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On the verge of nuclear war: Global security challenges and dynamics in maintaining world peace

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Abstract
Purpose: This research aims to identify the most effective strategies for maintaining world peace in the midst of these threats. The research methodology employs a hybrid approach, utilizing both the Analytic Hierarchy Process (AHP) and surveys.
Research methodology: The survey involved 60 respondents from academia, policymakers, and the public to understand their perceptions of nuclear threats and mitigation strategies. This study is based on the theory of international system stability, which emphasizes the importance of multilateral cooperation and arms control.
Results: The findings indicate that the most effective strategy is international diplomacy, with alliance strengthening and defense modernization following closely. We identify geopolitical threats, particularly unilateral actions, as major risk factors and emphasize that controlling the spread of nuclear technology is more significant than disarmament. These findings emphasize the need for a multidimensional approach based on diplomacy, technology control, and multilateral cooperation to create sustainable world peace.
Conclusions: International diplomacy is the most effective strategy to maintain world peace amid nuclear threats, supported by nuclear technology control and strategic alliances through a multidimensional, cooperative approach.
Limitations: The study's findings are limited by a small, region-specific sample and potential subjectivity in the AHP and survey methods.
Contribution: This study provides a strategic basis for global security policy in the face of increasingly complex nuclear challenges.

Keywords: *Analytic Hierarchy Process (AHP), geopolitical threats, international diplomacy, nuclear technology control, nuclear war*

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1. Introduction

World peace is a fundamental necessity to ensure the safety of humankind, especially in an era when global threats are increasing. One of the biggest threats comes from the existence of nuclear weapons that have the potential to destroy not only the human population but also the Earth's ecological system. The history of the use of nuclear weapons, such as the Hiroshima and Nagasaki events, has shown

damage that is not only physical but also has long-term impacts on human health and the environment. This underscores the importance of international diplomacy in preventing the use of such weapons of mass destruction (Müller & Wunderlich, 2020; Pebrianto, 2023).

However, it is difficult to realize world peace. Tensions between the major powers continued to rise, with the arms race heating up again. Geopolitical rivalry, particularly among countries with major nuclear powers, creates uncertainty and fear of an escalation of conflict that could trigger a nuclear war. Nuclear weapons are not only used as a means of defense but also as a political means to assert power on the international stage (Bollfrass & Herzog, 2023; Wulansari, 2023).

Currently, global security is increasingly dynamic and complex. Regional conflicts often involve issues such as territorial disputes and access to resources, which exacerbate tensions between countries. Strategic Non-Nuclear Weapons (SNNW) technologies also add a new dimension to global competition, carrying the risk of conflict escalation and potential miscalculations. Futter and Zala (2021) mentioned that the third era of world nuclear dynamics, called *the Third Nuclear Age*, is marked by increasingly complex interactions between nuclear and non-nuclear technologies, increasing unprecedented risks.

For example, on the Korean Peninsula, North Korea's change in nuclear doctrine confirms its commitment to maintaining its nuclear weapons as a guarantee of security as well as a tool of diplomacy. This makes the region one of the most vulnerable points to potential nuclear conflicts (Cheong, 2023; Chirozva & Damba, 2021). Meanwhile, in South Asia, relations between India and Pakistan, which are often hit by tensions, trigger the risk of regional conflicts that could have global repercussions, as warned by a study on the potential *for a nuclear winter* due to the limited nuclear war in the region (Auma, Obici, & Mwesigwa, 2022; Hess, 2021).

The threat of nuclear war is becoming more relevant in today's geopolitical landscape. Political instability, changes in the foreign policies of major countries, and increased access to nuclear technology by non-state actors add layers of complexity to efforts to maintain global security. Conflicts such as the Russia-Ukraine war show how nuclear threats are used as a tool to prevent third-party intervention, but at the same time raise concerns of further escalation (Corneo, 2023; Mwesigwa, 2021). In addition, the proliferation of advanced technologies has enabled the development of smaller, smarter, and hard-to-detect nuclear weapons. This not only increases the risk of weapons proliferation but also complicates efforts to monitor and prevent their use. In this context, it is important to develop early detection technologies and more effective surveillance mechanisms as part of a global strategy to prevent nuclear conflict (Fanlo & Sukin, 2023; Seran, Nursalam, & Tamunu, 2022).

How are efforts to maintain world peace amid the increasingly real threat of a nuclear war? The formulation of this problem leads to the need for a multidisciplinary approach to analyze and address these challenges. Some aspects to consider include identifying the key actors in global nuclear dynamics as the first step to understanding existing threats. This includes evaluating the impact of new technologies on the proliferation of nuclear weapons (Ashurova, 2025; Futter & Zala, 2021). International diplomacy plays an important role in easing tensions, while treaties such as the Nuclear Non-Proliferation Treaty (NPT) must be strengthened to ensure compliance and arms reduction (Müller & Wunderlich, 2020; Natamiharja, Panjaitan, & Setiawan, 2025). Increased global cooperation in building institutional capacity and verification technology is crucial to prevent the illegal or accidental use of nuclear weapons (Anayochukwu, 2022; Hamel-Green, 2021; Ramadhani. D, Shafira, Dewi, Jatmiko, & Warganegara, 2024).

2. Methodology

This study adopts a mixed methodological approach that combines *the Analytic Hierarchy Process* (AHP) and surveys to identify the best strategies for maintaining world peace amid the threat of nuclear war. The design of this method ensures comprehensive, systematic, and evidence-based results.

