CYCLONE DITWAH EMCOMM REPORT

30TH NOV - 2ND DEC 2025

THE RADIO SOCIETY OF SRI LANKA

EXECUTIVE SUMMARY

Cyclonic Storm Ditwah brought one of the most severe and widespread weather-related disasters in recent Sri Lankan history. With catastrophic flooding, landslides, and infrastructure collapse, communication failures were widespread across multiple districts.

In response to urgent requests from the Telecommunications Regulatory Commission of Sri Lanka (TRCSL) and the Disaster Management Centre (DMC), the Radio Society of Sri Lanka (RSSL), together with its emergency affiliate Amateur Radio Civil Services Network (ARCSN), executed a nationwide Emergency Communication (EmComm) Operation from 28 November to 2 December 2025.

This operation ensured:

- **Establishing initial communication** in fully isolated districts
- **24/7 message handling** between affected areas and authorities in Colombo
- **Coordination of evacuations, rescue logistics, and medical requests**
- **Rapid deployment of trained operators** within hours
- **Establishment of stable HF/VHF networks** where mobile and wired systems failed
- **Critical support to police, hospitals, and local government authorities**

This report documents the deployment, operational achievements, challenges, lessons learned, and strategic recommendations for strengthening Sri Lanka's national emergency communication infrastructure.

Cyclone Ditwah underscored a critical reality:

When all other systems fail, amateur radio remains the most resilient, independent, immediate, and reliable form of communication.

This report serves as an official operational record of the Radio Society of Sri Lanka's emergency communication response during Cyclone Ditwah, a reference document for government and institutional stakeholders, and a supporting technical justification for strengthening national emergency communication capabilities through future collaboration and donor support.

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1. INTRODUCTION

Cyclonic Storm Ditwah swept across Sri Lanka from late November to and early December 2025, causing catastrophic disruption to daily life, essential services, and national communication infrastructure. Severe floods, landslides, power failures, and road collapse left entire districts cut off, with some communities isolated for more than 48 hours.

In several locations, **all conventional communication systems failed simultaneously**:

- Mobile towers offline
- Internet outages
- Landline failures
- Police/DMC Repeater and microwave link disruption
- Power grid collapse

On 28th November RSSL informed the The **Telecommunications Regulatory Commission of Sri Lanka (TRCSL)** and the **Disaster Management Centre (DMC)** that we are ready to offer our services if needed. On 29th November, RSSL Secretary, Victor 4S7VK was formally requested by the TRCSL for the deployment of amateur radio operators to establish emergency communication bridging these failures.

Within just **30 minutes**, the Radio Society of Sri Lanka (RSSL) activated its EmComm network. But it took the day to coordinate with the Sri Lanka Air Force (SLAF) and arrange logistics for the teams. Volunteer operators were dispatched to affected districts, while a centralized communication hub was established at TRCSL Headquarters in Colombo.

This report provides a detailed, structured account of that operation.

2. ABOUT THE RADIO SOCIETY OF SRI LANKA (RSSL)

Established in **1950**, the **Radio Society of Sri Lanka (RSSL)** is the officially recognized national body representing amateur radio operators in Sri Lanka. RSSL is:

- The **IARU Member Society for Sri Lanka**
- A long-standing partner with **TRCSL**
- A recognized stakeholder in **DMC's national disaster readiness framework**
- The operator of Sri Lanka's **IARU/NCDXF HF Beacon (4S7B)**

2.1 Core Mandates

- Develop and advance amateur radio science and communication skills
- Provide trained emergency communication volunteers
- Operate national repeater, HF, and digital communication networks
- Promote youth engagement and technical education
- Support national disaster preparedness

2.2 RSSL's Emergency Communication Legacy

Year	Event	Contribution
2004	Indian Ocean Tsunami	Established first working communication in multiple districts
2017	Ratnapura/Kalawana floods	SLAF airlifted RSSL teams to restore communication
2023 -25	Periodic EmComm drills	HF/VHF readiness tests
2023 -24	Economic crisis	Continued HF/VHF nets even during long lasting power cuts to ensure everyone is safe and in good health
2025	Cyclone Ditwah	National multi-station EmComm deployment

RSSL has received recognition from national and international bodies for its contributions to humanitarian communication.

