CONFLICT COMPLEXITY & CLIMATE CHANGE

EMERGENT FEDERAL SYSTEMS AND RESILIENCE IN POST-COUP MYANMAR

Ashley South

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KNOWLEDGE FOR K4DM DEMOCRACY MYANMAR

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NOTE ON TERMINOLOGY

Prior to 1989, the largest country in mainland Southeast Asia was known internationally as "Burma." This was the name the British colonizers used after they consolidated the central plains and previously autonomous mountainous regions in the mid-1800s, in reference to the country's largest ethnic group—the Burmans. The international use of "Myanmar" dates only to 1989, when leaders of the 1988 military coup changed the country's name to *Myanmar naing-ngan*. In addition, the official names of many ethnic groups, regions, cities, and villages were also changed, including that of the former capital, from "Rangoon" to "Yangon".

ABBREVIATIONS

AA	Arakan Army
BGF	Border Guard Force
BRI	Belt and Road Initiative
CAS	Complex Adaptive System
CBO	Community-Based Organization
CCAM	Climate Change Adaptation and Mitigation
CDM	Civil Disobedience Movement
CNF	Chin National Front
CRPH	Committee Representing Pyidaungsu Hluttaw
CSO	Civil Society Organization
DIIS	Danish Institute of International Studies
DKBA	Democratic Karen Benevolent Army
DRR	Disaster Risk Reduction
EAO	Ethnic Armed Organization
ERO	Ethnic Resistance Organization
FECD	Forestry and Environmental Conservation Department (of the KIO)
FPNCC	Federal Political Negotiation and Consultative Committee
HURFOM	Human Rights Foundation of Monland
ICCA	Indigenous and Community-Conserved Area
ICNCC	Interim Chin National Consultative Council
ICRC	International Committee of the Red Cross
ICVA	International Council of Voluntary Agencies
IDP	Internally Displaced Person/s
IEC	Interim Executive Council (Karenni State)
IFRC	International Federation of Red Cross & Red Crescent Societies
IPCC	Intergovernmental Panel on Climate Change
KECD	Karen Education and Culture Department (of the KNU)

KESAN	Karen Environmental and Social Action Network
KFD	Kawthoolei Forestry Department (of the KNU)
KIA	Kachin Independence Army
KIC	Kachin Independence Council
KIO	Kachin Independence Organization
KNDF	Karenni Nationalities Defense Force
KNLP	Kayan New Land Party
KNPLF	Karenni National People's Liberation Front
KNPF	Karen National Police Force
KNPP	Karenni National Progressive Party
KNU	Karen National Union
KPICT	Kachin Political Interim Coordination Team
KSCC	Karenni State Consultative Council
KSP	Karenni State Police
LDU	Lahu Democratic Union
MNDAA	Myanmar National Democratic Alliance Army
MONREC	Ministry of Natural Resources & Environmental Conservation
MSFC	Mon State Federal Council, previously MSICC (Mon State Interim Coordination Committee)
NCA	Nationwide Ceasefire Agreement
NCUB	National Council of the Union of Burma
NDAA	National Democratic Alliance Army
NDA-K	New Democratic Army–Kachin
NDC	Nationally Determined Contributions
NLD	National League for Democracy
NMSP	New Mon State Party
NUCC	National Unity Consultative Council
NUG	National Unity Government
ODI	Overseas Development Institute
PAB	People's Administrative Bodies

PC	KNU-KNLA Peace Council
PDF	People's Defense Force
PNFC	Pa-O National Federal Council
PPST	Peace Process Steering Team
PSLF	Palaung State Liberation Front
RCSD	Regional Center for Social Science & Sustainable Development
RCSS	Restoration Council of Shan State
SAC	State Administration Council
SLORC	State Law and Order Restoration Council
SPDC	State Peace and Development Council
SRI	System of Rice Intensification
SSPP	Shan State Progressive Party
TNLA	Ta'ang National Liberation Army
TPCC	Ta'ang Political Consultative Committee
ULA	United League of Arakan
UNFCCC	UN Framework Convention on Climate Change
UNHCR	UN High Commissioner for Refugees
UWSA	United Wa State Army
WFP	World Food Program
WWF	World Wide Fund for Nature

အနှစ်ချုပ်

၂၀၂၁ ခုနှစ်၊ ဖေဖော်ဝါရီ ၁ ရက်နေ့တွင် အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံတွင် မငြိမ်မသက်မှုများ ဖြစ်ပေါ်နေပါသည်။ စစ်အာဏာသိမ်းမှုကြောင့် မြန်မာနိုင်ငံ၏ အခြေအနေမှာ ယိုယွင်းလွယ်သည့် အခြေအနေ သို့မဟုတ် ယိုယွင်းနိုင်သည့် အခြေအနေ မဟုတ်၊ ယိုယွင်းနေပြီ ဖြစ်သည်။

မြန်မာနိုင်ငံသည် ရာသီဥတုပြောင်းလဲမှု၏ သက်ရောက်မှုဒဏ်ကို ပြင်းထန်စွာ ခံရနိုင်သည့် အခြေအနေတွင်ရှိသည်။ နယ်ပယ်အသီးသီးနှင့် ကဏ္ဍအများအပြားတွင် ဆိုးရွားနေသည့်အခြေအနေများသည် မကြာမီ ယခုထက်ပိုပြီးဆိုးရွားလာနိုင်သည်။ စစ်အာဏာရှင်အစိုးရသည် ရာသီဥတု ပြောင်းလဲမှု လျော့ပါးသက်သာစေရေးနှင့် ပြန်လည်ကောင်းမွန်စေရေး လုပ်ငန်းဆောင်တာများ ဆောင်ရွက်ရမည့်အစား သဘောထားကွဲလွဲသူများကို ဖိနှိပ်ခြင်း၊ ပြည်သူများကို ဖမ်းဆီးသတ်ဖြတ်ခြင်းနှင့် သဘာဝသယံဇာတများကို စည်းကမ်းမဲ့ ထုတ်ယူခြင်းတို့ကိုသာ အဓိကလုပ်ဆောင်နေသည်။ သို့သော် ဖက်ဒရယ်မြန်မာနိုင်ငံစနစ်သစ်အဖြစ် 'အောက်ခြေမှ အထက်သို့' ပြောင်းလဲလာနေသည်။

၂၀၂၁ခုနှစ်၊ ဖေဖော်ဝါရီလ (၁) ရက်နေ့တွင် နိုင်ငံတော်အုပ်ချုပ်ရေးကောင်စီ (SAC) အစိုးရက အာဏာသိမ်းလိုက်သည်။ နိုင်ငံတော်အုပ်ချုပ်ရေးကောင်စီ (SAC) သည် တရားဥပဒေအရ အသိအမှတ်ပြုရလောက်သော အုပ်ချုပ်ရေးအာဏာပိုင်မဟုတ်ပေ။ ၂၀၂၃ခုနှစ်၊ ဖေဖော်ဝါရီလတွင် ကျင်းပသော ကုလသမဂ္ဂလူ့အခွင့်အရေးကောင်စီသည် (၅၂) ကြိမ်မြောက်

အခမ်းအနားတွင် အောက်ပါအတိုင်း အစီအရင်ခံခဲ့ပါသည်။ "အာဏာသိမ်းပြီး နှစ်နှစ်အကြာတွင် စစ်တပ်သည် အာဏာသိမ်းဆန့်ကျင်သူများကို သတ်ဖြတ်ခြင်း၊ မတရားဖမ်းဆီးခြင်း၊ ညှင်းပန်းနှိပ်စက်ခြင်း၊ အင်အားသုံး နှိမ်နှင်းခြင်း၊ တရားစွဲခြင်း၊ စီရင်ချက်ချမှတ်ခြင်းတို့ကို အဆက်မပြတ်လုပ်ဆောင်နေသဖြင့် တိုင်းပြည်အား ကာလရှည် လူ့အခွင့်အရေး အကျပ်အတည်း ဖြစ်စေပါသည်" စစ်အစိုးရသည် အရပ်သားများအပေါ် စစ်ရာဇဝတ်မှုများ ကျူးလွန်ရုံသာမက ပြုလဲနေသော စီးပွားရေးကို ဦးစီးဦးဆောင်မှုပြုသော်လည်း တိုင်းပြည် ထက်ဝက်ကျော်မျှကိုတောင် စစ်အာဏာသက်ရောက်မှုမရှိပေ။ အာဏာသိမ်းပြီး နှစ်နှစ်အကြာ ၂၀၂၃ ခုနှစ်၊ ဧပြီလတွင် Free Burma Rangers က မြန်မာစစ်တပ်၏ နယ်မြေထိန်းချုပ်မှု သိသိသာသာ ဆုံးရှုံးသွားသည့် အသေးစိတ်မြေပုံကို ထုတ်ပြန်ခဲ့သည်။

တချိန်တည်းတွင် အာဏာသိမ်းမှုဆန့်ကျင်ရေး အမျိုးသားညီညွတ်ရေးအစိုးရသည် မြန်မာနိုင်ငံအလယ်ပိုင်း စစ်ကိုင်းတိုင်းနှင့် မကွေးတိုင်းမှလွဲ၍ အခြားဒေသများ၌ မြေပြင်အာဏာသက်ရောက်မှုမရှိပေ။ တိုင်းရင်းသားလူမျိုးများနေထိုင်သည့် နေရာအများအပြားတွင် အခွင့်အာဏာနှင့် နိုင်ငံရေးတရားဝင်မှု ချုပ်ကိုင်ထားသည့် တိုင်းရင်းသားလက်နက်ကိုင်အဖွဲများ နှစ်ဒါဇင်ခန့်ရှိသည့်အတွက် ထိုနေရာများ ထိန်းချုပ်နိုင်ရန် ယှဉ်ပြိုင်မှုများ ပြင်းထန်လျက်ရှိသည်။ ထိုလက်နက်ကိုင်အဖွဲ့အစည်းအားလုံးမှာ စစ်အစိုးရကို တက်ကြွစွာ ဆန့်ကျင်နေကြသည် မဟုတ်ပါ။ အာဏာသိမ်းပြီးကာလတွင် ထိုအဖွဲ့အစည်း အများအပြားသည် နယ်နိမိတ်သစ်များစွာကို ထိန်းချုပ်နိုင်ခဲ့သည်။ ဥပမာ- ကရင်အမျိုးသားအစည်းအရုံး (KNU) သည် ၁၉၅၀ ခုနှစ်အစောပိုင်းကာလများကတည်းက ရန်သူတည်နေရာများကို ကျော်လွန်ချုပ်ကိုင်နိုင်ခဲ့ခြင်း မရှိခဲ့သော်လည်း ပြီးခဲ့သည့်

နှစ်နှစ်တာကာလအတွင်းတွင် မြန်မာစစ်တပ်၏ အခြေစိုက်စခန်း နှစ်ဆယ်ခန့်ကို သိမ်းပိုက်နိုင်ခဲ့ပါသည်။

ဤအခြေအနေတွင် ကျွန်ုပ်မှတ်ချက်ပြုချင်သည်မှာ ၁၉ရာစုတွင် ဖြိတိသျှအိန္ဒိယ၏ ကိုလိုနီအဖြစ် သိမ်းသွင်းခြင်းခံခဲ့ရသော နိုင်ငံများ (သို့မဟုတ် ပရိုတိုပြည်နယ်များ) သည် နိုင်ငံရေး အချုပ်အခြာအာဏာ ပြန်လည်ရရှိသင့်ပါသည်။ တိုင်းရင်းသားများ အုပ်ချုပ်ခဲ့ရာဒေသများ၏ အမွေဆက်ခံသူများဖြစ်ကြသည့် တိုင်းရင်းသားအဖွဲ့အစည်းများ (EAOs) နှင့် အသစ်ပေါ်ထွက်လာသည့် နိုင်ငံတော်အဆင့် အတိုင်ပင်ခံ ညှိနှိုင်းရေးအဖွဲ့များသည် 'အောက်ခြေမှစ၍' မြန်မာနိုင်ငံ ပြန်လည်ထူထောင်ရာတွင် အဓိကအခန်းကဏ္ဍမှ ပါဝင်ပါသည်။ တိုင်းရင်းသားနယ်မြေများကို အသိအမှတ်ပြုခြင်းသည် မြန်မာနိုင်ငံရှိ တိုင်းရင်းသားများ၏ ကိုယ်ပိုင်ပြဋ္ဌာန်းခွင့်ဆိုင်ရာ ဆွေးနွေးမှု၏ အခြေခံဖြစ်သင့်သည်။

ဖက်ဒရယ်စနစ်သည် တိုင်းပြည်-လူ့အဖွဲ့အစည်း၏ နှစ်ရှည်လများကြာမြင့်သည့် ပဋိပက္ခများကို ဖြေရှင်းရန်နှင့် တိုင်းရင်းသားလူမျိုးများအတွက် ကိုယ်ပိုင်ပြဋ္ဌာန်းခွင့် ရရှိရေးအတွက် အရေးကြီးသည်ဟု ယူဆထားသည်။ ဖက်ဒရယ်စနစ်သည် ပန်းတိုင်မဟုတ်ပေ။ ကိုယ်ပိုင်ပြဋ္ဌာန်းခွင့်ရရှိရေးအတွက် နည်းလမ်းစနစ် ဖြစ်ပါသည်။ ၂၀၀၈ ခုနှစ်ဖွဲ့စည်းပုံ အခြေခံကို ပြင်ဆင်ရန် သို့မဟုတ် ပိုမိုကောင်းမွန်သည့် ဖွဲ့စည်းပုံဖြင့် အစားထိုးရန်လိုအပ်မှုနှင့် ပတ်သက်၍ မကြာခဏဆွေးနွေးခဲ့ကြသည်။ သို့သော် ထိုဆွေးနွေးမှုများကို အထက်မှအောက် ('blueprint style') ပုံစံဖြင့် ပြုလုပ်ခဲ့ကြသည်။ ဖွဲ့စည်းပုံပြင်ဆင်ရေးသည် လိုအပ်နိုင်သော်လည်း ဖက်ဒရယ်စနစ်သည် ရပ်ရွာလူထုများနှင့် တိုင်းရင်းသားလက်နက်ကိုင်အဖွဲ့အစည်းများ၊ ၎င်းတို့ကို

ကိုယ်စားပြု တာဝန်ထမ်းဆောင်ပေးနေသည့် လူမှုအဖွဲ့အစည်းများနှင့်
အခြားနိုင်ငံရေးနှင့် အုပ်ချုပ်ရေးဆိုင်ရာ အဖွဲ့အစည်း သို့မဟုတ်
လူပုဂ္ဂိုလ်များ၏ လုပ်ဆောင်လျက်ရှိသည့် အလေ့အထများမှ
ပေါ်ပေါက်လာနိုင်ပါသည်။

၂၀၂၁ ခုနှစ် အာဏာသိမ်းမီကာလ၊ ဆယ်စုနှစ်ပေါင်းများစွာ
စစ်ရေးမပြင်းထန်သည့် ပြည်တွင်းစစ်အပြီးနောက်ပိုင်းတွင် ပြိုင်ဆိုင်မှုလည်း
ပြင်းထန်သော်လည်း အတော်အသင့် စည်းလုံးညီညွတ်မှုရရှိနေပြီးဖြစ်သော
မြန်မာနိုင်ငံ၏ စိန်ခေါ်မှုမှာ နိုင်ငံကို ဖက်ဒရယ်စနစ်ပြောင်းလဲရာတွင်
ဖြစ်ပါသည်။ စစ်အာဏာသိမ်းပြီးနောက် ကြုံတွေ့ရသောစိန်ခေါ်မှုမှာ
အရေးပါသော သက်ဆိုင်ရာအဖွဲ့အစည်းနှင့် လူပုဂ္ဂိုလ်များပါဝင်သည့်
ဖက်ဒရယ်စနစ်အသစ်ဖြင့် မြန်မာနိုင်ငံ ပြန်လည်ထူထောင်ရန် ဖြစ်ပါသည်။

Bertil Lintner က မကြာသေးမီက (ဧရောဝတီ ၂၀၂၃) တွင် အောက်ပါအတိုင်း
မှတ်ချက်ချခဲ့ပါသည်။ "ဤစစ်ပွဲသည် မည်သည့်ဘက်ကမှ အောင်နိုင်ခြေမရှိပါ။
စစ်အစိုးရဆန့်ကျင်ရေး လက်နက်ကိုင်တပ်ဖွဲများသည် ၎င်းတို့ထက်
လက်နက်အင်အားပိုမိုသာလွန်သော မြန်မာစစ်တပ်ကို အနိုင်ယူရန်
လုံလောက်သော လက်နက်အင်အားမရှိပါ။ တစ်ဖက်တွင်လည်း
မြန်မာစစ်တပ်သည် စစ်မျက်နှာပြင် ကျယ်ပြန့်စွာ ဖြန့်ကျက်ထားသောကြောင့်
လုံလောက်သောအင်အားနဲ့ ခုခံသူများကို မချေမှုန်းနိုင်ပါ။ မြန်မာစစ်တပ်သည်
ဤသို့ နှစ်ပေါင်း ၇၀ ကျော်ကြာ အမြစ်ဖြတ်ချေမှုန်းရန် ကြိုးပမ်းခဲ့သော်လည်း
အောင်မြင်မှုမရှိပေ။" အာဏာသိမ်းမှု ဖြစ်ပွားပြီးနောက်ပိုင်း မြန်မာနိုင်ငံတွင်
ပဋိပက္ခများ၏ အကျိုးဆက်ကို ကြာရှည်စွာ ခံစားနေရသဖြင့်
ဤရှည်လျားသော ကြားကာလတွင် အုပ်ချုပ်ရေးနှင့် ဝန်ဆောင်မှုပေးရေး
ယန္တရားကောင်းမွန်စွာ လည်ပတ်နိုင်ရေးအတွက် ပံ့ပိုးပေးမှုများလိုအပ်ပါသည်။

ဆယ်စုနှစ်ပေါင်းများစွာ ကြာမြင့်သော လက်နက်ကိုင်နှင့် တိုင်းပြည်-
လူ့အဖွဲ့အစည်း ပဋိပက္ခအတွက် နိုင်ငံရေးဖြေရှင်းချက်ကို မရှာနိုင်မီမှာပင်
အောက်တွင် မှတ်ချက်ပြုမည့်အတိုင်း ရာသီဥတုဖောက်ပြန်မှုနှင့်
အခြားအကြောင်းအရင်းများသည် နိုင်ငံတော်ပြိုလဲမှုကို ဖြစ်ပေါ်စေနိုင်ပါသည်။

ဤပြဿနာရပ်များသည် ရာသီဥတုပြောင်းလဲမှုနှင့် ချိတ်ဆက်လျက်ရှိသည်။
ရာသီဥတုဖောက်ပြန်ပြောင်းလဲမှုကြောင့် မြန်မာနိုင်ငံသာမက ကျွန်ုပ်တို့၏
ကမ္ဘာကြီးတစ်ခုလုံးကိုပါ ထိခိုက်စေပါသည်။ ရာသီဥတုပြောင်းလဲမှုကို
လျော့ပါးသက်သာစေရေး ဆောင်ရွက်ရာတွင်
တိုင်းရင်းသားလက်နက်ကိုင်အဖွဲ့များနှင့် လူမှုအဖွဲ့အစည်းများသည်
တစ်ကမ္ဘာလုံးနည်းတူ အရေးကြီးသော အခန်းကဏ္ဍများတွင် ပါဝင်ရပါမည်။

ကိုယ်ပိုင်ပြဋ္ဌာန်းခွင့်နှင့် ဌာနေတိုင်းရင်းသားအခွင့်အရေးအတွက်
လှုပ်ရှားမှုများသည် လူမှုအသိုင်းအဝိုင်းများနှင့် အဖွဲ့အစည်းများ၏
ခံနိုင်ရည်အားကောင်းမှုပေါ်တွင် မူတည်နေပါသည်။ အထူးသဖြင့်
တိုင်းရင်းသားလက်နက်ကိုင်အဖွဲ့အစည်းများမှာ ရာသီဥတုဖောက်ပြန်မှု
လျော့ပါးသက်သာစေရေးစီမံချက်များ ဆောင်ရွက်လျက်ရှိပါသည်။ ကရင်၊
ကချင်နှင့် အခြားဒေသများမှာ အရှေ့တောင်အာရှကုန်းတွင်းဒေသများတွင်
ကျန်ရှိသော ကမ္ဘာ့အကောင်းဆုံး သစ်တောများရှိရာ ဌာနေဖြစ်ပါသည်။
သစ်တောထိန်းသိမ်းခြင်းနှင့် ပြန်လည်စိုက်ပျိုးရေးလုပ်ငန်းများသည်
ဇီဝမျိုးကွဲများကို ကာကွယ်ရန်နှင့် ကာဗွန်ဒိုင်အောက်ဆိုဒ်ကို လေထုထဲမှ
လျှော့ချရာတွင် အခရာကျသည်။

ဘောဂဗေဒပညာရှင် Milton Friedman ၏ အဆိုအရ
"တကယ်ဖြစ်ပေါ်နေသော သို့မဟုတ် ဖြစ်နေသည်ဟု ယူဆသော
အကျပ်အတည်းပဋိပက္ခဖြစ်နေချိန်တွင်သာ စစ်မှန်သော ပြောင်းလဲမှုကို

ဖြစ်စေသည်။” ထိုအကျပ်အတည်းအခက်အခဲများ ကြုံတွေ့ရာတွင်
ဖြေရှင်းမှုလုပ်ဆောင်ချက်မှာ ရှိပြီးသား
အကြံဉာဏ်ဖြေရှင်းချက်နည်းလမ်းများပေါ်တွင် မူတည်နေပါသည်။
ကျွန်ုပ်ယုံကြည်မှုမှာ နိုင်ငံရေးရှုထောင့်အရ မဖြစ်နိုင်မှုများသည် နိုင်ငံရေးအရ
မလွှဲမရှောင်သာလုပ်ဆောင်ရမည့် အခြေအနေသို့ မရောက်ရှိမီကာလအထိ
ရှိပြီးသားမူဝါဒအပြင် အခြားသော မူဝါဒအသစ်များရွေးချယ်မှုများ
ရှိထားရန်လိုအပ်ပါသည်။” (၁၉၆၂- နိဒါန်း) ကိုဗစ်နှင့်
အာဏာသိမ်းမှုကာလအလွန် ပဋိပက္ခ အကျပ်အတည်းသည်
တိုင်းရင်းသားလက်နက်ကိုင်အဖွဲ့အစည်းများနှင့် လူမှုအဖွဲ့အစည်းများ၏
သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းကာကွယ်ရေး၊ သစ်တောထိန်းသိမ်းရေးနှင့်
ပြန်လည်ထူထောင်ရေးလုပ်ငန်းများ ကြိုးပမ်းဆောင်ရွက်မှုများကို
သိရှိနားလည်ရန်နှင့် ပံ့ပိုးရန် အခွင့်ကောင်းဖြစ်ပါသည်။
ဤဆောင်ရွက်ချက်များသည် ကာဗွန်လျှော့ချခြင်းကို ဖြစ်ပေါ်စေသဖြင့်
ရာသီဥတုဖောက်ပြန်မှုကို လျော့ပါးသက်သာစေပါသည်။
ဤသဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ‘အစိမ်းရောင်ဝန်ဆောင်မှုများ’ (Green
Services)ကို နိုင်ငံတကာအသိုင်းအဝိုင်းမှ နည်းပညာနှင့် ငွေကြေးပံ့ပိုးမှုများ
ပြုလုပ်ပေးသင့်ပါသည်။

အရင်းအမြစ် စီမံခန့်ခွဲမှုသည် ဌာနေတိုင်းရင်းသားများ၏
အချုပ်အခြာအာဏာနှင့် ဆက်စပ်နေသဖြင့် ပြိုင်ဆိုင်မှု ပြင်းထန်သည့်
ပြဿနာဖြစ်သည်။ တိုင်းရင်းသားအဖွဲ့အစည်းများနှင့် ၎င်းတို့၏
မိတ်ဖက်အဖွဲ့များမှ လုပ်ဆောင်သော အုပ်ချုပ်ရေးနှင့်
ဝန်ဆောင်မှုလုပ်ငန်းများသည် တိုင်းရင်းသားပြည်နယ်များ၏
ကိုယ်ပိုင်အချုပ်အခြာအာဏာ၊ သဘာဝသယံဇာတများနှင့်

လူသားအရင်းအမြစ်များကို အခြေခံထားသည့် မြန်မာနိုင်ငံ ဖက်ဒရယ်စနစ်သစ်
တည်ဆောက်ရေးတွင် အခြေခံအုတ်မြစ်ဖြစ်ပါသည်။ မြန်မာနိုင်ငံတွင်ရှိသော
ကြာမြင့်နေပြီးဖြစ်သည့် တိုင်းရင်းသားလက်နက်ကိုင်အဖွဲ့အစည်းများသည်
၎င်းတို့၏ ထိန်းချုပ်နယ်မြေများနှင့် မြန်မာအစိုးရနှင့် စစ်တပ်တို့နှင့်
အာဏာခွဲဝေ သို့မဟုတ် အာဏာပြိုင်ဆိုင်နေသည့် 'ရောနှောအုပ်ချုပ်'သည့်
ဒေသများတွင် အုပ်ချုပ်ရေးနှင့် ဝန်ဆောင်မှုလုပ်ငန်းများကို ကျယ်ပြန့်စွာ
ဆောင်ရွက်လျက်ရှိပါသည်။ ၎င်းတို့သည်
လူမှုအဖွဲ့အစည်းများ၏အကူအညီဖြင့် သစ်တောစီမံခန့်ခွဲမှု အလေ့အထများနှင့်
မူဝါဒများကို ချမှတ်ထားပြီးဖြစ်ပါသည်။ တိုင်းရင်းသားအဖွဲ့အစည်းများ၊
လူမှုအဖွဲ့အစည်းများနှင့် ရပ်ရွာလူထုများ၏ ပူးပေါင်းဆောင်ရွက်မှုများသည်
ခံနိုင်ရည်အားမြှင့်တင်ခြင်း၊ ဒေသတွင်း အုပ်ရေးရေးကောင်းမွန်စေရေးနှင့်
ရေရှည်ငြိမ်းချမ်းမှုတည်ဆောက်ရေး၏ အခြေခံဖြစ်ပါသည်။ ထို့ပြင်
ထိုပူးပေါင်းဆောင်ရွက်မှုသည် "လူနည်းစုများအတွင်းရှိ လူနည်းစုများ"
တန်းတူညီမျှမှုမရှိခြင်း၊ ခွဲခြားဆက်ဆံခံရခြင်း ပြဿနာကို ဖြေရှင်းရန်
အားလုံးပါဝင်သည့် အစီအစဉ်များချမှတ်အကောင်အထည်ဖော်ရန်
လမ်းစဖြစ်ပါသည်။ ဤသို့ လူလုပ်ပဋိပက္ခများနှင့်
သဘာဝသယံဇာတပြဿနာများကို ရင်ဆိုင်ဖြေရှင်းရာတွင် ဒေသတွင်း
ဆောင်ရွက်မှုများသည် အလွန်အရေးပါပါသည်။ အကြောင်းမှာ
ရာသီဥတုဖောက်ပြန်မှုနှင့် အခြားအကျပ်အတည်းများသည်
အနောက်နိုင်ငံများ၏ ပံပိုးပေးမည့် ကတိကဝတ်များကို
အားနည်းသွားစေနိုင်သဖြင့် အနာဂါတ်တွင် မြန်မာနိုင်ငံကဲ့သို့ နိုင်ငံများအတွက်
နိုင်ငံတကာအကူအညီများ လျော့ကျသွားနိုင်ပါသည်။ ထို့ကြောင့် စိန်ခေါ်မှုမှာ
အချိန်ရှိခိုက်တွင် ခံနိုင်ရည်စွမ်းအားတိုးမြင့်ရန် ပံ့ပိုးပေးရန် ဖြစ်ပါသည်။

