**ICG/PTWS Working Group 3 on Disaster Risk Management and Preparedness**

**Report to the ICG/PTWS-XXXI**

**April 2025**

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This Report covers the intersessional period between the ICG/PTWS-XXX (September 2023) and ICG/PTWS-XXXI (April 2025). The activity topics to be covered will follow the WG 3 terms of reference. WG3 recommendations to the ICG/PTWS are included with each topic and gathered in total in the last section on Governance.

**Working Group 3 on Disaster Risk Management and Preparedness Terms of Reference**

1. In collaboration with TOWS TT DMP, and organisations such as UNDRR, support the exchange of experiences and information on risk reduction and preparedness actions, and matters related to disaster management
2. Promote preparedness in coastal communities through education and awareness products and campaigns
3. Facilitate SOP training across regions to strengthen emergency response capabilities of Member States and their DMOs.
4. Develop and promote best practice preparedness material, programmes, and assessment tools
5. Develop and promote tsunami risk reduction theory and practice
6. Support the ITIC of the ICG.

**ACTIVITIES**

**1. Facilitate in collaboration with TOWS Task Team on Disaster Management and Preparedness (TTDMP) and organizations such as UNDRR, the exchange of experiences and information on risk reduction and preparedness actions, and matters related to disaster management**

**TOWS TT-DMP**

The Working Group continued to play an active role in the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems Inter-ICG Task Team on Disaster Management and Preparedness (TOWS-WG TT-DMP), with representatives attending meetings of TOWS-WG-XVII in February 2024 and TOWS-WG-XVIII in February 2025.

At the TOWS-WG-XVII, the TOWS-WG TT-DMP noted the progress that ICG/PTWS made with regard to ‘Equivalency” for Tsunami Ready and recommended that the Task Team Tsunami Ready share the guidance to TT-DMP for further consideration. TT-DMP also discussed working on sharing information on requirements and existing methods to warn people with disabilities, considering a number of Tsunami Ready initiatives, including:

* Tsunami Ready Evaluation form (currently in ICG/CARIBE EWS)
* Tsunami Ready Focal Points (currently in ICG/IOTWMS)
* ISO22328-3 for large scale private sector Tsunami Ready

At the TOWS-WG-XVIII, TOWS-TT DMP again appreciated the progress made for establishing the Tsunami Ready Equivalence for the PTWS by developing a draft guidance using the Tsunami Ready indicators as a foundation, and also noted that the PTWS will explore ways to further recognize and promote the benefits of formal Tsunami Ready Recognition, which remains the preferred approach.

TOWS TT-DMP discussion included key future governance questions for Tsunami Ready in the context of overall tsunami disaster risk reduction:

* *How should Tsunami Ready evolve at a policy and national level? How can UNESCO-IOC sustainably engage with both Member States and communities?*
* *How Member States adapt/streamline the programme into their national disaster risk reduction legislative framework?*

The TT-DMP will continue to address these questions, along with the further following in the intersessional period:

* *How to deal with other interests & complex and particular situations (entire coast, schools etc.?)*
* *How to deal with the interest and needs of critical infrastructure, i.e., airport and port*
* *How to deal with the interest and needs of hazardous vital infrastructure, i.e.,. industrial zone, power plan*
* *Alignment of Tsunami Ready Evaluation Survey and the Tsunami Event Post Assessment Questionnaire*

The TT-DMP meetings and discussion continue to provide a valuable mechanism for global coordination and collaboration on similar challenges across ICGs.

During the next intersessional period, the PTWS WG 3 will take note of the TT-DMP key future governance questions, and provide input in the context of overall tsunami disaster risk reduction from the PTWS for the next TT-DMP sessions in 2026 and 2067.

