payments to support claimants to rebuild more resiliently.
- **Risk of expansion of the scheme to homes built since 1 January 2009 and extension beyond the intended 2039 end-date.** The scope and lifespan of the scheme are intended to mitigate moral hazard risks from developments in flood prone areas. If perceptions of the credibility of the scheme's scope and lifespan erode, homeowners and developers may make decisions on the expectation of future expansion of Flood Re's benefits to flood prone areas. Increasing flood risk due to climate change-induced extreme weather events and sea-level rise are likely to present significant political challenges to the current scope and end-date of the scheme.

Annex 2: Australian cyclone reinsurance pool

68. On 4 May 2021, the Australian Government announced its intention to establish a reinsurance pool for cyclone and related flood damage, backed by a \$10 billion government guarantee. The purpose of the reinsurance pool is to improve the accessibility and affordability of insurance for residential, strata (unit title) and small business properties in cyclone-prone areas.
69. The Australian Reinsurance Pool Corporation (ARPC) would administer the pool, which would operate from 1 July 2022. ARPC is a statutory authority which administers Australia's terrorism insurance scheme.
70. An Australian Treasury-led Taskforce released a consultation document in Australia on 21 May 2021 seeking feedback on the design of the reinsurance pool. The pool is intended to allow insurers to reinsure at a lower cost than in the private reinsurance market, as the pool would forgo a commercial profit margin, and be backed by a government guarantee (meaning the reinsurance pool would not have to charge premiums to cover the solvency capital requirements). The reinsurance pool would be funded by reinsurance premiums paid by insurers and cover the expected long-term cost of insured risks and operating expenses for the pool.
71. The reinsurance pool appears to share similarities to the UK's Flood Re scheme, but Flood Re does not have a government guarantee and is partially funded by a levy on all UK property insurers, in addition to the premium paid by insurers for each property they reinsure with Flood Re. Without a general levy or alternative broad-based funding, it is unclear how the scheme would offer significant insurance premium relief to homes with high flood and storm risk.
72. The Taskforce is seeking feedback on the design of the pool, including pricing, whether it is mandatory or voluntary for insurers to participate, how to ensure pass-through of reinsurance cost reductions to private premiums, and how the scheme would encourage adaptation and avoid risk-taking (e.g. by only covering existing properties).
73. The announcement follows a multi-year inquiry by the Australian Competition and Consumer Commission into insurance affordability in northern Australia. The inquiry recommended consideration of direct subsidies over other measures if governments want to provide immediate relief to consumers facing acute affordability pressures.