



Taian kukune aika a kakawaki



KATEBENAKOAN TAIAN KUKUNE AIKA A KAKAWAKI AIKA A REKEREKE MA TE BETEBEKE

Man ana Riboti aika a Irengan Botakin te Aonnaba (United Nations) man **Te Rabwata ae e kaainaki irouia ana Botaki ni Mwakuri te Tautaeka aika a kakaokoro ibukin Bibitakin Kanoan Boong – Intergovernmental Panel on Climate Change (IPCC)**. Aio te kabanea n riboti man ana Kaonoua n Raun ni Kakae (AR6) IPCC, are e ikoti iai ni kabane ana riboti IPCC i nanon 7 te ririki.

Kauarerekean kabuebuen te aonnaba nakon 1.5°C man 2°C e na korakora iai te kabwaia man kerikakin taian kanganga ao te rotaki, ao kerikakin kainanoan bitakin tein te maiu, e ngae ngkai e rikirake n bobuaka aron kabebetana.



E kakoauaki bwa aia mwakuri aomata ngaia ae e karika kabuebuen (tari, te aba, ao te aonnaba ae ti mena i nanona (atmosphere)) nakon te kabuebue ae e tuai man namakinaki ma i mwaina



Katautauan mwaitin tinakon taian kaeti (carbon budget) ibukin kauarerekean te kabuebue nakon 1.5°C e na bon taonakoaki ni mwaitin tinakon te CO₂ ae e reke man ti taian kateitei ke taabo ni mwakuri ibukin te oera, te bwaa ke te koera (coal) (fossil fuel infrastructure)



I marenan 1850 nakon 2019, ao ikoikotan mwaitin tinakon te CO₂ e katautauaki nakon 80% man botan katautauan mwaitin tinakon taian kaeti ake a kainanoaki ibukin kauarerekean te kabuebue n te aonnaba nakon ti 1.5°C



A rang bati kanganga ma rotaki man bibitakin kanoan boong nakon aaba aika a uarekeke ni kabotauaki ma aaba aika a bubura



N 1.5°C ao e na rikirake te kanganga nakon marurungia ma aroia ni maiu aomata, mwaitin te ran, kawakinan te amwarake, kawakinaia aomata ao rikiraken kaubwain te aba



Iai iango aika a materaloi ao n tia ni katauraoaki ibukin bitakin tein te maiu ao aanga ni kabebete aika a kona ni kabonganaki ngkai



E kainanoaki riki te mwane ibukin boutokan te Betebeke ni karaoi mwakuri ibukin bitakin tein te maiu ao mwakuri ni kabebetea te kanganga

Te itera ni baa aio e rairaki man te taetae n imatang. E a tia n karaoaki raoti te mwakuri ibukin rairakina bwa ena kaineti raoti ma kanoan te ribooti are kaotinakoaki man te IPCC ke te rabwata are tabena kaotinakoan kukune iaon bibitakin kanoan boong. Ngkana arona bwa iai kanoan te ribooti ae eaki nang matata reitaki nakoira n: iceds@anu.edu.au ke pccc@sprep.org ibukin bwainin rongorongona.



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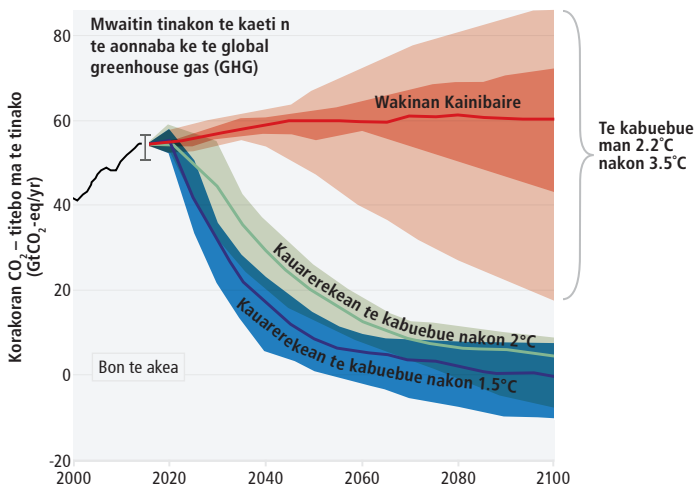
A rang teretere taian koaua man taian iango n rabakau: Bibitakin kanoan boong bon te kanganga nakon maiuia te botanaomata ao marurungin te aonnaba. E a rang uarereke te anga ibukin mwakurian kawakinan ao kateimatoan te maiu ibukia aomata ni kabane n taai aika a na roko. Iai rabakaura aika a bon tau, ara bwai n mwakuri ao kaubwain te aonnaba aika a tauraoni ni kaitarai taian kanganga. E na rotaki iranga te ririki man baika ti karaoi ke ti bairei.*1**