အခြားနိုင်ငံ၊ အခြေအနေများအကြောင်း ပြုစုခဲ့သည့် သုတေသနမှာ
လက်နက်ကိုင်အဖွဲ့အစည်းများကို သယံဇာတထုတ်ယူခြင်းနှင့် စစ်ဘုရင်နှင့်
ပုံစံတူခြင်းကို မီးမောင်းထိုးပြလေ့ရှိသည်။ သို့သော် မြန်မာနိုင်ငံ
တိုင်းရင်းသားလက်နက်ကိုင်အဖွဲ့အစည်းများသည် ထိုကဲ့သို့သော
လက္ခဏာများရှိနိုင်သော်လည်း၊ အများစုမှာ တရားဝင်သော၊
အများ၏ထောက်ခံမှုကို ရရှိသော နိုင်ငံရေးအစီအစဉ်များရှိပြီး ပြည်သူ့အကျိုး၊
သဘာဝပတ်ဝန်းကျင်ကာကွယ်ရေးလုပ်ငန်းများကို လုပ်ဆောင်နေကြပါသည်။
၎င်းတို့သည် မြန်မာနိုင်ငံတွင် နှစ်ရှည်လများဖြစ်ပွားနေသည့် စစ်ကြောင့်
လုံခြုံရေးခြိမ်းခြောက်မှုများ ပြင်းထန်စွာခံစားရသည့်အပြင်
စိန်ခေါ်မှုအများအပြား ရင်ဆိုင်နေကြရသည်။

မြန်မာနိုင်ငံသည် အာဏာသိမ်းမှု၊ ကိုဗစ်-၁၉ ကူးစက်ရောဂါနှင့်
ရာသီဥတုဖောက်ပြန်မှုအစရှိသည့် သုံးဆဖိအားကြောင့် လာမည့်
ဆယ်စုနှစ်ပေါင်းများစွာတွင် နာလန်ထူရန် မလွယ်နိုင်ပါ။ ပြင်းထန်လာသော
ပဋိပက္ခအကျပ်အတည်းများကြောင့် မြန်မာနိုင်ငံသည်
နောင်တွင်ကျဆုံးလာနိုင်သော ကမ္ဘာတစ်ဝှမ်းရှိနိုင်ငံများနှင့် မတူညီဘဲ
ကွဲထွက်နေသော နိုင်ငံတစ်နိုင်ငံ ဖြစ်နိုင်ပါသည်။

တောင်သူလယ်သမားများသည် အပူချိန်မြင့်မားခြင်း၊ ခန့်မှန်းမရသော
မိုးရွာသွန်းခြင်းစသော ရာသီဥတုဖောက်ပြန်ပြောင်းလဲမှု၏ ဆိုးကျိုးများကို
စတင်ခံစားနေကြရပြီဖြစ်သည်။ မည်သို့ပင်ဆိုစေကာမူ ရပ်ရွာလူထုနှင့်
အခြားဒေသခံများသည် အကျပ်အတည်းကို ကြံ့ကြံ့ခံ ရင်ဆိုင်နိုင်ကြောင်း
ပြသလျက်ရှိသည်။

CONTENTS

1

INTRODUCTION

The February 2021 Coup: Threat and Opportunity

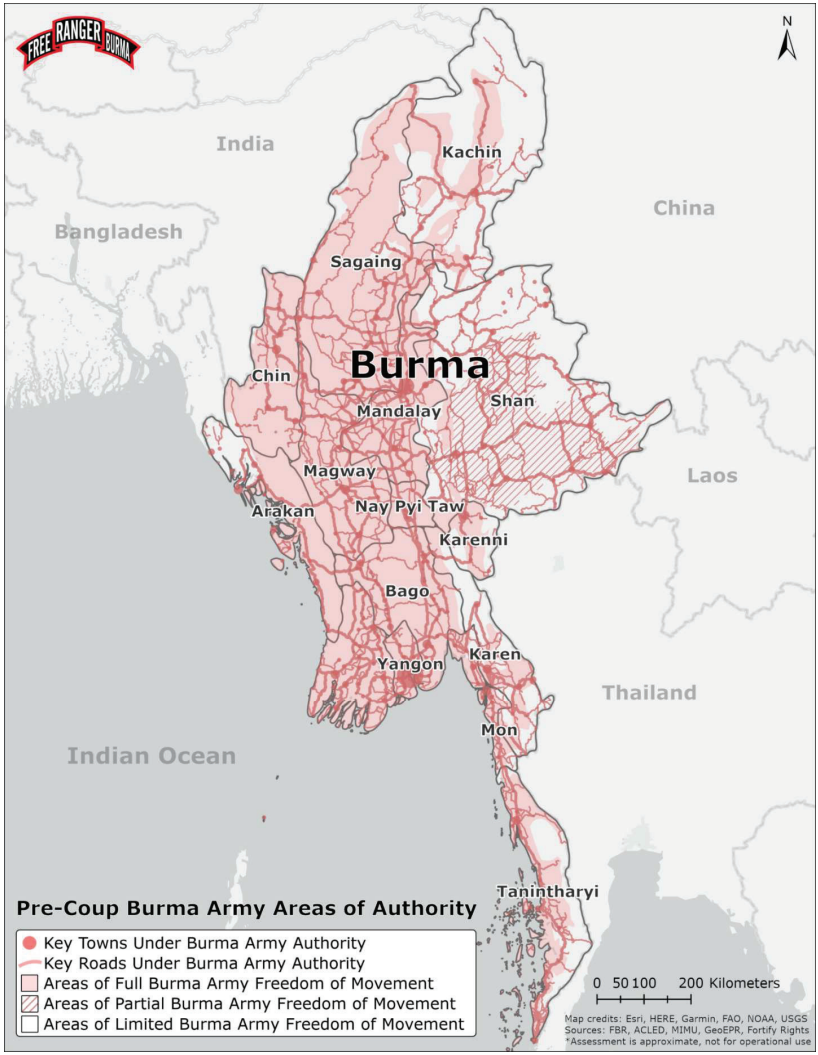
Following the February 1, 2021 coup, Myanmar is in turmoil. The militarized state is not fragile or failing—it has failed.

The country is highly vulnerable to the impacts of climate change. In many areas and sectors, an already dire situation may soon decline further. Instead of supporting adaptation and mitigation actions, the military regime focuses on suppressing dissent, killing and detaining citizens, and looting natural resources. However, a new federal Burma is emerging—painfully, from the bottom up.

The State Administration Council (SAC) junta, which seized power on 1 February 2021, is de jure illegal, and de facto not a credible or effective governing authority. In February 2023, the UN Human Rights Council, in its fifty-second session, reported: "Two years after launching a coup, the military has brought the country into a perpetual human rights crisis through continuous use of violence, including killing, arbitrarily arresting, torturing, forcibly disappearing, prosecuting, and sentencing

anti-coup opponents."[1] Not only does the junta commit war crimes against civilians, and preside over a collapsing economy, it fails to exercise even limited forms of militarized control over half the country. In April 2023 the Free Burma Rangers produced a map detailing the Myanmar Army's dramatic loss of territorial control two years after the coup.

1. UN High Commissioner for Human Rights, "Situation of Human Rights in Myanmar since 1 February 2022" (agenda items 2 and 4; February 24, 2023). See also Amnesty International, 2022b; and Amnesty International, 2022a (the latter report also documents the December 2021 Christmas Eve massacre of Karenni civilians by Myanmar Army troops in Hpruso). Attacks on armed opposition groups and civilian communities continued in 2023; according to Nayt Thit, "On March 11, Myanmar junta troops massacred 22 civilians including three Buddhist monks during a raid on Nam Name Village in Pinlaung Township, southern Shan State" (Nayt Thit, 2023, Terrifying Escalation of Junta Atrocities). See also Free Burma Rangers, 2023.


FREE RANGER BURMA
N
India
Bangladesh
China
Laos
Thailand
Indian Ocean
Kachin
Sagaing
Burma
Chin
Mandalay
Shan
Magway
Arakan
Nay Pyi Taw
Karenni
Bago
Yangon
Karen
Mon
Tanintharyi
Pre-Coup Burma Army Areas of Authority
Key Towns Under Burma Army Authority
Key Roads Under Burma Army Authority
Areas of Full Burma Army Freedom of Movement
Areas of Partial Burma Army Freedom of Movement
Areas of Limited Burma Army Freedom of Movement
0 50 100 200 Kilometers
Map credits: Esri, HERE, Garmin, FAO, NOAA, USGS
Sources: FBR, ACLED, MIMU, GeoEPR, Fortify Rights
*Assessment is approximate, not for operational use

Meanwhile, the anti-coup National Unity Government (NUG) is a work in progress, lacking a presence on the ground beyond Sagaing and Magwe Regions in central Myanmar. Control elsewhere is violently contested, with authority and political legitimacy in many ethnic nationality–populated areas resting with some two dozen Ethnic Armed

Organizations (EAOs[2])—not all of which actively oppose the junta. Since the coup, a number of these organizations have gained control over new territories. For example, the Karen National Union (KNU) has taken over some twenty Myanmar Army bases in the past two years - having previously failed to overrun and hold onto any enemy positions since the early 1950s.

In this context, I argue that political sovereignty reverts to the nations (or proto-states) that were yoked together as a colony of British India in the nineteenth century. The inheritors of these ethnic nations—EAOs and newly emergent state-level consultation and coordination bodies—have key roles to play in building a new Burma, from the "bottom up."[3] The recognition of ethnic homelands should form the basis of discussions on ethnic self-determination in Myanmar.

Federalism has long been considered an important tool for resolving the country's protracted state-society conflicts and achieving self-determination for ethnic nations. Federalism is a tool for self-determination rather than an end in itself. It has often been discussed in terms of the need to revise - or better, replace - the 2008 constitution, usually in a top-down ("blueprint style") manner. While constitutional change is probably necessary, federalism can also be seen as an emergent phenomenon, developing out of existing practices of communities and EAOs, CSOs, and other political and governance actors that seek to represent and serve them.

Before the 2021 coup, the challenge in Myanmar was to federalize a relatively unified (albeit deeply contested) state, following decades of mostly low-intensity civil war. Since the military takeover, the challenge is to rebuild Myanmar through a new federating process, including important new (or emergent) stakeholders.

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2. Particularly since the coup, some ethnic armed groups and analysts have started using the term "Ethnic Resistance Organization" (ERO), which was rejected by the Myanmar Army in negotiations toward the 2015 Nationwide Ceasefire Agreement (NCA). With some hesitation, I retain the term EAO as more conceptually inclusive: all EROs are EAOs—but not all EAOs are EROs.
3. Parts of this essay were first published in *Contemporary Southeast Asia* (South, 2021b); see also South, 2022b (Peace and Conflict Resolution Evidence Platform, University of Edinburgh). Burmese language translations of both are available on request.

As Bertil Lintner has recently argued (The Irrawaddy, 2023), "This is a war that neither side can win. The anti-SAC forces are not well-equipped enough to defeat the much more heavily armed Myanmar army, which, in turn, is stretched out on too many fronts to be able to crush the resistance. Besides, the Myanmar army has tried to do precisely that for more than 70 years, and not succeeded." Given the likely protracted nature of post-coup conflict in Myanmar, it is necessary to support effective governance and services delivery during a probably lengthy interim period. Indeed, as argued below, climate change and other factors may drive further state collapse before political solutions can be found to decades of armed and state-society conflict in Burma.

These issues are particularly relevant in relation to a crisis that affects not only Myanmar and the region, but our entire planet: climate change. Key EAOs and CSOs have globally important roles to play in mitigating and adapting to the challenge of climate change.

The struggles for self-determination and indigenous rights draws on and mobilizes the extraordinary resilience of communities and organizations, including long-standing EAOs, some of which are already putting adaptation and mitigation measures in place. Karen, Kachin and other areas are home to some of the best remaining forests in mainland Southeast Asia. Forest conservation (and reforestation) are central to protecting biodiversity, and 'drawing down' carbon dioxide from the atmosphere.

According to the economist Milton Friedman, "Only a crisis—actual or perceived—produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes the politically inevitable" (1962, preface). The post-Covid, post-coup crisis in Myanmar can be an opportunity to understand and support EAO and CSO efforts at environmental protection, and forest conservation and reforestation projects. These activities can contribute towards mitigating climate change through carbon drawdown. These globally important 'green services' should be backed by the international community, through technical and financial support.

Resource governance is a highly contested issue, related to the agency and sovereignty of indigenous communities. The administration and services delivered by EAOs and affiliates are the building blocks of a new (emergent), networked federalism in Myanmar, based on the sovereignty of ethnic states and their natural and human resources. Most of the dozen or so longer-established EAOs in Myanmar have developed extensive governance and service delivery systems in their areas of control or authority, including areas of "mixed administration," shared or contested with the Myanmar government and army. They have also developed progressive forest management practices and policies, often with the support of CSOs. Joint EAO-CSO-community action on climate initiatives can be an entry point for enhancing resilience, and developing effective local governance and long-term peace building (with inclusive arrangements to address the potential marginalization of "minorities within minorities"). This localization of responses to man-made and natural disasters is particularly important, given likely future reductions in international aid for countries like Myanmar, as climate change and other crises may weaken the commitment of Western countries, the traditional donors for most aid programs. The challenge is to support resilience while there is still time.

Research from other contexts and countries highlights the extractive and "warlord-like" nature of rebel groups. However, while they can demonstrate such characteristics, many of Myanmar's EAOs have credible and legitimate political agendas, and are working to support their people and protect the environment. They face huge challenges, including significant security threats at a time of protracted war in Burma.

Myanmar may not recover from the triple stressors of the coup, COVID-19, and climate change for many decades. The country may be an outlier for the coming failure of states across the world in the face of escalating crises.

Farmers are already beginning to experience the negative impacts of climate change, with higher temperatures and more unpredictable rainfall. Nevertheless, communities and other local stakeholders demonstrate extraordinary resilience in the face of crisis.

Complex and Contested Adaptations

Ethnic politics in Myanmar is notoriously complex, with multiple actors and networks. Complex Adaptive Systems (CAS) are characterized by (inter alia) self-organization and adaptive interactions among multiple actors, leading to the emergence of structures (or "states") of the system. Within these changing systems, agents adapt and interact with other agents or actors.

An important principle of complexity is the concept—and empirical manifestation—of hierarchy, as an emergent phenomenon.[4] In complex holistic systems, adaptation demonstrates emergent properties, including self-organizing behavior and hierarchies. Higher-level subsystems are dependent on, but reach beyond, component elements, which assemble in increasingly complex higher level structures.[5] These patterns of emergent hierarchical organization are not arbitrary, but demonstrate recurring and variable themes or motifs (and related subsystems).

Conflicts in Myanmar can be characterized as sets of interacting CASs, with climate change increasingly among the principal "generators of change." In this reading, EAOs (for example) would be key agents operating in, and emerging from fields of complexity, engaging with and adapting to other actors, responding to signals from the system. I do not claim to uncover the system laws through which higher-level subsystems emerge in relation to conflict and climate change in Myanmar. Rather, this monograph seeks to cast light on the "state" of the system(s) in early 2023, and possible future scenarios (or states of the system).

How EAOs and other agents adapt, or fail to do so, determines gains or reductions in their power and capacity (performance). Agents' adaptation and survival strategies include identifying and exercising "lever points," whereby the limited application of force can have major "fat-tailed" impacts (for example, a timely political initiative or military strike). Ethnolinguistic and faith-based networks, which embody

4. The hierarchical ordering of emergent phenomena has similarities with the patron-client ("neo-patrimonial") hierarchies apparent in political cultures of Burma (see Holland, 2014, p. 28).
5. John Holland recommends a comparative method for understanding differences and similarities between systems (2014, p. 5), as attempted here with EAOs and other stakeholders in Myanmar.

resilience, give rise to and are mobilized by EAOs and other agents. They can be viewed as subsystems, which are combined in higher-level states.

Local EAO, state-level, and People's Defense Force (PDF) governance-administration and security structures in post-coup Myanmar can be seen as the adaptive, self-organizing building blocks of emerging federal structures. Those that are more successful (variously measured) receive greater support (political, financial, and technical resources) and prestige, allowing them to contribute toward higher (union)–level emergent functions and discussions.

According to Jim Woodhill and Juliet Millican (2023), the best way to approach complex systems analysis is to take a holistic "helicopter view"—looking at how different CASs, networks, and actors intersect and overlap, going beyond siloed realms of analysis. Complexity analysis uncovers and embraces uncertainty, and multiple perspectives and actors, and considers alternative future scenarios.

A systems-based approach can support local agents and networks to design adaptive interventions around system dynamics in partnership with local actors ("coproduction"). The CAS approach "is a mindset of working with rather than against the way complex adaptive (human) systems function. It involves taking multiple perspectives, surfacing differing worldviews and asking questions about the whole system" (Woodhill & Millican, 2023; Ramalingham, 2013).

This paper applies these principles to the topics of violent conflict, climate change, and the emergence of bottom-up federal governance systems in post-coup Myanmar. Understanding complexity can also contribute toward sustainable peace building. For Cedric de Coning (2020), "complexity theory, applied to the social world, can offer insights about social behavior and relations that are highly relevant for peace and conflict studies … [including] a theoretical framework helpful for understanding how complex social systems can prevent, manage, transform, or recover from violent conflict (p.1)."

Elsewhere, Coning states:

> [C]omplex systems cope with challenges posed by changes in their environment through co-evolving together with their environment in a never-ending process of adaptation … [a process] that the adaptive peacebuilding approach seeks to replicate and modulate. In the development field [we find] a similar approach, called adaptive management. (Coning, 2018, p.305)

The relationships between complexity theory and adaptive development/management (and "appreciative enquiry"), are beyond the scope of this monograph. It is nevertheless encouraging that complexity theory provides further theoretical scaffolding to the emergent "bottom-up" approach to politics and society.

Rather than an overly defined and pre-planned "blueprint approach" (critiqued by William Easterly, 2007, and Ben Ramalingam, 2013), the dynamic situation in Myanmar requires adaptive "searchers" who proceed by innovative trial and error, identifying and supporting "positive deviations" (rather than the more traditional problem-solving approach to identifying and correcting weaknesses). "Positive deviance" has the added advantage of involving close attention to local adaptations (unlike the planners' top-down blueprint approaches).

Following the principles of complexity theory and adaptive management, international actors should support successful adaptations (EAOs and state-based bodies, and CSOs), emerging out of the violence and conflict in Myanmar. Following the coup, these actors are leading the emergence of a federal and democratic Burma.

Methodology

This paper is based on a review of published sources and "gray literatures," as cited in the bibliography. Additional material comes from forty key informant interviews and twenty-two focus group discussions conducted between November 2021 and October 2022, over the course of two consultancies, with about twenty additional and follow-up discussions in January and February 2023. The recommendations derive

from this research and have been triangulated with local partners and national and international resource people. Material is also drawn from my three decades working in and on Burma—most recently one visit to Monland and two trips to Kawthoolei (Karen State) in 2022 (including a week spent in "Poo Thawaw" village—not its real name—in the northern Karen hills: see below). I am grateful also for numerous discussions at Chiang Mai University's Regional Center for Social Science and Sustainable Development.

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All errors of fact and interpretation are my own. A Burmese language translation of this monograph is available, on request.

Resilience

Resilience is the ability (of individuals, families, communities—or ethnic nations) to withstand and recover from shocks and cope with crises. The ways in which groups of people are affected by climate change impacts depends on their *exposure*, *vulnerability*, and *coping capacity*. Resilient people and communities cope with shocks, and return to or improve previous standards of living and human security. Resilience can be understood in terms of capacities: *Absorptive capacity* prepares for or mitigates the impacts of hazards, focusing on essential goods, structures, and functions. *Adaptive capacity* brings about longer-term change, including through adapted and diversified livelihoods and farming techniques (supported by awareness raising and training). *Transformative capacity* goes beyond existing absorptive and adaptive abilities, challenging the deep structures that make existing systems unsustainable and inequitable (South & Demartini, 2020).

In Complex Adaptive Systems, resilience is tested and confirmed by adaptation to shocks. This capacity "depends upon inherited, persistent characteristics" (Holland, 2014, p. 79)—as demonstrated in Burma by indigenous communities, and the EAOs and CSOs that represent and serve them.

2

FEDERALISM

A Tool for Self-Determination and Nation Building

Like "peace," "federalism" means different things to different stakeholders. The "contested concept" (Gallie, 1962) of federalism can generate heated—and possibly unresolvable—debate, because actors' positions are psychologically and/or ideologically driven, and relate to specific material and ideational interests. Technically, federalism refers to a mixed sovereignty system of government, which divides and shares authority and accountability between a central (federal/union)– and provincial (state/region)–level governments. I will argue that a key dynamic in Myanmar's federating process is that the segments (state units) are regarded as autonomous, and in effect sovereign.

Generally, federalism is achieved either through a "federating process," bringing together independent units to create a union, or through a "federalizing process" (or process of radical decentralization or devolution), wherein the central authority of a single political unit negotiates—or renegotiates—with local or regional political constituent parts to provide them with constitutional autonomy. Examples of a federating process include when the thirteen North American colonies formed a federal union in 1789, or when the German Empire was created in 1871. Although in both cases the states no longer enjoy constitutional independence, key powers (and popular sovereignty) are still closely guarded at the state level.

More uncommon is to federalize a preexisting "unitary" state through a process of radical decentralization. Forms of devolution or regionalization

have occurred in recent decades in the United Kingdom and Spain, reflecting past territorial divisions and concepts of nationalities.

Before the 2021 coup, the challenge in Myanmar was to *federalize* a relatively unified (albeit deeply contested) state. Since the military takeover, the challenge is to rebuild Myanmar through a federating process. For example, in the field of education a 'federalizing' process would introduce more decentralization and local language and cultural contents in the curriculum, as partially attempted in Myanmar under successive SPDC and NLD government educations reforms; a 'federalising' approach would build on recognition of and support to independent EAO and community-based education initiatives (see below). Regional autonomy can be introduced without a federal constitution through the introduction of "special regions"—as arguably was de facto the case in parts of Myanmar following the ceasefires of the late 1980s and 1990s (autonomy under this dispensation being defined in geographic terms).

For many conflict-affected communities, federalism is valued as enabling (or constituting) a political settlement that might prevent the continuation or recurrence of armed conflict. For ethnic elites in Myanmar, federalism has usually had a stronger attraction than decentralization or regional autonomy, as this would require a fundamental legal-constitutional restructuring of the central state, as well as devolving power at the periphery. In contrast, Bama (or Burman) political and (particularly) military elites have historically been wary of federalism. In 1962, General Ne Win used concerns about the supposed imminent disintegration of Burma's national unity, through the imposition of federalism by a civilian government, as a pretext for the March military takeover (Taylor, 2015).

Political Legitimacy

For Aoife McCullough (2015, p.1), "the 'legitimacy' of a state or of a non-state actor refers to the acceptance of its authority among both political elites and citizens, although not all citizens are equally able to confer legitimacy. Without legitimacy, power is exerted through coercion; with legitimacy, power can be exerted through voluntary or quasi-voluntary compliance. … Legitimacy can be assessed through a set of 'right standards'—a normative approach; or through the

perceptions and acts of consent of the authorities and citizens in a given society—an empirical approach. Perceptions and acts of consent are influenced by local social norms."

McCullough suggests a more empirical approach, taking account of "non-state armed groups" services delivery, which "can influence perceptions of legitimacy … affected by expectations of what the state should provide, subjective assessments of impartiality and distributive justice, the ease of attributing performance to the state, and the characteristics of particular services (p.1)." She critiques donor assumptions that strengthening states through strengthening services delivery is either possible or desirable. An empirical approach "assesses legitimacy through the perceptions and acts of consent by both the governed and the authorities in a given society (p.3)." Context—and local perceptions—are key elements of political legitimacy.

Key stakeholders in Myanmar—the NLD and the Committee Representing Pyidaungsu Hluttaw (CRPH; established 5 February 2021 by mostly NLD MPs elected the previous year)—claim legitimacy through successful participation in Western-style democratic elections. Other actors (EAOs, state-level consultative bodies, and to a degree the NUG) are legitimate due to their political struggle, and their provision of services and governance administration.

Much of the discourse on legitimacy is framed by Max Weber's famous categorization, with Western state-led donors generally favoring *rational-bureaucratic* institutions and actors. *Traditional* and *charismatic* sources of legitimacy may have more local traction (and resonance with ethnolinguistic and faith-based communities) but are often excluded from serious consideration in the aid and diplomatic worlds. This is particularly true for the type of "strong-man" patronage politics characteristic of some parts of some EAOs (neo-patrimonialism).

Top-Down Federalism

In ethnic nationality circles in Myanmar, calls for "genuine federalism" are widespread—but the details of what is required (and how it will be achieved) have not always been clearly articulated. As already noted, there are many forms of federalism, and different ways of getting there. In the Myanmar context at least, federalism is best approached

as a tool for self-determination and conflict resolution, rather than an end in itself.

Debates on federalism in Myanmar tend to focus on which powers should remain at the Union level and which should belong to subnational states, and on the problematics of defining federalism along ethnoterritorial lines when ethnic communities are spread across different areas and often live side by side. The 1947 constitution of the Union of Burma, promulgated a few months after the Panglong Conference in February of that year, was federalist in appearance but centralizing in practice—not least because the central government retained budgetary control over ethnic states. The Panglong Conference can be seen as a federating moment, in which different leaders from—but not necessarily fully representative of—the Shan, Chin, and Kachin communities agreed to form an independent union after the withdrawal of British colonial power.