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3. AMATEUR RADIO CIVIL SERVICES NETWORK (ARCSN)

The **Amateur Radio Civil Services Network (ARCSN)** is an emergency-focused affiliate and operational partner of the Radio Society of Sri Lanka (RSSL). ARCSN complements RSSL by maintaining repeater infrastructure, training operators, and offering specialized field-deployment capability.

3.1 Mandate of ARCSN

- Provide communication support to civil authorities during disasters
- Maintain and expand Sri Lanka's emergency VHF repeater system
- Train volunteers in rapid field-deployable radio operations
- Support RSSL's EmComm deployments with manpower and equipment
- Conduct simulation drills and digital communication tests

3.2 Infrastructure Operated by ARCSN

ARCSN manages several key installations, including:

- **Padukka 145.675 MHz VHF Repeater** — covering Western, Sabaragamuwa, and parts of Southern Province
- **Gammaduwa 145.150 MHz VHF Repeater** — covering North Western and North Central Provinces

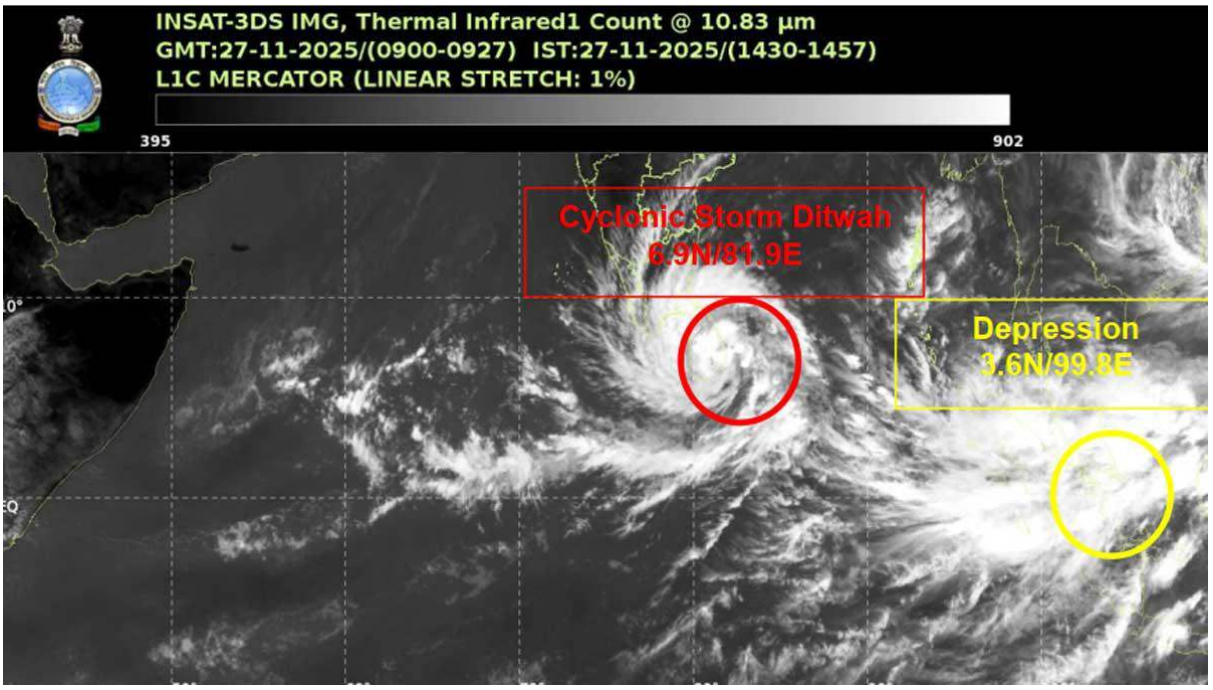
During Cyclone Ditwah, ARCSN's Gamaduwa repeater was affected by the landslides and infrastructure damage in Matale District.