2.1. Analytic Hierarchy Process (AHP)

We used the AHP approach to determine strategic priorities based on criteria relevant to the main goal, namely world peace. The AHP process involves the following steps:

1. **Goal**: World Peace.
2. **Criteria**:
   a. *Nuclear Technology Capacity* Measures the level of nuclear technology's ability to support or prevent conflict escalation.
   b. *Geopolitical Threats*: Assessing geopolitical dynamics that increase the risk of conflict.
   c. *Stability of Diplomacy*: Measures the effectiveness of diplomacy in easing tensions.
   d. *Military Readiness*: Assessing military capabilities as a means of defense or deterrence.
3. **Sub Criteria**:
   a. *Nuclear Technology Capacity* for Nuclear Disarmament and Proliferation Control.
   b. *Geopolitical Threats*: Global Political Dynamics and Unilateral Actions of States.
   c. *Stability of Diplomacy*: Bilateral Diplomacy and International Agreements.
   d. *Military Readiness*: Alliances and Cooperation Between Nations.
4. **Alternatives**:
   a. *International diplomacy* strengthens international dialogue and cooperation to ease tensions.
   b. *Armament* Modernization: Improvement of defense capabilities to prevent attacks.
   c. *Alliance Strengthening*: Forming strategic alliances to create a balance of power.

Experts in international policy and global security, comprising the respondents, will assign weights to the criteria and alternatives through a pairwise comparison scale. The results of the AHP determine the strategy with the highest weight to support world peace.

2.2. Survey

We conducted a survey to gather stakeholder perspectives on nuclear threats and peace strategies. We designed the survey in both quantitative and qualitative formats, covering questions about nuclear risk perceptions, trust in international diplomacy, and preferences for global security strategies. The sample included academics and practitioners working in Wantannas and Bapeten.

2.3. Method Integration

We compared the AHP results with the survey findings to determine the alignment between expert preferences and public opinion. We used relevant literature to evaluate the feasibility and impact of implementing the proposed strategy. We anticipate that a combination of these methods will yield data-driven recommendations for global policies aimed at preserving world peace.

3. Results and Discussions

3.1. AHP Structure

This study uses the Analytic Hierarchy Process (AHP) approach to evaluate effective strategies for maintaining world peace amidst the threat of nuclear war. The goal is to identify priorities based on relevant key criteria and evaluate various policy alternatives.

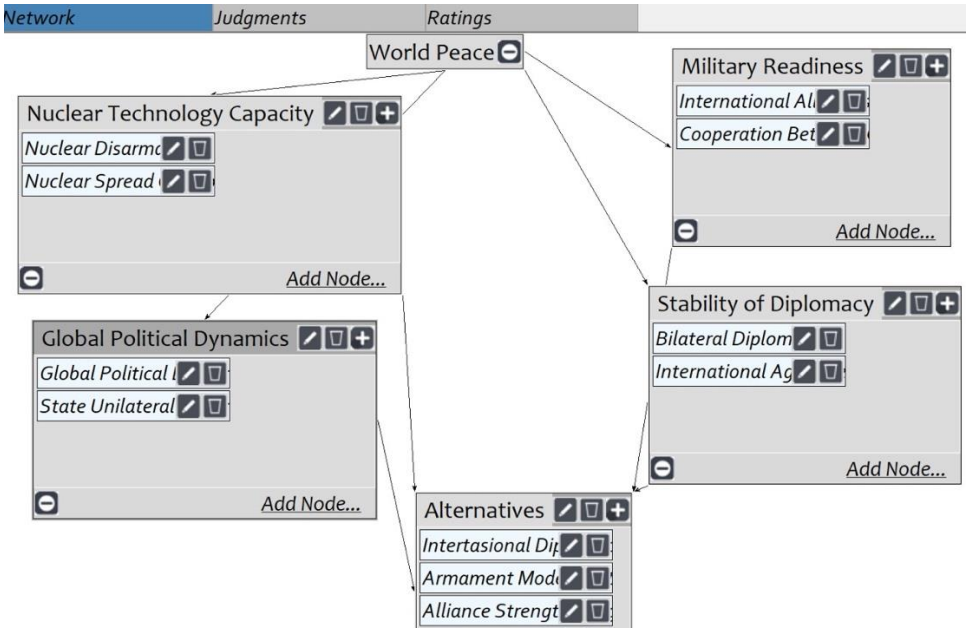

Figure 1. AHP Structure

World peace is the main goal, given the increasing nuclear threat that affects global stability. This condition demands policies that can reduce the risk of war and maintain geopolitical balance (Bollfrass & Herzog, 2023; Budjeryn, 2022; Weng et al., 2024).

Four main criteria were selected to assess the effectiveness of the policy.

1. Nuclear Technology Capacity

Measure the ability of states to control or utilize nuclear technology for peaceful or destructive purposes. Nuclear disarmament efforts codified in the Nuclear Non-Proliferation Treaty (NPT) are a major challenge in global geopolitics (Müller & Wunderlich, 2020). In addition, technologies such as missile defense systems and hypersonic weapons further complicate nuclear control and stability (Johnson, 2024).

2. Geopolitical Threats:

Geopolitical tensions and global power dynamics are primary causes of instability. For example, the Russia-Ukraine war not only threatens regional integrity but also shows how nuclear weapons are used as a tool of political threat (Bollfrass & Herzog, 2023; Budjeryn, 2022; Reisner et al., 2018).

3. Stability of Diplomacy:

International diplomacy, including bilateral negotiations and international agreements, plays an important role in suppressing tension. However, a lack of compliance with agreements such as the NPT often hampers progress (Müller & Wunderlich, 2020).

4. Military Readiness:

Military readiness, including cooperation between countries and strategic alliances such as NATO, is a key element in preventing conflict escalation. This strategy has been proven in the face of direct threats from countries with large nuclear powers (Budjeryn, 2022).

