

CLIMATE-SECURITY WARGAMING: Taking on the hyperthreat in Southeast Asia

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Introduction

In March 2023, ASEAN [1] postgraduate students war-gamed 'PLAN E' – a concept for a climate emergency response; they were the first people in the world to do so. The scenario involved a heat crisis in Southeast Asia, exacerbated by the arrival of El Niño.

The activity identified five key risks, some of which are not prominent in current climate security or climate emergency discourse. The wargame differed from past approaches to climate security wargaming in that it utilised a different theoretical framework – eco-military theory – which centres the climate and ecological crisis as the preeminent threat (a hyperthreat).

This briefing document contains three parts:

- Part I: Difficulties, dimensions, and developments in climate security wargaming.
- Part II: Description of the ASEAN heatwave wargame
- Part III: Discussion on wargame result and method.

PART I: DIFFICULTIES, DIMENSIONS AND DEVELOPMENTS IN CLIMATE SECURITY WARGAMING

Background: wargaming climate is difficult.

Military planning methods and skill sets are often applied to aid civil society during disasters and increasingly to analyse climate, environmental and energy security problems.

Yet analysing and wargaming climate security issues can be difficult and at times, contentious. To start with, research on approaches to climate security at the international level concludes that the issue has not been effectively conceptualised. Meanwhile Warner and Boas find that climate security framings haven't galvanised “exceptional action” and are often paired with mundane solutions.

Reviewing past US climate security wargaming efforts, Sharon Burke and Andrea Cameron write:

“Games that try to be about everything can end up being about nothing. Too many sponsors or stakeholders with different agendas can make for incoherent outcomes.”

Burke and Cameron note that climate security wargaming often ends up serving educational rather than analytical functions and caution on the limitations of war-gaming a specific natural disaster scenario, where expertise already exists and which steers analysis away from the larger more complex issue of climate change. They also assert that the ‘how’ of addressing dangerous climate change is “not the responsibility of the armed forces.”

Another barrier is the stigma associated with wargaming within academia where, Sabin argues, military style wargaming can be regarded as “childish” and not a legitimate method of analysis.

Stepping up to Scale of Problem

Analytical methods must evolve as the threat environment evolves. The above-described approaches observe the norms of a pre-climate era and do not accord with the new dangers humanity face. To refresh, in March 2023, the IPCC issued its [final warning](#) while the UN Secretary General implored the world to act with [warp speed](#). Since then, the prognosis has become more dire. In June 2023, new [research](#) found that the likelihood of ecosystems collapsing had not been properly assessed – as a range of factors hadn't been properly accounted for. In other words, pertinent to wargaming and risk assessment methods, siloed research methods had underestimated the danger. The same is true of the extraordinary June-July 2023 [meteorological observations](#) which have exceeded scientific expectations.

For a long time, scientific methods have dominated as the means to determine climate risk. However, such methods often require years of research and may not be able to keep pace with the speed and complexity in which future events unfold. Wargaming and military appreciation processes are common methods for time-limited decision making in environments of deep uncertainty and danger, however, effective wargaming – that produces useful insights – is never straightforward.

Importance of the wargame “high-concept” and atmospheric

Considering the preconditions for a wargame to be useful, Rupert Hoskins [explains](#) that success depends upon the calibre and expertise of participants, but also capacity to keep the focus off ‘process’ and instead upon ‘thinking’ and to create an atmosphere which supports creative thinking.

Pertinent to the ‘creative thinking’ problem is Stephen Gordon and colleague’s [analysis](#) on the links between storytelling and effective wargaming:

“The storytelling process is the essential missing component to transforming the U.S. approach to wargaming and warfare.” – Stephen M. Gordon; Colonel Walt Yates, USMC (Ret); and Andrew Gordon (2021)

Gordon emphasises the importance of a “high concept,” “big idea” or compelling narrative which inspires wargames to “engage and think” but also helps to coherently link contributions from disparate participants and perspectives. A coherent story or frame at the start of the wargame hinges the analytical activity, preventing it from becoming ‘about everything... about nothing’ while providing a platform for imaginative leaps and experimentation.

Scientific research papers prioritise empirically correct information, however, wargames focus upon identifying unknowns, occurrences for which evidence may not yet exist. This requires creating an atmosphere which permits people to be ‘be wrong.’ Gordon writes:

“Wargames attempt to solve complex problems by encouraging participants to strive for originality and collaborate and communicate outside their organizational chain of command without fear of failure or apprehension to offer breakthrough concepts....do not settle for obvious and easy answers—push yourself to uncomfortable places and do not be afraid to reach for new ideas that may seem outside the lines, but keep iterating, “Failure isn’t always a necessary evil”—the cost of preventing errors is often far greater than the cost of fixing them.... This is the time and place to make mistakes: expand thinking and open up the conversation to input and critique.” P.186-187

Wargaming and military planning methods, designed for anticipating and responding to chaotic, dangerous, rapidly unfolding complex events are analytical tools that can be modified to suit the context of climate and ecological crisis. However, going straight to the map board is not the answer. It is proposed here that preliminary effort is required to refine the conceptual approach, to familiarise participants with it, and support them to use it. Otherwise, the risk is that they may revert to pre-climate mental modes, which may produce the dreaded “mundane” solutions.