4. OVERVIEW OF CYCLONIC STORM DITWAH

Cyclonic Storm Ditwah was the **fourth major storm of the 2025 North Indian Ocean cyclone season**, forming over the Bay of Bengal and intensifying rapidly before tracking across Sri Lanka.

4.1 Meteorological Summary

- Sustained winds exceeding **130 km/h**
- Rainfall above **350 mm** in several districts
- Widespread lightning and microbursts
- Rapid intensification due to high SST (Sea Surface Temperature)
- High atmospheric moisture content leading to cloudbursts



Satellite Map of Cyclone Ditwah

4.2 Humanitarian Impact **(as of 16th December.** *See Appendix D*)

- 640+ fatalities and and 183 people missing
- More 2.18 million people (448,817 + families) affected across all 25 districts
- 70,297 people from 23,348 families sheltering in 731 government-run safety centres
- Entire communities isolated due to landslides and road collapse
- 102,745 houses have been partially or fully damaged

4.3 Communication and Infrastructure Impact

- Grid power outages lasting several days
- Mobile networks offline in multiple districts (more than 96 hours)
- Fibre and copper lines damaged
- Microwave tower failures
- Police and divisional authority communication lines non-operational
- Several hydropower-related installations compromised
- Roads impassable due to debris, collapsing embankments, and flooding

4.4 Regions Most Severely Affected

- **North Western Province** — Chilaw, Puttalam
- **Central Province** — Matale, Kotmale, Gampola, Nuwara Eliya
- **Uva Province** — Badulla, Girandurukotte
- **Western Province** — Kelaniya, Colombo outskirts
- **Sabaragamuwa** — Ratnapura, Kegalle (flood and landslide alerts)

Ditwah's destructive path demanded a rapid, resilient, independent communication system, provided by amateur radio.

5. ACTIVATION OF EMERGENCY COMMUNICATION RESPONSE

5.1 Official Request for Assistance

On the morning of **29 November 2025**, the **Telecommunications Regulatory Commission of Sri Lanka (TRCSL)** and the **Disaster Management Centre (DMC)** formally requested the support of the Radio Society of Sri Lanka to:

- Establish emergency radio links
- Deploy trained operators to affected districts
- Relay official messages to and from field authorities
- Assist police, hospitals, and divisional secretariats with coordination

5.1.1 INVOLVED PARTIES

To ensure the efficient handling, verification, and escalation of inbound emergency communication traffic, a dedicated Action and Coordination Committee was established at the outset of the operation. This committee comprised senior representatives from key government institutions, together with appointed members of the Radio Society of Sri Lanka (RSSL).

The committee functioned as the central decision-making and coordination body, enabling timely assessment of incoming information and facilitating appropriate operational responses. RSSL and ARCSN operators routed structured, formalized emergency messages to this committee through the designated coordination station, ensuring clarity, accuracy, and consistency in the information presented for action.

The Action and Coordination Committee included representatives from the following organizations:

- Office of the President – President's Representatives
- Ministry of Digital Economy
- Telecommunications Regulatory Commission of Sri Lanka (TRCSL)
- Disaster Management Centre (DMC)
- Tri Forces
- Presidential Media Division
- OREL IT PVT Ltd.

The close collaboration among these entities ensured that critical information received from the field was rapidly translated into coordinated response actions, significantly enhancing the effectiveness of the national emergency response during the Cyclone Ditwah operation.

5.2 RSSL EmComm Activation Timeline

RSSL issued a **RED Alert** for its members on 29th November once.

SITREP-00 | 28 NOV 2025

0800H – RSSL notifies TRCSL and DMC of operational readiness.
ALL DAY – No further tasking received from authorities.