Four main criteria were then determined as sub-criteria to assess the effectiveness of the policy against alternatives:

1. Nuclear Technology Capacity Criteria.

a. The Nuclear Disarmament Sub-Criteria face a major challenge from the tension between use control norms and the need for states to maintain these weapons for security reasons (Müller & Wunderlich, 2020).

b. The Sub-Criteria for Nuclear Spread Control, such as the TPNW Agreement, offer a new approach, but its success depends largely on how disarmament and non-proliferation norms are implemented in practice (Hamel-Green, 2021).

2. Geopolitical Threat Criteria.
a. The Sub-Criteria for Global Political Dynamics reflects that global politics is increasingly fragmented, where national interests dominate international collaboration efforts in preventing the escalation of nuclear conflicts (Budjeryn, 2022; Leal Filho et al., 2023).

b. The Sub-Criteria for State Unilateral Actions, such as the threat of the use of nuclear weapons by Russia during the Ukrainian conflict, have exacerbated tensions in the global nuclear order (Budjeryn, 2022).

3. Criteria for Stability of Diplomacy.
a. Sub-Criteria for Bilateral Diplomacy, which is often the main tool for reducing the risk of nuclear escalation, such as denuclearization negotiations between the United States and the DPRK (Cheong, 2023).

b. The Sub-Criteria for International Agreements, in the form of bilateral diplomacy agreements, are vulnerable to failure when there is no long-term commitment or adequate international supervision (Hamel-Green, 2021).

3. Military Readiness Criteria.
a. International alliances, such as NATO, serve as nuclear deterrence mechanisms, but they often also trigger tensions with countries like Russia that see them as existential threats (Fanlo & Sukin, 2023).

b. Cooperation between countries through nuclear weapon-free zones offers the potential to build trust and stability in conflict-prone regions (Hamel-Green, 2021).

The three main alternatives identified for maintaining world peace are as follows:
1. International Diplomacy
Prioritize multilateral negotiations and cooperation to reduce tension. This has become a suggested strategy to prevent the escalation of conflicts, as seen in global efforts to limit nuclear proliferation (Müller & Wunderlich, 2020).

2. Armament Modernization:
Focus on improving defense systems to ensure readiness to face nuclear threats, although this approach is often criticized for being able to escalate the arms race (Johnson, 2024).

3. Alliance Strengthening:
Forming military and economic alliances to balance power. This move is seen in NATO's role during the Ukrainian crisis, where the alliance serves as a protector from Russian threats (Bollfrass & Herzog, 2023).

The AHP structure identifies strategic priorities by weighing the importance of criteria towards the goal of world peace. Geopolitical threats and diplomatic stability stand out as key criteria, highlighting the importance of an approach that focuses more on diplomatic and multilateral cooperation than on weapons modernization. This approach reflects the global need to reduce tensions and improve stability in the face of nuclear threats (Budjeryn, 2022; Johnson, 2024; Kulesa, 2023; Müller & Wunderlich, 2020).

3.2. AHP Results
3.2.1. Consistency Ratio
The Consistency Ratio (CR) in this analysis shows the level of consistency in the comparison of the criteria pairs carried out. In the results obtained, the inconsistency ratio value of 0.08368 is below the

threshold of 0.1, accepted in the Analytic Hierarchy Process (AHP). This demonstrates that the respondents' or analysis's assessment is sufficiently consistent and reliable to produce priority weights. Therefore, decision makers can utilize the calculation results to compare the criteria for world peace.

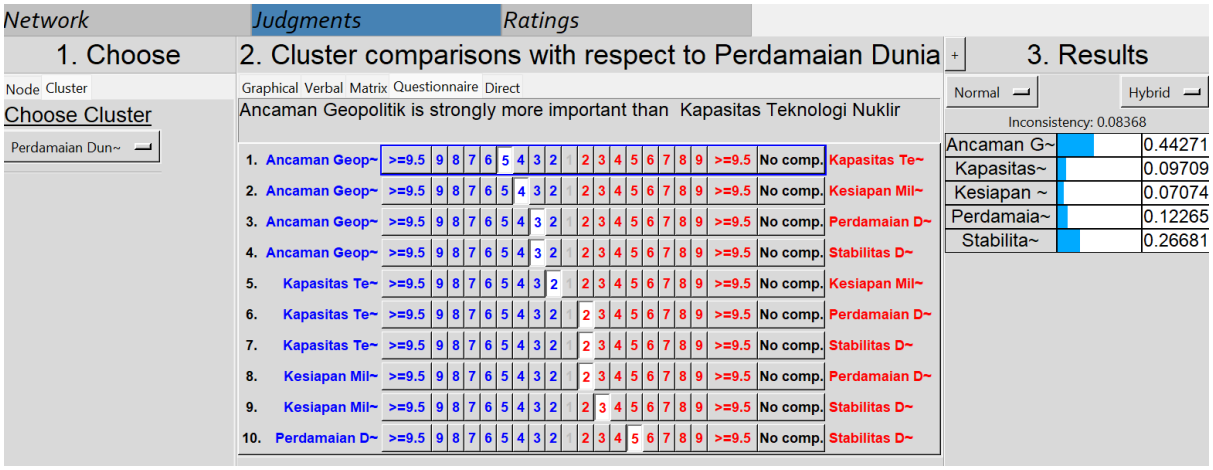

Figure 2. CR Results

3.2.2. Unweighted Super Matrix

The displayed supermatrix provides a view of the inter-influencing relationship between various criteria and alternatives in the analysis of the *Analytic Hierarchy Process* (AHP) to support world peace. This structure shows the priorities and contributions of each element in the analyzed system.