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| Working Group Three recommendation tothe ICG/PTWS:  **Notes** the importance of global awareness and collaboration on challenges and opportunities relating to tsunami disaster management and preparedness, and particularly regarding the implementation of the Tsunami Ready Recognition Programme.  **Requests** the WG 3 to address in the context of overall tsunami disaster risk reduction the key future governance and Tsunami Ready implementation questions as identified by the TOWS-WG-XVIII Task Team on Disaster Management and Preparedness, for sharing to the TOWS WG. |

Global Performance Monitoring Framework

The matter of a Global Performance Monitoring Framework was also discussed at the joint meeting of the TOWS-WG-XVIII TT-DMP and Task Team on Tsunami Watch Operations (TT-TWO) in February 2025. The IOC Tsunami Resilience Section (IOC-TSR) Secretariat is actively preparing to develop a Performance Monitoring and Tracking Framework and Tool for Ocean Decade Tsunami Programme (ODTP) actions, following an unsuccessful attempt to recruit a consultant.

The tool is designed to closely align with both the Monitoring and Evaluation Framework of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) and the Global Tsunami Performance Monitoring Framework. The design concept prioritizes the efficient integration of Key Performance Indicators (KPIs) from multiple assessment frameworks, ensuring streamlined assessments and reporting while minimizing duplication. The overarching goal is to create a unified Tsunami Performance Monitoring and Tracking Tool that offers users the flexibility to choose their assessment application—whether using ICG-KPIs, ODTP-KPIs, or other relevant indicators, from detailed micro-level to broader macro-level applications. The Pacific/ICG-KPI serves as the foundational layer for this tool, with additional layers incorporating KPIs derived from the ODTP Research, Development, and Implementation (RDI) Plan and other relevant frameworks. A key remaining task is the alignment and mapping of ODTP-RDI and Vision 2030 indicators onto the ICG-KPI structure. A proposed work plan includes the following milestones:

* Gathering feedback from ODTP-SC and TOWS meetings, as well as online feedback, by August 2025.
* Developing an online platform tool by September with the expertise of a consultant.
* Testing by November 2025.
* Operationalizing the tool by January 2026 to align with the next Ocean Decade Monitoring and Tracking annual exercise, considering the possibility of using a testing group of Member States

There are two levels of questions requiring attention. At the operational level, key considerations include determining who will conduct the assessments, what training will be necessary, and the timeline for operationalizing the tool. At the strategic level, the focus is on how the TRS can effectively and sustainably manage the tool to ensure standardization and alignment with best practices for KPIs and performance measures. This encompasses data collection, analysis, knowledge dissemination, and continuous adaptation. Additionally, strategies and resource planning approaches are needed to support the coordination and management of such an important initiative.

Other materials, guidance and standards will need to be developed that support the global assessment process. This will also include national report changes, monitoring and evaluation and potential differences between inter-ICG reporting. This work can and will be undertaken by the TOWS Task Team responsible for developing this framework.

The expectations of IOC-ICG Member States are that they will monitor and evaluate progress against the new global framework and provide yearly reports via the annual ICG meeting structures. These will replace the current national reporting process. Participation in annual TOW’s meetings/workshops will allow gaps, opportunities, improvement and successes to be discussed, specific to their ICG countries evaluation against the framework. ICG Steering Committee meetings across the four ICG’s will also work on the same evaluation results in their early reporting.

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| Working Group Three recommendation tothe ICG/PTWS:  **Recalling** that the ICG/PTWS-XXX recommended that the latest version of the Global Performance Monitoring Framework be presented at the next TOWS-WG for endorsement of the global adoption by all ICGs, and for the TOWS-WG TT-DMP to work with the IOC Tsunami Resilience Section (IOC-TSR) to develop the web portal.  **Notes** that the IOC-TSR Secretariat is actively preparing to develop a Performance Monitoring and Tracking Tool for ODTP actions, with the ICG/PTWS KPI as a foundational layer, and also incorporation KPIs derived from the Ocean Decade Tsunami Programme and other relevant frameworks  **Requests** Working Group 3 representatives to continue to engage through the TOWS-WG TT-DMP on the Global Performance Monitoring Framework and Tracking Tool, in support of consistent and effective global monitoring. |

Tsunami Ready Coalition

As part of the ODTP governance structure, a special Coalition for Tsunami Ready (TRC) was established. The present Chair of the Tsunami Ready Coalition is Dr. Laura Kong, ITIC Director.

