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Joint Conference on Comprehensive Security in the Indo-Pacific

The *Joint Conference on Comprehensive Security in the Indo-Pacific*, took place on 14 and 17 November 2025 in Tokyo and Kyoto, as a collaboration between **Kyoto University** and **Security & Defence PLuS**, organised with the **Kajima Institute of International Peace** (KIIP). Below are a selection of abstracts and policy recommendations from the presentations.

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Closed Dialogue: Cyber Security

The Strategic Cyber Landscape and Comprehensive Security in the Indo-Pacific
Sally Burt, Senior Lecturer in Cyber Strategy and Diplomacy, UNSW Canberra

There are a series of threats in the cyber landscape that are interconnected and feed into the comprehensive security framework in ways that might not be immediately obvious. Firstly, there is a contestation between the great powers in the information environment that is challenging societal cohesion and regional cohesion. There are non-cyber elements to the information environment, but there is a need to work to compete more effectively in cyberspace as well.

Global challenges and existential threats require cohesion and cooperation to address them. Threats to that cohesion and collaboration must be confronted and contested. The stalemate in cyber governance regime development also presents a challenge to creating a cyber environment that provides security and stability for the international community. Establishing rules and regulations about how to best utilise cyberspace would create greater stability and security in the international system. Building resilience from the impacts of natural disasters and cyber threats (resulting from accidents and well as deliberate behaviour) is another focus for policymakers.

Cyber security capabilities are key to understanding and building protections from the threats to security faced by states all around the globe. There are clear roles for states and groupings such as AUKUS and the QUAD to play in helping build cyber capabilities to address threats across the cyber landscape to strengthen the comprehensive security of the Indo-Pacific. This presentation will outline some of the suggestions for how these groups can work more effectively to build security through and in the cyber landscape and provide recommendations for ways forward.

Cyber Security as Human Security: Co-Creating Resilience in a Digital Age
Professor Debi Ashenden, Director of UNSW Institute for Cyber Security

Cyber security is frequently characterised as the protection of technological systems and infrastructure. Yet it is equally about human security: ensuring both freedom from harm and the freedom to live a full life in an increasingly digital age. As digital technologies underpin essential services such as health, energy, communications and disaster response, their protection becomes inseparable from the protection of people. In this talk I will explore the idea of cyber security as a foundation for human security and discuss the implications of this perspective for national resilience and wellbeing.

Drawing on research conducted in Australia and the United Kingdom, I will illustrate how co-creation with communities, practitioners and policy partners can produce more legitimate and sustainable security outcomes than technological measures alone. Fieldwork with disadvantaged communities in the United Kingdom demonstrates that citizen participation in designing secure digital services fosters inclusion, trust and a renewed sense of agency. Initial complementary research on cyber security as statecraft in the Indo-Pacific highlights how capacity-building and cyber diplomacy could be more effective when they address local human security priorities such as climate resilience, connectivity and equitable access to technology. Together, these findings suggest that cyber security policy is likely to achieve greater effectiveness when framed not solely as defence but as the shared creation of conditions that enable societies to thrive securely.

Countries such as Japan, the UK, the US and Australia already foreground critical-infrastructure protection, workforce development and international cooperation. Framing these priorities through the lens of human security would further strengthen their coherence and social legitimacy. By explicitly recognising that secure digital systems underpin public wellbeing, such a framing connects national capability with everyday resilience and trust.

Policy recommendation: Integrate human-security principles into cyber-policy design. This involves treating cyber security interventions as enablers of societal resilience rather than purely as technical controls, and embedding co-creation with citizens, industry and regional partners into policy processes. Doing so would enhance public confidence in digital transformation, support inclusive innovation, and strengthen trust-based approaches to regional stability.