Main Network: TUGASKEL7.sdmod: Unweighted Super Matrix

Clusters	Nodes	Diplomasi Internasional	Modernisasi Pertahanan	Penguatan Aliansi	Dinamika Politik Global	Tindakan Unilateral Negara	Pelucutan Senjata Nuklir	Pengendalian Peny
Alternatif Perdamaian	Diplomasi Internasional	0.000000	0.000000	0.000000	0.100654	0.102034	0.614411	0.546931
	Modernisasi Pertahanan	0.000000	0.000000	0.000000	0.673811	0.725848	0.117221	0.108525
	Penguatan Aliansi	0.000000	0.000000	0.000000	0.225536	0.172118	0.268369	0.344545
Ancaman Geopolitik	Dinamika Politik Global	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Tindakan Unilateral Negara	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Kapasitas Teknologi Nuklir	Pelucutan Senjata Nuklir	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Pengendalian Penyebaran	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Kesiapan Militer	Aliansi	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Kerja Sama Antar Negara	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Perdamaian Dunia	Pengaruh Lembaga Internasional	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Proliferasi Senjata	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Stabilitas Politik	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Stabilitas Diplomasi	Diplomasi Bilateral	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Perjanjian Internasional	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Figure 3. Unweighted Super Matrix Results

Main Criteria

1. **Geopolitical Threats**

The two main sub-criteria, namely Global Political Dynamics and Unilateral Actions of States, have high weights, reflecting the central role of geopolitics in determining the risk of nuclear conflict. The unilateral actions of states show a significant influence with a weight of 0.725848, indicating that a country's unilateral decisions are an important factor in triggering or easing global conflicts.

2. **Nuclear Technology Capacity**

The Nuclear Disarmament *sub-criterion* received a dominant weight of 0.614411, confirming that global initiatives to reduce nuclear armaments remain a key focus in building stability. Meanwhile, *Deployment Control* with a weight of 0.546931 shows the urgency of monitoring and controlling the distribution of nuclear technology.

3. **Stability of Diplomacy**

Bilateral diplomacy and international agreements play an important role in supporting multilateral dialogue and cooperation to prevent conflicts.

Alternative Strategies

1. **International Diplomacy**

This alternative has received attention as the most effective way to address global political dynamics and encourage international cooperation.

2. **Defense Modernization**

Although this alternative focuses more on military readiness, its contribution to nuclear disarmament remains significant on a smaller scale.

3. **Alliance Strengthening**

This alternative plays a role in encouraging cross-border cooperation, although it is less dominant than international diplomacy.

The unweighted supermatrix emphasizes the importance of a diplomatic approach and nuclear disarmament initiatives in building world peace. Geopolitical threats and unilateral actions remain major challenges, requiring a strategy based on the cooperation and control of nuclear technology to address the risk of global conflict.

3.2.3. Weighted Super Matrix

Main Network: TUGASKEL7.sdmod: Weighted Super Matrix

Clusters	Nodes	Diplomasi Internasional	Modernisasi Pertahanan	Penguatan Aliansi	Dinamika Politik Global	Tindakan Unilateral Negara	Pelucutan Senjata Nuklir	Pengendalian Peny
Alternatif Perdamaian	Diplomasi Internasional	0.000000	0.000000	0.000000	0.100654	0.102034	0.614411	0.546931
	Modernisasi Pertahanan	0.000000	0.000000	0.000000	0.673811	0.725848	0.117221	0.108525
	Penguatan Aliansi	0.000000	0.000000	0.000000	0.225536	0.172118	0.268369	0.344545
Ancaman Geopolitik	Dinamika Politik Global	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Tindakan Unilateral Negara	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Kapasitas Teknologi Nuklir	Pelucutan Senjata Nuklir	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Pengendalian Penyebaran	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Kesiapan Militer	Aliansi	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Kerja Sama Antar Negara	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Perdamaian Dunia	Pengaruh Lembaga Internasional	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Proliferasi Senjata	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Stabilitas Politik	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Stabilitas Diplomasi	Diplomasi Bilateral	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
	Perjanjian Internasional	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Figure 4. Weighted Supermatrix Results

The weighted supermatrix illustrates the weighted interactions between criteria and alternatives in the AHP analysis. This matrix shows the relative influence of various elements on achieving the main goal of maintaining world peace.

Relationship Between Criteria

1. **Geopolitical Threats**

The sub-criteria of unilateral actions of states have the highest weight (0.725848) compared to global political dynamics (0.673811). This shows that the unilateral policies of countries have a significant influence on triggering or preventing geopolitical tensions. This situation is especially relevant in the context of global tensions, as seen in the Russia-Ukraine crisis (Budjeryn 2022; Credi 2019).

2. **Nuclear Technology Capacity**

Nuclear Disarmament has the dominant weight (0.614411), affirming the importance of global initiatives to reduce the number of nuclear weapons as part of global stability. Deployment control (0.546931) is also an important priority, given the risk of the proliferation of nuclear technology to irresponsible state or non-state actors.

3. **Stability of Diplomacy**

In this category, *bilateral diplomacy* and *international agreements* reflect the important role of multilateral relations in easing global tensions. A diplomatic approach remains the main pillar for balancing the interests of a country.

Alternative Strategies

1. **International Diplomacy**

This strategy provides strong support as an effective solution for confronting geopolitical challenges and improving diplomatic stability.

2. **Defense Modernization**
This alternative makes a significant contribution to readiness to face immediate threats, although it is more relevant in preventing military escalation.
3. **Alliance Strengthening**
Strategic alliances strengthen the framework of international cooperation, especially in crisis situations, to balance power and suppress potential conflict.

This weighted supermatrix emphasizes the importance of international diplomacy and nuclear disarmament as priority steps to maintain world peace. Geopolitical threats and unilateral actions are the main challenges that require a global cooperation-based approach.