During the PTWS intersessional period, the TRC Chair, in consultation with the IOC TRS and supported by a technical consultant with extensive PTWS experience, prepared the Tsunami Ready Coalition Implementation Plan (TRC-IP). The draft TRC-IP was presented to the ODTP-Steering Committee in January 2025 and to the TOWS-WG TT-DMP in February 2025 for comments. The final version was then presented to the TOWS-WG-XVIII in February 2025, and approved.

The mandate for the Tsunami Ready Coalition, derived from the IOC Executive Council (IOC Decision A-31/3.4.1), the TOWS-WG-XV decisions and earlier TOWS Task Team on Disaster Management input, and the ODTP Implementation Plan (IOC Technical Series 180), is proposed as follows:

The Tsunami Ready Coalition is a collaboration between global, regional, and national stakeholders to advance and sustain the UNESCO-IOC Tsunami Ready Recognition Programme (TRRP), with a specific view on the UN Ocean Decade Tsunami Programme aim of 100% of communities at risk of tsunami are prepared for and resilient to tsunamis by 2030.

The Tsunami Ready Coalition Implementation Plan approved by the TOWS-WG-XVIII and pending approval by the IOC Assembly in June 2025. It outlines its establishment, mandate, objectives, Terms of Reference (ToR), action plan, governance, proposed membership and communications plan in support of the Tsunami Ready Recognition Programme (TRRP). The TRRP, established in 2022 by the Intergovernmental Oceanographic Commission (IOC) of UNESCO, is an international community-based recognition programme that aims to build resilient communities through awareness and preparedness strategies that will protect life, livelihoods and property from tsunamis.

The Coalition will establish a network of critical stakeholders that will advocate for and facilitate support towards the implementation and sustaining of Tsunami Ready through targeted promotion, advocacy, resource mobilization, networking, influence, and advice. Reporting to the TOWS-WG, the Coalition will have a diverse, yet relatively small, membership by invitation of the UNESCO-IOC. Membership is primarily at the institutional level.

The objectives of the TRC will be to:

1. Raise the Profile of TRRP in Collaboration with Critical Stakeholders

2. Increase Funding Resources for TRRP Implementation

3. Advocate for the conduct of Tsunami Ready Indicator Workshops in the Regions,

4. Effectively Organize the Tsunami Ready Coalition

The Implementation Plan sets up the membership and minimum organizational and meeting structure, lists relevant institutions for membership, identifies potential sources of funding for implementation and meetings for raising the TRRP profile, outlines outreach and communication strategies, and proposes indicators for monitoring and measuring progress. Activities and milestones, aligned with the objectives, are proposed, emphasizing the identification of relevant institutions for advocacy and implementation as the first critical step, followed by efforts to increase funding resources for implementation.

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| Working Group Three recommendation tothe ICG/PTWS:  **Recalling** that nearly 70% of the world's historical tsunamis have occurred in the Pacific, with 99% of the tsunami deaths from local and regional tsunamis, thus making tsunami community preparedness, such as through programmes like Tsunami Ready, a high-priority action for saving lives,  **Notes** the approval of the Tsunami Ready Coalition Implementation Plan by the TOWS-XVII WG, towards realizing and sustaining tsunami readiness through targeted promotion, advocacy, resource mobilization, networking, influence, and advice  **Requests** Working Group 3 to actively support the implementation activities of the Tsunami Ready Coalition |

**Supporting the UN Ocean Decade**

The implementation of the UNESCO-IOC Tsunami Ready Recognition Programme remains a key contribution to achieve the societal outcome ‘A Safe Ocean’ of the UN Ocean Decade.

Through the PTWS WG3 Task Team Tsunami Ready, the Working Group continues to support progress towards this goal. The Working Group can also act as a key engagement mechanism

**Supporting other bodies**

The Working Group, through the Director of ITIC, continued to participate in the IUGG Joint Tsunami Commission (JTC). The IUGG and ITIC were part of the organizing committee and speakers at the 2nd UNESCO-IOC Global Tsunami Symposium on Two Decades After 2004 Indian Ocean Tsunami: Reflection and Way Forward (November 2024), and similarly for the 9th Joint ICG/PTWS–IUGG/JTC Workshop, 60th Anniversary of the ICG/PTWS – Past and Future (April 2025). The ITIC Director made presentations on tsunami awareness and preparedness, the Tsunami Ready Coalition, and the implementation and sustainability of Tsunami Ready implementation.