Implement and Operationalise Cybersecurity Measures in accordance with the Three Strategy Documents and Integrate New Intelligence Initiatives under the Takaichi Cabinet
Nobushige Takamizawa, Former Director of National Center for Cybersecurity

1. Common Elements Typically Seen in Cyber Powers

The presence of influential intelligence organisations and robust public support are indicative of significant cybersecurity capabilities in cyber security powers such as the United States, the United Kingdom, and Australia. The formation of a cyber intelligence community requires robust cooperation, including flexible division of labour and integration of individuals from government, military, industry, academic, and private sectors. Their robust operations depend on institutional infrastructure, including extensive intelligence protection and security clearance systems. Investments in cybersecurity and

information technology have been identified as strategic priorities, as has close cooperation with information and communication technology companies, including major technology corporations. Extensive and enduring experience in cybersecurity and cyber operations, an integrated R&D system, and a trusted "battlefield" are fundamental to the system's effectiveness.

2. Japan's determination to play MLB under improved but different rules/systems under the new Cybersecurity Law

The gradual expansion of intelligence organisations, in conjunction with the enhancement of information, cyber, and intelligence literacy, is of paramount importance. However, Japan's security strategies have had a limited emphasis on the enhancement of information organisations and capabilities, as well as on the response to cognitive warfare, information warfare, and mal/disinformation. The collaboration among the government, military, industry, and academia is gradually and partially expanding in the country. However, challenges persist regarding institutional and integrated cooperation, collaboration, and a positive societal mindset.

Advancements in the domain of information protection and security have been observed, with a particular emphasis on economic security. However, the scope of these developments is limited, and the absence of anti-espionage laws and resources to implement regulations is a notable impediment. The main goals of the initiative are to introduce, upgrade, and implement the Cyber Response Capability Enhancement Act and other relevant legislation, including NPA/SDF laws. The initiative will also establish an NCO and enhance information sharing. However, it is not clear how to put the system into action and adapt to new challenges, incidents, and claims, including the Communications Supervision Committee. The expansion of exercise opportunities and the enhancement of awareness regarding cybersecurity at all levels of society are imperative. The present situation falls short of the level of disaster relief and SDGs in terms of education, literacy, awareness, exercise, social attitude, funding, and people's support.

3. Intelligence/Cyber Security-related Initiatives in the new Cabinet

Implementing Prime Minister Takaichi's directives for cabinet ministers is a crucial step toward achieving new heights. It is crucial to ensure the revision of the three security strategy documents and the enforcement of the new cybersecurity law. The challenges include the following: 1) R&D and human resources development for information operations; 2) protection of data and establishment of a related think tank; 3) review of the Economic Security Promotion Act from the perspective of critical infrastructure services; 4) protection of sensitive information from foreign activities; 5) promotion of all stakeholder collaboration for economic intelligence functions; and 6) promotion of an AI policy/planning package in a comprehensive manner.

Closed Dialogue: Stable Supply and Safe Sea Lanes for Energy, Rare Metals & Food

Extended Critical Infrastructure in the Indo-Pacific

Manolis Priniotakis, Professor of Practice, Arizona State University

Maritime systems in the Indo-Pacific are essential to global commerce, energy flows, and supply chain resilience and must be conceptualised as a shared cross-border system, framed as Extended Critical Infrastructure (ECI). This approach encompasses the tangible assets, bottlenecks, and other elements of the region as a system in which a disruption, even far from national borders, can have immediate and cascading effects. Traditional conceptions of critical infrastructure tend to focus on physical, land-based assets, but the lifeblood of modern economies flows through maritime avenues and elements: ports and terminals, undersea cables, energy platforms, logistics hubs, and critical corridors that connect across sovereign, disputed, and international waters.

Recent events have illustrated the fragility of maritime networks. Pandemic-era port shutdowns immobilised global shipping; blockades in conflict zones destabilised food and commodity markets; and the collapse of key transportation elements demonstrated how a single point of failure can ripple across regions. These vulnerabilities are amplified by artificial intelligence, unmanned systems, cyberattacks, and natural hazards. At the same time, the private sector often possesses better real-time situational awareness than governments, while public-sector agencies struggle to coordinate and share information effectively.