Whether this is how the Panglong Agreement was understood at the time by Aung San and other participants is not entirely clear (South, 2022b). However, more than half a century later, approaching federalism in Myanmar requires a new process of "federating" whereby the present dispensation would be renegotiated to create a genuine federal union.

Broken Promises of Federalism

Previous attempts to achieve federalism in Burma failed due to a lack of political will on the part of the military and successive central governments (and to a lesser degree, the lack of a clear strategy on the part of ethnic nationality political elites). With the post-coup collapse of legitimate or effective central authority in Myanmar, these barriers have been largely removed, in principle at least.

Tensions around federalism were evident long before the November 2020 elections and February 2021 coup. Like its military predecessors, the National League for Democracy (NLD), which ruled on military sufferance from 2016 to 2020, paid little attention to ethnic nationality concerns and demands while overseeing a faltering peace process (begun by the previous U Thein Sein regime in 2011–2012, culminating in the Nationwide Ceasefire Agreement of October 2015).

In contrast to a central state with which many citizens have never identified, many of Myanmar's several dozen EAOs enjoy significant legitimacy among the communities they seek to represent and protect (Covenant Institute, 2021; Mark, 2022). Most engaged in good faith with a peace process which, during the period 2011–2015, seemed to offer the best opportunity since independence of addressing ethnic nationality elites' and communities' grievances and aspirations. However, the experiment ultimately failed—or, perhaps more accurately, proved that ethnic Burman (or Bama) elites in the military and NLD were unable or unwilling to take ethnic demands seriously. Meanwhile, the Myanmar Army was working behind the scenes to undermine peace and nascent democracy in Burma.

Min Aung Hlaing miscalculated—both in thinking his proxy party could win the 2020 elections, and in assuming that his coup would work. Within days of the military takeover, huge numbers of ordinary citizens took to the streets, launching an unprecedented Civil Disobedience Movement (CDM), voicing demands for the end of military rule, the abolishment of the 2008 constitution, and the establishment of a genuine federal democracy. The Spring Revolution has changed Myanmar indelibly. The anti-coup movement has moved beyond calls to reinstate the 2020 election results, to develop an urgent and ambitious agenda calling for a reimagination of the state and its relationship with diverse social groupings.

Following violent crackdowns against peaceful protesters, tens of thousands of young people took up the call of resistance. Since the junta's bloody crackdown, opposition to the coup has proliferated. In the majority of Myanmar's 320 townships, People's Defense Forces (PDFs) have emerged—some are aligned with the NUG while others work with long-established EAOs or operate more or less independently.

Despite assumptions (including my own) that most PDFs would be more-or-less defeated by the Myanmar Army, the opposite seems to be true. In many parts of the country, PDFs have inflicted significant battlefield casualties on the military, despite being mostly poorly armed (at least at first). In Chin, Kachin, Karenni, and Karen areas, EAOs and allied PDFs have resisted violent incursions by the Myanmar Army. In Sagaing and Magwe, they have battled the junta in villages that had not

seen armed conflict since the Second World War. Those PDFs associated—and increasingly integrated militarily—with the KNU, Kachin Independence Organization (KIO), Karenni National Progressive Party (KNPP), Chin National Front (CNF), Ta'ang National Liberation Army (TNLA), and other EAOs have proved the most resilient.

The Myanmar Army responded to the widespread protests and uprising by killing, raping, and torturing civilians, including many children. By mid-2023, more than 3,700 civilians (including 400 children) had been killed by the junta, with some 20,000 people detained. Many more lives were destroyed or rendered profoundly insecure in ethnic nationality–populated conflict-affected areas, including as a result of hundreds of Myanmar Army air strikes on civilian populations.

In July 2022, the KNU, KNPP, CNF, and NUG Ministry of Humanitarian Affairs and Disaster Management undertook a comprehensive assessment of the humanitarian impact of the coup (August 2022). This was conducted under very difficult circumstances (in war zones), against a tight deadline. The survey was undertaken by EAO line departments and related CSOs in order to provide accurate numbers about the massive humanitarian consequences of the coup. The assessment found that 1.5 million people had been forcibly displaced and at least 3,500 killed by the Myanmar Army and proxy militias since the coup. There were at least a 250,000 Internally Displaced Persons (IDPs) in Karen areas, probably more. In June 2003, the UN High Commissioner for Refugees (UNHCR) reported that there were at least 1.8 million IDPs in Myanmar, at least 1.5 million of whom had been forced to flee since the coup. In addition, well over a million refugees from Myanmar live in Thailand (mostly Karen and Karenni) and Bangladesh (the Rohingya), with at least 4 million migrant workers outside the country - many of whom left for the same reasons as the refugees: state violence and poverty.

The majority of Myanmar's citizens will not anytime soon be reconciled with the vicious State Administration Council (SAC) regime. Instead, the challenge and opportunity is for reconciliation between the Burman majority and ethnic nationality citizens. Since the military takeover, the country's politics have been reenergized. "Gen Z" and other young people from the cities are making common cause with Myanmar's ethnic

nationality actors, who have suffered from decades of state-led violence and forced assimilation. A new Burma is emerging.

For many EAOs, consolidating control in their areas of authority (and adjacent areas of "mixed administration," where authority is shared—or contested—with the Myanmar Army) is equally if not more important than overthrowing the SAC junta that seized power in February 2021. This is perhaps understandable, given the long-standing aspirations of many ethnic nationality leaders and communities. The quality of EAO governance is crucial to establishing and demonstrating their political legitimacy and administrative effectiveness. In order to be credible authorities, EAOs need to demonstrate a commitment to rights-based and inclusive governance, and services delivery.

Alliances

In 2023 there were two main EAO groupings in Myanmar: the United Wa State Army (UWSA)-led (and heavily China-influenced) Federal Political Negotiation and Consultative Committee (FPNCC, established April 19, 2017) and the Nationwide Ceasefire Agreement signatory EAOs. The latter coordinate through the Peace Process Steering Team (PPST, established in 2016, a year after the NCA).[6]

Following the 2021 coup, the KNU and CNF, and then the RCSS, suspended their participation in the PPST. In May 2023 the New Mon State Party (NMSP) withdrew from the group, as the Mon EAO was unwilling to engage politically with the SAC junta - leaving a rump PPST of just 5 small EAOs.

While the PPST is a coordination body (rather than a formal alliance), the FPNCC is primarily a political organization, which includes about 75 percent of Myanmar's EAO troop strength. Following the Arakan Army (AA)'s ideological model, the FPNCC has adopted a broadly "confederationist agenda" (see below).

6. Since 2017, a task force of four PPST members (KNU, RCSS, NMSP, and CNF) has been informally coordinating with two non–NCA signatory groups (the KIO and KNPP)—the so-called "big six." Among the main outcomes of this collaboration was the drafting of a set of federal principals for a future Myanmar.

As Bertil Lintner notes, "[W]hile China exerts influence over the FPNCC as a group as well as its individual members, it would be wrong to view them as Chinese puppets." Rather, these are useful allies for China in Myanmar, with the KIO perhaps regarded by Chinese leaders as too close to the West (Lintner, 2021, p. 204). Under Premier Xi Jinping's Belt and Road Initiative (the BRI, launched in 2013), Myanmar has provided China with access to the Indian Ocean (the Bay of Bengal), circumventing the strategic choke point of the Strait of Malacca (Singapore). China had provided cover for successive military regimes' human rights abuses in the UN Security Council and elsewhere. This relationship has been backed by extensive resource exchanges: (mostly) black-market timber and other goods flow north into China, while Myanmar imported an estimated US$1.2 billion worth of armaments from China between the late 1980s and mid-1990s (Lintner, 2021, p. 190).

While China did not welcome the coup, it seems willing to support SAC rule, if this means greater openness to Chinese infrastructure and other BRI investments. Ultimately, China will support whichever government is in power. In the meantime, China rolled out "vaccine diplomacy" by providing COVID-19 response assistance (including the Chinese-developed Sinovac vaccine) to EAOs and communities in a border buffer zone south of Yunnan Province.

China has provided significantly more support to EAOs in Myanmar than have Western countries. The northern EAOs are relatively well supplied with small-arms, roads and electricity. While some groups (such as the KIA) produce weapons locally, most military and infrastructure assistance comes directly or indirectly from China. Several northern EAOs have complained that - while they appreciate rhetorical support from the West, and limited humanitarian and development assistance from NGOs - China is a far more generous patron, and also has a bigger stick.

FPNCC Members

United Wa State Army (UWSA), National Democratic Alliance Army (NDAA), Shan State Progressive Party (SSPP), Kachin Independence Army (KIA), Ta'ang National Liberation Army (TNLA), Myanmar

National Democratic Alliance Army (MNDAA), and Arakan Army (AA).

The FPNCC effectively incorporates two related military alliances: the National Alliance-Burma (NA-B), including the KIA, AA, MNDAA, and TNLA; and the Three Brotherhood Alliance, consisting of the AA, MNDAA and TNLA (but not the KIA, officially).

NCA Signatory Groups

2015: Karen National Union (KNU), Chin National Front (CNF), All Burma Students' Democratic Front (ABSDF), KNU-KNLA Peace Council (PC), Pa-O National Liberation Organization (PNLO), Arakan Liberation Party (ALP), Restoration Council of Shan State (RCSS), and Democratic Karen Benevolent Army (DKBA).

2018: New Mon State Party (NMSP) and Lahu Democratic Union (LDU).

"Federalism from Below": Emergent/Network Federalism

Several of Myanmar's EAOs have developed credible political agendas and demonstrated long-standing provision of services and governance authority (including access to justice) in their areas of control. With the collapse of credible and legitimate government and governance across much of Myanmar since the coup, many EAOs have become the sole providers of severely under-resourced health and education services.[7]

For example, (as discussed below) EAO education departments administer at least 2500 basic education schools across Myanmar. In the southeast alone, the KNU, NMSP and KNPP manage some 200 health facilities, including hospitals, and health outreach services to communities. At least a dozen EAOs have established state-like—if under-resourced—governance administrations in their areas of control or authority. These include sometimes quite sophisticated justice

7. On EAO governance and services delivery before the coup, see the Myanmar Interim Arrangements Research Project's *Between Ceasefires and Federalism* (South et al., 2018); on EAO services and administration since 2020, see South, 2022b.

systems. The KNU, NMSP, KNPP, AA, PSLF-TNLA and several other EAOs have courts at the Township, District and headquarters levels, including appeals systems and relatively well-established legal codes and procedures. In most cases, hybrid EAO justice systems are integrated with and build upon local customary practices, which are deeply integrated in communities. These are local ethnic building blocks of a new federalism, built from the bottom up.[8]

A flexible, adaptive, and asymmetrical federalism is emerging out of the present crisis. This new, networked union is more than the sum of its parts.

It is important to note that some role for the union level is essential in this model, to steer and where necessary regulate the parts of a complex political system. Furthermore, states need representation—and in some cases a veto—at the union level. As noted above, hierarchical organization is an important characteristic of emergent systems, with emergent properties at any level needing to be consistent with and respect constituent subsystems.

Confederalism

Established in 2009, by 2016 the Arakan Army had become the dominant EAO in western Myanmar. The extraordinary growth of the AA, with its promotion of "the way of Rakhita" (or "Arakan Dream 2020") vision—restoring Arakan's sovereignty through adopting a "confederationist" approach to self-determination—was a major game-changer in Myanmar's ethnic politics. The AA aspires to a high degree of autonomy, based on the historical independence of Arakan. In practice, this may be similar to the de facto independence achieved by the UWSA

8. John Holland notes that "well-established building blocks" are key components of (or "mediate") emerging systems (2014, pp. 31, 54), which "have had their usefulness established in several contexts." There can be few more challenging contexts for education provision than Myanmar, where junta forces often directly target schools and kill children (for example). (Amnesty International, 2022a; 2022b).

following its 1989 ceasefire.[9] This does not sit well with the Myanmar Army, given the latter's strong rhetorical commitment to conserving the unity of the state.

In August 2022, the AA established district courts and installed salaried judges in its areas of control. By this time, the United League of Arakan (ULA, the AA's political wing) had established some governance authority in fifteen out of Rakhine State's seventeen township.

Resurgent Rebel Rulers

Far from being exclusively (or in addition to being) composed of warlords motivated by self-interest, several of Myanmar's EAOs have developed credible political agendas and demonstrate the long-standing provision of services and governance authority (including access to justice) in their areas of control. In the Burmese context of "hybrid governance," where state and EAO authority often intersect and overlap, political legitimacy is contested (or ambiguously liminal) between competing sovereignties and governance actors.[10] For many conflict-affected communities, for example, the KNLA (Karen National Liberation Army, the armed wing of the KNU) provides protection against the ravages of the Myanmar Army. The KNU raises revenue from local agricultural levies, taxation at trade gates and checkpoints, taxation of logging and mining activities (which often have negative impacts on the local environment and livelihoods options), and "revolutionary donations" from civilian

9. In late May 2022, the UWSA was among other ceasefire groups to meet with the junta leader, Min Aung Hlaing. They subsequently released a statement calling for political negotiations while making it clear that the Wa would not get involved in disputing the coup. The UWSA declared that it would not leave the union of Myanmar but clarified that "except for national defense and diplomacy, we will manage ourselves," and asked for the creation of an autonomous Wa state.

10. Roger Mac Ginty and Oliver Richmond argue that hybrid regimes are only sustainable if locally owned and constructed: "Hybridity is a condition that occurs, in large part, contextually; it is a constant process of negotiation as multiple sources of power in a society compete, coalesce, seep into each other and engage in mimicry, domination or accommodation. International actors can, and do, influence the nature of hybridized contexts, but often in ways that are unanticipated. Hybridity is not a condition that can be crafted in a laboratory and rolled out in neat factory packaging" (Mac Ginty & Richmond, 2016, p.2).

communities.[11] The KNU has developed a significant body of legal and policy apparatuses, including land laws and a fairly systematic (if not always systematically implemented) body of civil and criminal (and witchcraft) law. The KNU and other EAOs therefore demonstrate many elements of sovereignty.

State-centric notions of sovereignty can be supplemented or challenged (decentered) by indigenous conceptions and practices, such as Salween Peace Park in northern Karen State (see Box). Tomas Cole (2021) provides a fascinating account of lived indigenous concepts of sovereignty in the northern Karen hills, based on animist traditions of land and landscape owned by the ancestor spirits.

Thomas Risse (2011, p. 27) calls for better understanding of and support to areas of "limited statehood" and mixed sovereignty (or hybrid governance), as a way of supporting rights to self-determination. These arguments apply to areas of "limited statehood" in Myanmar, where EAOs exercise governance authority. In the case of ceasefire groups, Annika Pohl Harrisson and Helene Kyed (2019) examine "ceasefire state-making" (a kind of conceptual counterpart to Kevin Woods's "ceasefire capitalism" [2011]), through the lens of EAO provision of access to justice, focusing on the NMSP and KNU. In both cases, they find EAOs' systems better trusted locally than those of the central government. Kyed and contributors to her edited volume *Everyday Justice in Myanmar* (2020) point to the plurality and complexity of justice systems and cultures in Myanmar, including the importance of localized, nonformal solutions and customary informal dispute mechanisms, and the roles of (some) trusted EAO justice systems.[12]

11. Over many years, Karen villagers have often told the author that taxation by the KNU is not too onerous, and is generally predictable—unlike the arbitrary and violent manner in which the Myanmar Army extracts resources from civilian communities.

12. Ja Htoi Pan Maran (deputy minister for education in the NUG) and Mandy Sadan (2021) analyze legal pluralism, in the context of the Pat Jasan antidrug movement in Kachin, including the roles of legal brokers facilitating the navigation of these spaces of fragmented sovereignty, shared and contested by the state (mostly Baptist churches) and by the KIO (Ja Htoi Pan Maran & Mandy Sadan, 2021).

Like state administrations, Myanmar's EAOs are characterized by a mixture of private (individual and clan-based network) economic incentives ("greed factors") and social, economic, and political grievances deepened by decades of armed conflict. Most EAOs are characterized by significant internal differentiation—even factionalism, as discussed by David Brenner (2019). Professional and academic literature often frames EAOs as relatively homogeneous actors. However, even if we have difficulty looking inside the "black box," it is important to note that different actors and stakeholders within and among EAOs and other networks challenge (and combine) for positions, mobilizing material and symbolic resources to pursue a range of agendas from political-economic through identity-based to ideological positions. There are many gray areas; power holders, for instance, exercising political office often act in good faith in the difficult and uneven struggle for self-determination, while at the same time developing their own careers and looking after families and friends. These factors are not unique to EAOs in Myanmar, but arguably characterise most governments in Southeast Asia.

The most well-known and documented EAO administrations are those in the southeast (especially the KNU and NMSP) and the north (the KIO). Meanwhile, the UWSA has established a fairly sophisticated and extensive administration in its areas of control opposite China's Yunnan Province, funded by massive tin reserves exported to China, and by the global amphetamines business. This includes over four hundred schools (compared to only twenty in 1989) and twenty-six hospitals (Lintner 2021, p. 147).

To the west of the Shweli road, in the hills of northwestern Shan State, the Ta'ang armed and political-civilian nationalist movement has been resurgent since 2016-18, undertaking a series of military and administrative reforms. In addition to its expanded military capacities, in 2022 the Palaung State Liberation Front (the PSLF—political and administrator wing of the TNLA) deployed six civilian line departments. Dynamic TNLA leaders have played important roles mobilizing civil society and supporting Ta'ang language education and development initiatives. According to a publication marking the sixtieth anniversary of the PSLF/TNLA:

> One of the aims of the current PSLF/TNLA is the creation of Ta'ang State. As an ethnic nationality, it is the rights to raise the status of its people so that their people would be respected equally and to stand for equal rights as other people. It is the rights of all the national races. (PSLF/TNLA, 2023)

The expansion of PSLF-TNLA territorial control and administration has created some tensions on the ground, particularly with local Kachin communities, and the KIO. This highlights the importance of inter-EAO coordination, especially in relation to the situation vulnerabilities of "minorities within minorities" (see below). Such issues need to be addressed with some urgency, if EAOs are to demonstrate their credibility as governance authorities.

Questions of EAO governance as explored here can usefully be examined with reference to Zachariah Mampilly's notion of "rebel rulership"—a concept relevant to armed groups' postwar administration, as well as to situations of ongoing armed conflict (Mampilly, 2011; also see South & Joll, 2016). Focusing on rebel administration provides a useful corrective to the focus in much of the literature on nonstate armed groups as criminal and violent organizations, motivated primarily by profit. Mampilly (2011, p. 37) rejects rebel government as necessarily being on the trajectory toward achieving state-like status, due to the difficulties of legitimizing "nonstate" authority in a world of sovereign states. Although he does not engage with issues of sociopolitical legitimacy beyond questioning the place of nonstate actors in the international states system, Mampilly (2011, p. 67) notes that armed groups are motivated to provide elements of governance and service delivery in order that civilians may "embrace … a specific rebel organization." However, this insight tends to obscure an appreciation of rebels' provision of services as a *responsibility* of rule, an act of solidarity with co-ethnic civilians. In the case of several EAOs in Myanmar, credible claims to parastate status are demonstrated through education provision.

Ethnic Education Systems [13]

There are two main reasons why ethnic education is important in Myanmar (and other multi-ethnic, particularly conflict-affected, countries):

Educational benefits

Children who are forced to learn in a language they do not speak at home are educationally disadvantaged. Education in the local language ('mother tongue') builds on foundational understandings, helping children to later learn the national language (in this case, Burmese). This is referred to as Mother Tongue Based Multilingual Education (MTB-MLE), and is acknowledged internationally as the most cost-effective way for children who do not speak the national language to have a fair chance in school. Evidence globally shows this to be the best way of teaching children from minority language communities.

Political benefits

Ethnic education is an important element in peace-building. One of the main grievances fueling ethnic conflicts in Myanmar is the perceived disregard for the identity of minority ethnic nationalities in the government system, and experiences of marginalization among ethnic communities, in the context of a dominant Burman majority culture and language ('Burmanization'). For these reasons, many ethnic nationality communities regard the national education system as a tool of assimilation. Education has been seen as a 'driver of conflict'.

Since the 1960s, the suppression of minority languages within a centralizing, militarized state dominated by members of the Burman majority has been one of the main grievances underlying ethnic conflict. In response to this, and the lack of available education in rural areas, the KNU, NMSP, KIO, and other EAOs have developed separate education systems in order to preserve and reproduce minority languages and cultures. Some of these alternative education actors have come from the civil society sector, particularly Christian and Buddhist associations, and literature and culture committees, while others were developed by EAOs.

13. The following section is derived from South, Stenning, & Schroeder (2023).

Several EAO systems were standardized in the 1970s. Since the 1980s, and particularly with an increase of external support following the 1988 democracy uprising, EAO education regimes expanded, especially in the Karen, Mon, and Kachin areas. Before the coup, the KNU's Karen Education and Culture Department (KECD) supported more than 1,500 schools, of which about half were primarily administered by the community and half directly run by the KECD; many community-administered and some KECD schools also receive support from the government ("mixed schools"). In addition, there are dozens of Christian mission schools as well as several tertiary education institutes, some of which are linked to the KECD.

Ethnic Basic Education Provider (EBEPs) are diverse in character, serving at least 300,000 children, in schools either directly administered by EAO education departments or (at least before the coup) in 'mixed' (including community-run) schools, jointly administered by the Ministry of Education and EBEPs. There are EAO-affiliated schools in Karen, Mon, Kachin, Chin and Shan States, and Bago and Tanintharyi Regions. Most EBEPs use Mother-Tongue Based (and/or Multilingual Education/MTB) teaching methods, with child-centered methodologies. Some funding is provided by international donors, but much is supported by communities. Teachers often receive stipends, but are essentially volunteers. Following the coup, EBEP (EAO education department) schools are the only functioning basic education providers in the country.

There are also some thirty-five thousand school-age children in the ten Karen and Karenni refugee camps in Thailand. These are closely linked to the KNU and KNPP education systems inside Myanmar.

Key EBEPs[14]

Karenni State Consultative Council (KSCC) Education Committee

280 autonomous schools; 31,735 students

Karenni Education Department - KNPP

14. Other important ethnic education providers include Kachin church-based and *kaw dai* (Shan) systems in northern and central Shan State.

185 schools; 1261 teachers; 22,721 students

MTB-MLE Curriculum

Karen Education and Culture Department (KECD) – KNU education department (also in some DKBA areas)

c.1200 schools; 11,445 teachers; 164,874 students

MTB-MLE Curriculum

Mon National Education Committee (MNEC) – NMSP education department

136 schools; 800 teachers; 12,000 students

MTB-MLE Curriculum

RCSS Education Commission (RCSS - EC)

350 [inc. 'mixed'] schools in southern Shan State; 11,000 students

Curriculum under review

KIO Education Department (KIO ED)

195 schools (10 high-schools); 30,566 students

Curriculum under revision

Ta'ang National Education Committee

338 primary schools, 72 middle schools, 11 high schools; up to 100,000 students

Ta'ang and Burmese languages, some local curriculum (including for other minority groups)[15]

15. Ta'ang (in Burmese, Palaung) Mon-Khmer communities speak four main languages/dialogues. In 2017 the TNLA, whose working language comes from the majority Samglong sub-group, agreed to adopt Rujing as the organization's official language. As a T'ang leader put it, "We believe in supporting the rights of 'minorities within minorities', and indigenous communities - so we thought we should start at home" (personal communication, 13-8-22). As among Chin linguists and educators, there is a movement among some Ta'ang to create a common language, combining the four dialects.

In addition, there are well over a hundred higher education institutes in ethnic areas across Myanmar. Many are associated with EAOs, but in most cases are operationally independent; others are founded and administered by CSOs and/or by faith-based networks and organizations. There are also several post-basic education colleges in Karen and Karenni refugee camps on the Thailand side of the Myanmar border. For refugee children and young people, these are often the only accessible post-secondary education institution.

Basic and tertiary education institutes in refugee camps (Thailand) and ethnic areas of Burma, and EAO education departments, are characterised by the involvement of large numbers of women. Many teachers are female, who also play leading roles in many education departments, CSOs and training institutes - making tertiary education a key domain of women's agency. Education also has important roles to play in building long-term cultures of peace, supporting awareness of climate change (including actual and potential adaptation and mitigation strategies; see below).

Despite great needs, funding for ethnic education has been unpredictable and scarce; insecurities have increased massively since the coup, with direct SAC attacks on a number of education institutes. Children not living in areas controlled by successive Myanmar governments have mostly been denied opportunities to sit state matriculation exams and therefore could not attend government universities or pursue their education abroad. Therefore EAO-aligned and state-based higher education institutes will continue to play important roles, including in a federal education system.

Under the previous NLD-led (hybrid) government, education reforms were introduced, allowing somewhat more input for local actors (e.g. literature and cultural associations), including some ethnic languages and historical materials in the government curriculum (piloted in five ethnic states, before the coup). The National Education Law (2014; amended in 2015) stated that "there shall be freedom to develop the curriculum in each region based on the curriculum standards". These developments were important in acknowledging the diversity of the students' needs - but progress was slow and uneven, highlighting the complexities of addressing the language barrier in a context of multiple different languages.

Arguably therefore, the pre-coup context in Myanmar was one of limited attempts to 'fedralise' a unitary (centrally administered, and Burman dominated) education system. Since the coup, the challenge is to build on EAO and other autonomous ethnic education systems, in order to create a new education system, based on locally owned schools and colleges—a 'federating' process in education.

Academic and Policy Perspectives on 'Rebel Rulers'

Mampilly argues that ignoring the reality of insurgent governance is to both deny the facts on the ground and foreclose engagement with such authorities, who may provide as good or better care for civilians under their control than those of the de jure government. Insurgents' control of sometimes extensive territories and populations necessitates their international recognition. This recognition should be extended particularly in cases where insurgent organizations, which Mampilly (2011, p. 248) refers to as "counter state sovereigns," meet certain minimum standards of governance efficiency that ensure both "stability and civilian welfare." This raises questions of how to assess the quality of rebel governance in contexts in which the state is either contested or performs poorly, as in Myanmar. It also introduces the issue of the relationship between the provision of aid and conflict actors.