The ITIC Director chairs the IUGG JTC Working Group on Science-based Tsunami Warning, and is a member of the WG on Tsunami Terminology. Further information is provided in the WDS/NCEI Report under Agenda 3.10 Report from UN/non-UN organizations.

The Working Group, through the ITIC, also works with the WDS/Marine Geology and Geophysics (MGG), which is hosted by the NOAA National Centers for Environmental Information (NCEI), to produce global and regional hazard maps to support hazard assessments, awareness and preparedness.  Further information is provided in the WDS/NCEI Report under Agenda 3.10 Report from UN/non-UN organizations.

The Working Group, through the Director of ITIC, continued to participate in the ITU-WMO-UNESCO-IOC SMART Subsea Cable Joint Task Force (JTF). The ITIC Director serves as the co-Chair of the JTF Science and Society Committee (SSC), with the SPC Pacific Community Centre for Ocean Sciences (PCCOS) Head, Dr. Jérome Aucan. The JTF SSC also supports the SMART Subsea Cable International Programme Office (SMART IPO). Further information is provided in the SMART Subsea Cable Report under Agenda 3.10 Report from UN/non-UN organizations.

**2. Promoting preparedness in coastal communities through education and awareness products and campaigns**

**World Tsunami Awareness Day**

In 2024, the United Nations Office for Disaster Risk Reduction (UNDRR) was themed around ‘Lessons from the 2004 Indian Ocean Tsunami for the Next Generation’. This was closely aligned with the International Day for Disaster Risk Reduction. A number of public events and exercises are being conducted within regions and by Member States in 2024 coinciding with World Tsunami Awareness Day, and the 20th Anniversary commemorations of the Indian Ocean tsunami. The ITIC supported the UNDRR / UNESCO-IOC contributions through a video recalling the progress since 2004 ([link here](https://vimeo.com/941247303/c5540a40cc?share=copy)), input to the IOC's 20 year since publication ([link here](https://unesdoc.unesco.org/ark:/48223/pf0000391662)), participation in the IOC's global press conferences in November in advance of the 20th anniversary, and participation through its ITIC Caribbean Office, in the November 5, 2024 UN Headquarters (New York City) Panel "Building Future Resilience: Youth Empowerment and Education in Tsunami Preparedness" by sharing on engaging the blind community in the Caribbean on tsunami awareness. Information on the 2004 commemorative activities (including the above) can be found in the US TsuInfo newsletter ([Dec 2024](https://www.dnr.wa.gov/publications/ger_tsuinfo_2024_v26_no6.pdf))

UNDRR invited UNESCO to co-develop the WTAD 2025 theme, potentially related to Innovative Financing for DRR but not limited by it. Key WTAD activities include ongoing efforts under the #GetToHighGround initiative, aimed at connecting high level political support to real change making people safer. UNDRR has expressed its interest to bolster a connection between the Tsunami Ready Programme and #GetToHighGround Campaign.

The TOWS TT DMP recommended to UNDRR that ‘*Tsunami Ready’* becomes a permanent WTAD theme, similar to Safe Schools and others.

**Exercises – PacWave24**

The PTWS Task Team on PacWave24 will report on the outcomes and will also propose Terms of Reference for PacWave26 (ICG/PTWS XXXI agenda item 4.9), however Working Group Three would like to note the importance of PacWave for disaster management and preparedness, and in particular the ongoing importance to involve NDMOs responsible for emergency response. Once international alerts from the TSPs are received, and national tsunami warning centres issue national tsunami warnings, then the national disaster management offices take action to alert tsunami vulnerable coastlines and communities to evacuate. Since tsunamis do not happen regularly or often, it is essential that there is preparedness beforehand, such as through tsunami exercises of plans and procedures, and evacuation actions by NDMOs to communities.