Conceptual Framework – Eco-Military Theory

Eco-military theory proceeds on the basis that extant framings, conceptions, and institutional designs are relics of a pre-climate era which are themselves part of the problem. As the nature of the problem demands whole-of-society transformative response, it takes the view that the security sector must be part of this transformation. This involves a fundamental rethink about how violence, killing, harm and destruction will manifest over 2023 to 2100 and in turn, what type of security support citizens need.

Eco-military theory regards climate and ecological crises not as threat multipliers, but rather as the [primary threat](#) (a [hyperthreat](#)). Modified military style threat analysis and response planning methods are applied to the [hyperthreat](#) to devise ideas about how to structure a HyperResponse. The result was PLAN E – a new [theoretical](#) approach and a prototype [grand strategy](#).

PART II: THE ASEAN HEATWAVE WARGAME – MARCH 2023

Wargame Participants

Wargame participants were members of the ASEAN Australian Defence Postgraduate Scholarship Program (AADPSP) studying at the Australian National University (ANU) in Canberra. Mid-career security practitioners, mostly military officers, they brought a high level of expertise on security issues pertinent to their region and were familiar with wargaming methods. The 15 participants came from Indonesia; Malaysia; the Philippines; Singapore; Thailand; Vietnam and Cambodia.

The wargame was commissioned by the academic course convenor, [Dr Greg Raymond](#); designed by [Dr Liz Boulton](#) and supported by three Australian Army Officers who acted as advisors and small group facilitators, coordinated by Lieutenant Colonel Roger Grose. The students' final brief was delivered to a representative from the Indonesian Embassy in Australia.

Wargame Structure

The entire activity was conducted over only four hours. As shown in Table 1, it was slanted towards participatory learning

Table 1: Schedule

2-hr Class	WARGAME PREPARATION & CONDUCT
Lecture 1	<ul style="list-style-type: none">• Lecture 25 mins – Conceptual framework (hyperthreat, entangled security)• Activity 30 mins – Brainstorm via world café method on the 'centre of gravity' for Hyperthreat and for HyperResponse.• Lecture 20 mins – PLAN E and wargame orientation• Activity 20 mins – Students meet facilitators, issued wargame GREEN• Lecture 10 minute – Wargame scenario refresher
Lecture 2	<ul style="list-style-type: none">• Activity 40 minutes – Small group work - develop courses of action• Activity 50 minutes – Wargame, sequential playing of 'turns'• Activity 20 minutes – Analysis of lessons learned and briefing

Wargame Scenario

The wargame scenario is described in a news [article](#). In brief, the scenario was set in November 2023. Students were advised that since April 2023 the global climate had been heating at an unprecedented rate. The arrival of El Niño in September 2023 exacerbated the crisis globally; in the Southeast Asian region there were almost half a million heat deaths.

The UN Security Council declared a planetary emergency, with subsequent discussions that signatories to the Paris Agreement (197 Nations) will sign a "planetary security peace treaty".

Globally, citizens gave Governments a mandate for an emergency response. The method of implementing an emergency response was left to the discretion of nations, leading to conversations, worldwide, about 'how' to respond, with many options being quickly developed.

As part of this deliberation, Secretary-general of ASEAN, Mr Kao Kim Hourn, tasked a group of ASEAN security planners (the wargame participants) to evaluate the [PLAN E](#) approach for suitability in the ASEAN region. The planners were to identify critical risks on start-up in the first 12 months of implementation and identify necessary modifications. To facilitate such analysis, the planners conducted a wargame, with five player groups (Table 2).

Table 2: Wargame roles

• BLUE TEAM	HyperResponse Force – HRF
• GREEN TEAM	Hyperthreat – HT - climate and environment impacts
• RED TEAM	Hostile/violent human actor
• BROWN TEAM	Non-violent civil groups opposed to PLAN E
• NEUTRALS	General civilian population

Wargame Scenario Result

In brief, the clear result of the wargame was that the BLUE team (governance) was overwhelmed. At a surface level analysis, this might seem an obvious result; after all, 'BLUE' had three concurrent 'foes' (the RED, GREEN, and BROWN teams), while also needing to support weakened NEUTRALS. How did this result come about?

BLUE (HRF)

BLUE began cautiously, focused upon establishing an ASEAN treaty and trusted governance and power sharing arrangements between nations. It assessed that an ASEAN multi-national approach was needed to generate the weight of action needed. This was combined with decentralised actions by nations; multi-stakeholder planning and discussion forums (for example, scientists meeting with religious groups); supporting education and communication programs (including using tiktok); shoring up anti-corruption measures; implementing a regional carbon emission trading scheme and creating a new green jobs workforce.

BLUE anticipated misinformation campaigns and outright disagreement; so, it sought to form cooperative partnerships with 'anti-climate' groups on mutual areas of concern. To aid trust, it created a public register of 'who is doing what'. A command hub was placed in Indonesia to focus upon regional disaster while an engineering and technology hub was placed in Singapore, to fast-track eco-solutions and boost food security for the region.