Most aid agencies recognize that their interventions can have direct and indirect impacts on the political economy of war and local conflict dynamics. However, aid agencies in Myanmar are often reluctant to examine the contested legitimacies in conflict situations. Mark Duffield (2001) writes about "emerging political complexes" (inverting the humanitarian terminology of "complex political emergencies"), where nonstate armed groups perform some or all elements of governance authority on the ground. In these situations, "rebel rulers" provide degrees of relatively predictable authority and often limited services to vulnerable populations, gaining some credibility as political authorities.

Assuming that "'limited statehood' is not a historical accident or some deplorable deficit of most Third World and transition countries," Thomas Risse (2011, p. 2) sees this phenomenon as an indigenous and long-established characteristic of many non-Western countries. Instead of supporting programs that roll out the modern, Westernized,

bureaucratic state, Risse calls for a "governance package" that recognizes the unique characteristics of many local arrangements. Like Duffield, he rejects the often implicit assumptions of modernization theory, proposing that "limited statehood" does not mean the absence of governance but rather can be a site of novel and intersecting forms of political authority, including "various combinations of state and nonstate actors … including … violent actors" (2011, p. 11).[16] Risse observes that successful "state building," particularly as supported by external actors in postconflict situations, is most successful when local, nonstate governance actors (or "states within states") share sovereignty with the central state.

Frances Fukuyama addresses some of these issues in *The Origins of Political Order* (2011; see also the 2014 sister volume). Across a sweeping historical narrative, he argues that well-developed states offer certain inherent benefits, including an "inclusive political order" (overcoming nepotism and political-economic corruption[17]), respect for rule of law, and widespread participation in the political process, including on the part of civil society. Fukuyama advocates for an effective (strong and capable) state that is impartial in the rational-bureaucratic sense of not favoring vested (patrimonial) interests, and inclusive of and accessible to all citizens. However, in conflict-affected countries such as Myanmar, this may not be enough. In such contexts, the need for state capacity, accountability, and rule of law should be combined with the importance of political legitimacy and the acceptance of local communities. This can be achieved in part by recognizing and supporting appropriate EAO governance regimes in conflict-affected areas.

Following Risse and Duffield, hybrid governance regimes (or "emerging political complexes") should be acknowledged and supported, as expressing indigenous characteristics of authority and the delivery of public goods and services. Government actors and international donors and aid agencies aiming to "think and work politically" should

16. Didier Péclard and Delphine Mechoulan (2015, p. 5) review the literature on "rebel governance" and observe that "civil wars do not simply destroy political orders … [but] are part and parcel of the process of state formation."

17. The criminalization of the Myanmar body politic is illustrated by the 2018 appointment as lower house speaker of militia leader U T Khun Myat, who has deep associations with the heroin economy in Shan State (Moe Myint, 2018).

move beyond standard peace-building and development packages based on strengthening the state, and adopt more conflict-sensitive approaches, including principled engagement with the country's diverse EAOs. The aim should be to foster "the emergence of new political and social orders in areas of limited statehood" (Risse, 2011, p. 28), in ways that can best benefit long-marginalized, vulnerable, and conflict-affected communities. However, recognition of and support to EAO governance regimes cannot proceed naïvely, on the assumption that these emergent structures are necessarily always legitimate or operationally effective.

Regarding the political economy of insurgency and post-conflict scenarios, it should be noted that many Myanmar Army–backed militias (especially, but not only, in Shan State) are deeply implicated in the drug trade. Ceasefire EAOs and militias have often allowed the Myanmar Army to extend its control (by proxy) into many previously inaccessible areas. Kevin Woods (2011) has developed the concept of "ceasefire capitalism" to explain the manner in which many militias support state penetration into ethnic communities in conflict-affected (technically post-ceasefire) areas. Nevertheless, since the 2021 coup, impressive new governance regimes have emerged in several areas. Among these are some of the most inclusive and effective state-level bodies in the history of Burma.

Ethnic Coordination and Consultation Bodies

Since 2021, the following organizations have been established: the Kachin Political Interim Coordination Team (KPICT, the first); Ta'ang Political Consultative Committee (TPCC); Pa-O National Federal Council (PNFC);[18] Interim Chin National Consultative Council (ICNCC); Karenni State Consultative Council (KSCC); Mon State Federal Council (MSFC); Irrawaddy Federal Council; Tanintharyi (the Tanintharyi Consultative Council), and the Sagaing Forum (a prototype federal state unit in the Burman heartlands, established in May 2023 buy a wide range of stakeholders, led by local CDM-ers and PDFs). Most state-level bodies generally started as political coordination fo-

18. Unlike most other "state-level bodies", those representing Ta'ang and Pao – while inclusive of communities, CSOs and EAOs – are defined by an historic ethnic nation, rather than a geographical state area.

rums but have trended toward more governance and administration roles. Institutions like the KSCC (and the Interim Executive Council: see below) and others can be regarded as constituent (and legitimate) bodies of the federal union, grounded in inclusion and participation of local political and civil society. Working with communities, CSOs, and EAOs on key issues (e.g. education, climate change adaptation, and land issues), ethnic coordination bodies have become key elements in developing a federal union "from the bottom up."

In some areas, similar roles may be played by people's administrative bodies associated with the anti-junta PDFs—especially in Bama-majority places where EAOs do not operate, such as Sagaing and Magwe Regions, where the NUG has established elements of administration. In their liberated areas, some PDFs and People's Administrative Bodies have already assumed responsibilities for law enforcement, public works, and some education provision, sometimes under the guidance of the NUG.

Further research should be conducted on the understanding and attitudes toward federalism of Bama communities. If representatives of the majority community are not well prepared for the concept and diverse practices of federalism, this could be presented by unscrupulous and divisive politicians as somehow undermining the union.

To be sustainable, successful, and equitable, these forms of local governance have to be rooted in the trust of communities. It is particularly important that EAOs and state-level bodies are supported to develop funding models that are not primarily dependent on natural resource extraction.

The 'Shwe Koko model': Casinos on the Thailand border

The $15 billion Shwe Kokko Special Economic Zone, developed by the Myanmar Yatai company, was planned to cover come 12,100 hectares, stretching nearly 20 km along the border with Thailand, in areas under the control of Karen Border Guard Forces (BGF). The fully elaborated project would include luxury housing, condominiums, hotels, shopping centers, golf courses, casinos, entertainment complexes, tourism, culture shows and agriculture projects. From 2014, the Shwe Koko area attracted

a huge amount of unregulated investment, primarily from transnational Chinese criminal networks, who at the time of the coup were well advanced in building a casino city at this once sleepy backwater.

In late 2020, the NLD government started to move against Karen BGF commander Chit Thu and the Shwe Koko enclave, suspending building and launching an investigative tribunal. Chit Thu was given an ultimatum to step down from his official BGF/Myanmar Army position. There was some speculation that this could drive the Karen BGF (or parts of it) back into alliance with the KNU. However, the February 2021 coup served to resurrect Chit Thu's fortunes, as an important front-line ally at the Myanmar Army in its battles against the KNU.

The casino complex is reported to have high-speed internet connections, to facilitate internet gambling and various online scams. Many workers were involved in 'boiler room' call centers, often being held against their will, having been lured to Shwe Koko to by promises of legitimate work. In August 2022 the head of Yatai, Xhe Zhijiang, was arrested in Bangkok.

There were further casinos, also connected to shady business and criminal networks in the region, located in KNU areas further to the south, in Myawaddy Township and along the border near Mae Sot. Controversy arose in early 2023 when a group of 68 Karen CSOs issued a statement criticising the KNU for its involvement in these shady enterprises (the 'K Park' project). It remained unclear whether profits from these, and similar establishments KNU 4 Brigade (Tanintharyi Region), went solely to the KNU, or if funds were sometimes diverted into private pockets.

New, longer-term models of EAO funding are required. Traditionally, EAOs have relied for funding on varying combinations of taxing villagers and traders, and income from natural resource extraction (logging and mining) and involvement in the drugs business, casinos and unregulated 'boiler-room' call centers. These activities are mostly not sustainable, ethically or practically. New funding models for EAO governance and services are urgently required. As discussed further below, these could include payments from the international community for globally important "green public services" - including carbon drawdown through forest conservation (and reforestation), as part of worldwide efforts to mitigate the impacts of climate change. In the

meantime, as so often in Myanmar, key stakeholders are mostly focused on formal political arrangements.

The Federal Democracy Charter

Myanmar needs federal democracy, based on recognition of existing local governance administration systems, which are mostly under the authority of anti-coup ethnic and pro-democracy forces. According to the revised Federal Democracy Charter (March 2022), the National Unity Consultative Council (NUCC) is the peak policy body of the anti-coup opposition, with a deliberative and legislative role. According to the revised Charter, the NUG should be referred to as the "Transitional National Unity Government." This seems to indicate the NUG's subordination to the NUCC (which is a more inclusive and participatory body), and the dependence of both on EAOs and state-level coordination bodies that exercise authority on the ground.[19] However, according to several informants, key bodies associated with the previous semi-civilian regime (particularly the NLD-dominated NUG and CRPH) have failed to support the NUCC, and sometimes actively obstructed it - for example, by conducting direct bilateral talks with EAOs, bypassing the NUCC process.

The mandate and role of the NUG has been much debated and contested, and is a work in progress. As defined in the charter, the Transitional NUG has an important role to play as a "light-touch" federal coordinating body. Ultimately, however, authority rests with the ethnic states, and—if they can hold on—with other subnational governance entities such as PDFs and PABs in Sagaing, Magwe and elsewhere.

In principle, the NUG is accepted by many anti-coup actors as an executive for the governance of Myanmar at the union level, at least in those areas that are not controlled already by autonomous EAOs. The NUG is a relatively inclusive body, with several ethnic nationality CSO and EAO leaders in (albeit often deputy) ministerial positions; also,

19. As of early 2023, nine NUCC joint coordination committees had been set up to address a range of issues, including strategy, federalism, and foreign affairs (the first three joint committees established). Ethnic nationality politicians engaged in the NUCC complain of domination and intransigence (deep-seated assumptions of entitlement) on the part of CRPH and NLD representatives.

unusually for Myanmar, it includes relatively large numbers of women in key leadership positions (in line with UN Security Council Women, Peace, and Security Resolution 1325).[20]

Relationships between emergent authorities at the sub-national level (often associated with EAOs) and the union-level government (e.g. the NUG) include the issue of EAO (and/or state-level) representation at the center. Thus, it is important that representatives or delegates from states—EAOs and others—have a seat (and a veto, on some issues) at the federal union level.

Minorities-within-minorities

Under the 1982 Citizenship Law, access to Myanmar citizenship has been dependent on membership in one of 135 state-recognized (and rather arbitrary) 'national races'. While indicative of the country's great diversity, these official categories of identity are deeply unhelpful.

Participation in ethnolinguistic and faith-based groups or networks is an important resource, mobilized by individuals, families, and communities as a key element in helping people to support and love each other, and survive crises (resilience). However, ethnic (and religious and gender) categories and roles can be exclusionary, marginalizing individuals and communities that are not part of the group core. In many parts of Myanmar, ethnic groups such as the Karen and Shan coexist with smaller minority communities like the Mon, Pa-O, and Lahu. For example, there are five townships in Karen State with significant Mon populations, and there is significant overlap within and between Kachin, Ta'ang and other communities associated with powerful EAOs in northern Shan State. This raises questions regarding locally dominant ethnic group identities and interests, and their relationship with such "minorities-within-minorities." How does self-determination for locally dominant (although nationally minority) ethnolinguistic EAOs fit with the aspirations and rights of local

20. For an analysis on climate change and conflict broadly from the NUG perspective, see Hickey & Maria-Sube, 2022. This policy paper makes useful recommendations for the engagement of intergovernmental institutions with the NUG, EAOs, and other key stakeholders in Myanmar.

"minorities-within-minorities" associated with other ethnic groups living in the same area?

Mary Callahan points to the increasing prevalence in recent years of discourse and activism around the identity category of *lu-ney-zu* or "ethnic groups/races" (personal correspondence). Since around 2010, the rise of political activism among smaller ethnic nationality communities in Myanmar has inspired people to mobilize in new ways.

"Non-territorial" federalism, based on access to rights of individuals and communities - wherever they may live in Myanmar – may be one way forward. This is what Arend Lijphart (1977) calls "segmental autonomy." Nonterritorial autonomy could provide important guarantees and provisions for minority (and minority-within-minority) communities, wherever they live. In practice, this may look like a rights-based approach, without necessarily referring to federalism and decentralization/autonomy.

If pursued and implemented seriously, subsidiarity—the federal principle of consultation and decision making at the lowest level possible—can promote localization and inclusive governance institutions. By including local communities and "minorities-within-minorities," this approach can help to blur the boundaries between otherwise ethnically defined and fixed territorial blocks. Inclusive local governance in an emergent federal system can help to reduce tensions and boost the legitimacy and credibility of EAO and state-level authorities. How state units (EAO or state council authorities) treat "minorities-within-minorities" is a key test of their credibility as rights-based and responsible power holders.

These issues converge in debates regarding whether self-determination in Myanmar is better conceived and practiced at the level of (predominantly ethnic nationality) communities (e.g., Kawthoolei or Kachinland), generally under the leadership of an EAO, or at the state or substate level, with ethnically neutral administrative nomenclature and terminology (e.g., Mon State or Karenni State).

3

LOCAL TO GLOBAL

Self-Determination and Climate Change

Addressing climate change is the global priority of our times, and thus potential common ground shared by multiple stakeholders in Myanmar and beyond. However, the impacts of climate change are experienced differentially, so this is not necessarily an area of common interest. The disruptions of climate change will likely further drive the disarticulation of the state of Myanmar, which was never effective or perceived as legitimate by many ethnic nationality citizens, especially those living in conflict-affected areas. Thus, climate change is both a driver of state failure and an opportunity for exploring new political structures and sovereignties.

Especially in the absence of credible and legitimate state authorities in Myanmar following the February 2021 coup, EAOs and CSOs have key roles to play in climate change mitigation and adaptation. Many actors are already working on climate change issues, without necessarily framing their work in this way.[21]

In March 2023 the Intergovernmental Panel on Climate Change (IPCC, the UN body for assessing the science related to climate change) issued its 2023 Climate Change Synthesis Report, stating that:

21. Some of these arguments were first presented in a report for Search for Common Ground: "*Ethnic Armed Organizations and Climate Change in Myanmar*" (South, 2021a).

> [A.2] Human-caused climate change … has led to widespread adverse impacts and related losses and damages to nature and people (high confidence). Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected (high confidence).
>
> B.1.1 Global warming will continue to increase in the near term (2021-2040)… a best estimate of warming for 2081-2100 that spans a range from 1.4°C for a very low GHG emissions scenario (SSP1-1.9) to 2.7°C for an intermediate GHG emissions scenario (SSP2-4.5) and 4.4°C for a very high GHG emissions scenario.

These already worrying elements are likely to be exacerbated by the impacts of the Niño weather event in 2023-24, warming sea and air over the Pacific Ocean. In the next two decades, global temperatures are likely to rise by well over 1.5°C above preindustrial levels (breaking the goal set in the 2015 Paris Climate Agreement), threatening the world with further extreme weather patterns, including increased incidents of droughts, floods, and storms, and more intense and unpredictable monsoons in Southeast Asia (IPCC, 2021, B.3.2). Rising sea levels will affect many countries for many centuries to come (IPCC, 2021, B.5.4). Low-income countries will be particularly hard hit, especially those already facing humanitarian disasters. These developments will drive crises in food security in Myanmar and globally (Harvey, 2021).

Yet Myanmar bears little responsibility for the climate crises affecting the planet. Historically, as one of the most underdeveloped countries in Asia, Burma has played a very minor role in producing carbon dioxide emissions or other factors driving climate change. Nevertheless, the country is highly vulnerable to climate-related hazards. The disruptive

"new abnormal" includes global pandemics such as COVID-19, and possible future pandemics.[22]

Case Study: Karen[23]

In terms of land and forestry policy and practices, the KNU is probably the most progressive EAO in Myanmar (although things are also moving in the right direction within the KIO, NMSP, and KNPP-KSCC, among others; see below). A wide range of Karen civil society actors work on climate change–related issues. Broadening the scope, rural farming communities will increasingly experience and adapt to the impacts of climate change, mostly in the form of changing rain and temperature patterns. Upland farmers are already noticing the impacts of climate change. Some entrepreneurial agriculturalists are experimenting with new types of planting method, and looking for crop varieties (including heritage seeds) which can tolerate late and sporadic monsoon rains, and increased temperatures (recent conversations with folks in Karen and Mon areas).

The KNU and CSOs

The KNU was founded in 1947, and remains the most politically significant and militarily powerful EAO representing the Karen ethnolinguistic community (South, 2011). Following more than half a century of armed conflict, in 2012 the KNU agreed to a ceasefire with the Myanmar government and army. From around 2018 to 2020 (well before the 2021 coup), the Myanmar Army relaunched attacks against the KNU, as well as associated civilian communities.

22. While beyond the scope of this paper, it should be noted that several EAOs in Myanmar channeled significant amounts of international donor support in responding effectively to the COVID pandemic. For example, the KNU repurposed existing clinics, established new fever centers, and implemented appropriate controls on travel between regions in order to limit contagion. Nevertheless, COVID-19 took a terrible toll across the country, including in ethnic areas—a disaster exacerbated by the mismanagement of the SAC regime (which destroyed several EAO COVID screening stations).
23. The four case studies (Karen, Kachin, Mon, and Karenni) can be seen as snapshots of the conflict-climate Complex Adaptive System (nexus) as of early 2023 (two years after the coup).

Karen areas (particularly those under the control or influence of the KNU) contain some of the best forests in Myanmar, and indeed in all of mainland Southeast Asia.[24] Karen villagers, CSOs and the KFD have developed a community-based approach to environmental conservation and forest management, which has been successful in preserving and managing these important resources. Karen forests are vitally important assets for Kawthoolei (the Karen State), Myanmar and the world—as resources for sustainable local cultures and livelihoods, as "carbon sinks" to mitigate climate change, and as sites of great biodiversity, with potentially huge monetary value. Locally owned and delivered approaches to forest management demonstrate the effectiveness and legitimacy of KNU and partners' governance and administration arrangements.

In the past, the KFD was more associated with logging and deforestation. However, since around the turn of the twenty-first century, the KFD has redefined and reoriented itself within the KNU as the main body responsible for environmental conservation, with an explicit commitment to community-based forest management. This is particularly important for maintaining the legitimacy and credibility of the KNU among local stakeholders, and opposing misconceived and potentially disastrous hydropower and other infrastructure development plans (Middleton, Scott & Lamb, 2019). This shift in approach has been supported and partly driven by Karen indigenous communities, CSOs and resource specialists, particularly the Karen Environmental and Social Action Network (KESAN). Since 2023, with international donor support, KNU departments and KESAN have planted 680,000 (out of a planned 1 million) new trees.

The KFD has adopted a suite of laws, policies and projects aimed at sustaining Kawthoolei's globally important natural resources.. In general, forest, wildlife, and environmental laws are fairly well understood and respected at the community level (at least in principle). Demonstrating the KFD's commitment to protecting Karen forests will require further culture change within the KNU and its bodies. Under conditions of intense violence and suppression by the militarized state

24. As noted by International Alert in 2019:"The KNU's KFD [Kawthoolei Forestry Department] now presides over the most high-value conservation forests in southeast Asia, which the Myanmar government does not have access to.

of Myanmar, the KNU has over the years adopted a decentralized command-and-control system, lending itself to clientelist (neopatrimonial, privatized) political economies. It is important that headquarters and local power holders, including in the KNU's armed wing, the KNLA, understand and respect the long-term value of Kawthoolei's forests.

Communities play key roles in stewardship, conserving the natural environment through a range of traditional sociocultural and livelihoods practices. For centuries, this indigenous wisdom has helped to conserve areas of extraordinary biodiversity, including for example in KNU Mergui-Tavoy District (Tanintharyi Region, KNLA 4 Brigade), a globally important biodiversity hotspot. The protection of still substantial forests in Kawthoolei is a result of generations of stewardship and traditional wisdom on the part of local communities, in recent years supported and regulated by the KFD.

Environmental conservation is undertaken in partnership with KNU district- and township-level authorities, and the Karen National Police Force (KNPF). There are potential tensions in policing KNU forestry law, with conflicts of interest across a wide range of stakeholders—including possible KNU/KNLA personnel and villagers who may benefit (financially, in the short term) from some wildlife crimes. Communities have long relied on forests for game meat and other nontimber products. Thus, it is important to find a balance between environmental conservation on the one hand, and perceiving and using forests as productive assets (which should be managed in a responsible and sustainable way) on the other. These local dynamics may explain why relatively few poachers are apprehended—despite the apparent extensiveness of hunting.

Recent reports of increased logging in Tanintharyi Region focus mostly on non-KNU-controlled areas. However, since the February 1 coup, there has also been a very worrying increase in gold mining on the Tanintharyi River and tributaries. This seems to be driven by well-connected crony companies, with the acquiescence (or strategic support) of the Myanmar Army (according to key informants). Such activities would seem to contravene KNU forest law and policy.

In the past, the KFD was primarily responsible for licensing timber extraction operations in KNU areas. More recently, the focus has shifted to the conservation of forest resources, as exemplified by the KNU's 2009 imposition of a logging ban (which, however, is not always respected in practice—largely due to the clientelist/neopatrimonial nature of KNU and other EAO political cultures).

Over many centuries, Karen communities have developed customary (mostly informal) but sophisticated land-use practices, including community forests and areas reserved for traditional (animist) spiritual practices, and designated no-hunting and no-fishing areas (or seasons), with locally agreed bylaws and community-level "policing" of these arrangements. These long-standing cultural traditions have been supported and reinforced through the policies, laws, and practices developed by the KNU, KFD, and KESAN, which has established protected areas (wildlife sanctuaries, community forests, reserve forests, etc.) in each of its seven districts.

For example, together with KNU Mudraw (Papun) District (KNLA 5 Brigade) the KESAN has been closely involved in establishing the five-thousand-square-kilometer Salween Peace Park (in 2018) in the northern Karen hills. This radical alternative vision of activism and sovereignty can be a model for future efforts at locally owned forest management and conservation.

Some Karen CSOs (including KESAN) have developed local solar power projects. This experience can be learned from, and much advice can be garnered from groups like the Free Burma Rangers, who have developed substantial solar power for their headquarters in northern Karen State.

KDF policies and laws

The goal of the 2009 KNU Forest Policy (currently under revision; see below) is to "ensure sustainable natural resources (minerals, oil, gas, forests, solar, and wind) management and minimize environmental impacts through adoption of effective monitoring and supervision for resources uses and management of any socioeconomic sectors." The draft policy designates natural resources as publicly owned and stipulates local communities' rights to the utilization of natural resources, in a

sustainable manner. This contrasts with the (previous) Myanmar government policy, which emphasized increasing the area of land administered under a centralized system of land use planning. The KNU's forest policy emphasizes local community rights to use and manage forests, and the key role of community-managed forests under a future federal government policy.

The KNU Forest Law (2012) includes topics such as the authority to establish a reserve forest, rules for the commercial removal of forest produce, and forest offenses and penalties. KNU district and township authorities can establish a reserve forest, ensuring procedures for consulting with local communities and considering their rights. The policy is decentralized, with the district as a key actor in forest governance, including protecting wildlife and biodiversity. District KFD officials are authorized to monitor the removal of forest produce by road or river, setting charges to be paid for extraction permissions and other licenses and prohibiting activities that have a negative impact on rivers and other local environmental resources. In general, there is a preference to resolve cases locally; local authorities often fine offenders and release them, rather than going through the formal justice system (which may lead to imprisonment).

The KNU's forestry policies and laws are statements (and practices) of self-determination, reinforcing their claims to sovereignty and legitimate governance in their areas of control. For the KNU (and, arguably, for most Karen villagers in affected areas), forestry governance is about Karen sovereignty and KNU political legitimacy as the local governing authority. The KNU strategy of working on community-based environmental conservation, as part of a larger political sovereignty claim, means that the organization is open to partnerships with international actors.

Political economy

The KNU and KNLA need revenue, including to fund the protection of Karen communities and forests. For the long-term conservation of Karen and other forests in Myanmar, the KNU (and, where relevant, other EAOs) will need to be involved in designing sustainable income-generation and funding models. The risk otherwise is that these

organizations will have little recourse but to rely on natural resource extraction and taxes as key income streams.

In addition to organizational needs, it is necessary to recognize the reality that local KNU (district/township/village tract) and KNLA (brigade/battalion/company) leaders (and/or their families) are often involved in private economic activities, including in relation to natural resource extraction—sometimes in violation or ignorance of KNU/KFD policies and laws. This requires the KNU to carefully balance the implementation and policing of laws and regulations, with the aim of not alienating key local stakeholders or driving further conflict—including the potential risk of KNU/KNLA fragmentation.

There is an urgent need to work with the KNU and KFD at the district level to address this issue and find alternative income streams. This will not be easy, given the likely pressure from the cash-strapped SAC junta. This is one area where international support is urgently needed—including possibly in the form of interim payments—in order to protect the forest and decrease reliance on revenues from gold mining and other environmentally destructive practices. These local conservation activities are important contributions to mitigating climate change globally, through carbon draw-down.

Climate Change in Myanmar: Impacts and Issues

According to the Global Climate Risk Index, four of the ten countries most affected by climate change are located in Southeast Asia: Myanmar, the Philippines, Thailand, and Vietnam (Overland et al., 2017). Myanmar has experienced forty-three extreme weather events since 2000. Between 2005 and 2015, more than 1.6 million people in Myanmar (across twelve zones and states) were displaced due to weather-related disasters (Colquhoun, Sandberg, & Nyoi, 2016).

In the global climate risk index from 2000 to 2019, Myanmar is the second-most disaster- or extreme-weather-affected country in the world (Eckstein, Künzel, & Schäfer, 2021). Millions of citizens reside in natural disaster–prone areas, including the dry zone, the delta, and many ethnic nationality–populated areas. Extreme weather incidents and climate change–induced natural disasters are becoming increasingly

frequent, with local communities prone to the risk of storms, floods, droughts, and landslides. Rural communities bear the brunt of impacts from natural disasters, often experiencing loss of livelihood and food insecurity, resulting in increased economic migration. This compounds the vulnerability of already marginalized communities.

In 2008, Cyclone Nargis, Myanmar's worst natural disaster to date, killed an estimated 140,000 people and severely affected 2.4 million people in the Irrawaddy delta. In 2010, Cyclone Giri claimed 45 lives and affected another 260,000 people. Cyclone Mocha in May 2023 killed up to 400 people, and displaced hundreds of thousands (including many highly vulnerable Rohingya refugees and IDPs). The frequency and scale of disasters indicate Myanmar's increasing susceptibility to climate change. Neglecting those warnings, the former military regime has failed to take meaningful mitigation and adaptation measures. Instead, it has allowed unregulated extractive industries to continue their activities, approving large, risky investments with little to no consideration of environmental impacts.