SITREP-01 | 29 NOV 2025

0900H – TRCSL formally tasks RSSL (via 4S7VK) to deploy amateur radio operators for emergency communications.
0930H – Core EmComm Command Team convenes; operational plan drafted.
1200H – Field teams assembled online, briefed, and placed on standby.
1800H – No confirmation received regarding SLAF lift capability.
2230H – Presidential Task Force Coordinator arrives at QTH 4S7LEO.
2300H – SLAF briefed; operator manifests and deployment data handed over.

SITREP-02 | 30 NOV 2025

0800H – Chilaw Team (4S7RS/Chilaw) airlifted from Katunayake Base.
0900H – Kotmale & Mahiyangana Teams airlifted from Ratmalana Base.
0900–1000H – Island-wide HF/VHF monitoring initiated by 4S7VK (Piyandala), 4S7AB, 4S7HP, 4S7SA, 4S6AJA and 4S6TMP.
1040H – First emergency traffic received from Chilaw on VHF repeaters.
1100H+ – Kotmale station begins reporting.
1200H – Mahiyangana team redirected to Girandurukotte; VHF mobile signal was received shortly after.
1200H – 4S7RS/TRC Command Station operational at TRCSL HQ.

AFTER 1200H – All deployed stations maintain continuous contact with HQ via Pidurutalagala (Piduru) and Yatiyanthota repeaters.
ALL NIGHT – 24/7 comms maintained; continuous traffic relayed to TRCSL and DMC. 4S7JL & 4S6TMP on watch.

SITREP-03 | 01 DEC 2025

1250H – 4S7RS/Chilaw ceases operations; extraction commences.
1640H – 4S7RS/Girandurukotte concludes mission and shuts down.
ALL DAY – Kotmale continues to provide landslide and access-status reports.
ALL NIGHT – 24/7 comms maintained; continuous traffic relayed to TRCSL and DMC. 4S7JL & 4S6TMP on watch.

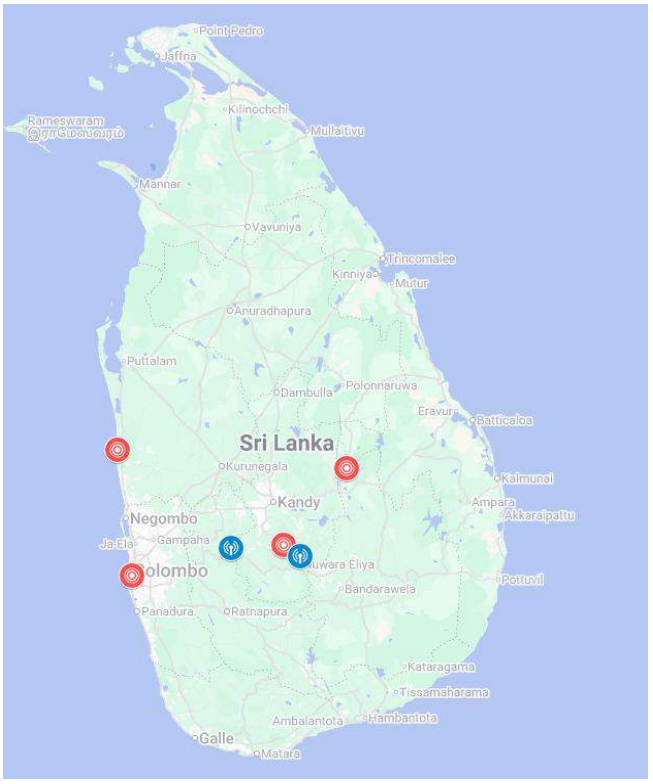
SITREP-04 | 02 DEC 2025

0800H – 4S7RCS/Kotmale ceases operations; extraction commences.
1125H – ARCSN 4S7RCS/Kotmale Team airborne; final extraction commenced.
1154H – ARCSN 4S7RCS/Kotmale Team landed;extraction completed.
1222H – 4S7RS/TRC on air for the final. 4S7VK and 4S6TMP thanks everyone involved.
1223H – Operation Ditwah officially closed after all stations reported safe return.