After establishment of the Treaty, it was intended that military representatives would be sent to each village to monitor their overall wellbeing and level of supplies, provide radio communication support during electricity blackouts, oversee implementation of new initiatives, and protect villages from external threats.

GREEN (hyperthreat)

GREEN, (the hyperthreat) battered BLUE relentlessly. It introduced continuous wildfires, which brought direct deaths and injuries but also caused widespread smoke related health problems which overloaded medical capacities. The pervasive smoke and haze also affected the efficiency of new solar power installations.

The hyperthreat destroyed the Indonesian fish farming industry, (the second largest in the world), which further impacted the economy and food security. Finally, the hyperthreat used a pandemic to attack Singapore (the technology hub) and the BLUE force's collective military and emergency services. This final blow, of immobilising the BLUE force via a pandemic may not have been realistic, but as a final move it was allowed to play in the last minute of the wargame.

RED (violent humans)

Reflecting other [research](#), transnational criminals moved quickly to exploit the chaos. With Government agencies, security and emergency services focussed upon the heat crisis, these was opportunity to expand illegal logging, wildlife trade, land clearing, fishing (including through using cyanide bombing) and human trafficking, all of which allowed greater profits. Existing criminal networks and supply chains could be quickly converted to supply stolen food, medicines, and bottled water to desperate communities. This allowed the RED force to create dependent communities, which in turn allowed them greater access to remaining environmental resources and a larger workforce.

BROWN (humans opposed to HyperResponse)

The BROWN force worked hard to undermine the emergency response. As retaliation for strict environmental controls, several multinational corporations immediately ceased operations, plunging tens of thousands of people into unemployment. Other major companies remained operating but retrenched enormous numbers of people. Their collective aim was to create an unemployment crisis which would undermine the emergency response and force governments to lift strict environmental controls which they felt would negatively impact long term profits.

Anti-climate activists launched a misinformation campaign, which involved meeting village chiefs to attempt to persuade them to turn against it. The focus of their messaging was that the emergency response would cause unemployment, rising cost of living, food shortages, land seizures and a loss of cultural and religious customs.

NEUTRALS

A key moment of the wargame activity was when the NEUTRALS became impatient with what was perceived as an overly bureaucratic and slow approach by authorities. A popular news radio host said, "What are you doing, you've bodies in the street and you are still talking about treaties?" This perception perhaps missed that there had been an assumption that emergency response would occur at the national level. However, this speech pinpointed a key failure in BLUE's plan; it's initial focus upon establishing long term legitimate governance, seemed to be at the expense of providing effective response to the immediate crisis.

PART III: DISCUSSION

The hyperthreat concept was quickly adopted by participants and it seemed to provide a helpful ‘high concept,’ ‘big idea’ or ‘story’ to focus and link group analytical activity.

Like regular military wargaming, the quality of participants impacted the quality of the final analytical result. In this case, the wargame activity benefited greatly from the calibre and intellect of the participants, but particularly the fact that they were current practitioners with detailed knowledge of their region and its security dimensions.

The wargame identified significant risks of launching an emergency response, during a climate/ecological crisis, not commonly discussed in academic literature (Box 1).

Box 1: Key risks: launching an emergency response, during a climate/ecological crisis

1. A major, transformational planetary emergency initiative may immediately face significant, sophisticated, and multi-faceted opposition.
2. A major, complex climate related crisis combined with a lull before an effective transition to a new system, could create sudden and widespread unemployment, causing further negative impacts.
3. The crisis may enable transnational criminal and terrorist groups greater freedom of action to exploit environmental resources and people.
4. It is very difficult to implement an eco-transformation of society while (A) attempting to respond to a severe climate incident and (B) when authorities do not have any existing frameworks or contingency plans for rapid large-scale transformative response.
5. It cannot be assumed that if the ‘go’ signal is given, authorities will know how to effectively plan and launch a major eco-transformational response nor that the requisite expertise and skills exist across broader society to enact it.

Conclusion

Wargaming offers an efficient way of synthesising and integrating numerous knowledge realms to better identify risk and optional pathways, while concurrently developing participant’s ability to navigate complexity and dangerous circumstances. That is the ideal outcome, but it is not always achieved.

Historically climate security analysis has led to outcomes criticised as mundane solutions, which reinforce existing policy approaches and are mismatched with language often used such as “the greatest security threat.”

The hyperthreat and HyperResponse (PLAN E) concepts offer a story, a grand narrative, and a lexicon which, used in wargames, may encourage participants to think at the ‘hyper’ scale. The concepts may also help address common problems related to achieving coherence and synergy in climate security analysis and problem solving.

This wargame event, of only four hours, produced useful new insight on the unexamined risks of implementing a rapid transformational response to the climate and ecological crisis.

The activity encouraged regional military officers to engage with the climate change and security threat problem in a way that conventional security and strategic studies courses are generally yet to do (Course convenor, Dr Greg Raymond).