Climate Action before the Coup

Myanmar lost ten million hectares of forest cover between 1990 and 2015 (an area equivalent to the total land area of South Korea) (World Bank, 2019). Between 2010 and 2015, the country had the third-worst deforestation rate in the world (Aye Sapay Phyu, 2015).

The period 2011–2020 saw a limited political reform processes in Myanmar. These included policies aimed at mitigating the impact of climate change, such as banning the export of raw timber logs in 2014 (Mclaughlin & Aung Hla Tun, 2016), and a ten-year moratorium on timber extraction in 2016 (Khin Wine Phyu Phyu, 2016). The Myanmar Climate Change Strategy (2018–2030) was developed to address the long-term aspects of response (Republic of the Union of Myanmar, 2019). The then-government also committed US$500 million over ten years for rehabilitation and reforestation programs (MONREC, 2019).

As with other aspects of governance, Myanmar's approach to addressing climate change before the 2021 coup was fairly centralized, and top-down. Nevertheless, there was a growing move toward—and some

space and exposure to—climate activism on the part of CSOs raising awareness regarding the consequences of climate change. In this newly formed space, CSOs could engage in policy-making processes through platforms such as the Myanmar Alliance for Transparency and Accountability (MATA) and the Myanmar Climate Change Alliance (MCCA). These allowed CSOs and other stakeholders to formulate interventions at the local and national levels, including awareness-raising, local adaptation, vulnerability assessments, preparedness training and projects, resource management, transparency in environmental management, and support for resilience.

The Situation since the Coup

In 2021 the SAC submitted a Nationally Determined Contributions (NDC) report—a document previously developed by the 2015–2020 NLD government—to the UN Framework Convention on Climate Change (UNFCCC). The NUG submitted more or less the same report, with a new preface written since the coup (MONREC, 2021a). The United Kingdom (hosts of the 2021 UN Climate Change Conference, or COP26) left the SAC delegation off the summit guestlist, while the UNFCCC (the event organizers) disinvited Myanmar military government representatives. In this instance at least, the SAC's illegitimacy was clearly recognised.

The NUG's NDC document was a placeholder. An improved, bottom-up approach should be developed, taking account of historical conflict dynamics, the roles of EAOs and CSOs, local community agency, and indigenous positions and rights. A less state-centric approach will help to support better engagement with ethnic stakeholders and communities, at the forefront of credible and effective climate action in Burma.

Little systematic analysis of changes in weather patterns or climate change impacts has been undertaken since the coup. The KNU is presently coordinating a survey of the organization's line-department and district-level administrations, key CSOs and communities, in order to document and better understand the impacts of climate change in Karen areas, and to document how locally-led Karen adaptation and mitigation activities contribute to global climate goals.

The SAC's collapsing finances have reportedly left it unable to import the requisite natural gas to operate two recently built electric power generation plants in the Yangon area, reducing the amount of electricity available nationally but contracting the amount of fossil fuels consumed. In this context, there has been a major increase in deforestation and poorly regulated mining activities.

In December 2021, Al Jazeera reported on "[f]ears that [the] military could step up exploitation of resources to shore up finances, putting one of the world's most climate-vulnerable nations at increased risk" (Liu & Wallace, 2021). The Al Jazeera report also mentions concerns that "the military might decide to restart the controversial China-backed Myitsone Dam in northern Myanmar, a pet project of former dictator Than Shwe that was halted by then-president Thein Sein in 2011 in the face of significant public protests." (Liu & Wallace, 2021).

Destruction of the natural environment under the SAC has targeted Myanmar's globally important forests. Forests provide important ecosystem services that can impact households down the length of a river basin. Myanmar has the most forest cover remaining among countries in Southeast Asia, but also one of the highest rates of deforestation.

Myanmar's remaining old-growth forests (up to 11% of total forest cover) are sites of extraordinary biodiversity, but rates of deforestation and biodiversity loss are deeply worrying. Whereas 77% of the country's territory was covered by forest in 1948, this decreased to 60% in 1990 and to 44% in 2015; the deforestation rate of 1% to 2.5% from 2000 to 2020 makes Myanmar one of the top ten countries globally for deforestation. Forest loss in Myanmar is not just a matter of complete forest removal, but also forest degradation in which ecosystems are gradually compromised.

The cash-strapped SAC junta seems intent on maximising short-term revenues by recourse to logging and mining in the country's remaining forests. This is already happening in Sagaing Region and Kachin and State (*The Irrawaddy*, 2021), and in Tanintharyi Region in the far south (Cowan, 2021).

Major drivers of deforestation are commercial oil palm and rubber plantations, small-scale agriculture, and infrastructure development.

In the southern districts of Tanintharyi, for example, forest loss is affecting the already fragmented habitat of globally threatened Gurney's pittas and tigers, among other rare species (Cowan, 2021). Meanwhile, activists report that political turmoil following the military coup has effectively halted community-led forest protection work. Once-remote forests are gradually eroding under intense pressure from commercial oil palm and rubber plantations, small-scale agriculture, and infrastructure development. The expansion of commercial oil palm, rubber, and betel nut plantations, together with the expansion of smallholder agriculture drives indigenous people off their land — forcing some IDPs to cultivate new fields in the jungle (Cowan, 2021; Hill & Kenney-Lazar, 2021).

The pillaging of natural resources by the SAC and crony companies (some related to district- and township-level EAO leaders) is documented in a report by the Independent Research Network (2022). Following the 2012 KNU ceasefire, environmentally destructive oil palm plantations expanded to nearly two million acres in western Tanintharyi, and large-scale mining operations also increased in the region. The widespread crises and violence since the coup allowed further such expansions into previously relatively unaffected areas in one of the most biodiverse and environmentally rich parts of Southeast Asia. In some areas, streams are polluted, and the environment resembles a "moonscape" of poisonous mining pits (a landscape witnessed by the present author on more than one occasion). During this period, many CSOs operating "inside" Myanmar had to go underground or severely restrict in their operations, resulting in less documentation of environmental abuses.

Illegal logging transported to China has greatly increased since the coup, with at least forty to fifty trucks loaded with timber reportedly heading to China every day. For example, Sagaing Region's Katha, Khamti, and Sagaing Townships saw rampant illegal logging from March to May 2021. Illegal logging is also witnessed in Sagaing Region's Alaungdaw Kathapa National Park (Myanmar's oldest and largest national park) Current political and security conditions make it extremely insecure for local environmental watchdogs to report timber trafficking in Myanmar. Reportedly, illegal logging in Alaungdaw Kathapa National Park intensified after the coup after forest officials

began participating in the Civil Disobedience Movement from early March 2021, refusing to work under military rule.[25]

Impacts of climate change

Southeast Asia's three most serious climate change impacts are floods, heat waves, and rainfall-induced landslides (Seah et al., 2022). The US National Intelligence Council (2021) identifies Myanmar as one of the countries most at risk from combined threats of climate change and conflict.

In addition to significant loss of life, livelihoods, and property, natural disasters are estimated to cost up to 3 percent of Myanmar's annual GDP, and the longer-term impacts will be greater. Loss of natural ecosystems such as mangroves and forests, rising average annual temperatures, and more intense rainfall are all factors that could increase the impact of natural disasters on large numbers of Myanmar's population.[26]

National daily average temperatures rose about 0.25°C per decade between 1981 and 2010, with daily maximum temperatures increasing by 0.4°C per decade This trend is expected to continue, although the degree of warming will depend on global decarbonization successes or failures and varies by season and geographical region. By the middle of the century, temperatures are expected to increase by 1.3°C to 2.7°C above historical levels.

While possible changes in Myanmar's future precipitation are less clear, over the past forty years, rainfall has become more intense and more likely to cause damage than before. Flooding is by far the most frequent hazard in Myanmar, accounting for 51 percent of disasters between 1970 and 2015. An estimated twenty-eight million people live in districts that have a high risk of flood exposure in at least part of a

25. According to the Environmental Investigation Agency, "The illegal timber trade has proven to be resilient in the face of conflict, ceasefires, recessions, government policy changes, temporary clampdowns and nascent political reform in the country" (*Irrawaddy*, 2021).

26. The data in this and the following three paragraphs are drawn from the Myanmar Information Management Unit's "Climate, Environmental Degradation and Disaster Risk in Myanmar" (MIMU, 2022).

district's area, mainly along Myanmar's coasts, the Ayeyarwady River and in Karen State.

Further changes in rainfall patterns are expected, varying by region and season, with projections related to sea-level rise in Myanmar ranging from twenty to forty-one centimeters by midcentury (and potentially much more than this by 2200, or sooner). The monsoon season duration during 1955–2008 reduced significantly, from 140–150 days in the mid-1950s to fewer than 120 days in 2008. The late arrival of the rains and the early ending of the monsoons have been particularly evident since 1977, when the duration of the rainy season dropped below 130 days. Overall, the duration of the southwest monsoon has shortened by about three weeks in northern Myanmar and by one week in other parts of the country.[27]

According to the UN Food and Agriculture Organization, the agricultural sector accounts for 37.8 percent of Myanmar's GDP, employs 70 percent of the labor force, and generates 25–30 percent of total export earnings. Current agricultural practices and policies do not prepare or support smallholder farmers in facing the challenges of climate change. With limited savings and often high debts, smallholder farmers cannot afford to maximize the utilization of land, causing exposure to vulnerable climatic and financial conditions, and possible tipping points beyond which resilience may break down.[28] Indeed, across Burma in 2022–2023 the impacts of climate change (higher temperatures and uneven rainfall) are already beginning to affect crops, with the potential of seriously undermining food security, already greatly

27. A rare recent study (Tun Oo et al 2023) notes that "In recent years, the southwest monsoon has arrived later and departed earlier with heavier rainfall and harsher weather. Annual rainfall increased in the northern hilly region by 228 mm between 2001 and 2020 but fell in the Ayeyarwady, Tanintharyi, and Yangon regions, as well as Rakhine State, by 58 mm. Sea levels are rising in coastal areas, and there has also apparently been an increase in saltwater intrusion onto farmlands… since the year 2000, cyclones now occur almost annually compared to once every three years on average in preceding decades."

28. On climate change impacts in Karen State, and an analysis of pre-coup community-based and other local (including CSO and EAO) coping mechanisms and response strategies, see Ashley South and Liliana Demartini, "*Towards a Tipping Point?*" (2020).

weakened by decades of armed conflict and Myanmar Army attacks on civilian communities.

Despite these hazards, the resilience of indigenous communities, and the unique habitats and ecosystems in many EAO-controlled or -influenced areas, present opportunities and resources for mitigating and adapting to climate change, by working with and supporting indigenous communities. Before the coup, many donors and aid agencies preferred to work through the central government, which failed to engage constructively with EAOs despite the existence of a deeply contested peace process. Following the coup, EAOs, CSOs, and communities are the key system agents and partners for climate change action.

Conflict, governance, and climate change

As a recent guidance note to peace-builders notes, nature can be both a "victim and driver of conflict… [and] conservation efforts do not necessarily have positive effects on peace. Conservation itself – and the politics surrounding it – can also contribute to conflict" (Hillert, 2023). This is been the case for example in international efforts to work with the Myanmar government (before the coup), to establish state-controlled 'protected areas' from Kachin State to Tanintharyi - in the process threatening the lives and livelihoods of indigenous people, and mostly ignoring the legitimacy of the EAOs which control most of these territories (Gum Ja Htung, 2018; Cole, 2021; Covenant Institute 2021; Hill & Kenney-Lazar, 2021).

According to the International Committee of the Red Cross, "countries enduring armed conflict are disproportionately vulnerable to climate variability and change" (ICRC, 2020). Interactions between climate change, conflict, governance, and migration are uncertain (Sturridge & Holloway, 2022). While there is significant correlation, causality is often difficult to determine (or is multidimensional).[29] The complexity is captured in a recent World Wide Fund for Nature (WWF) report:

29. "There exists no common, widely accepted methodology how to assess and address the links between climate change, conflict and fragility" (Tänzler, Scherer, & Detges, 2022, p.10).

> The climate-security nexus and the nature-security nexus overlap and cannot be fully addressed independently of one another. In fact, environmental factors are often a critical link in the pathway from climate change impacts to security risks. However, the nature-security nexus comprises additional interactions in which climate impacts play no or only smaller aggravating roles. Hence, the nature-security nexus puts biodiversity and ecosystems rather than climate change at its center. (Rüttinger et al., 2022)[30]

The conflict-climate change-migration nexus will increasingly define Myanmar's many challenges.[31] Drivers (generators) of disruption and system change include armed and state-society conflicts, and (increasingly) climate change, combined with the lingering impacts of COVID-19 (on livelihoods, etc.) and potential future pandemics. Myanmar is already experiencing a violent political crisis and massive decline in human security, unprecedented since at least the decade after World War II and independence. When the impacts of climate change become more apparent, things will likely get much worse, including possible widespread food insecurity.

Political, socioeconomic, and humanitarian crises in Myanmar may nevertheless be "critical junctures"—opening new spaces for local governance authorities, including those associated with long-standing EAOs as well as newly emerging subnational governance authorities like the KSCC, MSFC, and TPCC. Despite many challenges, this context may provide new roles and opportunities for previously marginalized actors working on climate change issues.

Increased numbers of displaced people in geographically remote and historically sparsely populated areas put significant pressure on forests and other natural resources, for example when the need for food leads to large-scale expansion of swidden (rotational, slash-and-burn)

30. The WWF calls for nature-based solutions to these interlinked crises.

31. These issues are relevant beyond the borders of Myanmar. If people in low-lying and crowded areas of neighbouring Bangladesh are displaced by rising sea-levels and storms, some may have little choice but to flee east. By 2021, there were already some ten million climate refugees (technically, IDPs) in Bangladesh, plus one million Rohingya violently expelled from Myanmar.

farming practices, which may nevertheless be suitable for lower population densities.[32] Furthermore, the post-coup environment of lawlessness and violence creates spaces for power holders and private interests to initiate new and potentially very damaging logging and mining ventures. Combined with some ethnic stakeholders' "natural resource fatalism" ("these are our forests, so we might as well derive the benefit, by logging while we can"), the pressure on Myanmar's extraordinary natural environment is very serious. Climate change also impacts the well-being of conflict-affected communities. Several informants pointed out that socially and environmentally destructive natural resource extraction (e.g., gold mining) can undermine local livelihoods, sometimes forcing families and communities to migrate.

The resilience of IDPs and "host communities" (the two categories are often not distinct), CSOs, and EAOs is extraordinary. In some ethnic areas, however (e.g., Karenni State), access to water (and elsewhere, to food) is already (in early 2023) becoming difficult in the dry season. Large numbers of newly displaced people arriving in these areas (including CDM refugees from the towns and cities) can put considerable stress on scarce local resources.[33] In some contexts, environmental degradation (logging activities, and in the southeast and Kachin areas, widespread unregulated gold mining) can have direct impacts on the local climate.

The hazards of climate change are likely to increase significantly (in some cases, exponentially) in the future. Impacts on the conflict and migration are uncertain, but feedback interactions between these different trends could lead to further instability and complex political-economic-humanitarian crises. Therefore, addressing climate change (adaptation and mitigation) can be framed as preventative action—mitigating against or at least alleviating future humanitarian

32. This is not a new phenomenon. For example, after donors withdrew most support to forcibly repatriated Mon refugees in the late 1990s, returnees planted rice and contributed to the destruction of previously intact forests in the NMSP headquarters area (South, 2003).

33. Karenni State is one of the most water-scarce states and regions in the country. Although "host communities" in many areas have been generous and welcoming to large numbers of new IDPs, increased demands on limited local resources can create tensions within and between groups.

crises by helping to build local resources, social capital, and development options. This kind of deep "capacity building" is essential to strengthening inclusive and resilient communities, which in turn are necessary for effective mitigation and adaptation. As such, action on climate change supports peace building—helping to prevent or limit outbreaks of conflict while building longer-term capacities for peace.[34]

Interlude in a Northern Karen Village[35]

"Poo Thawaw" village (not its real name) is located in the northern part of Luthaw Township, Kawthoolei (Karen State), not far from the Karenni State border. The community consists of about forty households, most of which are located on a ridge overlooking a small valley. Around ten more remote households are located a few minutes' walk from the main village, in or above adjacent valleys.

None of the villagers have Myanmar ID cards. Those we spoke to said they were not interested in being recognized by or engaging with the Myanmar authorities. They recognize the KNU as their legitimate government.

The villagers speak Sgaw Karen. A few also speak Burmese, and one or two individuals have some English-language skills. About three-quarters of the villagers are Christian; the rest practice traditional Karen religion (sometimes referred to as animism: *maw-lu paw la*). Relations between the different religious communities seem very good.

The village was originally established some way to the south, by four siblings who moved up into the hills following Burmese independence and the subsequent outbreak of armed conflict. Poo Thawaw village has moved a few times since then, mostly "following the *hku*"—that is, changing location according to the shifting patterns of upland rice cultivation.

34. The US Agency for International Development recommends building local institutional capacity for conflict sensitivity (USAID, 2015).

35. This portrait of the northern part of Salween Peace Park is based on my visit to Luthaw Township (the KNU's Mudraw/Papun District, northern Karen State; KNLA 5 Brigade), during January and April, 2022, published as "*Climate Change in a Northern Karen Village*" (South & South, 2022).

Most houses are made of bamboo, with wooden frames. There are three small (privately owned) rice mills in the village, and a generator at the church that provides electricity occasionally to some houses. Some households also have access to solar power, enough to charge mobile phones and lights.

Poo Thawaw village has never been directly attacked by the Myanmar Army. However, villagers have often had to flee in the past—mostly temporarily—when Myanmar Army patrols came nearby. On two occasions during our visit, MiG jet fighters flew low over the village. Local KNU authorities have instructed villagers to be prepared to flee, if necessary, including by preparing cakes of sticky rice and sesame (*mae tu pee*), a portable food supply.

Village leadership is provided by a headman selected by the villagers, supported by a couple of local (village tract) security personnel and village elders including the church pastor and school headteacher. The church is the most impressive and well-built (brick and concrete) structure in the village. This was constructed with funds provided by a Poo Thawaw villager who resettled in the United States some years ago. The old church located nearby is now the site of the village middle school, which provides education up to grade 8 (using the KECD system).

Over the years, several Poo Thawaw villagers have moved to Thailand and currently reside in the refugee camps there. Some also work as migrant workers in the neighboring kingdom. A few villagers have moved to the United States under refugee resettlement programs. Some families (a minority) receive occasional remittances from family in Thailand or beyond.

In addition to rice cultivation, many families raise chickens, pigs, goats, and/or ducks. However, meat is generally eaten quite rarely—not more than once a week, even for better-off families. Many families also own water buffaloes, which are primarily used for ploughing and fertilizing rice fields.

Three small streams pass through the valleys below the main village. The surrounding area is forested, and quite beautiful. Many of the nearby hills show signs of past or present rice cultivation.

Villagers have noticed a general increase in temperatures over the past several years. They pointed out that during the year of my visit

(2022), leaves were beginning to bud on deciduous trees in early April—whereas normally they would not appear until late May. Most worrying has been the changing patterns of rainfall.

In previous years, it may have rained lightly a few times during the dry season. Since the end of the previous rainy season (in October 2021), however, it had rained every few weeks. During the hottest part of the dry season (March–April), it rained almost weekly. Meanwhile, the flow of streams through the village and into the rice fields has significantly reduced over the past several years.

These developments have had serious impacts:

- Irrigated rice (*si plaw*): Less water in the rice fields has led to reduced crops. There is some anecdotal evidence that increased temperatures are also leading to smaller rice grains at harvest time.
- Upland, swidden rice (*hku*): Rains during the cutting and burning season result in less successful burns, with fewer nutrients entering the soil, and more weeds. Often, villagers have to undertake a second burn, with additional backbreaking work. Rains near the harvest time also cause rice stems to rot. Additional problems are sometimes caused by rats, which eat the rice grains.
- As a result of these stresses, the rice yield is in decline. In combination with the impacts of armed conflict in Karen State—causing many villagers to flee, often at crucial times in the agricultural cycle—these factors may indicate a looming food security crisis.[36]

Case Study: Kachin

36. Limited data indicates that the situation described above deteriorated following a poor 2022 rice harvest in the northern Karen hills. In particular, a hot August led to the failure of many rice plants in the KNU's Papun (Mudraw) District. On February 11, 2023, I interviewed a middle-aged Karen woman who had previously been a teacher at Deh Boh Noh KNU high school. She told me that since the junta airstrikes most larger buildings had been abandoned (including schools), with many people living in fear, and children being forced to study in the forest. In relation to climate change and food (in)security, this woman reported that usually (including in 2021) she harvested about three hundred 15-20 kg tins of rice from the family-irrigated rice fields. However, in November 2022 she harvested only sixty tins (20 percent of the previously usual harvest). The village pastor harvested only eight tins of rice, whereas in previous years his fields had yielded about a hundred.

Kachin areas (including parts of northern Shan State) are among the best endowed with natural resources (jade and timber, rare earths, fruits, and forests), as well as being among the most environmentally threatened areas in Myanmar. Media reports and this research indicate that there is widespread discontent among communities regarding the negative impacts of mining for gold (Fishbein et al., 2022a; Mizzima, 2021)[37] and jade,[38] including on the part of well-connected Kachin businesspeople.[39] Particularly in regard to rare earth mining, environmental impacts and community health hazards have increased significantly since the coup, as has already widespread land grabbing (Gum Ja Htung, 2018).

Conflict in Kachin is also fueled by—and impacts on—construction of hydropower projects, including the suspended US$3.6 million Myitsone Dam.[40] Also very damaging is the prevalence of tissue-paper banana plantations across much of Kachin, involving widespread land grabbing and environmental pollution. These negative actions are mostly undertaken by the SAC/Myanmar Army and their proxies and clients (e.g., Kachin Border Guard Forces), but also in some cases by the KIO. Most EAOs in Myanmar derive income by granting natural resource extraction concessions and licenses; in order to be credible and sustainable governance actors, EAOs and local governance bodies should review and assess such sources of funding. As discussed below, political-economic cultures and strategies seem to be shifting within the KIO, as the organization seeks to better control and regulate environmentally and socially destructive aspects of resource extraction in Kachinland. Nevertheless, there is reportedly a post-coup boom in legal wildlife trading.

37. Following the coup, there was an increase in illegal gold mining operations along the Ayeyarwady River in Kachin State including in Shwegu, Mohyin, Chibwe, Sunprabon, Myitkyina, Hpakant, Tanaing, and Waingmaw Townships. Overall, the current lack of rule of law in Myanmar is resulting in increased illegal natural resource extraction and elevated rates of environmental degradation.
38. Landslides in Hpakant and elsewhere sometimes kill hundreds of people.
39. An article in Frontier Myanmar informs: "Local people call for community leaders to do more to stop one of Kachin State's most influential businessmen and his company from digging up and destroying land near the famed river confluence" (Fishbein et al., 2022b).
40. Not only is it feared that Myitsone Dam construction will resume, but another potential dam may be constructed at Ngo Chang Hka (KDNG, 2020).

The KIO and CSOs

The KIO was founded in 1961, and it remains the most politically significant and militarily powerful EAO representing the Kachin ethnolinguistic community. Following a seventeen-year ceasefire, in 2011 the Myanmar Army relaunched attacks against the KIO and its armed wing —the KIA—as well as associated civilian communities (South, 2018).

Although its scope and capacity are still somewhat underdeveloped, the KIO Forestry and Environmental Conservation Department (FECD) has drawn up a set of basic regulations, including laws criminalizing hunting endangered species. The FECD is in the process of strategy and mandate planning, including developing a more comprehensive set of land and environment policies, and relevant laws, including a draft Kachin Forest Masterplan. It is assisted by a small group of Kachin CSOs to ensure engagement with the community and that local voices are heard. Especially in more remote districts, the FECD works closely with the KIO General Department of Administration. The FECD currently offers two months of training to all staff members, with two years of forestry training for senior and longer-term personnel.

In an important recent development, on December 7, 2021, the Kachin Independence Council (KIC; the government administrative body in KIO areas) released an order to halt gold mining operations in its areas of control and authority.[41] According to a KIO spokesman, Colonel Naw Bu:

> The primary concern of the order is to address the increased gold mining that is now encroaching on the land and farmland inhabited by internally displaced persons in Kachin State. Second, we do not wish to see our natural resources wasted without any benefit. We released this order with the intention of preventing the destruction of our lands. … The KIC released this order in response to local requests to take strong action against gold mining.

The KIO has (contractually) designated mining areas, and taxes the product of mining and logging operations in SAC-controlled areas

41. Confirmed by key informants.

(especially materials brought through KIA areas to the Chinese border). Along the Chinese border, there are several extremely valuable rare earth mining operations, mostly located in New Democratic Army–Kachin (NDA-K) BGF-controlled areas around Chipwe (Kachin State, Special Region 1),[42] and also near KIO-controlled Mai Ja Yang. According to the British environmental NGO Global Witness, by 2021 this market was worth nearly US$800 million. The following year, Global Witness identified 300 mining sites (over 2,700 individual pools) in NDA-K areas alone. Most are operated by Chinese (mostly Yunnan-based) companies, and cause massive environmental damage (Global Witness, 2022).

The extent of rare earth mining along the Kachin-China border expanded rapidly beginning in 2016 (UCA News, 2023). Despite commitments by the KIO, such concerns continued into 2023, with church leaders and communities complaining about the impacts of rare earth extraction on the environment, and local health and livelihoods. A March 4 letter from Bishop Raymond Sumlut Gam of Banmaw and four other diocesan leaders said that minerals are a gift from God; therefore, "we have the responsibility to protect them."

Prior to the December 2021 mining ban, there was at least one example (provided by a CSO) of villagers complaining to the KIO about destructive mining operations—following which the KIO closed down the mines in question. Kachin CSOs confirmed that the KIO has fairly strong anti-poaching policies. However, capacities and local political will for policing are limited.

Among several projects with the potential to mitigate climate change by promoting carbon draw-down in Kachin areas are ambitious plans by the FECD to re-forest areas previously damaged by logging, and/or by hillside opium cultivation. Like its counterpart, the KFD, the FECD is increasingly focused on environmental governance, working alongside communities and CSOs. The FECD is developing several new community-based forests and conservation areas, and planning a major re-forestation initiative.

42. A Radio Free Asia article states: "Myanmar exported more than 140,000 tons of rare earth deposits to China, worth more than U.S. $1 billion between May 2017 and October 2021" (Whong, 2022).