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| **Working Group 3 recommendation to the ICG/PTWS:**  **Notes** the importance of PacWave exercises with regard toward improving disaster management and preparedness, and in particular the ongoing effort to involve NDMOs to prepare and respond. |

**Awareness Products**

The ITIC continued to update its global and regional awareness products, and to create new ones, many in collaboration with the WDS / NOAA NCEI. These will be reported in detail in the ITIC Report (ICG/PTWS XXXI agenda item 3.6) and WDS/NOAA NCEI Report (ICG/PTWS XXXI agenda item 3.10).

The ITIC also works with the IOC to update standard tsunami awareness products, including the Tsunami Glossary (from 2019 to 2025, TS 85 rev)

**Mechanisms for Tsunami Ready participation**

Refer to the Report of the WG3 Task Team Tsunami Ready (ICG/PTWS-XXXI agenda item 4.2) for reporting on the progress of implementation of the Tsunami Ready Recognition Programme and the Equivalency Approach.

**3. Facilitate SOP training across regions to strengthen emergency response capabilities of Member States and their Disaster Management Offices**

Much of the PTWS effort regarding SOP training is led and facilitated by the ITIC. Online training has been made available via the IOC OceanTeacher Global Academy (OTGA) as UNESCO-IOC Tsunami Awareness (2024) and Tsunami Ready (2025) self-paced courses. OTAG Tsunami Warning Center Minimum Staff Level Competency Training, which will is planned for 2026. Please refer to the ITIC report for full detail of ITIC efforts to support emergency response capabilities and tsunami training under ICG/PTWS XXXI agenda item 3.6.

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| **Working Group 3 recommendation to the ICG/PTWS:**  **Appreciates and thanks** the ongoing significant effort and leadership provided by the ITIC for tsunami preparedness in the Pacific, including through SOP training, online training under the OceanTeacher Global Academy, and creation and distribution awareness products. |

**4. Develop and promote best practice preparedness material, programs and assessment tools**

The CNAT from Ecuador has created a video about the experiences of authorities and community members during the tsunamis of Chile in 2010, Japan in 2011, Tonga in 2022, and local experiences such as the earthquake of April 2016 off the coast of Pedernales. The goal was to create a file that could be disseminated for the knowledge and preparedness of Ecuador's coastal communities.

Much of the PTWS effort regarding best practice preparedness material is led and facilitated by the ITIC, as part of ITIC's Terms of Reference for *'assisting Member States in the establishment of national warning systems and improving preparedness for tsunamis .. [and] gathering and promulgating knowledge on tsunamis and fostering tsunami research and its application so as to prevent loss of life and damage to property,'*

The ITIC web site, previously hosted by the IODE web portal but now in transition to the UNESCO tsunami server using OceanExpert as a file repository, has traditionally served as a resource for sharing global tsunami awareness products and preparedness tools, but has not attempted to offer comprehensive services for the Pacific due to limited staffing and time resources.

The Working Group sees value in an effort to collate guidance and material on certain topics (e.g., preparedness, risk assessment, risk reduction) for PTWS member states, to enable the spread of best practice, and reduce the duplication of effort. This could be at a global scale, specific to the Pacific, or multi-hazard as preferred. This has previously been recommended but is lacking a sharing mechanism.

This would ideally have two components:

1. A mechanism for Member States to share relevant documentation & resources for collation.
2. A landing page for people to access those resources.

Early investigation of this has indicated that the OceanExpert doclist may be an appropriate mechanism to support this, however, further work is required in order to scope and test usability for this purpose.

As the ITIC fully transitions its materials and services, it will investigate mechanisms for the Pacific and report back to the WG3. In the interim, the ITIC requests Member States to share their best practices material, programs and tools with the ITIC, so that in turn the ITIC can share them with the PTWS and globally.

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| **Working Group Three recommendation to the ICG/PTWS:**  **Requests** that Working Group 3 and the ITIC continue to explore mechanisms with the Secretariat for Member States to share materials, in order to better facilitate the collection and accessibility of best practice resources on disaster management and preparedness topics.  **Welcomes** the ITIC offer to host an interim repository, and **requests** PTWS Member States to share their best practice awareness and preparedness material, programs and assessment tools with the ITIC to compile and maintain for the PTWS. |

**5. Support the ITIC of the ICG**

The ITIC appreciates the support of PTWS Member States to accomplish its work activities. These include the sharing of best practice materials which can then shared in ITIC and IOC presentations, reports, guidelines, and videos. ITIC especially recognises the Chile, Costa Rica, New Zealand, and the USA for its open sharing of materials.