3.2.4. Priorities

Main Network: TUGASKEL7.sdmod: Priorities

Here are the priorities.

Icon	Name	Normalized by Cluster	Limiting
No Icon	Diplomasi Internasional	0.42517	0.330709
No Icon	Modernisasi Pertahanan	0.31597	0.245772
No Icon	Penguatan Aliansi	0.25886	0.201345
No Icon	Dinamika Politik Global	0.39409	0.009745
No Icon	Tindakan Unilateral Negara	0.60591	0.014983
No Icon	Pelucutan Senjata Nuklir	0.77140	0.038077
No Icon	Pengendalian Penyebaran	0.22860	0.011284
No Icon	Aliansi	0.49547	0.024457
No Icon	Kerja Sama Antar Negara	0.50453	0.024904
No Icon	Pengaruh Lembaga Internasional	0.44348	0.021891
No Icon	Proliferasi Senjata	0.08116	0.004006
No Icon	Stabilitas Politik	0.47537	0.023465
No Icon	Diplomasi Bilateral	0.45874	0.022644
No Icon	Perjanjian Internasional	0.54126	0.026717

Figure 5. Priorities

The AHP priority results demonstrate a strategic approach to supporting world peace based on the assessed criteria and alternatives. The key outcomes identified are as follows:
Alternative Strategies
1. **International diplomacy** has the highest weight (0.42517), emphasizing the importance of cooperation between countries through multilateral dialogue to reduce global tensions. Diplomacy is considered the most effective approach for balancing complex geopolitical dynamics.
2. **Defense modernization** takes second place (0.31597), reflecting the relevance of this strategy in increasing defence readiness and strength in the face of direct threats**.**
3. **The strengthening of the** alliance with a weight of 0.25886 demonstrates the importance of strategic cooperation between countries, particularly through military alliances aimed at creating a balance of power.

Supporting Criteria

1. **The unilateral actions of states** (0.60591) are the most significant geopolitical factor, indicating that unilateral policies can directly affect global stability.
2. **Nuclear disarmament** (0.77140) was a key step in reducing the threat of weapons of mass destruction.
3. **Cooperation between Countries** (0.50453) and Political Stability (0.47537) reinforce the argument that stability in international relations is an important foundation for achieving peace.

The overall results show that a combination of diplomatic approaches, defense modernization, and strategic alliances should be prioritized in managing geopolitical challenges as well as nuclear threats.

3.3. Survey Results

The survey in this study involved 60 respondents from two agencies, Wantannas and Bapeten, with a gender distribution of 60% men and 40% women.

The survey "On the Verge of Nuclear War: Global Security Challenges and Dynamics in Maintaining World Peace" aims to identify the priorities of factors that affect efforts to maintain world peace amid nuclear threats. Respondents were asked to compare two criteria based on their level of importance to the main goal using a scale of 1 to 9.

3.3.1. Political Stability vs. Cooperation Between Countries

Most consider this equally important. However, some respondents considered cooperation between countries to be more important than internal political stability in maintaining world peace. This shows that international collaboration is crucial for preventing global conflicts.

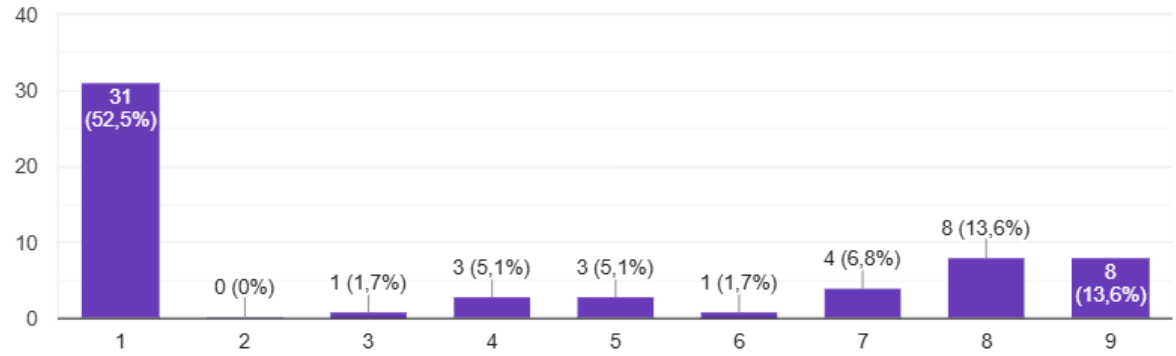

Figure 6. Survey Results no 1

3.3.2. Global Political Dynamics vs. Internal Political Stability

Respondents tended to think that global political dynamics, such as changes in international alliances, had a greater influence on the threat of nuclear war than domestic political stability. This emphasizes the importance of monitoring and adapting to global geopolitical changes.