Aia mwakuri aomata ngaia ae e karika kabuebuen te aonnaba man 1850.²

E rang teretere ae man aia mwakuri aomata ngaia ae e kabuea te (marawa, te aba, ao te aonnaba ae ti mena i nanona) n te ware ae e tuai man nonoraki rimoa.³ E namakinaki kabuebuen mataniwin te aonnaba ae 1.09°C i marenan 2011-2020.⁴ E baiti naba rikiraken kabuebuen mataniwin te aonnaba man 1970 ni kabotauaki ma 50 te ririki man 2000 te ririki n nako.^{**5}

Man te ririki 2010, ao e teimatoa n rikirake te tinako man itera aika a kakaokoro ao e a reke aio man taabo ni mwakuri n aron taabo ni karaobwai (industry), baao ni mwamwananga ao kateitei ao n ikotakia ao e reke 79% tinakon te greenhouse gas n 2019.^{**6}

Taian kainibaire ake a kaweneaki n tokin te ririki 2020 a bane n aki boraoi ma taketenan kauarerekean te tinako man aaba ake a kawenei bwa katabeaia man aban te aonnaba, are e a kaota iai te kaokoro ke te maranga n te babaire ao bon taian kainibaire. Ngkana a aki kamatoaki taian kainibaire aikai, ao e katautauaki te kabuebue bwa e na rokoroko n 3.2°C n 2100.^{**7}



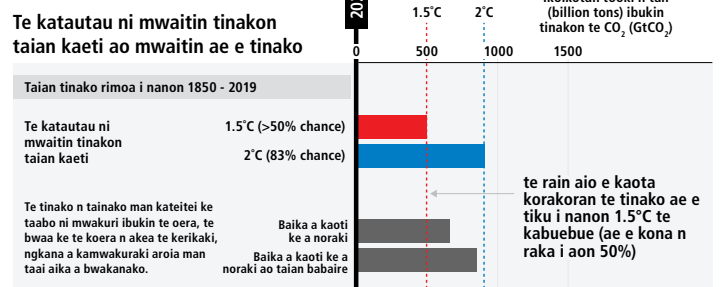
E anaki man te banna (Figure) SPM.5 — Wakinan kainibaire ake a manga karika tinakon kaeti ao ni kakerakea te kabuebue man 2.2°C nakon 3.5°C. Bon ti man kateimatoan kauarerekean tinakon te greenhouse gas (ghg) ae e nano ao e tawe e na kona ni kauarereke te kabuebue nakon 1.5°C ke e kee i aan 2°C i nanon teubua te ririki.**

Kateimatoan te kabuebue ae e bon tau n te aonnaba e kainanoa katauan mwaitin tinakon te CO₂, n ikotaki ma kakorakan kauarerekean taian kaeti tabeua aika a kona n tinako n aron te methane (te kaeti ae e kai ura).⁸

Ikoikotan botan mwaitin te CO₂ ae e tinako i marenan 1850-2019 e katautauaki nakon wanibwi te katebubua man ikotan mwaitin taian kaeti are a tia ni katauaki mwaitia n tinako ibukin kauarerekean rakan kabuebuen te aonnaba nakon 1.5°C.⁹

Nikiran te katautau ni mwaitin tinakon taian kaeti ibukin 1.5°C a na bon taonakoaki n tinakon te CO₂ ae e reke man ti taian kateitei ke taabo ni mwakuri ibukin te oera, te bwaa ke te koera.^{***10}

E kona ni moantai ni memere ke n uarereke te katautau ni mwaitin tinakon taian kaeti ibukin kauarerekean te kabuebue nakon 1.5°C