The Indo-Pacific's strategic chokepoints sit at the intersection of multidomain and transnational risks. Maintaining the integrity of these systems requires a security approach that integrates defence actors, commercial operators, insurers, regulators, and technology partners. Treating the sea as infrastructure reframes maritime security as a whole-of-region, whole-of-economy effort grounded in resilience, continuity, and collective stewardship rather than military capability.

Concepts such as Japan's Comprehensive Security approach, major-power partnerships, and existing supply chain coordination mechanisms provide a basis for expanded cooperation. No single system today, however, fuses government and private-sector insights into a shared operational picture or integrated model for simulation, early warning, and predictive analytics. Such a capacity would require new public-private partnerships, academic involvement, and governance arrangements.

Recommendations:

- Bring the private sector into multinational resilience exercises to understand and train for multi-domain disruptions.
- Develop an Indo-Pacific Extended Critical Infrastructure Framework that integrates maritime domain awareness, supply chain visibility, private-sector data streams, and government information to enable a shared regional picture. A multilateral academic ECI Lab could serve as a neutral platform to enable this collaboration.
- Support the establishment of Chief Intelligence or Geopolitical Risk Officer roles in major ports and shipping companies to provide integrated analysis across domains.

Critical Undersea Infrastructure: The Unseen but Vital Dimension of Sea-lanes Security
Alessio Patalano, Professor of War & Strategy in East Asia, King's College London

Building on the legacy of Professor Kousaka Masataka, this intervention argues that the 21st century is a fundamentally maritime century. The use of the oceans as a highway for the affordable transport of goods and raw materials defines the maritime character of any century. This talk, however, suggests that the growing dependence of modern societies on critical undersea infrastructure, or CUI, is exponentially increasing the maritime foundations of modern digitalised economies and societies. This, in turn, is changing the notion of maritime connectivity from one based on physical connectivity - through shipping lanes - to one including digital connectivity - through undersea data cables.

This talk interrogates how the security of CUI is emerging as a critical issue for maritime security cooperation. It suggests that whilst Professor Kousaka's emphasis on the need to think about security in a broader sense to include economic security remains valid, CUI security presents significantly different challenges. The talk argues that this is the result of two crucial factors: first, undersea cables represent a significant pressure point that adversarial regimes can actively and more accessibly seek to exploit through a variety of coercive activities. Second, the talk highlights how, unlike sea-lanes defence (a wartime defence endeavour to protect shipping), CUI security is a peacetime effort that requires considerable coordination across public and private stakeholders and national and cross-national coordination.

The talk draws upon the case of the Eagles S incident in the Baltic to propose a roadmap for the development of coordinated approaches across trusted partners. Such approaches concern three steps and require one key precondition. The latter pertains to the trusted character of the partners involved in the effort, provided the sensitive nature of data and positioning of CUI. The former concerns the distinction between resilience and defence of CUI, the identification of key stakeholders in the public and private

sectors to engage each aspect, and the development of national and transnational agreements to facilitate the monitoring and the protection of these undersea networks.

Defence as the Core of "Comprehensive Security" in the Indo-Pacific
Hirohito Ogi, Senior Research Fellow, Institute of Geoeconomics, International House of Japan, Tokyo

Around 1980, the concept of "comprehensive security" was advanced in Japan to highlight the importance of non-military aspects of national security in addition to military capabilities. Particularly, as a maritime nation relying on foreign sources of its energy and critical materials, maritime security and the protection of sea lanes were always named at the top of the priorities for comprehensive security. This concept was inherited by the current "economic security," which highlights economic aspects of national security and statecraft to bolster government measures to assist corporate efforts to enhance Japan's strategic autonomy and indispensability.