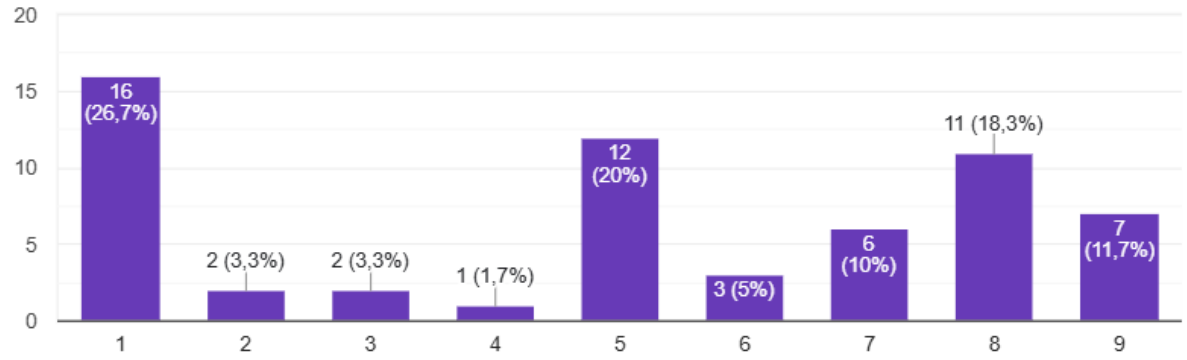

Figure 7. Survey Results no 2

3.3.3. *Nuclear Technology Deployment Control vs. Nuclear Disarmament*

Most consider this equally important. However, some argue that controlling the spread of nuclear technology is considered to have a greater impact on world peace than the disarmament of nuclear power. Respondents assessed that preventing the proliferation of nuclear technology was more effective in reducing the risk of nuclear conflict.

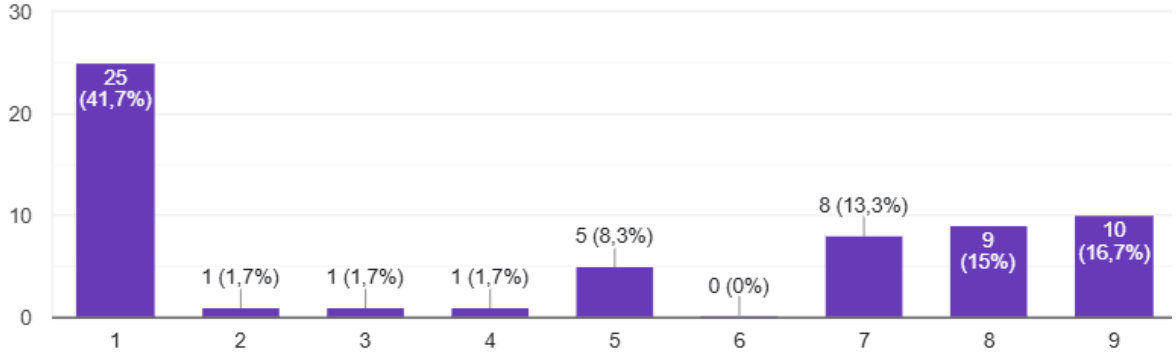

Figure 8. Survey Results no 3

3.3.4. *International Agreements vs. Unilateral Actions of States*

People view international agreements, such as the Non-Proliferation Treaty (NPT), as more crucial in preventing nuclear war than unilateral actions by a country. This shows the confidence of multilateral mechanisms in maintaining global stability.

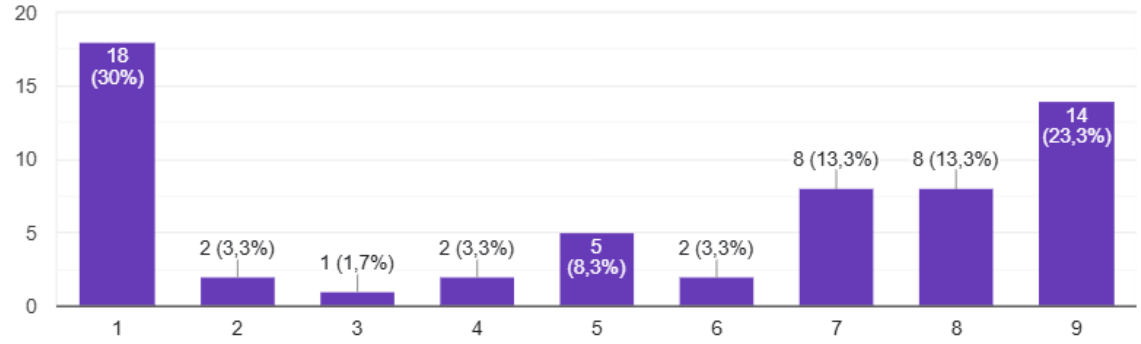

Figure 9. Survey Results no 4

3.3.5. *UN Security Council vs. Bilateral Diplomatic Initiative*

Most consider this equally important. Other respondents assessed the UN Security Council's actions as more effective in preventing nuclear war than bilateral diplomatic initiatives between major powers. This underscores the UN's important role of the United Nations in maintaining international peace and security.

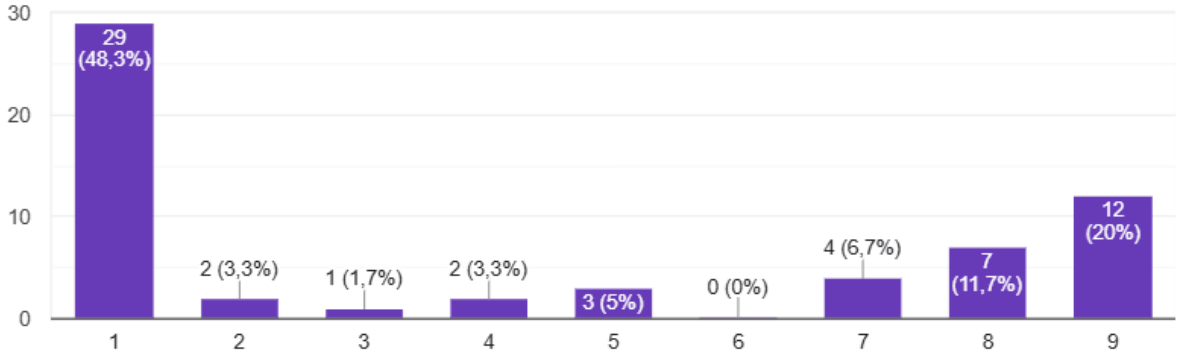

Figure 10 Survey Results no 5

3.3.6. International Institutions vs. Military Alliances

International institutions, such as the International Atomic Energy Agency (IAEA), are considered to have more influence in maintaining world peace than military alliances such as NATO. Respondents emphasized the importance of international oversight and regulation in preventing nuclear escalation.