E anaki man te banna (Figure) 3.5 — ngkana ti teimatoa ni mena i nanon te katautau man taian kaeti ae 500 gtCO₂ man 2020, e na raka i aon 50% te anga n tiku i nanon 1.5 °C. Ngkana ti teimatoa ni mena i nanon te katautau man taian kaeti ae 900 gtCO₂ man 2020, ao e na reke 83% te anga n tiku i nanon 2°C.¹¹ E na riai n ataki bwa nikiran mwaitin kaeti are a katauaki mwaitia n tinako ibukin kauarerekean te kabuebue e aki wareka ke karina mwaitin taian tinako man 2020. N te aonnaba ae e bwain, e a tia n manga tinako 84gt te CO₂.¹²

* = Te konabwai ae e bon tau
** = Te konabwai ae e korakora
*** = Te konabwai ae e rang korakora

1 Summary for Policymakers (SPM)C.1 6 SPMA.1.4 9 SPMB.5.4; This refers to keeping to 1.5°C with more than 50% likelihood. 'Carbon budget' refers to the maximum amount of cumulative net global anthropogenic CO₂ emissions that would result in limiting global warming to a given level with a given probability. 10 SPMB.5; SPMB.5.3; This is based on unabated fossil fuel infrastructure (e.g. without Carbon Capture & Storage). 11 SPMB.5.3 12 Global Carbon Project 2022; Friedlingstein et al 2022 'Global Carbon Budget 2022'

Ti man tinakon te GHG ae e nano, e tawe ao ni baiti e kona ni kauarerekea te kabuebue i aan 1.5°C ao 2°C i nanon te tubua te ririki. Ao aio are e na kabirimerea tawen keraken iabutin taari.**¹³ N akean te nano ni kan karaoi mwakuri ni kauarerekea te tinako, a na urubwai bibitakin kanoan boong a kona ni rotaki iai aaba tabeua n aki kona ni kaainaki i nanon te tai aei. E korakora te kanganga aio nakon aaba aika a riki man te uaan (atoll nations).¹⁴

N tabeua aanga aika a kauarerekea te kabuebue nakon 1.5°C n akea ke e uarereke kerikakin te kabuebue (overshoot), n 2035, tinakon te GHG n te aonnaba ae e bwanin e na kerikaki n 60% i an te karinan n 2019, ao te kaeti ae te carbon dioxide e na kerikaki tinakona n 65% i an te karinan n 2019.¹⁵

E rang bubura man korakora ana urubwai bibitakin kanoan boong nakon are e katautauaki ni kakae ke riboti** n taai aika a nako ao te katautau ibukin te rotaki n te tai ae e maan, e na rang korakora ni kabotauaki ma ae e noraki ngkai.**¹⁶

Bibitakin kanoan boong aika a riki ma irouia aomata ngaia ae e a karika te bitaki ae e tawe man korakora nakon te aonnaba ae ti mena i nanona, te marawa, taabo aika a rabunaki n te aiti ao te aba, n ikotaki ma okiokin angibuaka aika a korakora. Taian bitaki aikai are a karika butinakon te urubwai ma rotakin baika a maiu i aon te aba ao ai rotakia aomata.¹⁷ Angiin te kanganga ma te rotaki man kanoan te bong a rang bubura ao ni korakora ibukin aaba aika a uarereke ni kabotauaki ma aaba aika a bubura.¹⁸

N te aonnaba ae e bwanin, aaba aika a aomwaimwai i mataniwin te aba a tia ni kerikaki buburaia nakon ae e kania 50% i nanon 100 te ririki n nako, man mwini aia mwakuri aomata, keraken iabutin taari, te kabuebue ao angibuaka aika a korakora.**¹⁹ Te kanganga man bibitakin kanoan boong ao bitakin kabonganan te aba a bane n irekereke ma rotakin aaba aika a aomwaimwai.²⁰