Please refer to the ITIC report for full detail of ITIC activities for the ICG/PTWS under ICG/PTWS XXXI agenda item 3.6.

**6. Governance**

The Working Group notes the importance of encouraging more NDMO participation and involvement in PTWS discussions and governance mechanisms, especially given the nature of the UN Ocean Decade Goals and their connection with disaster management and preparedness.

The Working Group welcomes suggestions from the PTWS Steering Committee and Member States on ways to facilitate this and would like to encourage more Member States to provide nominations to the working group, particularly from NDMOs.

The Working Group also proposes to amend the Terms of Reference for the Working Group for the next intersessional period, namely:

* Mandating the Working Group to support the implementation of the Tsunami Ready Coalition, noting that these efforts will extend past 2030, and require global collaboration and coordination;
* Recognising the significance of the Pacific Tsunami Preparedness Capacity assessment for the forward work programme of the PTWS, and ensuring that this contributes to the design and prioritisation of Working Group 3 activities

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| Working Group 3 recommendation tothe ICG/PTWS:  **Recalling** that nearly 70% of the world's historical tsunamis have occurred in the Pacific, with 99% of the tsunami deaths from local and regional tsunamis, thus making tsunami community preparedness, such as through programmes like Tsunami Ready, a high-priority action for saving lives,  **Notes** the report of Working Group 3 (Disaster Management & Preparedness)  **Notes t**he importance of encouraging more NDMO participation and involvement in PTWS discussions and governance mechanisms, especially given the nature of the UN Ocean Decade Goals and their connection with disaster management and preparedness.  **Notes** the approval of the Tsunami Ready Coalition Implementation Plan by the TOWS-XVII WG, towards realizing and sustaining tsunami readiness through targeted promotion, advocacy, resource mobilization, networking, influence, and advice  **Notes** the importance of PacWave exercises with regard toward improving disaster management and preparedness, and in particular the ongoing effort to involve NDMOs to prepare and respond.  **Requests** Working Group 3 to actively support the implementation activities of the Tsunami Ready Coalition  **Requests** the Working Group 3 to address key future governance and Tsunami Ready implementation questions as identified by the TOWS-WG-XVII Task Team on Disaster Management and Preparedness, for sharing to the TOWS WG.  **Requests** that Working Group 3 and the ITIC continue to explore mechanisms with the Secretariat for Member States to share materials, in order to better facilitate the collection and accessibility of best practice resources on disaster management and preparedness topics.  **Welcomes** the ITIC offer to host an interim repository, and **requests** PTWS Member States to share their best practice awareness and preparedness material, programs and assessment tools with the ITIC to compile and maintain for the PTWS.  **Appreciates and thanks** the ongoing significant effort and leadership provided by the ITIC for tsunami preparedness in the Pacific, including through SOP training, online training under the OceanTeacher Global Academy, and creation and distribution awareness products.  **Encourages** Member States to provide nominated representatives, particularly from national disaster management organisations, to Working Group 3 Disaster Management and Preparedness to support an active work programme for this working group  **Continues** Working Group 3 to facilitate the coordination of efforts relating to Disaster Risk Management and Preparedness within the ICG/PTWS with revised Terms of Reference:  **Working Group on Disaster Risk Management and Preparedness Terms of Reference**   1. In collaboration with TOWS TT DMP, and organisations such as UNDRR, support the exchange of experiences and information on risk reduction and preparedness actions, and matters related to disaster management 2. Support the implementation activities of the Tsunami Ready Coalition 3. Promote preparedness in coastal communities through education and awareness products and campaigns. 4. Facilitate SOP training across regions to strengthen emergency response capabilities of Member States and their DMOs. 5. Develop and promote best practice preparedness material, programmes, and assessment tools 6. Develop and promote tsunami risk reduction theory and practice 7. Review and advocate for the filling of gaps in Pacific Tsunami Risk Management and Preparedness identified from the 2025 PTWS Tsunami Preparedness Capacity Assessment 8. Support the ITIC of the ICG. |