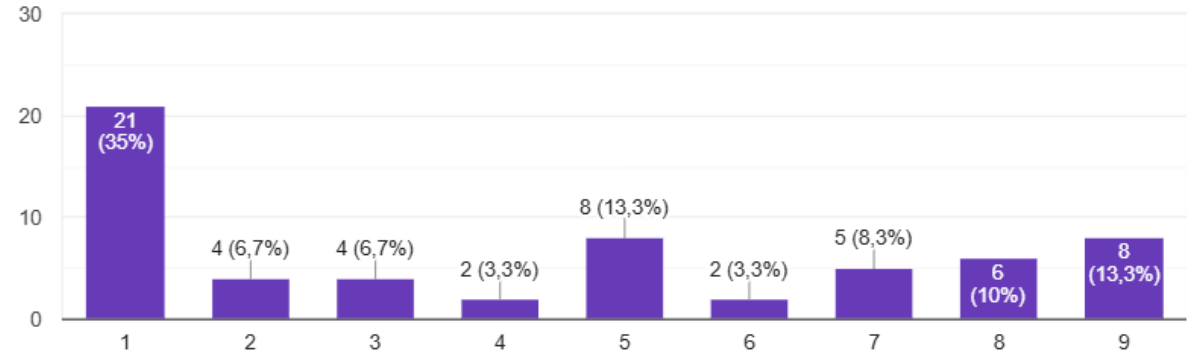

Figure 11. Survey Results no 6

3.3.7. Political Stability and Global Dynamics vs. Proliferation and Control of Nuclear Weapons

Respondents tended to view nuclear weapons proliferation and control as more crucial for maintaining world peace than political stability or global dynamics. This shows a focus on arms control as the key to preventing nuclear conflict.

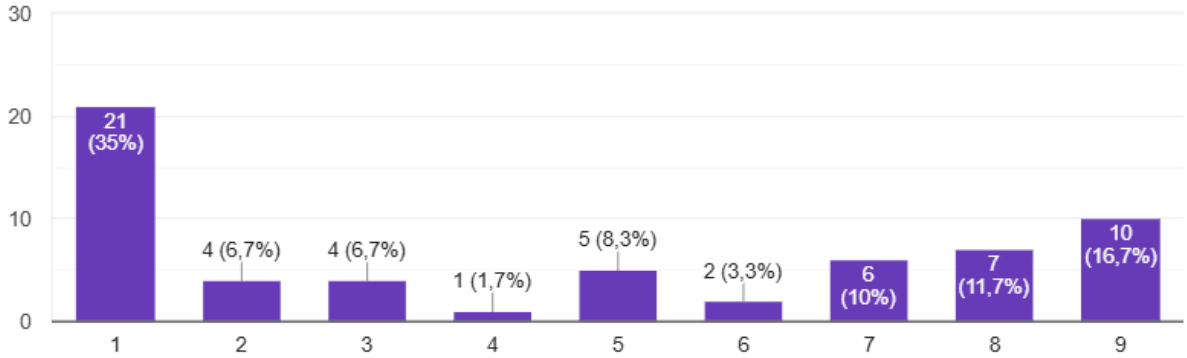

Figure 12. Survey Results no 7

3.3.8. The Role of International Institutions vs. Political Stability and Global Dynamics

Most consider this equally important. Others view the role of international institutions as more significant than political stability and global dynamics in reducing the risk of a nuclear war. Respondents assessed that international institutions play a vital role in conflict mediation and prevention.

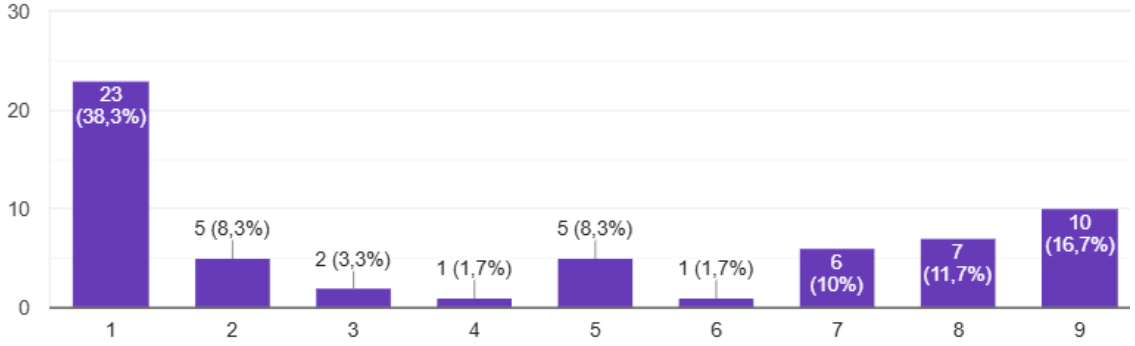

Figure 13. Survey Results no 8

3.3.9. Nuclear Weapons Proliferation and Control vs. the Role of International Institutions

Most respondents considered it equally important. However, some respondents also assessed that the role of international institutions has a greater impact on the prevention of nuclear war than the proliferation and control of nuclear weapons. This confirms confidence in the effectiveness of international institutions in maintaining peace.