5.3 Command and Control Structure

RSSL operated under a structured chain:

1. **TRCSL Coordination Centre (4S7RS/TRC):** 24/7 monitoring
2. **Field Stations:** Chilaw, Kotmale, Girandurukotte
3. **Monitoring Nodes:** Senior operators across the country
4. **Message Handling Protocol:** ICS-style (Incident Command System) adapted for amateur radio



5.4 Objectives of Deployment

- Provide communication where none existed
- Relay official instructions from DMC/TRCSL/MoD and other Public Administration offices
- Support local authorities in:
    - Relief logistic coordination
    - Emergency supply coordination
    - Health and safety communications
- Maintain continuous HF/VHF coverage
- Monitor repeaters and HF for emergency traffic

6. FIELD DEPLOYMENT REPORTS

This section provides detailed information on each deployment, including operator actions, situational observations, message logs, and outcomes.

6.1 4S7RS/TRC – Colombo Headquarters

TRCSL Operations Room

This was the **central hub** for all Ditwah emergency message routing.

6.1.1 Operators on Duty

30 November:
4S7VK, 4S7PA, 4S7PL, 4S7NYL, SWL Thewjan, SWL Buddhila

1 December:
4S7DF, 4S6RML, 4S5MST, 4S6TKA, SWL Buddhila, SWL Timothy, SWL Thevjan

2 December:
4S6TKA, 4S5MST, SWL Buddhila, SWL Timothy, SWL Thevjan

6.1.2 Responsibilities

- Operated on VHF
- Logged and classified all incoming emergency messages
- Liaised with TRCSL officers stationed at TRCSL
- Re-routed traffic to appropriate authorities via a designated WhatsApp group
- Coordinated field operator safety
- Provided technical fault instructions where necessary

6.1.3 Key Message Types Received

- Requests for food and medicine
- Flood level rise alerts
- Requests for evacuation vehicles
- Hospital power failures and urgent needs
- Landslide warnings
- Requests for fuel for rescue operations
- Search and rescue coordination updates
- Police requests for communication assistance

6.1.4 Challenges

- High message load on repeaters
- Simultaneous traffic on both Yatiyanthota and Pidurutalagala repeaters
- HF signals unstable at certain times due to atmospheric disturbances
- Confirmations not received for messages passed over to authorities

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6.2 4S7RS/Chilaw – Field Deployment

Chilaw Field Station Setup

6.2.1 Operators

- 4S7RWN – Ruwan
- 4S6MIR – Ifthar

6.2.2 Situational Overview

Upon arrival, the operators encountered:

- Entire neighborhoods submerged, roads impassable and washed away
- Police radio network **completely offline**
- Total mobile network outage for over 24 hours
- Public panic and overcrowded hospital
- Multiple relief camps with no communication
- Pediatric ward of the hospital inundated, with patients evacuated to police station and later airlifted to Puttlam hospital by SLAF

6.2.3 RSSL Interventions

- Installed portable VHF base station at Chilaw Hospital
- Distributed 20 handheld radios to Police
- Operated hospital communication for internal coordination
- Supplied power via RSSL generator to run the hospital's water pump
- Established VHF links with Colombo HQ

6.2.4 Critical Messages Relayed

- *“Ground floor of Chilaw hospital flooded; patients moved upstairs.”*
- *“Urgently require water bowsers for refugee camps.”*
- *“Fuel shortage for rescue teams; request immediate allocation.”*
- *“Bridges collapsed on A3 road; reroute all transport.”*

6.2.5 Outcomes

- Chilaw hospital regained functional communication
- Police regained situational coordination capabilities
- Improved accuracy of DMC resource allocation
- Assisted relocation of 400+ individuals

6.2.6 Challenges

1. **Coordination Gaps at Air Force Base**
   Initial confusion was encountered at the Sri Lanka Air Force base due to incomplete dissemination of information regarding RSSL personnel airlift arrangements.