However, while various government measures, including the Economic Security Enhancement Act (ESPA), have been introduced to strengthen supply chain resiliency for key materials and products, they sometimes lack relevance to enhancing Japan's wartime resiliency due to the peacetime mindset and the absence of defence and strategic focus. For example, while natural gas was designated as one of the critical materials under the ESPA to enhance its stable supply, the only measure proposed has been the "strategic buffer LNG (SBL)" in peacetime, and there is no measure to bolster wartime resiliency under this framework.

To fill this gap, this presentation tries to propose concrete measures to enhance the security of sea lanes by focusing on China's maritime strategy and Japan's vulnerabilities. First, in a possible Taiwan contingency, China may pursue a de facto maritime blockade surrounding Taiwan if it recognises the difficulty in large-scale conventional landing operations. In such a grey zone scenario, Taiwan's economic resiliency, especially the stable supply of LNG, would be key to resisting China's attrition strategy. Second, not only Taiwan but also Japan will be affected by the disruption of sea lanes during a Taiwan contingency. On this point, sea lanes in the Pacific will be more critical for Japan than those from the Middle East since it relies on 60% of its power sources on Southeast Asia and Australia. Third, China's maritime strategy, combining sea denial and sea control, poses a difficult challenge for Japan's maritime defence posture, especially on the optimum balance between forward denial and the protection of sea lanes in the rear.

To address these challenges, I make three sets of policy recommendations. First, Japan should consider the security of the supply of natural gas and its alternatives during wartime more extensively. Second, it should utilise the new initiative of Official Security Assistance (OSA) to boost security cooperation with partners in the Pacific on the Pacific sea lanes. Third, given the expansive nature of Chinese maritime strategy, the early interdiction of Chinese fleets would be critical. In this context, the maritime Self-Defense Force (MSDF) should prioritise maritime strike capabilities more than the conventional anti-submarine warfare capabilities inherited from the Cold War era.

Cooperation on the Security of Energy, Rare Metals, and Food
Kunihiko Shinoda, National Graduate Institute for Policy Studies (GRIPS)

Japan is strengthening cooperation to secure stable supplies of energy, critical minerals, and food amid intensifying geopolitical tensions and increasingly interconnected global crises. These compound crises—which span geopolitical conflicts, climate change, pandemics, and natural disasters—are hitting emerging economies the hardest and destabilising global supply chains. Recent disruptions, such as U.S.–China technological rivalry, Russia's invasion of Ukraine, conflict in the Middle East, and attempts to change the status quo in the East and South China Seas, highlight the urgent need for resilient and diversified economic systems.

Japanese companies are increasingly cautious about geopolitical and economic security risks in China. While investment interest in China has declined, interest in ASEAN and India has grown, along with a stronger emphasis on decentralised production and procurement. At the policy level, Japan has designated 14 critical products—including storage batteries, critical minerals, semiconductors, and advanced electronic components—and is investing in domestic production, inventory, and infrastructure to strengthen supply chain resilience.

Securing sea lane safety is essential for guaranteeing flows of vital goods. In response to rising regional tensions, Japan is advancing its Free and Open Indo-Pacific (FOIP) initiative and is promoting the rule of law at sea, enhancing maritime law-enforcement capabilities in partner countries, and contributing to international organisations. Examples include providing patrol vessels and training on maritime law to Southeast and South Asian countries. GRIPS also plays a role by training coast guard officials who return to leadership roles in their home countries.

Japan is deepening economic security cooperation through regional mechanisms such as the Indo-Pacific Economic Framework (IPEF), launched in 2022 with 14 participating countries. IPEF addresses trade,

supply chains, clean economy, and fair economy, and its Supply Chain Agreement—the first of its kind in the region—builds on the SCRI among Japan, India, Australia, and the Quad. Japan views it as a groundbreaking mechanism to enhance collective resilience against economic coercion.

Ensuring stable access to critical minerals is another urgent challenge. Critical minerals like rare earths and lithium are indispensable for green and digital transformation, yet production and refining remain highly concentrated in China and parts of the Global South. Through JOGMEC, Japan supports exploration, mine development, refining, and technological innovation. International cooperation through frameworks such as the IEA, MSP, G7, IPEF, and the Quad aims to create diversified, global battery supply chains that include Southeast Asia, Africa, and the Americas.