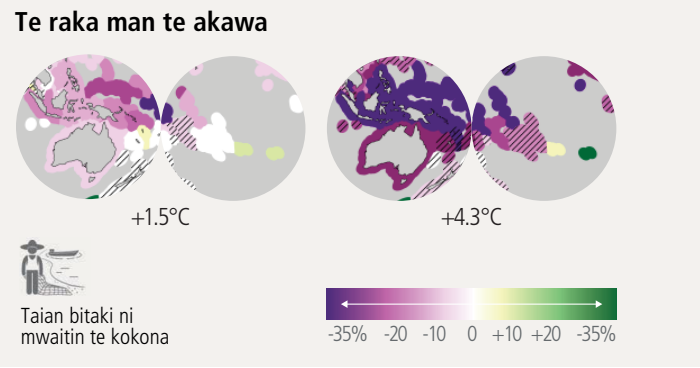
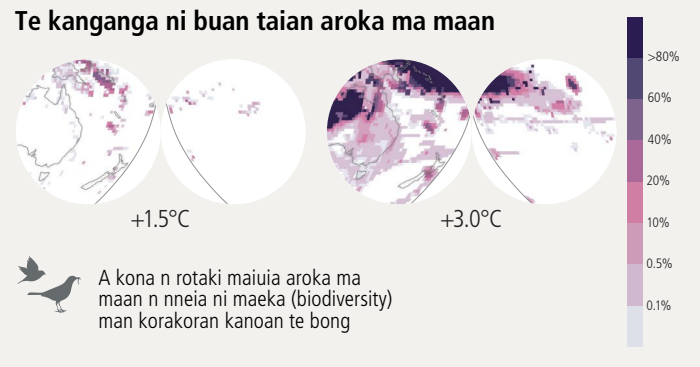
Kanganga aika a irekereke ma kanoan boong ibukin aia mwakuri aomata a rang korakora ibukin kabuebuen te aonnaba ae 1.5°C nakon ae ngkai.**²¹ N aron ae, a katautauaki taian rakai bwa a na kerikaki riki mwaitia n 70–90% man kabuebuen te aonnaba ae 1.5°C.**²²

Aaba aika a Tabe n Rikirake ke Small Island Developing States (SIDS), n ikotaki ma botanaomata aika a maeka n aban te Betebeke ke te Pacific Island Countries and Territories (PICTs), bon ngaiia taabo aika a rang kakai rotaki ao ni kai reke naba ni kanganga aika a korakora²³, e ngae ngke e rang uarereke ae a tibwaia nakon bibitakin kanoan boong n taai aika a nako.²⁴

* = Te konabwai ae e bon tau
 ** = Te konabwai ae e korakora
 *** = Te konabwai ae e rang korakora

A korakora n rotaki aban nako te Betebeke mai Maiaki n te mwaing ke kitanan aia tabo man bibitakin kanoan boong ao angibuaka aika a korakora, ni kabotauaki ma uarereken mwaitin aia botanaomata.²⁵

Kauarerekean kabuebuean te aonnaba man 2°C nakon 1.5°C, e na kakerakea te kabanemwane ibukin aanga ni kabebetea te kanganga, ma e na karekei naba taian kabwaia n aron kauarerekean ma kakerikakin kanganga man kanoan te bong ao e na kakerikaka kainanoan bitakin tein te maiu.**²⁶