2. **Antenna Deployment and Repeater Accessibility**
   On-site antenna installation presented challenges, compounded by uncertainty regarding access to operational VHF repeaters at the initial stage.

3. **Energy Management Constraints**
   Decisions had to be made regarding optimal band usage (HF vs VHF) to conserve limited power resources while maintaining operational effectiveness.

4. **Repeater Congestion During Extended QSOs**
   Prolonged non-essential transmissions occasionally congested repeaters during critical periods.

   Suggested mitigations:

   - Establish a brief **silence period at the top of every hour** for emergency traffic.
   - Implement **hourly or bi-hourly SITREP transmissions** from each field station to the Colombo coordination centre.

5. **Managing Non-Operational Requests from Civilians**
   Operators faced challenges balancing their primary emergency communication mandate with requests from non-official individuals (e.g., device charging), highlighting the need for clearer operational boundaries during deployments.

6.3 4S7RS/Girandurukotte – Field Deployment

Girandurukotte Deployment

6.3.1 Operators

- 4S7DZ – Dimuthu
- 4S7MAN – Manjula

6.3.2 Field Conditions

- Heavy flooding along Mahaweli river basin
- 3 major access roads rendered impassable
- SLT line failures causing total communication blackout
- Police station unable to contact District Secretariat

6.3.3 Interventions

- Restored police communication using portable VHF rig
- Inspected SLT microwave link failure and relayed findings
- Provided updates to DMC Colombo regarding isolated villages

6.3.4 Representative Messages

- *“Mahiyanganaya–Badulla route only passable with 4×4 vehicles.”*
- *“Several villages fully cut off; food and medicine depleted.”*

6.3.5 Challenges

1. **Limited Point-to-Point Communication Capability**
   The field coordination centre required simultaneous point-to-point communications with multiple government, security, and response officials operating across dispersed locations. This was constrained by the limited availability of handheld transceivers.

2. **Inter-Agency Interoperability Constraints**
   The absence of a pre-agreed shared interoperability frequency limited direct communication between RSSL operators and other responding agencies.

3. **Lack of Awareness of RSSL Capabilities Among Field Officials**
   Some on-site officials were unfamiliar with the scope and capacity of amateur radio emergency communications. Effective operation depended significantly on how RSSL personnel introduced and explained their role and capabilities.

4. **Insufficient Pre-Deployment Area Familiarization**
   A comprehensive geographical overview of the operational area was not available prior to deployment. In several instances, even responding authorities had limited situational awareness of terrain conditions due to the evolving disaster environment.

5. **Exposure to Post-Disaster Hazards**
   Operators faced risks associated with post-disaster conditions, including unstable terrain and secondary hazards. Enhanced preparedness and hazard awareness are required for future deploymen

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6.4 4S7RCS/Kotmale – Field Deployment

Kotmale Field Station

6.4.1 Operators

- 4S6LEO – Singhe
- 4S6CMU – Chamindu

6.4.2 Field Observations

- Multiple landslides along Kotmale-Gampola route
- Entire region under blackout due to powerline collapse
- Camps overflowing with evacuees
- Complete mobile network failure

6.4.3 RSSL Contributions

- Established first functioning communication link to the AG Office
- Distributed handheld transceivers for Police/Hospital/DMC staff for internal communication
- Maintained generator-powered operations for over 48 hours
- Coordinated transport of emergency rations and medical supplies
- Relayed high-priority evacuation notices

6.4.4 Relay Messages

- *“36 camps active; over 3,000 stranded; food exhausted.”*
- *“Seeking urgent medical supplies for Kotmale hospital.”*

6.4.5 Challenges

- Critically low fuel reserve

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7. HF & VHF OPERATIONS DURING THE EMERGENCY

Amid widespread telecommunications failure, the HF and VHF amateur radio networks operated by RSSL and ARCSN became the **primary inter-district communication backbone** during Cyclone Ditwah.

7.1 HF Operations (7 MHz / 40m Band)

HF propagation was extremely challenging due to intense atmospheric disturbances and continuous thunderstorms. Despite this, the RSSL operators maintained communications on HF.