Japan's food and energy security vulnerabilities are acute: food self-sufficiency is only 38%, and energy self-sufficiency is just 13%, the lowest in the G7. Geopolitical shocks—such as Russia's invasion of Ukraine, tensions in the Middle East, and disruptions in key maritime routes like the Red Sea and Panama Canal—have heightened risks of supply shortages and price spikes. Japan is diversifying procurement of oil and natural gas beyond the Middle East, sourcing from the U.S., Canada, Australia, Southeast Asia, and Africa. It is also promoting green transformation in Asia, including through the Asian Zero Emissions Community (AZEC), which supports renewable energy, LNG, hydrogen, ammonia, and decarbonisation technologies.

Food security is threatened globally by rising demand, climate change, and export restrictions. Japan supports the Indo-Pacific region through initiatives such as emergency food aid, information-sharing systems, and agricultural training. In ASEAN, Japan works through mechanisms like APTERR and AFSIS, and implements the Japan–ASEAN Midori Cooperation Plan to build sustainable and resilient food systems.

Building Allied Food Security Architecture in the Indo-Pacific
Alicia Ellis, Director, Director of the MA in Global Security, Arizona State University

Agriculture is often overlooked in supply chain security debates, yet it is no less strategic than energy or rare earths. This presentation introduces an Agriculture Security (AgSec) framework for understanding food systems as frontline infrastructure in an era of hybrid competition, where adversaries exploit economic pressure points below the threshold of conflict.

Drawing on recent U.S.-based research, the presentation maps vulnerabilities across the farm-to-fork supply chain. Input dependencies, particularly on adversary-controlled fertiliser, seed, and agtech supply chains, represent critical chokepoints. China, Russia, and Belarus together account for roughly one-third of global nitrogen exports and nearly half of phosphates, placing U.S. producers at risk of economic coercion through critical supply chains. Opaque ownership structures and strategic investments by state-linked actors in agribusiness assets, combined with heavy reliance on Chinese-manufactured agricultural drones and precision equipment, compound this exposure. Cyberattacks on processing facilities and transport networks reveal further points of leverage. These interconnected vulnerabilities, if exploited, could reverberate across domestic stability, global food markets, and allied cohesion.

While rooted in analysis of U.S. supply chains, these insights extend across the Indo-Pacific, where food import dependence, fertiliser flows, and maritime chokepoints similarly expose partners and allies to coercion. Japan's agriculture sector remains heavily import dependent, with over sixty percent of caloric consumption and most fertiliser inputs sourced abroad, leaving limited redundancy in domestic production. Australia's food system depends on imported fertilisers, agrochemicals, and farm machinery, creating systemic risks when global supply chains tighten or ports are disrupted. In the United Kingdom, lean "just-in-time" food logistics networks and declining domestic production capacity have exposed vulnerabilities to fertiliser price shocks, energy shortages, and shipping delays. These cases mirror the pressures evident in the United States, revealing a pattern of over-optimised supply chains and inadequate buffers against disruption.

By analysing agriculture through the lens of strategic pressure points, this presentation underscores the need to treat food not as a peripheral concern but as contested terrain. It recommends that the United States, Japan, Australia, and the United Kingdom each adopt policies to diversify inputs, expand domestic and regional stockpiles, and integrate agriculture into broader supply chain resilience frameworks and joint scenario-planning exercises.

The AgSec framework unites these efforts conceptually, framing agriculture as both an enabler of national resilience and a potential vector of coercion. By providing a means to anticipate, mitigate, and deter non-military coercion through food and input systems, it positions agriculture as contested terrain within hybrid competition and as a critical domain for coordinated national and allied security planning.