Kachin civil society is known for having a large proportion of capable women in leadership positions. Several CSOs reported that they are not directly working on climate change, although they recognize the seriousness of the issue and expressed a desire to do so. In practice, many groups and networks are engaged in climate change–adaptation activities, for example in relation to local community livelihoods in various community development projects and initiatives.

Kachin CSOs are supporting environmental and forestry protection, including capacity- and knowledge-building activities with the KIO forestry department. The KIO formally adopted a Forestry and Land Policy in November 2018 at the people's assembly in Laiza (there was a follow-up assembly in 2019, but not in 2020 because of COVID-19). The La Mu Ga ("protecting the land and the sky") working group, established in 2015 by mostly civil society actors, has been instrumental in supporting the KIO to develop and adopt these policies. La Mu Ga has advocated with the KIO to cancel mining concessions in some areas—and on a few occasions they stopped mining in areas where communities complained about the negative impacts on the local environment and livelihoods. The degree to which the KIO and other ESAOs are responsive to such concerns is a good indicator of their "democratic credentials."

Before the coup, the KIO Technical Advisory Team did some work on environmental conservation issues in order to prepare KIO leaders to engage on these issues as part of the political dialogue from the previous peace process. Some KIO personnel pointed out that they had more influence over forestry and environmental issues, and broadly in terms of governance authority, in areas with stronger KIA control or influence. In areas where other armed groups are present (e.g., around Putao), the KIO's lines of authority and ability to protect the environment are more limited. This raises issues with respect to "minorities-within-minorities" in Kachin areas—i.e., historical and structural relations between the Lisu and Jingphaw, and/or between the Rawang and Jingphaw groups.[43]

In several areas (including Putao), CSOs work on environmental conservation and local development activities in partnership with indigenous

43. For an overview and analysis of conflict-related, humanitarian, and ethnic political issues in Kachin State prior to the coup, see South, 2018.

communities. A major problem since the onset of the COVID-19 pandemic, exacerbated by the coup, is the lack of access to markets for local products. In some cases, lack of income is driving villagers to engage in small-scale logging and/or gold mining activities, sometimes with negative environmental consequences.

Some CSOs talked about villagers recognizing the reality of climate change and being interested in new forms of agriculture. Informants mentioned streams drying up in some areas, and rice harvests seemingly beginning to fail in northern Kachin State, due to rising temperatures (much hotter than usual in Putao in October–November 2021, but also with some unusual, extremely cold spells).

Further complicating the Kachin context, and exposing more than one hundred thousand civilians to often extreme vulnerability, thousands of farming families have fled to displaced persons camps because of the armed conflict. When possible, they return to their original farmlands and try to maintain some crops (South, 2018).

As more than one civil society informant pointed out, traditional Kachin livelihood patterns (including shifting/swidden/rotational rice farming) can be sustainable with low population densities, as is the case in some mountainous areas. One of the most commonly repeated needs and recommendations for addressing climate change issues in Kachin is to work with young people and women to raise awareness and support sustainable livelihoods and economic activities.

The approach should be economic, political, and social. As one civil society activist put it, "The biggest challenge is the SAC—the number one priority for addressing climate change is to bring down the junta… The future of natural resources in Kachin State will be decided by the people of Kachin State." This was demonstrated in April 2023, when the KIO cancelled a major rare-earth mining project in Mansi Township, in response to widespread local protests (Fishbein, Hpan Ja Brang, Zau Myet Awng, & Jaw Tu Hkawng, 2023).

Mitigation: Limiting Climate Change

Myanmar's forests are crucial to mitigating climate change in the region and globally, helping to reduce the risk of massive future temperature changes through carbon draw-down. An IPCC Sixth Assessment Report coauthor, Professor Paulo Artaxo Neto, has stated that there is "no cheaper, easier, and faster way to reduce CO2 emissions than by reducing tropical deforestation" (Jenkins, 2021).

Stopping deforestation—and where possible and appropriate, undertaking reforestation—is key. This needs to be undertaken in consultation with communities and their representatives (especially indigenous groups who have long lived in and protected the vast majority of the world's great forests).

Myanmar contains the largest forest reserves in mainland Southeast Asia, notably in Kachin State (temperate forests) and Tanintharyi Region in the south (semi-evergreen, montane, and coastal rain forests). Under the stewardship of local communities and responsible EAOs, these are globally important biodiversity hotspots.[44]

Some EAOs have been relatively good forest managers, in a context where indigenous communities have long been custodians of nature. Sustainable community forestry management practices and traditions have played a key role in maintaining Karen, Kachin, and other forests. This local agency includes an implicit claim to sovereignty.

Several EAOs and state-based bodies are in the process of reinforcing and developing the capacity and strategy of forestry and environmental departments, including the KIO (Forestry and Environmental Conservation Department) and the PSLF/TNLA (Department of Land and Forest). The Department of Land and Forest issues land titles, establishes protected forest zones, and works to resolve land disputes. Under the PSLF's 2015 land policy, "Ta'ang State's water, land, forest, and mountain resources are determined to be owned by the Ta'ang

44. For an overview of indigenous forest governance in Burma, see "Protecting Myanmar's Forests" (KESAN, 2021). This short film was presented at the UN Climate Change Conference (in the Indigenous Peoples Pavilion) on November 5, 2021. It shows how Karen and Kachin indigenous peoples protect Burma's forests against the military junta and other threats. This inspiring film features Dr. Tu Hkawng (National Unity Government, minister for natural resources and environmental conservation) and Saw Paul Sein Twa (KESAN).

people, and the traditional assets of the Ta'ang community are recognized. On the basis of recognizing the private property of the Ta'ang people, a land and forest registration law and a system of business mechanisms have been established to protect the public." Since 2020, the TNLA has established protected forests in a number of districts. In some areas, this has led to territorial disputes with the neighbouring KIO. One of the greatest challenges facing Myanmar's EAOs is to focus on conserving the natural environment and supporting sustainable local livelihoods, rather than cashing in on natural resources while they can ("natural resource fatalism").

If Myanmar's EAOs can position themselves as protectors of the forest, they can move away from negative associations of EAOs as primarily interested in income generation through resource extraction—the proceeds of which sometimes go to private individuals rather than the rebel organizations in question. In this way, EAOs can move along the spectrum from warlords toward responsible local governance actors. Furthermore, if sustainably managed, forest resources can contribute hugely toward future income generation for ethnic communities and authorities, including through the potentials of biotechnology and ecotourism, and as internationally important carbon sinks. These goods are likely to become increasingly valuable commercially, as global forest cover decreases and temperatures rise in the coming years. The future financial benefits of forest resources could be equivalent to oil wealth in the twentieth century.

The natural resource governance role of EAOs was acknowledged in the Nationwide Ceasefire Agreement (Article 25 on "Interim Arrangements"; South et al., 2018). However, the previous government's climate change responses and architecture tended to be top-down and technocratic, with limited consultation with local stakeholders—whether EAOs, CSOs, or indigenous communities. This centralized and state-centric approach reflects Myanmar's authoritarian political culture and the historical marginalization of ethnic nationality communities.

The current crisis in Myanmar presents new opportunities for "building back better" and for engaging with community groups as per the global development "localization" agenda. Natural resource

management and conservation, and broader themes of self-determination and indigenous rights, come together in Indigenous and Community-Conserved Areas (ICCA) such as Salween Peace Park—a radical model of empowered, grassroots community-led natural resource governance and political self-determination.

The Salween Peace Park

The best known and most politically (and environmentally) significant ICCA in Myanmar is Salween Peace Park, which received the UN Development Program's 2020 Equator Prize. The same year, one of the park's founders, Paul Sein Twa from KESAN, won the Goldman Environmental Prize (the "Green Nobel").

This 5,500-square-kilometer conservation area in the highlands of northern Karen State (in KNU Mudraw District, KNLA 5 Brigade) is based on the Karen indigenous *kaw* land governance system, under authority of the KNU. Salween Peace Park "promotes peace, cooperation, cultural preservation, and environmental and natural resources conservation through a bottom-up, people-centered approach. … The project also aims to expand the conversation around 'governance' in Burma beyond mere management of resources, but to address issues of militarization, conflict, displacement, resource capture, and destructive development, and through this contribute to conflict transformation" (KESAN, n.d.). Such forms of "hybrid governance" can be seen as building blocks of federalism in a new Myanmar.

Case Study: Mon

Until recently, the NMSP and Mon CSOs have not much focused on climate change issues. Within Mon civil society, a number of activities can be framed as climate-change related (livelihood projects, organic farming, support for community responses to natural disasters, and mangrove reforestation to prevent flooding and rising sea levels). Problems are especially acute in Ye Township (flooding and landslides, and water shortages in the summer). As in other parts of the country, human and livelihood security issues are exacerbated by land tenure insecurity and the growing prevalence of relatively large-scale mono-crop plantations, particularly rubber.

The NMSP and CSOs

The NMSP was founded in 1958 and remains the most politically significant and militarily powerful EAO representing the Mon ethnolinguistic community (South, 2003). In 1995 the NMSP agreed to a ceasefire with the then-military government which, despite many stresses, has been mostly maintained.

The NMSP was the first EAO in Myanmar to denounce the 2021 coup and side with popular protests against it. However, the NMSP has not gone back to war with the SAC. Rather, it has sought to provide a secure environment in its demarcated ceasefire zones, protecting local Mon communities (including long-term resettled refugees and IDPs) from state incursions and military violence. As a fifty-nine-year-old villager said, "We are safe here [because the NMSP has a] security guard." A thirty-seven-year-old woman agreed: "It is peaceful here under NMSP control." However, travel beyond NMSP areas is difficult and dangerous, with access to markets a particular challenge for farmers.

Although some CSOs and activists have criticized the NMSP for not fighting the junta, a party leader pointed out that "most Mon civilians do not want to return to war and displacement, which they experienced many times in the past." Many communities struggle to secure basic livelihoods, with very limited support. The NMSP works in partnership with Mon CSOs to provide community development in this remote area; the party also operates thirty-three inpatient and outpatient clinics.

The NMSP has expressed a strong interest in developing a better understanding of and policies in relation to climate change. Reflecting the NMSP's interest in reforestation (see below), a senior party leader said:

> There is an informal understanding of climate change issues in the community, and an awareness that deforestation drives climate change. In recent years villagers have seen less water for rice, and much increased flooding. It is getting hotter every year—and there are more mosquitos in the past fifteen years or so.

Other observed impacts of climate change include increasing salination and sea flooding of paddy fields adjacent to the Andaman Sea,

and impacts on fruit orchards (more pests) and the betel nut harvest (which is declining in quantity and quality). A number of CSOs are engaged in research and advocacy, including public education with the community and other stakeholders, often in partnership or as part of the Mon State Federal Council (MSFC). Mon CSOs consider it particularly important to engage with and support NMSP leaders to respect and implement sustainable and environmentally friendly policies, including a moratorium on or close control of logging and mining activities. As in Kachin and Karen States, CSO advocacy in Mon State has focused particularly on opposing inappropriate mining projects and hydropower dams. With their experience in advocacy and action research, several Mon CSOs have done research on and campaigned against megaprojects and other inappropriate developments.

The NMSP Forestry Department (founded in 1972) has a modest reforestation project and is developing a suite of forestry and land policies and laws, with support from CSOs. Although over the years it has often been dormant, there is currently an effort to reenergize the department.

A comprehensive, rights-based land-use policy has been developed by the Monland Community Land Policy Committee, initiated by the Human Rights Foundation of Monland (HURFOM) in 2016. This draft policy supports customary ownership and traditional livelihoods, with a pilot launch and testing activities in villages at Three Pagodas Pass and in NMSP Thaton District. Further pilots are being implemented in Ye and Yebyu Townships, with the support of HURFOM. Capacity building will be needed in order to support the NMSP and relevant CSOs in implementing (and effectively monitoring and evaluating) the new policy.

Somewhat similar to the roles of KESAN vis-a-vis the KNU (KFD), and Kachin CSOs and the KIO, HURFOM plays a particularly important facilitating role in relation to land and climate issues in NMSP areas. Local civil society actors supporting capacity- and institution-building through awareness-raising and training, implementing projects and developing policies for both civil society and communities, for and with the "mother EAO"—sometimes combined with a rather sharp critique of existing practices and approaches. There is a general perception and request among Mon CSOs that the NMSP should consult

with them more and utilize the capacities and energies of civil society groups. Mon CSOs have also pointed out the importance of engaging with the private sector at local, national, and international levels.

Adaptation: Building Back Better

Beyond (but not excluding) climate change mitigation lie the challenges of adaptation. These include working with communities (particularly farmers) to identify and adopt climate change–adapted agriculture. As responsible governance authorities working in partnership with CSOs and appropriate technical experts, relevant EAO line-departments can take the lead in identifying future livelihoods, food/human security stresses, and locally appropriate adaptations. The challenge then is to work with local farmers and other stakeholders to determine which crops and other adaptations are most suitable (Climate-Smart Agriculture - an integrated approach to adapting and building resilience to climate change stressors).

This might include new types of agricultural production: different varieties of rice and technologies of planting, as well as new crops. A participatory approach will be essential, including peer-to-peer learning and sharing (farmer field schools etc).

"Building back better" should include the transformation of social and political-economic relations by supporting the leadership of indigenous communities and women, and the role of EAOs as climate change governance actors. These resilient ethnolinguistic and faith-based networks will be key to the survival (the adaptation and rehabilitation) of local communities, especially in conflict-affected parts of the country.

As Paul Sein Twa of KESAN says:

> The "ICCAs—Territories of Life" approach [exemplified by Salween Peace Park] is a radical attempt to decolonize environmental conservation. This is climate justice in action. It is also an opportunity for EAOs to build their legitimacy by recognizing and promoting indigenous

peoples' contributions to climate change mitigation and adaptation.[45]

Internationally, there are strong arguments for the decentralization of Disaster Risk Reduction activities, of the sort that will be necessary in responding to climate change. In the case of Myanmar, decentralization of disaster response can be an important step in developing an effective federal system of disaster response and governance. This approach is in line with the principle of "subsidiarity" in federalism—the decentralization of decision-making power (and funding) to the lowest practicable level (closest to the ground), to empower and support local agency and adaptation.

Localization; Financing Climate Change Action

Since the Paris Climate Agreement in 2015, debates and interventions on climate change have focused on the governance and implementation of adaptation and mitigation activities. Aiming to ensure a fair deal and adequate support to the Global South, donors and other international actors have supported "new international agendas and forms of cooperation … with enhanced focus on devolved finance and governance of climate change adaptation" (Friis-Hansen et al., 2022, p. 4).

Climate change interventions should support a localization agenda. Globally, research shows that the top-down, centralized model of working with states is ineffective, especially in contexts of recent or ongoing armed conflicts. As with other donor commitments and instruments (i.e., the 2011 Busan New Deal for Engagement in Fragile States), the focus has been primarily on states and governments (at the central/national or subnational levels). Given the SAC junta's illegal status and appalling record, Myanmar presents a good case study for working with so-called "nonstate armed groups," EAOS (or ethnic governance actors) rather than with the pariah military regime.

As a recent report notes, globally much of the work on climate change governance (and finance) has been delivered through CSOs and

45. Paul Sein Twa, interview, November 13, 2021.

international think tanks (Friis-Hansen et al., 2022).[46] The time is right in Myanmar to expand the range of key stakeholders working on climate change policy and action to include EAOs and other key power holders. As political authorities, EAOs have responsibilities and opportunities to support communities in adapting to the impacts of climate change. As governance authorities working in partnership with CSOs and technical experts, EAOs can take the lead in identifying future livelihoods, food/human security shocks and stresses, and locally appropriate adaptations.[47] As noted above, this will require reform of EAOs systems, particularly in relation to financing.

Economic factors will play into such decisions, such as identifying for agricultural producers the market potential of sustainable/perennial crops that might replace traditional short-cycle crops in environmentally vulnerable contexts like hillsides and shifting forest cultivation. Efforts toward soil restoration can also be important, to help sink carbon in the ground.

In addition to climate change–adapted agriculture, key elements of future sustainability will include new off-grid solar and hydropower technologies for local energy production, including boosting livelihoods. Some limited projects have been made, with varying degrees of success. It will be important to avoid reproducing large-scale (particularly mono-crop) agricultural products; smallholder agriculture is the key to adaptation and flexibility.

46. Esbern Friis-Hansen and his colleagues identify "seven governance aspects for successful climate change adaptation at sub-national levels, namely: (1) subsidiarity [an important principle in federalism]; (2) integration in local government planning and decision-making; (3) spaces for public deliberation and participation; (4) devolution of decision-making over climate change; (5) decision-making informed by local knowledge and knowledge needs; (6) predictability of financial flows; and (7) [a] supportive national policy environment" (Friis-Hansen et al., 2022, p. 5).

47. The Danish Institute of International Studies (DIIS) authors find that NGOs and CSOs play important roles in facilitating inclusive climate change governance spaces at the subnational level (Friis-Hansen et al., 2022, p. 5). The DIIS (January 2023) calls for international engagement with non-state armed groups, under the rubric of the (draft) 2022 "UN Guidelines for the Protection of the Environment in Relation to Armed Conflict." (Several of the armed ethnic groups mentioned in this monograph aspire to and demonstrate state-like status. EAOs are not "NSAGs."

The localization of responses to man-made and natural disasters is particularly important, given growing global crises and a likely future decline in international aid flows. Myanmar may be an outlier for the coming failure of states across the world in the face of escalating crises.

Ethnic Armed Organizations, Communities, and Climate Change

Globally, the roles of nonstate armed groups have been overlooked in relation to climate change. According to researchers at the Danish Institute of International Studies (DIIS), "up to 160 million people live in areas under the direct control of non-state armed groups or in areas where such groups contest state control."[48] The role of EAOs—not nonstate armed groups—in relation to climate change in Myanmar is particularly important following the February 1, 2021 coup.

The peoples of Myanmar demonstrate great resilience in the face of natural and man-made disasters. This is due to and reflected in social bonds of mutual trust and solidarity, and participation in ethnolinguistic and faith-based networks (forms of "social capital").This resilience is shared by EAOs and related civil society networks. Their capacity to absorb, cope with, and adapt to shocks is extraordinary. This includes establishing equitable customary laws and practices that help to conserve and protect unique habitats and ecosystems, and sustainable local livelihoods.

However, EAOs have in been involved in logging, mining, and other environmentally destructive practices—which in some places continue

48. A DISS survey identifies three ways in which NSA EAOs can have positive effects on the environment during and after armed conflict: [1] *Unintended forest protection*—Known as 'conservation at gunpoint,' the activities of NSAGs can unintentionally reduce pressure on forest resources by making large areas inaccessible to national armies, settlers, or extraction companies. … [T]he forest provides cover for insurgent forces. … [2] *Environmental protection for recruitment and legitimacy*—A handful of NSAGs in the survey have included provisions for environmental protection during armed conflict in their doctrines … [3] *Environmental protection as political vision*—NSAGs have developed political visions that center on environmental protection. The KNU … has long experience in natural resource management, with its own land, forestry, and environmental policies and departments, including the creation of a large, protected area ("the Salween Peace Park") (Munive & Stepputat, 2023, para 3).

to this day. To be credible custodians of globally important forests and biodiversity hotspots, EAOs need to demonstrate improved governance and stewardship of natural resources, including where feasible moratoriums on new mining and logging activities. Deforestation is a major driver of climate change, so EAOs must act responsibly and adopt sustainable and transparent forestry practices. Conserving the natural environment may also require EAOs and state-based bodies to exercise discipline on PDFs and other allies, as well as preventing destructive logging and mining practices by the SAC and its cronies.

Old-growth forests (and reforestation) have crucial roles in mitigating climate change, through carbon draw-down. As custodians of these forests, EAOs and other legitimate local governing authorities have globally important roles to play in the struggle against climate change. International donors should consider supporting these 'global green services,' through technical and financial assistance to EAOs and other relevant authorities. Such a compact would provide globally important public goods, while helping to solve gaps in EAO funding.

Bottom-up approaches to environmental self-determination in Burma are not new. According to Jack Fong: "For the Karen, their self-determination for greater autonomy, designed to preserve heritage, culture, way of life and the regional political economy is thus a *bottom-to-top* ethnodevelopment process… Karen development occurs not from the charity of the Burmese state, but from its own Karen administered institutions" (2008, p. 2). In the context of further massive conflict and humanitarian suffering in the decade and a half since Fong proposed this approach, one could meaningfully replace "ethnodevelopment" with the currently more fashionable concept and practices of "resilience." Fong's analysis points in that direction, regarding the Karen as being "a people in survival mode" (2008, p. 26).

Community engagement and ownership is key to sustainable conservation.[49] Arguably, the greatest need to support more effective and

49. For John Holland (2014, pp. 38, 42) a "community is a set of nodes where the connections of each node in the set largely lead to other nodes within that set. … Community-based organization extends both downward and upward … [g]iving rise to the hierarchies that characterise complex adaptive systems."

equitable climate change action is for political will—including on the part of the relevant EAOs. Encouragingly, this seems to be emerging.

Supporting communities in responding to climate change, CSOs and EAOs can help to develop the resources and capacities essential for resilience. As well as material assets, these include social and cultural capital, and skills. This inclusive, bottom-up approach to climate change is also a form of anticipatory action, in relation to potential future conflicts around natural resources. Supporting networks of trust can contribute over the long term to peace-building.

By building action and policy networks from the bottom up, those engaged in climate action can contribute toward an emergent "federalism from below" in Myanmar. It may be effective to support an "alliance of the willing" on climate change—a subject directly relevant to (but differently understood and experienced by) all stakeholders. Indeed, climate change action can be a route toward discussing and imaging practical federalism.

The principles of federalism (subsidiarity: decision-making at the most local level practicable), and good practice in Disaster Risk Reduction, require that climate change decision-making and funding be as localized as possible. This is compatible with an approach focused on EAOs and relevant CSOs.

With the right support, EAOs can be key actors in mitigating and adapting to climate change locally, with global impacts. For the first time in history, given the unprecedented challenges presented by the climate emergency, key EAOs have a global role to play—in adapting to and (especially) mitigating climate change.

Two Recent Overseas Development Institute Studies

In October 2021, the ODI's Humanitarian Policy Group (HPG) noted that, although the policy and academic literature on climate change increasingly take account of linkages with conflict (the "climate change–conflict nexus"), this relationship is difficult to analyze, especially in relation to causality (Peters, Davies, & Holloway, 2021). Another recent ODI study notes that climate-related natural resource scarcity or

extreme weather events can act as "threat multipliers," compounding stresses to increase the likelihood of violent conflict and protection crises (following USAID, 2015). However, "there is little consensus in the literature on whether or how hazard events instigate or escalate conflict" (Peters et al., 2020).

Calling for improved analysis and the development of early-warning models and instruments, the HPG authors recommend (in relation to protection) that aid actors develop new partnerships to address the challenges of climate change. This begs the question of the status of so-called "nonstate armed groups," whose realities and positions are often ignored in such debates. Regardless of normative considerations, EAOs are the primary governance authorities on the ground in some of the most important biodiverse and forested areas in mainland Southeast Asia. These local governance authorities are deeply challenged and stretched, in terms of human and financial resources, in the context of a vicious armed conflict. They require long-term systems strengthening, at a time when the central state authorities have abrogated responsibility and unleashed terror on their own citizens.

Case Study: Karenni

Like the Kachin and Karen, the Karenni (of Kayah State, and parts of southern Shan) are a highly diverse society. Many of the challenges are similar to those described elsewhere in the country, in a context of massive Myanmar Army attacks on EAOs and PDFs, as well as civilian communities. Unsurprisingly, many Karenni and other interlocutors talked about greatly increased security concerns since the coup. This includes fear of infiltration, and the risk of capture, torture, and murder by SAC forces, for "ordinary" community members as well as activists. Several interlocutors talked about the difficulties of operating out of Thailand, where the security establishment and government more-or-less actively support the SAC's suppression of democracy and dissent, and have blocked aid to IDPs and refugees in border areas.

The KSCC and CSOs

Leaders of the Karenni State Consultative Council (KSCC, established on September 4, 2021) include many young men and women who

were previously working for CSOs and national NGOs, including on a range of environmental issues.

In January 2023, the KSCC was re-formed, with a core group made of Karenni CSOs, the KNPP armed forces (Karenni Army), and the Karenni Nationalities Defense Force (KNDF). While several PDFs in Karenni remained independent or aligned with the NUG (/CRPH-NLD), thousands of young people joined the KNDF, KNPP, and KSCC.[50] This reinforced already significant military and political-administrative capacity on the part of the KNPP and other long-standing EAOs. While only the KNPP remained officially part of the re-formed KSCC—other Karenni EAOs preferring to lend support in the background—this was nevertheless the most inclusive governance body in the history of the state. Throughout 2023, the KNPP and KSCC worked to harmonise and coordinate their systems—the Karenni Government and the KSCC Governing Body, respectively—as credible state-level units of an emerging federal Myanmar.

In June 2023 a seven-person Interim Executive Council (IEC) was established, led by KNPP chairman Ku Oo Reh and KNDF and Kayan National Party leader Khun Bedu. With the KSCC responsible for policy development, the IEC reorganized its administration into nineteen relatively small townships (generally consisting of two or three village tracts, including in Kayan-majority Pekhone Township), allowing for greater localization of consultation and governance. Karenni leaders estimate that some 250,000 people live in areas under IEC authority.

The KSCC-IEC received a huge boost in late June 2023, when combined KNPP and KNDF forces overtook Mese, an important trading town and permanent border crossing post in southern Kayah State, under the control of the Karenni Nationalities People's Liberation Force (KNPLF, the largest BGF in Karenni). The defection of two battalions of KNPLF soldiers was key to this victory (to which the SAC predictably responded with air-strikes, killing and displacing civilians). This was an important development: for the first time, entire units of a BGF (previously under Myanmar Army control) had defected en masse to

50. As of July 2023, the KNDF fielded 23 battalions of 4-500 men and women (about 100 of whom had modern weapons).

join the Spring Revolution—specifically, free Karenni state. Renewed unity among Karenni EAOs represented a major threat to the SAC.

This period saw the emergence of the KSCC-IEC as probably the leading sub-national entity in post-coup Myanmar. The most inclusive governance body in the history of the state (probably, of the country) the KSCC-IEC was a model for the emergence of locally-led, 'bottom-up' federalism in Burma.

Localized and inclusive governance institutions and practices can support sustainable self-determination, and—by including local communities, including "minorities-in-minorities"—can help to blur the boundaries between otherwise ethnically defined and fixed territorial blocks. In this context, the KNPP Legal Department has been undertaking extensive consultations with communities and CSOs, to consider how best to support and work with indigenous customary law, within a framework universal human rights.