7.1.1 Responsibilities

- Maintain national situational awareness
- Relay long-distance traffic between Uva, Central, and Western Provinces
- Provide redundancy when VHF repeater paths degraded
- Coordinate message routing between TRC HQ and field stations

7.1.2 Observed Conditions

- Rapid fading (QSB)
- Reduced ground-wave range

7.1.3 Monitoring Stations

Kamal 4S7AB, Hemantha 4S7HP, Aruna 4S6AJA and Tharanga 4S6TMP monitored 7.060 MHz for emergency traffic. Since the VHF repeaters were accessible to the field stations, HF was used only as a backup.

IARU R3 was informed to request member societies to keep the frequencies clear for emergency traffic.

7.2 VHF Operations

7.2.1 RSSL Repeater Infrastructure as National Backbone

Two critical repeaters carried the bulk of emergency traffic:

Pidurutalagala 145.650 MHz and Yatiyanthota 145.625 MHz

- Fully operational even during prolonged power failures
- Handled Uva, Central and North Western district reports
- Connected Colombo HQ with multiple mobile operators
- Carried cross-district coordination alerts

7.2.2 Repeater Hosts and Infrastructure Continuity During the Crisis

The availability and continuous operation of VHF repeater infrastructure proved to be a critical enabler of national-level emergency coordination during Cyclone Ditwah. RSSL's ability to interconnect field-deployed teams with Colombo-based coordination centres depended heavily on these repeater systems remaining operational under extreme conditions.

RSSL extends its sincere appreciation to the Airports and Aviation Services (Sri Lanka) Limited (AASL) and the Independent Television Network (ITN) for hosting and sustaining repeater facilities at their transmission sites. Despite severe weather, access limitations, and power challenges, officers and technical staff ensured these sites remained functional at moments of national importance.

The ARCSN Gammaduwa repeater, located at a Derana Television transmission site in the Matale District, was severely affected by landslides and went off-air on 29 November. Access roads remain impassable and grid power unavailable, highlighting the vulnerability of repeater infrastructure and the urgent need for resilient power and access solutions.

7.2.3 VHF monitoring stations

There were more than half a dozen licensed amateurs supporting the operation although they couldn't be deployed on field. They monitored the traffic, kept logs and relayed back to the main coordination centre at TRCSL when the frequencies got clear.

Kamal 4S7AB, Hemantha 4S7HP, Aruna 4S6AJA, Varuna 4S6VNN, Yohan 4S6YTM, Ravindu 4S6RVD, were on the bands and helping coordination work almost throughout the operation.

Tharanga 4S6TMP and Jaliya 4S7JL took turns to standby on repeaters and make sure that the stations operating overnight were not exhausted. They too wanted a moral boost that they are not alone in this endeavour.

It must be highlighted that Siri 4S7SA, Jaliya 4S7JL, Jayantha 4S5SC and Ron 4S7RO were active on Echolink covering all modes and forms of being connected, although some of them were many thousands of miles away.

8. LOGGING AND RELAYING OF EMERGENCY MESSAGES

During the Cyclone Ditwah emergency communication operation, all deployed teams were encouraged to follow a structured message-handling format when transmitting and receiving traffic. This approach was intended to ensure clarity, traceability, and accuracy when relaying critical information to national authorities.

During the initial high-tempo phase of the operation, message traffic volumes from field locations occasionally exceeded the capacity for strict adherence to structured formats. As operations stabilized, all teams progressively adopted disciplined message-handling practices.

The 4S7RS/TRC coordination station played a central role in reformatting incoming traffic into standardized, concise messages prior to escalation to authorities, ensuring clarity, accuracy, and avoidance of ambiguity at decision-making levels.

The standardized format used for official handover of information was as follows:

<Date>, <Time>, <Messaging Station>, <Message From>, <Message To>, <Message Content>

This disciplined approach significantly reduced the risk of misinterpretation, enabled efficient logging, and supported timely decision-making during the emergency response.