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Japan-Australia Hydrogen Energy Cooperation for Prosperity and Enhanced Economic Security in the Indo-Pacific Region

Takeshi Sakade, Professor in Economic History, Kyoto University

This report focuses on hydrogen, which is becoming more popular as a primary energy source. It can help make our society free of carbon emissions and make our energy more secure. It talks about how important this partnership is for Japan and Australia, the challenges they might face, some specific ideas for how to move forward, and how this will help the whole region.

1. Why Hydrogen Energy is Important and Why It isn't Being Used More

Hydrogen energy is important because it does not emit CO2 when used. This means that it helps reduce the amount of CO2 in the air. It also functions as an "energy carrier." This means that it can store and transport extra electricity from solar and wind power. Hydrogen energy can be produced from different resources, such as water, fossil fuels, and biomass. This leads to better energy independence and more options for getting energy (energy security). There are three main problems that make it difficult to create a society that uses hydrogen. First, there is the issue of high costs. For example, it costs a lot of money to produce the cleanest "green hydrogen" (produced from renewable energy). It also costs a lot of money to build and operate infrastructure, such as hydrogen stations. Second, there are unresolved physical and technical challenges related to mass production technology and the efficient storage and transportation of hydrogen due to its lightness (requiring cryogenic liquid hydrogen or ultra-high pressure compressed hydrogen). This creates a cycle where it is difficult to know what came first, the chicken or the egg. This cycle hinders infrastructure development and demand creation. Third, hydrogen is a flammable gas, which raises general concerns about how it is handled. However, it is also extremely light and spreads quickly, meaning leaks are unlikely to linger. We need to set strict technical standards and regulations. We also need to do a better job of informing the public.

Hydrogen is very important for Japan. Japan depends a lot on fossil fuels and does not produce enough of its own energy. Hydrogen can help Japan do more with its energy sources, make more of its own energy, and be less dependent on other countries for energy. It also makes industrial competitiveness stronger by encouraging the growth of advanced hydrogen-related technologies and related industries, as well as by improving international competition.

2. Hydrogen Energy Policies of Major Countries

Many countries around the world have ambitious hydrogen policies. These policies aim to reduce carbon emissions and strengthen energy security. The European Union (EU) has increased its goals in its

REPowerEU plan. The EU wants to stop relying on Russian fossil fuels. It aims to do this by introducing large amounts of green hydrogen and building a global supply chain. The goal is to get 20 million tons each year by 2030. 10 million of those tons will be made in the region, and 10 million will be imported from outside the region. The European Hydrogen Bank will provide money to make this happen. The plan is to use this in certain industries as part of the Fit for 55 program. The United States is neutral when it comes to technology and has provided significant financial support (through the Inflation Reduction Act, or IRA) to achieve this goal. The "Hydrogen Shot" initiative aims to reduce manufacturing costs to $1 per kilogram within 10 years. It is also investing in building clean hydrogen hubs in the region, launching its domestic market quickly, and trying to make clean hydrogen much cheaper. China is working hard to support the growth of the entire industrial chain and the switch to clean hydrogen through government programs. China produces more hydrogen than any other country, but most of the hydrogen they make comes from coal. It is promoting large-scale green hydrogen production in the western region, which has a lot of renewable energy. It is used mostly in commercial vehicles like city buses and trucks, as well as in industrial fields like hydrogen metallurgy. The goal is to produce 100,000 to 200,000 tons of green hydrogen and have 50,000 fuel cell vehicles (FCVs) in use by 2025.

3. Plan for Building an International Hydrogen Supply Chain Centred on Japan and Australia
Japan imports hydrogen. It wants to lead the creation of an international supply chain with Australia and other countries. It is focusing on the spread of FCVs and household fuel cells (Ene-Farm) and power generation applications. The goal is to expand hydrogen use to 20 million tons per year by 2050. Australia is a country with a lot of natural resources. It wants to be one of the top exporters of clean hydrogen in the world. To do this, it will use its large amount of renewable energy. It is promoting the large-scale production and export of green hydrogen and blue hydrogen (fossil fuels + CCS (Carbon dioxide Capture and Storage)). Australia wants to be a long-term energy supplier to Japan. It is working on international projects to show how it can do this. It is also promoting the hydrogen industry as a future export. This could replace LNG and iron ore.