Other elements of IEC/KSCC governance included establishing the Karenni State Police (KSP), initially employing three hundred volunteer CDM police officers. By early 2023, the KSP had processed 250 criminal cases, with about eighty people still detained (including prisoners of war and suspected informants who might be at risk if released into the community). Regular strategic planning sessions were held with the NUG and NUCC.

For the KSCC, IEC, and KNPP, the term "Karenni" references the Kayah State territory—within which are a diverse network of communities (Kayah, Kayan, K'yaw, and several others, most of whom speak languages that are part of the Karen language family). This inclusive (symbiotic) approach has helped to keep lines of communication open with the KNPLF, Kayan New Land Party (KNLP), and other EAOs with large numbers of non-Kayah members.[51]

State-level coordination committees such as the KSCC/IEC can be seen as constituent bodies of the NUG, grounded in local political and civil

51. After early support for the Spring Revolution, the KNLP adopted a more neutral position, mindful of the Kayan hills' proximity to strongly defended Naypyidaw, Myanmar's capital city.

society and with claims to significant legitimacy in their own right. Working with communities on key issues (e.g., education, awareness raising, climate change adaptation, and land issues), ethnic coordination bodies could be key elements in developing a federal union from the bottom up, deriving from networks of cooperation within and between communities.

"Deep adaptation" [52]

The disruptions caused by climate hazards, and the opportunities presented in responding, may allow vulnerable and marginalized communities to participate more equitably in development and political processes, through their leading roles in developing adaptive technologies and innovative approaches. As noted above, building back better should include the transformation of social and political-economic relations, including through supporting community and women's leadership, and recognizing the important roles played by CSOs, EAOs, and state-level bodies such as the KSCC, MSFC, TPCC and KPICT. This is a key element in supporting resilience, particularly the capacity of key stakeholders to transform existing and unjust social-economic-political structures. It is also an important step toward the localization of international responses to man-made and natural disasters. This would align with a call by the International Committee of the Red Cross, the International Council of Voluntary Agencies, Mercy Corps, the Overseas Development Institute, the Red Cross Red Crescent Climate Centre, the UN High Commissioner for Refugees, and the World Food Program for more climate finance to be made available in conflict-affected areas (ICVA, 2022).

Hugo Slim (2023) calls for climate justice to be at the heart climate finance: "In the run-up to COP 28, humanitarian agencies are advocating hard for climate finance to be invested in countries affected by fragility, conflict and violence. Quite rightly, they argue that millions of people in these countries are often the poorest of the poor and overlooked by climate funders… these next few years are a critical time

52. "Deep Adaptation" is premised on the assessment that climate change will lead to societal collapse/s (Bendell, 2018). For a discussion in the Myanmar context, see "Climate Change and Deep Adaptation in Myanmar," my first publication on climate change (South, 2019).

to learn how best to support the survival and adaptation of extremely vulnerable communities… Because it is easier and lower risk, climate financiers clearly prefer investing in countries that are already rich and relatively stable... If this skewed trend in the investment portfolios of climate funds continues, it will see global climate action stuck in path-dependent spending which may be globally maladaptive… failing to invest in renewables, water supply, food security and well-managed retreat for poorer parts of the world. This is not climate justice."

Climate change also threatens to undermine already marginal livelihoods and fragile human security, in some cases beyond a tipping point—resulting in potentially massive loss and damage. Jem Bendell, the originator of "Deep Adaptation" as an applied analytical approach, identifies six "hard trends" likely to constrain food supply and drive widespread food insecurity, and social breakdown.[53] Profound and widespread insecurity—and even socioeconomic and political collapse—are possible scenarios, if adaptation and coping capacities are overwhelmed by multiple crises.[54]

In these dire but not unrealistic scenarios, Myanmar will be particularly vulnerable as one of the most climate change–affected countries in Southeast Asia. Increasingly serious impacts of climate change are

53. "1. We are hitting the biophysical limits of food production and could hit 'peak food' within one generation; 2. Our current food production systems are actively destroying the very resource base upon which they rely, so that the Earth's capacity to produce food is going down, not up; 3. The majority of our food production and all its storage and distribution is critically dependent upon fossil fuels, not only making our food supply vulnerable to price and supply instability, but also presenting us with an impossible choice between food security and reducing greenhouse gas emissions; 4. Climate change is already negatively impacting our food supply and will do so with increasing intensity as the Earth continues to warm and weather destabilizes, further eroding our ability to produce food; 5. Despite these limits, we are locked into a trajectory of increasing food demand that cannot easily be reversed; 6. The prioritization of economic efficiency and profit in world trade has undermined food sovereignty and the resilience of food production at multiple scales, making both production and distribution highly vulnerable to disruptive shocks" (Bendell, 2023, The foundations are breaking together).

54. This is how collapse happens: first slowly, then quickly. It takes vastly more energy to reconstruct the stupa than to topple it (once it has been destabilized): https://fb.watch/fTF3Tovn9L/.

likely to be experienced roughly in conjunction with a decline in aid interventions, as donor countries grapple with change-induced economic stress, and related social and political crises. In the coming years urgent needs are likely to multiply globally in so-called fragile states. In this context, local agency will be an essential part of response and adaptation —with communities, EAOs and CSOs often being the only actors with access to the most vulnerable communities, and the capacity and will to help.

In addition to the political implications, these realities will have impacts on emergency humanitarian response and Disaster Risk Reduction (DRR). The need for more locally relevant and effective climate change action and DRR can in part be addressed through a decentralization of power and decision-making within a federal constitutional framework. This should include greater authority for the local (state) government to make decisions within a nationally agreed Union-level framework, in the context of moves toward federalism in Myanmar, as envisaged in the previous peace process.

The combination of climate change and possible future pandemics constitute disasters that may stretch local coping mechanisms beyond the limits of resilience. As climate change and other crises disrupt societies worldwide, funding for humanitarian and development aid is uncertain in the middle-to-long term. It is therefore more important than ever to support local agency and social capital as part of "building back better." These local agents, capacities, and networks may prove to be the future of disaster response in a post-aid world. Ethnolinguistic and faith-based networks will be key to the survival and rehabilitation of local communities in conflict-affected parts of Myanmar.

Climate change can be an opportunity (or "critical juncture") to reimagine the kind of world we live in, and negotiate and struggle for transformations in state-society and power relations. The disruptions caused by climate hazards, and the opportunities presented in responding, potentially allow vulnerable and marginalized communities to participate more equitably in development processes, through adaptive technologies and innovative approaches. In this context, it will be important to support and encourage EAOs and other local authorities to act in ways

that promote and protect the rights of all people, particularly marginalized and vulnerable groups.

4

CONCLUSIONS

Complexity, Resilience, and Localization

In mid-March 2023 the China-aligned Federal Political Negotiation and Consultative Committee (FPNCC) met at the UWSA headquarters at Panghsang, to confer and confirm strategy two years after the coup. These seven EAOs released a statement lavishing praise on China (unsurprisingly) and calling attention to their successful efforts to consolidate ethnic-based control in a huge swathe of territory across northern Myanmar which contains about two-thirds of the country's EAOs.

Since COVID, China has probably supplied more direct aid to EAOs than any other country, including vaccinating hundreds of thousands of people (albeit with Sinovac). While the West dithered over how to prevent atrocities in Myanmar, China was providing the space for its clients to act. While not all EAOs in northern Myanmar are comfortable working so closely with the regional superpower, the reality of China's influence and interests is undeniable. In this context, northern EAOs are undertaking increasingly bold exercises in state building. In the meantime, the state of Myanmar is in chaos, and China backs the SAC junta.

Following the February 1, 2021 coup, the country is deeply damaged, possibly beyond repair. No amount of "state strengthening" will rehabilitate this doomed project. Nevertheless, a new Burma is remerging—with renewed demands for justice, good governance, and sustainable peace.

The UN Department of Political and Peacebuilding Affairs regards climate change action as an area in which the inclusion of "social, religious, and regional minorities" can aid peace processes.[55] Effective climate change action can address key drivers of conflict by developing models for community-led cooperative action.

With various unstable or dynamic systems in play, and such a variety of often violently contesting stakeholders, climate change strategies and interventions should be pragmatic and flexible, adapting to changing conditions (a characteristic of successful agents in complex systems). Interventions and partnerships between local and international actors on climate change should be assessed over the middle term and evaluated against changing scenarios (to be updated as scientific modeling becomes available, for example through the IPCC).[56] An adaptive, systems-based approach to working with complexity (*Aid on the Edge of Chaos*; Ramalingham, 2013) should identify and foster positive deviation ("Appreciative Inquiry" approach).[57]

As noted, Jim Woodhill and Juliet Millican (2023) explain how a systems approach to complexity brings multiple (sometimes marginalized, even insurgent) perspectives and actors to the table, considering various scenarios; and can strengthen local networks and local actors, and promote adaptive learning. As well as contributing toward disaster risk reduction and being in accord with the federal principle of subsidiarity, supporting locally based climate action reinforces the localization of aid.

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55. UNDPA, 2022, p. 6. A USAID framework recommends fostering trust through "frequent interactions [which] could build capacity for negotiation, mediation, and dispute resolution and thus contribute to peace or/and taming tensions and violent conflict. Key element of such a project would be an inclusive or participatory approach that aims at consensus-building, deliberative dialogue between various actors, and local-level capacity building" (USAID, 2015).
56. Dennis Tänzler, Nikolas Scherer, and Adrien Detges (2022) suggest building "scenarios [regarding] how climate change and conflict may intersect in the future (p.23)."
57. "People are constantly adapting to their changing circumstances, even after displacement. Aid actors should incorporate the strategies already used by displaced people into their policy and programming" (Sturridge & Holloway, 2022, Key Messages).

According to the ICRC, ICVA, MercyCorps, ODI, Red Cross Red Crescent Climate Centre, UNHCR, and WFP:

> More than half of the 25 countries most vulnerable and least ready to adapt to climate change are affected by conflict. Places affected by armed conflict, violence and instability are among the most vulnerable in the world and the least able to adapt to the adverse effects of climate change.

They are also among the least likely to receive substantial support, particularly local nongovernment institutions. Despite such challenges and difficulties, subnational (sovereign) authorities in Myanmar—EAOs and state-based bodies—can lead the way on localized climate change action.

There is an urgent need to develop narratives and programs to support federalism from below in the context of resilient climate change action in Myanmar. Engagement should be based on the sovereignty and agency of communities, EAOs, and partner CSOs. Many of the system agents (actors) are already working on climate change issues, without necessarily framing their policies and activities in this way (see the four case studies).[58] The individuals, groups, and networks surveyed for this research can make significant contributions to mitigating and adapting to the impacts of climate change—acting locally, with global impacts.

Part of what is needed is a greater EAO and CSO policy advocacy focus on climate change issues when communicating with the international community. High-level and specific political commitments to climate change action—adaptation, and particularly mitigation through responsible forest governance and natural resource management—could

58. This mirrors the findings of the Conflict Analysis and Research facility of the Nexus Response Mechanism: while international actors often view environmental programming "as its own discrete workstream, local responders and communities often do not. Local responders and activists do not necessarily differentiate between environmental, socioeconomic, political, and security issues—they see all these issues as interrelated. Similarly, many communities do not see their environmental concerns as specific 'environmental' problems—they see them as community problems, on par with (and usually related to) other humanitarian and development issues" (Nexus Response Mechanism, 2022).

be a symbolic and important rallying cry. This is a key element in building a new, federal Myanmar from the bottom up, which should have global resonance: Myanmar's forests are among the most important green lungs of the world. In exchange for protecting these global assets, EAOs and other relevant authorities deserve international support. Such 'green partnerships' can go some way towards addressing sustainability and ethical problems, in relation to EAO funding models.

Addressing climate change in the conflict-affected contexts of Myanmar is to a significant degree about governance. At one level, this means getting rid of the illegal and illegitimate SAC junta in order to install a more legitimate and inclusive regime. Governance can also take the form of interorganizational coordination, with potential for developing relations between the NUG, relevant CSOs and EAOs, and their forestry and other departments. In this case, it will be important to include potentially marginalized groups including women, youth, and nondominant "minorities-within-minorities." How state units (EAOs or state-based authorities) treat ethnic "minorities-within-minorities," and religious and LGBT groups, is a good test of their credibility as rights-based and responsible power holders.

Many of the activities described above focus on natural resource conservation and forest governance. According to the classic longitudinal study by Raymond Bryant, *The Political Ecology of Forestry in Burma*: "Forest politics in Burma needs to be understood in relation to at least three key notions: (1) forests as a contested resource, (2) the [Myanmar] Forest Department as a resource manager, and (3) conflicting perceptions of forest use" (Bryant, 1997, p. 8). A quarter of a century later, this analysis remains sound. Resource management and forest governance are still highly contested issues, related to ethnic nationality communities' sovereignty and struggles for self-determination. It is therefore problematic to differentiate these political issues from the more technical aspects of

addressing climate change.[59] As a recent survey of climate change governance in Southeast Asia concludes: "Climate change governance is becoming purely technical: measurable commitments and GHG [greenhouse gas] emissions reduction targets in climate change policymaking are trending while neglecting the sociopolitical conflicts they entail, and who will come out as winners or losers in these necessary transitions" (Marquardt, Delina, & Smits, 2022, p. 10). It is necessary to keep a focus on the intimate connections between working on climate change on the one hand, and struggling for democracy and self-determination in Burma on the other. A politically informed approach also underlines the importance of addressing land rights and tenure issues, in relation to climate change mitigation and adaptation, and food security (and local food sovereignty).

In the contested and constantly adapting complexity of post-coup Myanmar, international agencies should follow Cedric de Coning's advice regarding the role of outside peace builders. International agencies should provide financial and other resources to facilitate and stimulate those processes in a society that enable self-organization and that will lead to strengthening the resilience of the social institutions that manage internal and external stressors and shocks. It is not possible to direct or control self-organization from the outside; positive adaptations have to emerge from within (Coning, 2018).

Crucially for the emergent (bottom-up) approach to federalism and governance, he cautions against attempting "to solve such problems with determined-design methodologies aimed at definitively diagnosing a problem and prescribing a solution" (what I refer to as a "blueprint" or "top-down" approach). Rather, complexity theory teaches humility: identify and support successful adaptations and positive deviations ("good practice")—the building blocks of resilient systems and emergent higher-level structures. Recent developments in complexity

59. In The Anti-Politics Machine (1990), James Ferguson argues that development aid can depoliticize contentious issues by framing them as amenable to technical solutions implemented by government in partnership with aid professionals, rather than as sites of political struggle. This liberal peace-building approach was much apparent in Myanmar before the coup, when donors were keen to strengthen a state lacking capacity and reach, rolling out market-friendly "good governance" policies and in effect delivering the "anti-politics machine."

theory emphasize the importance of "thinking and working politically," rather than utilizing outmoded concepts of aid neutrality. However, the most important contribution of this approach is probably the manner in which it returns agency to local actors—including how issues and struggles are framed and understood.

While technical guidance will be necessary in a number of areas, it is important to listen to and support sustainable, indigenous/community, "traditional" (or customary) stewardship and management values, concepts, and practices. Innovations (e.g., climate change–adapted agriculture) will only be sustainably and successfully adopted if locally owned and codesigned by local farmers. Peer-to-peer pedagogic approaches (e.g., farmer field schools) will help foster local ownership and build on indigenous wisdom.

This locally focused approach links closely to food systems. Food production can be a major contributor to the carbon emissions that drive climate change, while agriculture is particularly vulnerable to the impacts of climate change. The centrality of food and agriculture systems is particularly important, given the turn to subsistence of many communities in Myanmar following COVID-19 and the coup. Many local stakeholders are focusing more on food sovereignty for the future, as well as added value through developing agricultural products for export to other regions within Myanmar, and beyond.[60]

As well as working on the many problems discussed in this report, it might be useful also to adopt an "Appreciative Inquiry" approach. This includes identifying successful (sometimes pilot) projects and variations that work in situ, and trying to support and do more of these (albeit, moving to scale is often difficult in practice).

Climate change is a long-term problem with significant short-term impacts on human rights, governance, and conflict. Efforts should be made to look for common ground and promote conflict transformation

60. On food sovereignty, see La Via Campesina, 2022. Food sovereignty "necessarily involves the localization of agricultural production, and this is good for the climate since the carbon emissions of localized production on a global scale are much less than that of agriculture based on global supply chains" (Bello, 2020, p. 9).

(and resolution) and dialogue in relation to these issues. Where possible, mitigation and adaptation activities (including migration) may lead to new interactions and possibly integration of previously separated ethnolinguistic groups. Tensions are likely. Programs designed to foster mutual understanding, dialogue, and tolerance may help. At a minimum, aid agencies should adopt conflict-sensitive (and climate change–sensitive) program management. While international actors can directly support such activities, they should also build the capacity of domestic NGOs and local governments to design and implement conflict mitigation programs.

For many Myanmar climate activists (whether they define themselves as such or not), environmental and natural resource management and conservation issues, and broader political themes of self-determination and human and community rights, are deeply and profoundly linked. The themes can come together in ICCAs, which can be modeled in different parts of the country, depending on local contexts. This is consistent with recognizing and supporting indigenous peoples' rights, and protecting areas of biodiversity and natural habitat, as agreed at the UN Biodiversity Conference (COP15) held in Montreal on December 7-19, 2022.

Climate change and other crises are opportunities for ethnic stakeholders to demonstrate their capacities. This, in a context where—in the absence of credible legitimate central state authorities—sovereignty resides with ethnic societies, which predated the artificial creation of a so-called Union of Burma/Myanmar.

Logging and mining bans implemented by the KNU and KIO (and in March 2022, by the KNPP[61]) are important indications of commitment toward environmental sustainability. In many instances, EAO policies are significantly more conservation-minded and people-oriented than those of the pre-coup government.

Climate change action (mitigation and adaptation) are key elements of emergent federalism "from below" in Myanmar. The localization of climate action—and support to community, EAO, and CSO interventions—is key to addressing the worldwide challenges of climate

61. The ban was effective as of March 9, 2022 (Kantarawaddy Times, 2022).

change. For the first time in history, ethnic actors in Myanmar have globally important roles to play.

5
RECOMMENDATIONS

- Support EAO and state-based forestry departments, CSOs, and communities to *conserve and protect Myanmar's internationally important forest reserves*. This will be a key contribution toward mitigating climate change globally through carbon draw-down. Such initiatives urgently need financial and technical support - including through international climate change funds.

- Given the normative agenda toward *decentralization and federalism* in Myanmar, climate change action and Disaster Risk Reduction should be managed, and financial and political resources provided, according to the federal principle of subsidiarity: decision-making as close as possible to the ground.

- Develop joint *strategies and partnership for climate change adaptation*: work with technical resource people to develop projections for different climate change scenarios, as a common framework for analysis and action. Work with key stakeholders (including farmers, relevant EAO departments, and CSOs) to develop strategies for climate change–adapted agriculture.

- Develop area-based (EAO or state-level) *Nationally Determined Contribution* plans to identify climate risks, and community, CSO, and EAO (state-level) adaptation and mitigation strategies (including indigenous knowledge).

- *Develop anticipatory early (hazard) warning models* and instruments, in relation to conflict and climate, and food security.

- Collect data and develop projections on *a range of scenarios, and projected climate change hazards and impacts* in key sentinel areas

(e.g., Karen, Kachin, Ta'ang, Mon, and Karenni). Differentiate between rapid-onset, often short-duration hazards and longer-duration events. This requires scientific and political analytical capacity, and datasets.

- *Pilot strategies and adaptations*, including in farmer field schools, to ground-test and share peer-to-peer learning, and develop best practices (including crops and adapted agriculture techniques).

- *Look for common ground* among key stakeholders to promote shared understandings and terminology, and facilitate conflict transformation and dialogue in relation to these issues. Developing common understanding and trust among key stakeholders can be facilitated through joint exposure trips – for example, to explore the situation and adaptation strategies in other contexts (including within Myanmar) and countries. Multistakeholder groups should be inclusive of youth and women (but not the SAC junta).

- Integrated approaches to supporting climate change mitigation and adaptation should take account of *livelihoods* needs (now, and in the future), including relevant vocational training, and establishing and supporting community forest enterprises.

- Commission action research on the *gender dimensions of climate change*.

Recommendations to EAOs and State-Level Bodies

- Develop forest conservation, and reforestation policies and practices. Support efforts to develop locally led Indigenous and Community-Conserved Areas (ICCAs).

- As governance actors, EAOs and state-level bodies should support local resilience initiatives by provide enabling environments for communities and CSOs to understand and adapt to the impacts of climate change.

- Including communities—and "minorities-in-minorities"—in local governance structures and practices can help to blur the boundaries

between otherwise ethnically defined territorial blocks. Inclusive local governance in an emergent federal system can reduce socio-political tensions, build trust, and enhance the legitimacy and credibility of EAO and state-level authorities.

- Working together with CSOs and communities, EAO leaders should articulate values, aims, and policies for climate change action, and develop portfolios of mitigation and adaptation projects. Many existing EAO policies and practices (e.g., in relation to forestry and land) are relevant to climate change. As well as developing the right policies, it will be important to ensure implementation including at the district and township level for EAOs, and among military wings. This will require training, and the socialization of values and policies.

- Review and reform the agriculture and natural resource management and training curricula used in EAO institutions to reflect emerging climate change realities and lessons learned from elsewhere. Develop training schools (or courses in existing institutes) to increase human resources for implementation of policies (capacity-building for governance skills).

- Political leaders and EAOs should focus on climate change action in their political discourse and public communications. By linking their concerns and aspirations to themes that resonate globally, EAOs can demonstrate their relevance to the challenges of climate change. As custodians and stewards of natural heritage, EAOs (and state-based authorities) and communities demonstrate the reality of local agency in providing green solutions to global climate challenges.

Recommendations to Development Partners

- Following the principles of complexity theory and adaptive program management, diplomats and donors should support successful adaptations (EAOs and state-based bodies, and CSOs) emerging out of the violence and conflict in Myanmar. Following the coup, these actors are leading the emergence of a federal and democratic Burma, with significant local commitments - and

capacities - to implement climate change adaptation and mitigation activities. A challenge for donors will be to identify best practices and projects (successful adaptations), and support these in a timely manner.

- Recognize and support EAOs and state-based bodies, and where appropriate, the NUCC and NUG, to resource and implement state and federal natural resource governance and climate change policies, based on the realities on the ground.

- Provide technical and financial support to relevant environmental and climate change governance actors (e.g., EAO forestry departments and training institutes, and CSOs), on request and after discussion.

- Support CSOs working on capacity building with EAOs and state-based bodies; CSOs represent community views and concerns to EAO leaders.

- Support indigenous community-led activities (including traditional wisdom and customary practices) for developing resilient and sustainable livelihoods—including essential work on climate change adaptation. Support local and regional reforestation plans through technical and financial assistance.

- Taking the lead from local partners, advocate against inappropriate infrastructure and other socially and environmentally damaging projects; sanction the SAC, its proxies, and its cronies.

- Support awareness raising and examples of positive deviance ("Appreciative Inquiry"), such as successful climate change–adapted agricultural projects.

Sectoral Recommendations

Agriculture

- Develop middle- to long-term support to rural livelihoods, based on analyses of likely climate change scenarios and impacts on agriculture (differentiated by geographic areas, time lines, and sectors).

- Consult farmers and technical experts to identify and develop climate change–adapted agricultural crops/varieties, strategies, and techniques; seek out climate change–related experiences and concerns. Support activities need to be adapted in conflict-affected areas, taking account of local security and survival mechanisms.

- Develop pilot project and farmer field schools:

    - Include technical experts, but focus also on indigenous wisdom and peer-to-peer learning. Work with farmers and technical experts to identify and develop climate change–adapted agricultural strategies and techniques.[62]

    - Where possible (taking security concerns into account), develop irrigated paddy terraces, for improved rice yields and to reduce deforestation caused by rotational agriculture. Optimize the use of paddy terraces, high-yield rice varieties, soil fertility management and restoration, and culturally appropriate sharecropping arrangements between farmers and nonfarmers. Promote second cropping with vegetables, beans, pulses, sesame, and so on. Build the supply network for inputs (seeds, and so on). For hillside agriculture, promote perennial crops adapted to local climates and markets.

- Focus on local food sovereignty for local consumption as well as high-value commercial production.

    - Promote locally adapted and marketable food *and* cash crops (e.g., durian, coffee, avocado, cardamom—including for export to neighboring countries), to reduce reliance on shifting cultivation and improve economic self-sufficiency.

    - Forests are food-producing community assets that require management strategies adapted to climate change. Convene community forums to discuss forest governance, taking into account observed and predicted changes in rainfall and temperature.

62. Where adequate water and land are available, this can include new rice varieties and techniques (e.g., the System of Rice Intensification).

- Recognize and support the roles of women and youth. Respect and strengthen indigenous and customary rights, forest governance practices and protected areas, security of tenure, and local ownership; facilitate community involvement in local and higher-level development, and political and governance forums.

- Back (invest in) a range of initiatives and activities; expect some to fail. As a form of adaptive programming, identify "positive deviance" and support local innovations. Provide long-term technical support. Use ongoing, iterative evaluation to troubleshoot problems, promote successful models, and discontinue others.

Energy [63]

- Explore the options and support small-scale hydropower projects, based on existing best practice in some areas.

- Explore and support new solar and battery technologies, and decentralized (off-grid) electricity generation, based on existing best practice in some areas.

- Local power generation technologies can support decentralized (small and medium-scale) industries, beyond the undercapacitated national grid. Provide initial subsidies, but require some local financial buy-in to ensure local ownership. Clarify the system for distribution of power produced, in terms of who receives how much, and payment arrangements. Consult community-level owners on a business plan and budget that specifies recurring costs, revenues, and taxation of asset owners (probably after an initial tax holiday).

63. In 2018, only 40 percent of households in Myanmar had access to electricity, with much of the power generated in Myanmar exported to neighboring countries. According to the Ethnic Nationalities Affairs Center, "Myanmar's current energy export priority results in focusing on largescale projects in border areas. … However, if Myanmar prioritized energy production for local consumption and development, then smaller energy production projects would logically replace these large mega-projects. These smaller plants, which would include those using new renewable energy, would provide cheaper, more efficient electricity and can be built faster and closer to the people they serve" (ENAC, 2020, p. 5).

Forests

- Future livelihoods should be safeguarded and generated by conserving and protecting the natural environment and resources—the wellsprings of biodiversity.