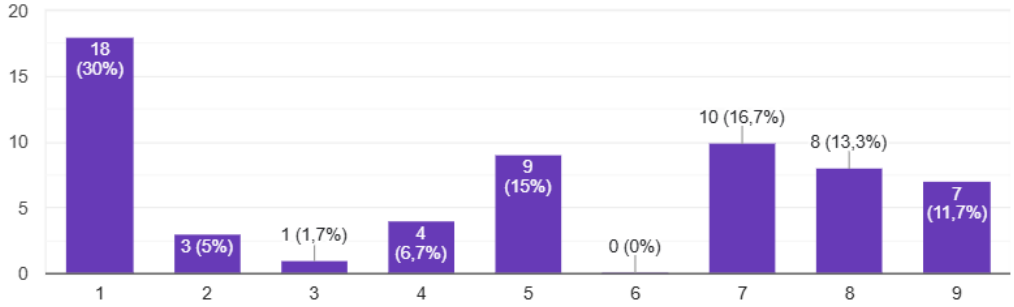

Figure 14. Survey Results no 9

The survey results showed that respondents ranked international cooperation, multilateral agreements, and the role of international institutions as the most effective measures to maintain world peace against the threat of a nuclear war. In addition, the focus on nuclear technology and arm control is a top priority. Respondents emphasized that a multilateral approach is more important than unilateral actions in reducing the risk of nuclear conflict escalation.

3.4. Mode Integration

This study employs the Analytic Hierarchy Process (AHP) approach and a Likert scale survey to assess strategies for preserving global peace amidst the threat of nuclear war. Both methods complement each other in providing insights into strategic priorities and global geopolitical dynamics. The following is an analysis of the findings of both the methods:

3.4.1. Key findings from AHP

The AHP approach identifies strategic priorities based on key criteria, such as geopolitical threats, nuclear technology capacity, diplomatic stability, and military readiness. Geopolitical threats, especially the unilateral actions of states, have the highest weight (0.725848), suggesting that unilateral policies are an important factor in triggering or easing global tensions (Cheong, 2023). Nuclear disarmament also stands out as a priority, with a dominant weight of 0.614411, which indicates the importance of global initiatives to reduce the risk of escalation of nuclear weapons conflicts (Müller & Wunderlich, 2020).

Of the alternatives analyzed, international diplomacy was the most effective strategy, with the highest weight (0.42517). This approach is considered the most relevant for addressing complex global political dynamics and creating stability (Bollfrass & Herzog, 2023). The modernization of armaments and strengthening alliances rank next, with a significant contribution to readiness to face direct threats (Johnson, 2024).

3.4.2. Key Findings from the Survey

The survey, which involved 60 respondents from agencies such as Wantannas and Bapeten, underlined the importance of international cooperation in maintaining world peace. As many as 70% of the respondents considered international cooperation to be more important than internal political stability. Controlling the spread of nuclear technology is also prioritized over nuclear disarmament, given its role in preventing proliferation and access by non-state actors (Budjeryn, 2022).

Respondents also assessed that multilateral mechanisms, such as the NPT international treaty, are more effective in maintaining global stability than the unilateral actions of certain countries (Müller & Wunderlich, 2020). In addition, international institutions such as the IAEA are considered more

significant than military alliances such as the NATO in creating a global balance of power (Cheong, 2023).

3.4.3 Things that are findings

1. **International Diplomacy as a Main Strategy**
   The second method places international diplomacy as the most important strategy for maintaining world peace.
2. **Nuclear Technology Control as a Priority**
   We prioritize controlling the spread of nuclear technology over disarmament, emphasizing the importance of preventing proliferation.
3. **Geopolitical Threats and the Role of International Institutions**
   Geopolitical threats pose a significant challenge that necessitates a collaborative approach involving international institutions.
4. **Multidimensional Approach**
   The combination of diplomacy, strengthening alliances, and defence modernization is a synergistic step in facing global security challenges.

Both methods show that international diplomacy and control of nuclear technology are top priorities for maintaining world peace. Multilateral mechanisms through international institutions and strategic alliances provide an important framework for creating a balance of power and preventing the escalation of nuclear conflicts (Bollfrass & Herzog, 2023; Cheong, 2023; Müller & Wunderlich, 2020).

4. Conclusion

This research emphasizes that nuclear threats remain a major challenge in maintaining global stability and peace. The results of the analysis show that international diplomacy is the most effective strategy for overcoming growing geopolitical complexity. This strategy is considered to ease international tensions through dialogue and multilateral cooperation. Furthermore, geopolitical threats, particularly the unilateral actions of states, significantly influence the potential escalation of conflicts. Controlling the spread of nuclear technology has also emerged as an important priority, given the risk of technological proliferation among irresponsible actors.

Surveys involving a wide range of respondents from national and international agencies support these findings. Maintaining world peace prioritizes international cooperation over domestic political stability. Respondents also assessed that controlling the spread of nuclear technology is more significant than nuclear disarmament due to greater deterrence capabilities. Multilateral mechanisms, such as international agreements and the role of international institutions, are more effective than unilateral approaches or military alliances.

To confront nuclear challenges, strengthening international diplomacy is a top priority. We need to enhance multilateral negotiations by renewing international agreements that address current challenges, including changing geopolitical dynamics. We must also strengthen nuclear technology control mechanisms by developing effective early detection and surveillance technologies. We need to enhance the role of international institutions by providing greater resources and authority to ensure better implementation of nuclear control policies.

We should expand international cooperation to include new initiatives such as nuclear weapon-free zones in conflict zones. This effort requires collective support from both large and small countries. Expanding public education on the risks and impacts of nuclear war is also necessary to raise global awareness. With better education, people can encourage their governments to adopt policies that support global peace.

We must implement a combination of international diplomacy strategies, technological control, and alliance strengthening synergistically. This multidimensional approach can strengthen a country's ability to respond to global dynamics more adaptively and proactively. We expect this collective effort to create sustainable stability and prevent the escalation of nuclear conflicts in the future.

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