This partnership between Japan (a country that creates demand and introduces technology) and Australia (a country with potential for supplying hydrogen) is the most important strategy for creating a "clean hydrogen economy" that will lead the Asia-Pacific region. A basic strategy to reduce the cost of green hydrogen is to quickly build large-scale green hydrogen production plants in Australia. These plants would use the country's abundant renewable energy. Another strategy is to reduce the costs of transportation and storage technologies. Some examples of these technologies are liquefaction, compression, and carrier conversion. To keep the supply steady and the cost low, the first step should be to start selling blue hydrogen made from Australian brown coal, natural gas, and CCS. Later, we should

speed up the switch to green hydrogen. In the Indo-Pacific region, it is necessary to develop the certification system, safety standards, and transportation technologies established between Japan and Australia as the "Japan-Australia + X" model into international standards for the Asian region. It is also necessary to build a hub function with a view to supplying and cooperating with other countries (such as South Korea and Singapore).

The first step is to create a "low-carbon hydrogen price difference support system." This system would be a joint effort between the Japanese and Australian governments. It would support and compensate for the portion of the price of clean hydrogen that exceeds the price of hydrogen that comes from fossil fuels. It would also guarantee long-term purchase contracts. Second, based on the demonstration of the supply chain for liquefied hydrogen, speed up the increase in the use of liquefied hydrogen carriers to make them a common technology for long-distance, large-volume transport. At the same time, work to make hydrogen carrier technologies like ammonia and MCH available around the world and follow the rules of the international market. Third, it is important for Japan to slowly require that power companies and the steel and chemical industries use clean hydrogen (or ammonia) to make sure there is a steady demand over time.

Japan and Australia working together can help with two parts of the Asia-Pacific region: The goals are "prosperity through clean energy" and "establishing resilient energy security." Australia can start making hydrogen and selling it to other countries. Japan can give Asia advanced hydrogen-related technologies, like fuel cells and liquefaction technology. Japan and Australia have a low-cost, stable supply chain that can offer other countries a practical way to reduce carbon emissions and meet energy needs. Projects between Japan and Australia can show other countries how to work together on technical and economic issues. These projects can also encourage other countries to invest in hydrogen and help create and use international standards for hydrogen quality, safety, and certification.

This Japan-Australia hydrogen energy cooperation is important for economic security. First, Australia has a lot of renewable energy resources. This makes it a reliable energy supplier. It can help reduce our reliance on fossil fuels from the Middle East. Second, using different ways to move things (like liquefied hydrogen, ammonia, MCH, etc.) can spread the risk of problems with any one way to move things. Third, countries involved in the hydrogen supply chain share common economic interests, which makes them more dependent on each other and contributes to regional stability. Transparent, rules-based cooperation can become an economic foundation for achieving an "Open and Free Indo-Pacific."

Public Seminar: Cooperation for Comprehensive Security in the Indo-Pacific Region

Comprehensive Security – Past, Present, Future

Hiroshi Nakanishi, Professor in International Politics, Kyoto University

1. Comprehensive Security - Past

The idea of "comprehensive security" comes from Japan. In the late 1970s, this term was used in Japanese policy discussions and was formalised in the "Comprehensive Security Strategy" report, which was requested by Prime Minister Masayoshi Ohira. At the time, the term was used to describe the idea that security was about more than just the military. It included things like international relations concerning resources and responses to major earthquakes. It expressed security policy befitting an economic powerhouse.

This complete security plan was closely connected to the construction of a regional framework for the Asia-Pacific focused on economic relations. Japan and Australia have always been good partners. This partnership led to the creation of APEC in 1989. A key focus of this policy was to integrate China and the communist countries of Southeast Asia into the regional economy, aligning with these nations' market-oriented policies.

