

## **RE: Response to Discussion Paper on Alternative Commonwealth Capabilities for Crisis Response**

I am writing on behalf of the Australian UAV Service (AUAVS), a wholly owned subsidiary of Surf Life Saving NSW (SLSNSW), in response to the Australian Government discussion paper on Alternative Commonwealth Capabilities for Crisis Response. I would firstly like to commend the Commonwealth Government for seeking input from various stakeholders to enhance Australia's response and recovery measures in times of crisis. There can be no more important initiative than saving lives and keeping our communities safe. As a leading provider of uncrewed aerial vehicle (UAV) services and already heavily involved in public safety and emergency response operations both locally and at a national level, I believe our perspective can contribute significantly to this vitally important discussion. The current capability and development potential of UAVs for utilisation in emergency response is truly remarkable and, by building on an existing depth of expertise to utilise these assets to their full potential, the Commonwealth Government stands to minimise the duplication of spend by embracing a multi-purposeful and innovative capability for effective crisis response.

As a brief background to highlight the use cases of UAV's that we have already put into play, the AUAVS is proud to be the provider of the largest coastal UAV surveillance program in the Southern Hemisphere. Since our inception in 2016 we have developed a policy and procedure driven framework, public safety and emergency response expertise and a highly trained workforce to unlock the potential of UAVs across a range of applications. We are still discovering new and improved ways to utilise this modern capability due to its incredible cross functionality.

The AUAVS team comprises over 250 qualified UAV Pilots and a fleet of over 200 UAVs, ready to support emergency response agencies, Surf Life Saving (SLS) professional lifeguard services and government initiatives. We have partnered with NSW Department of Primary Industries (DPI) since 2017 on shark identification and mitigation operations off the coast of NSW and are integrated into the SLS Emergency Response System, able to be rapidly deployed to statewide incidents as exemplified in the recent NSW floods. Of course, being part of SLSNSW, our capability uniquely leverages the collective capacity of an extensive volunteer network and existing infrastructure around the country, one that is already heavily embedded as a critical component of the national emergency management system.

UAV technology can be embraced in just about any industry to unlock alternative and improved ways of achieving success. Some of our extensive experience in operating UAVs, with primarily a public safety and emergency response focus, exemplify that. Specifically:

1. **Search and Rescue (SAR):** Our UAV teams have actively participated in SAR missions with NSW Police, providing aerial support in locating and assisting individuals in distress at sea and on land.
2. **Incident Response and Support:** AUAVS has a proven track record of rapidly deploying UAV teams to assist in emergency situations, providing critical situational awareness to first responders and incident commanders.
3. **Wildlife Surveillance:** Our UAVs have been utilised for wildlife monitoring, aiding conservation efforts and enhancing our understanding of local ecosystems.

4. **Location Safety and Risk Mitigation:** We have contributed to location specific safety management by providing real-time aerial monitoring and data collection during large gatherings and events.
5. **Landscape Assessment and Mapping:** AUAVS has played a key role in landscape assessment and mapping, supporting environmental studies and landscape management.
6. **Aerial Data Collection and Analysis:** We specialise in aerial data collection and analysis, providing valuable insights for disaster management, environmental protection and infrastructure assessment.

With high cross functionality and some of these relevant use cases in mind, emphasis should be placed on the potential of UAVs to support across the entire cycle of crisis response management; from supporting to pre-emptively mitigate the risk and impact of a crisis, during an actual emergency event and in post crisis recovery efforts.

One noteworthy example of our recent crisis response contributions showcasing the capability of UAVs was during the NSW Floods, where AUAVS collaborated with the NSW State Emergency Service (NSWSES) across five separate flood events. We conducted a range of critical activities including intelligence gathering, photogrammetry capture (3D mapping of an environment), live streaming, Search and Rescue (SAR) and rapid damage assessment (RDA) missions. Our involvement underscored the versatility and effectiveness of UAVs in disaster response scenarios by providing otherwise unobtainable intel, minimising risk to worker safety and enabling an efficient and highly scalable support to the team on the ground.

With appropriate investment, future UAV advancements will exponentially increase the capability afforded by the technology and organisational expertise. We are currently developing a Long Range UAV Network in partnership with DPI for exactly this purpose and have recently completed an industry first trial to inform future decision making and better understand potential applications. This project will position the AUAVS for deployment of a comprehensive and multi purposeful long range capability network which will substantially increase the area covered by aerial operations and provide a crucial piece of connective infrastructure for the Australian emergency response industry. It will enable multi-purpose drone functionality, enhance mobilisation times, minimise risk to worker safety, enable an efficient and standardised level of operations and minimise duplication of government investments in the long term. Whilst the AUAVS has laid the groundwork in this project, by gauging industry standards and investing in a comprehensive foundational framework, an effective and integrated fleet rollout will require further funding to safely integrate these platforms into the airspace and drive continual growth.