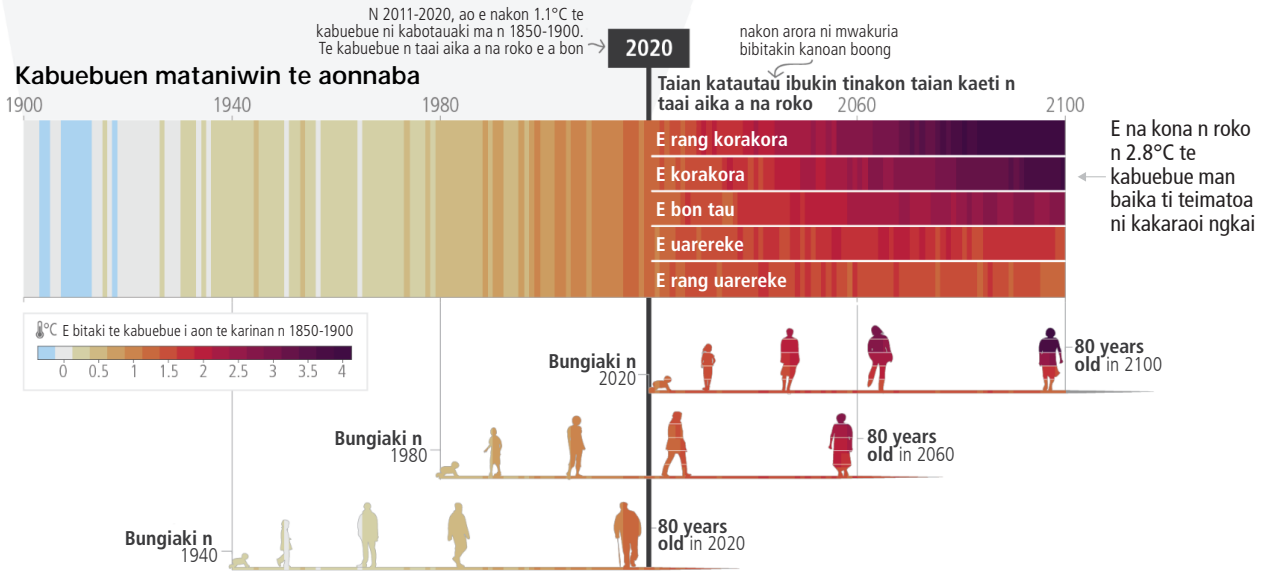


E anaki man te banna (Figure) A1.15, Te kurubu ni mwakuri ke te Working Group II (WgII) Annex I ao te banna SPM.3 — E katautauaki bwa e na rikirake korakoran te kanganga nakon aia waaki ma aroia aomata man bibitakin kanoan boong. Te katautau i aon kanganga ma te rotaki man bibitakin kanoan boong i aoiia aroka ma maan n nneia ni maeka ao te raka man te akawa n irekereke man 1850-1900, a bane ni kakaokoro n taian aono. E a rikirake rotakia aroka ma maan n nneia ni maeka ao taian ika man rikiraken te kabuebue. Taiaoka n ataiia bwa te mwabe ae e kaota nneia ni maeka aroka ma maan e taneiai ni kaoti kukune man te Riboti ke te Synthesis Report Figure SPM.3 ae e kaota te rongorongo ae titebo ma e kaokoro taraan te mwabe. E anaki te mwabe ibukin nneia ni maeka aroka ma maan man te WgII Annex I A1.15.

E na teimatoa te urubwai nakoia komuniti (community) ma aomata aika a kakai rotaki, ao e na rikirake te kainano ngkana akea te babaire ae e matoatoa ibukin bitakin tein te maiu ma nangoan taian kanganga.**²⁷ Taian rotaki ma urubwai a bane n rota aron kateimatoan karikirake (sustainable development) n te SIDS, n ikotaki ma PICTs, man rikiraken kanganga aika a teimatoa man bibitakin kanoan boong nakoia aaba aika a uarereke.²⁸

13 SPMB.6; SPMB.7.2	18 WGII Chapter 15.3	21 SPMB.2.2	26 Section 3.4.1; SPMC.2.4
14 WGII Chapter 15.3.4.9; FAQ15.1	19 Section 2.1.1	22 Figure SPM.4(b)	27 Section 2.1.2
15 Table XX: SPMB.6	20 SPREP 2020 State of Environment & Conservation in the Pacific Islands Regional Report	23 SPMA.2.2	28 WGII Chapter 15, Box 15.2
16 SPMB.2; Figure SPM.4(a)		24 Section 2.1.2	
17 SPMA.2; SPMA.2.6		25 SPMA.2.5	

Man baika ti kakaraoi ao e katautauaki iai bwa ataei n taai aikai e na nang kaokoro aron maiuia n te aonnaba ae e rangi ni kabuebue



E anaki man te banna (Figure) SPM.1 — Man baika ti kakaraoi ao e katautauaki iai bwa ataei n taai aikai e na nang kaokoro aron maiuia n te aonnaba ae e rangi ni kabuebue. E a kaman roko te aonnaba n te kabuebue ae 1.1°C ni kabotauaki ma n 1850–1900. Te katautau i aon bibitakin kanoan boong ae a kaman rinanona aomata i nanon tenroro (aika a bungiaki n te 1940, 1980 ao 2020), e na rang kaokoro man tarakin tinakon taian kaeti n taai aika a na roko (e na rang uarereke, e uarereke, e bon tau, e korakora, ao e rang korakora).