In 2016, Prime Minister Abe proposed a new plan called the "Free and Open Indo-Pacific." This was an update to the previous policy. But it was also, more importantly, the result of an unsuccessful attempt to create a cooperative regional framework using economic prosperity as a common language.

2. Comprehensive Security - Present

The term "comprehensive security" refers to a wide range of new security measures that go beyond traditional ones. It includes military strength, the ability to produce things, technology, financial strength, and information warfare capabilities. All of these are part of a country's power. It is changing to a system that prepares for a quasi-war state.

Australia and the UK are Japan's closest cooperative partners after its ally, the United States. The Japan-US-Australia-UK relationship aims for a security cooperation framework that includes all partners. This includes important documents like the Japan-Australia and Japan-UK security joint declarations, the Security Facilitation Agreement (RAA), the second part of AUKUS, the destroyer construction plan with Australia, and the Japan-UK-Italy fighter development program. It could also include getting resources,

working together on intelligence with the Five Eyes, economic agreements like the CPTPP and Japan-US agreements, working together with QUAD and ASEAN, and NATO-IP4.

3. The Future of Comprehensive Security - Future
If humanity manages to stay sane and avoid losing civilisation in a Third World War, by the mid-21st century, the world may look very different. One of the main challenges will be creating comprehensive security to control global governance. First, there's our relationship with nature, like infectious diseases, large-scale natural disasters, and harmful organisms. Second, there's our relationship with technology, like AI, artificial organs, and communication media. And third, there's demographic phenomena, like population decline in developed nations and migration pressure from developing countries. We should not only deal with the challenges we have now, but also work together to find ways to deal with problems that may arise in the future.

Comprehensive Security Cooperation in the Indo-Pacific
Hideshi Tokuchi, Former Vice-Minister of Defense for International Affairs

As today's world is an international community of sovereign states as well as a global community without national borders, it is full of traditional and non-traditional challenges. As for traditional challenges, we will have to address parallel multiple contingencies as the three authoritarian countries with nuclear weapons in Northeast Asia have been deepening their partnerships. Non-traditional challenges such as climate change, large-scale natural disasters and pandemics will be threat multipliers.

In today's world, dividing lines between war and peace and between military and non-military are being blurred due to rapid development of technologies. As anything can be weaponised and military means are more effective when combined with non-military means, the world is in an age of long and total warfare. The conflict may not end with a war of cognition. It is hard to avoid traditional war of attrition. Blitzkriegs will not bring war to a quick conclusion. Even the possibility of the use of nuclear weapons is not excluded.

Therefore, huge efforts are necessary for national security. Both deterrence and defence are necessary. A whole-of-government approach for building comprehensive national power is necessary. As no one country can ensure international security all by itself, partnership of like-minded countries is indispensable. A whole-of-partnership approach is necessary.

"Security" is a convenient expression to add importance to anything. In the end, anything could become a matter of security, and its urgency and importance would be diluted, but no one could deny the importance of such comprehensive approach to security.

That is why Japan's national security policy has been based on the following three pillars: first, Japan's own comprehensive national power; second, the alliance with the U.S.; and third, security partnership with like-minded countries. The main objective of the 2022 National Security Strategy is to make these three pillars more robust and intertwined with each other.

Japan's new administration decided to revise the National Security Strategy in light of the acute security environment surrounding Japan. The new leader is committed to each of the three pillars, and to the vision of a free and open Indo-Pacific (FOIP). The FOIP will continue to be the core principle of Japan's international security partnerships. It should not be just a political slogan. It should be elevated to a clearly defined strategic concept.

The U.S., which functioned as the leader of an international volunteer fire brigade for a long time, is ailing and setting fire worldwide, but the world still needs the U.S. It is too early to abandon the U.S. Like-minded countries other than the U.S. must get united to take care of the world during the U.S. absence. As a dependable ally of the country, Japan should take the lead in such efforts, sharing a refined FOIP vision with its partners.