- The advantages and risks of carbon credit and trading opportunities should be carefully examined, with local consultation.[64]

- Where feasible, EAOs should establish (or continue implementing) moratoriums on new mining and logging activities, especially in forested areas. This will require EAOs to adopt new models of financing. International climate change funds have a key role to play.

64. On the risks of carbon offsetting and "green washing," see Monbiot, 2022.

BIBLIOGRAPHY

Amnesty International. (2022a). *Myanmar: Deadly air strikes in Kachin State appear to fit pattern of unlawful attacks*. October 24. https://www.amnesty.org/en/latest/news/2022/10/myanmar-air-strikes-kachin-state/.

Amnesty International. (2022b). *Myanmar: Military's use of banned landmines in Kayah State amounts to war crimes*. July 20. https://www.amnesty.org/en/latest/news/2022/07/myanmar-militarys-use-of-banned-landmines-in-kayah-state-amounts-to-war-crimes/.

Aye Sapay Phyu. (2015). Myanmar third-worst for deforestation rate, says UN. *Myanmar Times*, September 11. https://www.mmtimes.com/national-news/16436-myanmar-third-worst-for-deforestation-rate-says-un.html.

Bello, W. (2020). *"Never let a good crisis go to waste": The COVID-19 pandemic and the opportunity for food sovereignty*. Focus on the Global South and Transnational Institute, April. https://www.tni.org/files/publication-downloads/web_covid-19.pdf.

Bendell, J. (2018). *Deep adaptation: A map for navigating climate tragedy*. Initiative for Leadership and Sustainability, University of Cumbria. https://insight.cumbria.ac.uk/id/eprint/4166/.

Bendell, J. (2023). *Beyond fed up: Six hard trends that lead to food system breakdown*. Initiative for Leadership and Sustainability, University of Cumbria.

Brenner, D. (2019). *Rebel politics: A political sociology of armed struggle in Myanmar's borderlands*. Cornell University Press.

Brozus, L. (2011). Applying the governance concept to areas of limited statehood: Implications for international foreign and security policy. In T. Risse (Ed.), *Governance without a state? Policies and politics in areas of limited statehood* (pp. 262–80). Columbia University Press.

Bryant, R. L. (1997). *The political ecology of forestry in Burma, 1824–1994*. Honolulu: University of Hawai'i Press.

Cole, T. (2021). Liberation conservation: The Salween Peace Park and the politics of possessing the earth in southeast Myanmar. *Development Dissertation Brief*. Expert Group for Aid Studies, February 2021. https://eba.se/wp-content/uploads/2021/03/EBA-DDB-2021_02-webb_tillganp.pdf.

Colquhoun, A., Sandberg, H. G., & Nyoi, M. Y. H. (2016). *How the people of Myanmar live with climate change and what communication can do*. Building Resilience and Adaptation to Climate Extremes and Disasters, August 26. http://www.braced.org/resources/i/?id=46bb299b-a312-46f0-8899-ae1f4bc24797.

Coning, C. d. (2018). Adaptive peacebuilding. *International Affairs, 94*(2), pp. 301–17.

Coning, C. d. (2020). Insights from complexity theory for peace and conflict studies. In O. Richmond & G. Visoka (Eds.), *The Palgrave encyclopedia of peace and conflict studies*. Palgrave Macmillan.

Covenant Institute. (2021). *Protecting Karen forests: Conservation and sovereignty; context and analysis of KNU forest governance*. Policy brief, August.

Cowan, C. (2021). *Deforestation surge continues amid deepening uncertainty in Myanmar*. Mongabay, August 23. https://news.mongabay.com/2021/08/deforestation-surge-continues-amid-deepening-uncertainty-in-myanmar/.

Duffield, M. (2001). *Global governance and the new wars: The merging of development and security*. Zed Books.

Easterly, W. (2007). *The white man's burden: Why the West's efforts to aid the rest have done so much ill and so little good*. Oxford University Press.

Eckstein, D., Künzel, V., & and Schäfer, L. (2021). *Global climate risk index 2021*. Germanwatch, January 25. https://www.germanwatch.org/en/19777.

Ethnic Nationalities Affairs Center. (2020). *Challenging Myanmar's Centralized Energy Model*. July. http://www.burmaenac.org/wp-content/uploads/2020/09/ENAC-Energy-eng-web.pdf.

Ferguson, J. (1990). *The anti-politics machine: "Development," depoliticization, and bureaucratic power in Lesotho*. Cambridge University Press.

Fishbein, E., Jauman Naw, Jaw Tu Hkawng, & Nu Nu Lusan. (2022a). Kachin public calls in KIO to address gold mining crisis. *Frontier Myanmar*, June 24. https://www.frontiermyanmar.net/en/kachin-public-calls-on-kio-to-address-gold-mining-crisis/.

Fishbein, E., Jaw Tu Hkawng, Nu Nu Lusan, and Jauman Naw. (2022b). Kachin tycoon draws controversy over gold mining at Myitsone. *Frontier Myanmar*, February 11. https://www.frontiermyanmar.net/en/kachin-tycoon-draws-controversy-over-mining-at-myitsone/.

Fishbein, E., Hpan Ja Brang, Zau Myet Awng, & Jaw Tu Hkawng. (2023). How the Kachin public overturned a rare earth mining project in KIO territory. *Frontier Myanmar*, May 2. https://www.frontiermyanmar.net/en/how-the-kachin-public-overturned-a-rare-earth-mining-project-in-kio-territory/.

Fong, J. (2008). *Revolution as development: The Karen self-determination struggle against ethnocracy (1949–2004)*. BrownWalker Press.

Free Burma Rangers. (2023). *Field report: Burma army massacres civilians and buddhist monks in Shan State and kills children in Karen State, 8 March–12 March 12. March 13*. https://www.freeburmarangers.org/2023/03/15/field-report-burma-army-massacres-civilians-and-buddhist-monks-in-shan-state-and-kills-children-in-karen-state-8-march-12-march/.

Friedman, M. (1962). *Capitalism and freedom*. University of Chicago Press.

Friis-Hansen, E., Lindegaard, L. S., Gravesen, M. L., Funder, M., & Pinderup, L. (2022). *Devolved finance and governance of climate change adaptation.* Danish Institute for International Studies, February. https://www.researchgate.net/

publication/358747010_Devolved_Finance_and_Governance_of_Climate_Change_Adaptation.

Fukuyama, F. (2011). *The origins of political order: From prehuman times to the French Revolution*. Farrar, Straus and Giroux.

Fukuyama, F. (2014). *Political order and political decay: From the Industrial Revolution to the present day*. Farrar, Straus and Giroux.

Gallie, W. B. (1962). Essentially contested concepts. In M. Black (Ed.), *The importance of language* (121–46). Prentice-Hall.

Global Witness. (2022). *Myanmar's poisoned mountains: The toxic rare earth mining industry at the heart of the global green energy transition*. August 9. https://www.globalwitness.org/en/campaigns/natural-resource-governance/myanmars-poisoned-mountains/.

Gray, S. (2019). *Forestry management and peacebuilding in Karen areas of Myanmar. International Alert, November*. https://www.international-alert.org/publications/forestry-management-and-peacebuilding-karen-areas-myanmar/.

Gum Ja Htung, L. (2018). *Land grabbing as a process of state-building in Kachin areas, North Shan State, Myanmar*. Chiang Mai University Press.

Harrisson, A. P., & Kyed, H. (2019). Ceasefire state-making and justice provision by ethnic armed groups in southeast Myanmar. *Journal of Social Issues in Southeast Asia, 34*(2) (July), 290–326.

Harvey, F. (2021). Global food supplies will suffer as temperatures rise: Climate crisis report. *Guardian*, August 10. https://www.theguardian.com/environment/2021/aug/10/global-food-supplies-will-suffer-as-temperatures-rise-climate-crisis-report.

Hickey, S. P., & Maria-Sube, E. (2022). Myanmar's environment and climate change challenges. *International Institute for Democracy and Electoral Assistance (IDEA), Policy Paper* no. 27, November 28. https://www.idea.int/publications/catalogue/myanmars-environment-and-climate-change-challenges.

Hill, J. J., & Kenney-Lazar, M. (2021). Dispossession, deforestation and deceit in Myanmar. *New Mandala*, November 3. https://www.newmandala.org/dispossession-deforestation-and-deceit-in-myanmar/.

Hillert, L. (2023). *Linking conservation and peacemaking.* Centre for Humanitarian Dialogue. https://hdcentre.org/wp-content/uploads/2023/03/Linking-Conservation-and-Peacemaking_Final.pdf.

Holland, J. H. (2014). *Complexity: A very short introduction*. Oxford University Press.

Independent Research Network. (2022). *The shifting political economy of natural resource governance in Myanmar's Tanintharyi Region following the February 2021 military coup*. December 15. https://progressivevoicemyanmar.org/2022/12/15/the-shifting-political-economy-of-natural-resource-governance-in-myanmars-tanintharyi-region-following-the-february-2021-military-coup/.

Intergovernmental Panel on Climate Change (IPCC). (2021). Climate change 2021: The physical science basis (summary for policymakers). *IPCC Sixth Assessment Report*. https://www.ipcc.ch/report/ar6/wg1/.

Intergovernmental Panel on Climate Change (IPCC). (2022). Climate change 2022: Impacts, adaptation and vulnerability (summary for policymakers). *IPCC Sixth Assessment Report*. https://www.ipcc.ch/report/ar6/wg2/.

Intergovernmental Panel on Climate Change (IPCC). (2023). Climate change 2023: Synthesis report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the IPCC. Geneva, Switzerland.

International Committee of the Red Cross (ICRC). (2020). *When rain turns to dust: Understanding and responding to the combined impact of armed conflicts and the climate and environment crisis on people's lives.* July. https://www.icrc.org/sites/default/files/topic/file_plus_list/rain_turns_to_dust_climate_change_conflict.pdf.

International Council of Voluntary Agencies (ICVA). (2022). *Embracing discomfort: A call to enable finance for climate-change*

adaptation in conflict settings. October 25. https://www.icvanetwork.org/resource/embracing-discomfort-a-call-to-enable-finance-for-climate-change-adaptation-in-conflict-settings/.

Irrawaddy. No author. (2021). Myanmar junta's coup gives greenlight to timber traffickers. August 17. https://www.irrawaddy.com/news/burma/myanmar-juntas-coup-gives-greenlight-to-timber-traffickers.html.

Ja Htoi Pan Maran & Mandy Sadan. (2021). The Pat Jasan drug eradication social movement in northern Myanmar, part three: Legal pluralism and the challenge of everyday justice. *International Journal of Drug Policy, 89* (March).

Jenkins, M. (2021). Resilience dispatch #18: Cocoa in a climate newsletter? *Forest Trends*, August 1. https://www.forest-trends.org/rd_series/resilience-dispatch-18-cocoa-in-a-climate-newsletter/.

Kachin Development Networking Group (KDNG). (2020). *Ngo Chang Hka Dam*. August 1. https://kdng.org/2020/01/08/ngo-chang-hka-dam/.

Kantarawaddy Times. No author. (2022). KNPP halts logging in Karenni State. Burma News International, March 14. https://www.bnionline.net/en/news/knpp-halts-logging-karenni-state.

Karen Environmental and Social Action Network (KESAN). (2021). *Protecting Myanmar's forests*. https://kesan.asia/resource/protecting-myanmars-forests/.

Karen Environmental and Social Action Network (KESAN). (n.d.). *Salween Peace Park program*. https://kesan.asia/salween-peace-park-program-3936/.

Kawthoolei Forestry Department (KFD). (n.d.). *Healthy Kawthoolei landscape plan*.

Khin Wine Phyu Phyu. (2016). Logging ban in effect for Bago Mountains over next decade. *Myanmar Times*, July 6. https://www.mmtimes.com/national-news/21229-logging-ban-in-effect-for-bago-mountains-over-next-decade.html.

Khun Bedu. (2021). *Earning credentials: A Karenni perspective on the future of Burma/Myanmar.* Transnational Institute, August 17.

https://www.tni.org/en/article/earning-credentials-a-karen-ni-perspective-on-the-future-of-burmamyanmar.

Kyed, H. M. (Ed.). (2020). *Everyday justice in Myanmar: Informal resolutions and state evasion in a time of contested transition*. Nordic Institute of Asian Studies Press.

La Via Campesina (International Peasants' Movement). (2022). *What are we fighting for?* https://viacampesina.org/en/what-are-we-fighting-for/.

Lijphart, A. (1977). *Democracy in plural societies: A comparative exploration*. Yale University Press.

Lintner, B. (2021). *The Wa of Myanmar and China's quest for global dominance*. Silkworm Books.

Lintner, B. (2023). The Mirage of the 'United Front' in Myanmar. *The Irrawaddy* 29 June 2023. https://www.irrawaddy.com/opinion/guest-column/the-mirage-of-the-united-front-in-myanmar.html.

Liu, J., & Wallace, R. (2021). Climate danger grows in "vulnerable" Myanmar after military coup. Al Jazeera, December 1. https://www.aljazeera.com/news/2021/12/1/myanmar-climate.

Mac Ginty, R., & Richmond, O. P. (2016). The fallacy of constructing hybrid political orders: A reappraisal of the hybrid turn in peacebuilding. *International Peacekeeping, 23*(2), 219–39.

Mampilly, Z. C. (2011). *Rebel rulers: Insurgent governance and civilian life during war*. Cornell University Press.

Mark, S. (2022). The forging of legitimate authority in the ceasefire mixed-control Karen areas of Myanmar. *Journal of Contemporary Asia, 52*(2), 226–46.

Marquardt, J., Delina, L. A., & Smits, M. (Eds.). (2022). *Governing climate change in Southeast Asia: Critical perspectives*. Routledge.

McCullough, A. (2015). *The legitimacy of states and armed non-state actors: Topic guide*. Governance and Social Development Resource Centre, University of Birmingham. https://gsdrc.org/topic-guides/the-legitimacy-of-states-and-armed-non-state-actors/.

Mclaughlin, T., & Aung Hla Tun. (2016). *Myanmar bans lucrative logging in bid to preserve forests.* Reuters, April 28. https://www.reuters.com/article/us-myanmar-economy-logging-idUSKCN0XP1JT.

Middleton, C., Scott, A., & Lamb, V. (2019). Hydropower politics and conflict on the Salween River. In V. Lamb & C. Middleton (Eds.), *Knowing the Salween River: Resource politics of a contested transboundary river* (pp. 27–48). Springer Nature.

Ministry of Natural Resources and Environmental Conservation (MONREC), Forest Department, Republic of the Union of Myanmar. (2019). *Submission of Myanmar's voluntary national report*. Letter to the UN Forum on Forests Secretariat, November 29. https://www.un.org/esa/forests/wp-content/uploads/2019/12/Myanmar.pdf.

Ministry of Natural Resources and Environmental Conservation (MONREC), Republic of the Union of Myanmar. (2021a). *Nationally determined contributions, 2020*. National Unity Government, July 12. https://assets-monrec.nugmyanmar.org/images/2021/07/Myanmar_NDC_2020_Executive-Summary_12Jul2021_EngVersion.pdf.

Ministry of Natural Resources and Environmental Conservation (MONREC), Republic of the Union of Myanmar. (2021b). *Status of natural resources depletion during the military regimes in Myanmar.* National Unity Government, July. https://assets-monrec.nugmyanmar.org/images/2021/08/Status_of_Natural_Resources_Depletion_During_the_Military_Regimes.pdf.

Mizzima News. No author. (2021). Kachin community worry about environmental damage due to gold digging" November 14. https://mizzima.com/article/kachin-community-worry-about-environmental-damage-due-gold-digging.

Moe Myint. (2018). Analysis: From militia leader to house speaker. *The Irrawaddy*, March 24. https://www.irrawaddy.com/news/analysis-militia-leader-house-speaker.html.

Monbiot, G. (2022). Carbon offsetting is not warding off environmental collapse—It's accelerating it. *Guardian*, January 26.

https://www.theguardian.com/commentisfree/2022/jan/26/carbon-offsetting-environmental-collapse-carbon-land-grab.

Munive, J., & Stepputat, F. (2023). How non-state armed groups engage in environmental protection. *Danish Institute for International Studies policy brief*, January 24. https://www.diis.dk/en/research/how-non-state-armed-groups-engage-in-environmental-protection.

Myanmar Information Management Unit (MIMU). (2022). *Climate, environmental degradation and disaster risk in Myanmar.* May. https://themimu.info/environmental-analysis.

Nayt Thit. (2023). Atrocities and reinforcements: Myanmar regime tries to control resistance strongholds. *The Irrawaddy*, March 17. https://www.irrawaddy.com/opinion/analysis/atrocities-and-reinforcements-myanmar-regime-tries-to-control-resistance-strongholds.html.

National Unity Government (Ministry of Humanitarian Affairs and Disaster Management), KNU, KNPP, and CNF (2022). *An Overview and Needs Assessment: Myanmar's Humanitarian Crisis, Period: February 1, 2021*, following the Military Coup, until July 2022, August 9, 2022.

Nexus Response Mechanism. (2022). *Crisis environment: Environmental programming considerations in post-coup Myanmar.* Conflict Analysis and Research Facility, Response Perspectives Platform, May.

Overland, I., et al. (2017). *Impact of climate change on ASEAN international affairs: Risk and opportunity multiplier.* Norwegian Institute of International Affairs and Myanmar Institute of International and Strategic Studies, November. https://www.researchgate.net/publication/320622312_Impact_of_Climate_Change_on_ASEAN_International_Affairs_Risk_and_Opportunity_Multiplier.

Palaung State Liberation Front/Ta'ang National Liberation Army (PSLF/TNLA). (2023). *60 years of Ta'ang revolution.* January.

Péclard, D., & Mechoulan, D. (2015). *Rebel governance and the politics of civil war.* Swiss Peace Foundation, working paper.

https://www.swisspeace.ch/fileadmin/user_upload/Media/Publications/WP_1_2015.pdf.

Peters, K., Davies, G., & Holloway, K. (2021). *Addressing protection risks in a climate-changed world: Challenges and opportunities.* Overseas Development Institute, Humanitarian Policy Group, October 27. https://odi.org/en/publications/addressing-protection-risks-in-a-climate-changed-world-challenges-and-opportunities/.

Peters, K., Dupar, M., Opitz-Stapleton, S., Lovell, E., & Yue Cao. (2020). *Climate change, conflict and fragility: An evidence review and recommendations for research and action.* Overseas Development Institute, June 10. https://odi.org/en/publications/climate-change-conflict-and-fragility-an-evidence-review-and-recommendations-for-research-and-action/.

Ramalingham, B. (2013). *Aid on the Edge of Chaos*. Oxford University Press.

Republic of the Union of Myanmar. (2019). *Myanmar climate change strategy (2018–2030).* https://myanmar.un.org/sites/default/files/2019-11/MyanmarClimateChangeStrategy_2019.pdf.

Risse, T. (2011). Governance in areas of limited statehood: Introduction and overview. In T. Risse (Ed.), *Governance without a state? Policies and politics in areas of limited statehood* (pp. 1–38). Columbia University Press.

Rüttinger, L., Munayer, R. Van Ackern, P., & Titze, F. (2022). *The nature of conflict and peace: The links between environment, security and peace and their importance for the United Nations.* World Wide Fund for Nature International and Adelphi. https://adelphi.de/en/publications/the-nature-of-conflict-and-peace-the-links-between-environment-security-and-peace-and.

Seah, S., Martinus, M. Huda, M. S., & and Qiu, J. (2022). *Southeast Asia climate outlook: 2022 survey report*. Institute of Southeast Asian Studies. https://www.iseas.edu.sg/wp-content/uploads/2022/08/2022-CCSEAP-Report-7-Sept-final.pdf.

Slim, Hugo. (2023). *Is it right to prioritise fragile states in the climate crisis?* (Global Policy Journal 2-6-2023). https://

www.globalpolicyjournal.com/blog/02/06/2023/it-right-prioritise-fragile-states-climate-crisis

South, A. (2003; second edition 2005). *Mon nationalism and civil war in Burma: The golden sheldrake***.** Routledge.

South, A. (2011). *Burma's longest war: Anatomy of the Karen conflict.* Transnational Institute and Burma Center Netherlands. https://www.tni.org/en/publication/burmas-longest-war-anatomy-of-the-karen-conflict.

South, A. (2018). *Protecting civilians in the Kachin borderlands, Myanmar: Key threats and local responses.* Overseas Development Institute, Humanitarian Policy Group, December 17. https://odi.org/en/publications/protecting-civilians-in-the-kachin-borderlands-myanmar-key-threats-and-local-responses/.

South, A. (2019). Climate change and deep adaptation in Myanmar. *Frontier Myanmar*, July 12. https://www.frontiermyanmar.net/en/climate-change-and-deep-adaptation-in-myanmar/.

South, A. (2021a). *Ethnic armed organisations and climate change in Myanmar*. Search for Common Ground. https://www.sfcg.org/wp-content/uploads/2022/01/EAO-climate-change-briefing-paper.pdf.

South, A. (2021b). Towards "emergent federalism" in post-coup Myanmar. *Contemporary Southeast Asia, 43*(3) (December), 439–60.

South, A. (2022a). Education and federalism in Myanmar. *The Irrawaddy*, February 11. https://www.irrawaddy.com/opinion/guest-column/education-and-federalism-in-myanmar.html.

South, A. (2022b). *A new look at federalism in Myanmar.* Peace and Conflict Resolution Evidence Platform, University of Edinburgh, July. https://cnxus.org/wp-content/uploads/2022/08/Myanmar-Report-07_2022.pdf.

South, A., & Demartini, L. (2020). *Towards a tipping point? Climate change, disaster risk reduction and resilience in southeast Myanmar*. ActionAid Myanmar, June. https://myanmar.

actionaid.org/sites/myanmar/files/publications/Towards%20a%20tipping%20point%20briefing%20paper_0.pdf.

South, A., & Joll, C. M. (2016). From rebels to rulers: The challenges of transition for non-state armed groups in Mindanao and Myanmar. *Critical Asian Studies, 48* (2), 1–25.

South, A., & South, J. (2022). *Climate change in a northern Karen village: Reflections on Luthaw Township livelihoods, part 2*. Protracted Displacement Economies Research Briefing. Covenant Institute, May.

South, A., Stenning, E., & Schroeder, T. (2023). Multilingual education: Politics and pedagogy; A case study of Myanmar's ethnic education systems; in press.

South, A., Schroeder, T, Jolliffe, K, Mi Kun Chan Non, Saw Sa Shine, Kempel, S Schroeder, A & Naw Wah Shee Mu (2018). *Between ceasefires and federalism: Exploring interim arrangements in the Myanmar peace process*. Myanmar Interim Arrangements Research Project. Covenant Consultancy. https://www.displacementeconomies.org/wp-content/uploads/2022/06/Reflections-on-Luthaw-Township-Livelihoods-P2-June-2022.pdf.

Sturridge, C., & Holloway, K. (2022). *Climate change, conflict and displacement: Five key misconceptions*. Overseas Development Institute, Humanitarian Policy Group, July. https://odi.org/en/publications/climate-change-conflict-and-displacement-five-key-misconceptions.

Tänzler, D., Scherer, N., & Detges, A. 2022. *Guidelines for conflict-sensitive adaptation to climate change*. Umwelt Bundesamt, June 22. https://www.umweltbundesamt.de/en/publikationen/guidelines-for-conflict-sensitive-adaptation-to-0.

Taylor, R. H. (2015). *General Ne Win: A political biography*. Institute of Southeast Asian Studies.

Tun Oo, A.; Boughton, D.; Aung, N. (2023). Climate Change Adaptation and the Agriculture–Food System in Myanmar. *Climate 2023*, 11:124.

UN Department of Political and Peacebuilding Affairs (UNDPA). (2022). *The implications of climate change for mediation and peace processes*. Policy and Mediation Division, September. https://peacemaker.un.org/sites/peacemaker.un.org/files/DPPAPracticeNote-TheImplicationsofClimateChangeforMediationandPeaceProcesses.pdf.

UN High Commissioner for Human Rights. (2023). *Situation of human rights in Myanmar since 1 February 2022*. March 3. https://www.ohchr.org/en/documents/country-reports/ahrc5221-situation-human-rights-myanmar-1-february-2022-report-united.

Union of Catholic Asian News (UCA News). (2023). *Myanmar church speaks out against rare earth mining*. March 9. https://www.ucanews.com/news/myanmar-church-speaks-out-against-rare-earth-mining/100613.

US Agency for International Development (USAID). (2015). *Climate change and conflict: An annex to the USAID climate-resilient development framework*. February. https://2012-2017.usaid.gov/sites/default/files/documents/1866/ClimateChangeConflictAnnex_2015%2002%2025%2C%20Final%20with%20date%20for%20Web.pdf.

US National Intelligence Council. (2021). *Climate change and international responses increasing challenges to US national security through 2040*. National Intelligence Estimate, NIC-NIE-2021-10030-A. https://www.dni.gov/files/ODNI/documents/assessments/NIE_Climate_Change_and_National_Security.pdf.

Whong, E. (2022). *Illegal rare earth mining harms environment in Myanmar's Kachin State*. Radio Free Asia, March 10. https://www.rfa.org/english/news/myanmar/mining-03102022184456.html.

Woodhill, J., & Millican, J. (2023). *Systems thinking and practice: A guide to concepts, principles and tools for FCDO and partners*. Institute of Development Studies.

Woods, K. (2011). Ceasefire capitalism: Military-private partnerships, resource concessions and military-state building in the Burma-China borderlands. *Journal of Peasant Studies, 38*(4) (October), 747–70.

World Bank. (2019). *Myanmar country environmental analysis.* June 11. https://www.worldbank.org/en/country/myanmar/publication/myanmar-country-environmental-analysis.

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Following the 2021 coup, the state of Myanmar is not fragile or failing — it has failed. But a new federal Burma is emerging, from the bottom up.

Before the coup, the challenge in Myanmar was to federalize a deeply contested state, following decades of conflict. Since the military take-over, the challenge is to build a new country, through a bottom-up federating process.

In many ethnic nationality-populated areas, political legitimacy and authority lies with some two dozen Ethnic Armed Organizations. The administration and services delivered by EAOs and civil society affiliates are building blocks of a new federalism, based on the sovereignty of ethnic states and their natural and human resources.

Key EAOs and new state-based bodies in Karenni and elsewhere have globally important roles to play in mitigating the impacts of climate change, by protecting Southeast Asia's best remaining forests. The long struggle for self-determination and indigenous rights in Burma draws on and mobilises the extraordinary resilience of communities and civil society groups, some of which are already putting climate change adaptation and mitigation measures in place.

In the context of escalating global crises, the localization of responses to man-made and natural disasters is particularly important. The challenge is to support resilience while there is still time.

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