E ngaie ngke bitakin tein te maiu e kaitarai tabeua kanganga man bibitakin kanoan boong, ma tabeua bitakin tein te maiu a tia n roko ni korakoraia ma ieta.^{**29} E na tabe ni memere korakoran taian bitaki n tein te maiu man rikiraken te kabuebue.³⁰ N aron ae, tabeua rakai aika a maiu n te ran ae e abuee a na tara n aki kona ni maiu ngkana e teimatoa n rikirake te kabuebue, n te aro are e na kerikaki mwakurin te rakai ma ana otabwanin.³¹

Iai te marena i aon kaungakin wakinan bitakin tein te maiu ao baika a kainanoaki n kaitarai kanganga ao kauarekean ana urubwai bibitakin kanoan boong.^{**32}

Te mwane bon ngaia ae e na kabirimwaka te mwakuri ni kaitarai kanoan te bong ni katoa tai.^{**33} **N 2018, ao e teimatoa n aki tau te mwane ae e kainanoaki ibukin bitakin tein te maiu ma kabebetn te kanganga n aaba aika a tabe n rikirake.**^{**} Butin ana mwane te botanaomata a bane n bwaka i aan te UNFCCC ao te Paris Agreement ibukin aaba aika a rikirake ni kamwakura UUD100 tooki (billion) ni katoa ririki imwain 2020.³⁴ **E kainanoaki rikiraken te mwane ibukin bitakin tein te maiu ni kaitara rikiraken taian kanganga, buan bwaai ma taian urubwai man ana mwakuri kanoan te bong, riki n aaba aika a tabe n rikirake ma ni kakai rotaki.**^{**35} E kainanoaki naba te mwane ibukin kabebetn kanganga ni kabirimwaka kateimatoan kauarekean tinakon taian kaeti n totokoi kanganga man bibitakin kanoan boong.^{**36}

E nang bubura riki butin ana mwane te botanaomata ibukin taian oera, bwaa ao koera nakon mwakuri aika a kainanoaki ibukin kanoan te bong.^{**37}

Reken baika a tamaroa ni maiuia aomata aika a mena n taabo aika a tia ni karikirakeaki aroia bon man karimoakin te mwane ibukin kauarekean te kanganga man kanoan boong ibukia aomata aika a uarereke aia karekemwane ma aomata aika a maeka n taabo aika a aki eti raoi taekaia ibukin te maekanaki.^{**38} **Ni karokoa ngkai ao akea te bwai ae e noraki ibukin te karikirake n taabo aikai.**^{*39}

E na rikirake taian kanganga aika a teimaan nakon itera aika a kakaokoro ma aroia ni maiu aomata ngkana e teimatoa keraken te kabuebue n te aonnaba, ma a na bon teimatoa n onimakini aanga ni karikirake bwa ngaia kawain ao angan bitakin tein te maiu ni kauarekeka te kakai rotaki ao bon te rotaki.⁴⁰

Bitakin aanga ni karikirake ibukin kateimatoan ao kaitaran kanoan boong e na boutokaki ngkana te tautaeka, aomata ao taabo ni mwakuri a bane n reitaki ni bonnanao kauarekean te kanganga, te boraoi ao te kaetieti.⁴¹ Kaieinan aanga ni babaire, te mwane ao mwakuri rinanon te tararua ao taabo ma karinan iango ma rabakau n aomata a na bane ni kakorakora te teimatoa.⁴²

29 SPMA.3
30 SPMB.4
31 SPMB.4.2
32 SPMA.3.3
33 SPM.C.7

34 SPMA.4.5
35 SPMC.7.2
36 SPMC.7.1
37 SPMA.4.5
38 SPMC.5.3

39 Section 4.5.3
40 SPMB.2.4
41 SPMC.1.2; Figure SPM.6
42 SPMC.6.5

* = Te konabwai ae e bon tau
** = Te konabwai ae e korakora
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