The below outlines a response to some of the guided questions posed in the discussion paper from the perspective of the AUAVS:

1. **Opportunities for Commonwealth capability development:** Commonwealth involvement in emergency response should revolve around supporting and facilitating state and territory-led crisis responses. The Commonwealth should maintain a standardised and supported UAV infrastructure and enabling regulatory framework at a national level to ensure that these assets are readily available when requested by states and territories. This includes establishing UAV deployment hubs and interstate logistical pathways for rapid deployment.

By doing so, the Commonwealth can empower local authorities with quick access to UAV support, unlocking the full potential of these assets in crisis response.

2. **Key Pressure Points:** Recognising the challenges in coordinating responses during concurrent crises, the Commonwealth, with support from industry, can establish a framework for UAV coordination and information sharing among states and territories. This can include the creation of a centralised database for real-time data collection and distribution. UAVs can be deployed strategically based on the severity of crises, and the Commonwealth can facilitate the sharing of UAV resources among jurisdictions in need. This cooperative approach ensures efficient resource allocation and supports states and territories in times of heightened demand.
3. **Community Resilience:** To enhance community resilience, the Commonwealth can fund and promote UAV training and awareness programs at the state and territory levels. By providing grants and resources for UAV awareness initiatives, local communities can better prepare themselves for crisis situations.
4. **Changes in the Current System:** The Commonwealth can play a pivotal role in facilitating changes in the current crisis response system by supporting the integration of UAV capabilities. This can be achieved through funding mechanisms that encourage states and territories to develop a comprehensive and multi-purposeful UAV infrastructure by partnering with purpose driven organisations that maintain the required expertise. Moreover, the Commonwealth can act as a knowledge-sharing platform, disseminating best practices and lessons learned from UAV deployments across the nation. This ensures a unified approach to UAV utilisation while respecting the primary role of states and territories in crisis response.
5. **Models for Commonwealth Support:** Exploring models that involve collaboration with organisations specialising in UAV operations, such as AUAVS, can be highly beneficial. These organisations have the expertise, infrastructure, and skilled personnel required to deploy UAVs effectively in crisis situations. By establishing partnerships with UAV service providers, the Commonwealth can tap into a scalable and efficient UAV network that can be rapidly deployed to support state and territory-led crisis responses. This approach ensures that the right capabilities are available when needed most.
6. **Role of Industry/Private Sector:** The private sector, including UAV service providers like the AUAVS, will be valuable partners in advancing UAV capabilities and ensuring effective use of this capability for crisis response. The Commonwealth can incentivise private sector investments in UAV technology through research grants, tax incentives or public-private partnerships. It will take an alignment of goals by all in the industry, including regulators and funding bodies, to safely integrate this revolutionary technology, protect communities and save lives. Encouraging industry collaboration ensures a steady supply of cutting-edge UAV technology, skilled operators and necessary expertise to support state and territory-led crisis responses.
7. **Legislative and Regulatory Changes:** To make it financially viable for other sectors to contribute to a Commonwealth crisis response capability, policymakers should consider streamlining regulations related to UAV operations during emergencies. Establishing consistent rules for UAV operations during emergencies simplifies cross-border deployments.

By creating a regulatory framework that encourages collaboration between the public and private sectors, governments can leverage the full potential of UAVs. Additionally, the Commonwealth can advocate for streamlined regulatory processes to expedite UAV authorisations, making it easier for states and territories to access these assets in times of need.

To conclude our response at this stage, the Australian UAV Service (AUAVS) believes that a more focused integration of UAV capabilities into the broader strategic landscape will bolster Australia's resilience and preparedness for natural disasters and emergencies. The alternative capability afforded by UAV technology, if appropriately paired with a mature organisation and existing emergency response expertise, offer the Commonwealth government a tool that will innovatively and efficiently advance the nature of crisis response in Australia.

We welcome further discussions and opportunities to contribute our expertise to the development of an effective and comprehensive crisis response framework. Please do not hesitate to reach out to us for additional information or to explore potential collaboration.

Thank you for considering our input, and we look forward to working together to strengthen Australia's capabilities in crisis response and recovery.

## Contact

AUAVS would be pleased to provide additional information on the matters contained in this submission. I would also be pleased to provide introductions into the Australian Association for Uncrewed Systems (AAUS), where I am a Director.

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## About AAUS

The Australian Association for Uncrewed Systems is Australia's oldest and largest industry advocacy group for uncrewed systems and the emerging Advanced Air Mobility (AAM) sector. AAUS is a not-for-profit organisation which represents the drone and AAM industry across three domains: land, sea, and air. AAUS' objective is to promote a safe, professional, and commercially viable uncrewed systems and AAM industry. AAUS achieves this through its industry advocacy and promotion, education and outreach, and networking activities. AAUS provides a single representative voice for the full breadth of the uncrewed system and AAM industry. AAUS' 4,000 members span small-to-large enterprise, manufacturers, licensed and unlicensed operators, training providers, academic institutions, Government, and other supporting technical and professional services in the Australian uncrewed systems and AAM industry.