The examples provided below illustrate the nature, urgency, and severity of the emergency communications handled by RSSL and ARCSN during the Cyclone Ditwah operation.

8.1 Redacted Message Log Samples

8.1.1 Chilaw Hospital (30 Nov)

> *“Ground floor flooded. All patients shifted upstairs. Require generator fuel urgently.”*

8.1.2 NWP Police Division (30 Nov)

> *“Unable to reach Regional Command. Establishing VHF-only operations. Request additional handhelds.”*

8.1.3 Kotmale AG Office (1 Dec)

> *“36 relief camps active. Several cut off. Food supplies low. Request DMC coordination.”*

8.1.4 Girandurukotte Divisional Office (1 Dec)

> *“Mahaweli river rising dangerously. Evacuation requested for low-lying zones.”*

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9. SAFETY, WELFARE & DUTY-OF-CARE MEASURES

RSSL followed globally accepted EmComm safety protocols for all deployments.

9.1 Before Deployment

- Risk briefing
- Identification checks
- Equipment audit
- Weather alerts
- TRCSL/SLAF authorization
- Contact details of family members shared with RSSL officials

9.2 During Deployment

- Operators instructed to avoid high-voltage zones, unstable structures, and floodwater
- Mandatory 2-hour check-ins
- HF/VHF failover procedure
- On-site anchor points for temporary antennas
- Ensuring no interference with public-safety channels

9.3 After Deployment

- Debrief with operators
- Submission of message logs
- Sleep/rest cycle
- Follow-up psychological wellbeing check for operators
- Informal get together to relax, discuss the outcomes of the project.

10. EQUIPMENT USED IN THE OPERATION

10.1 TRCSL Headquarters

- VHF/UHF base stations
- Grid power (SMPS)

10.2 Field Stations

- Dual-band handheld radios
- Mobile VHF rigs
- Gasoline Generators
- 40m dipole antennas
- Coax spares, rope & accessories

11. LESSONS LEARNED

Cyclone Ditwah reinforced the importance of amateur radio in national disaster response.

11.1 Technical Lessons

- Need additional portable VHF rigs for field officers
- HF NVIS antennas required for stable short-distance propagation
- More repeaters required in flood-prone districts
- Battery backup/offgrid power kits essential during multi-day grid failure
- Digital modes like PACTOR or WinLink should be established and trained

11.2 Operational Lessons

- DMC–RSSL unified message format should be standardized
- Inter-agency communication improves response time
- More radio amateurs needed in Northern, Eastern, Uva districts

11.3 Policy Lessons

- Portable operations should be permanently authorized
- TRCSL and DMC should maintain active EmComm coordination with RSSL
- Amateur radio exam syllabi should include digital/analogue EmComm systems

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12. RECOMMENDATIONS FOR FUTURE EMERGENCY PREPAREDNESS

This section outlines forward-looking proposals for national readiness.

12.1 Create a Permanent RSSL–DMC EmComm Partnership

Propose:

- Formal MoU between RSSL and DMC
- Establish a permanent amateur radio station at DMC HQ
- Establishing Amateur Radio Shacks at strategically important District DMC Offices
- Joint simulations twice per year
- Integration into DMC warning systems

12.2 Establish District EmComm Nodes

RSSL proposes to deploy:

- 10 solar-powered HF/VHF portable stations (Go-Kits)
- South Asia’s first Winlink gateway
- Weather-telemetry nodes for LoRa APRS

12.3 Public Awareness & Training

- Workshops for Scouts, Guides, universities
- Community demonstrations
- Amateur radio certification pathway for volunteers
- Technical training on emergency communication

12.4 Strengthen Repeater Network

- Add field repeaters in flood/landslide-prone regions
- Expand the linked VHF repeater network to North and East Sri Lanka
- Protect infrastructure with backup power & surge protection

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12.5 Improved Message Standardization

The Cyclone Ditwah operation reinforced the importance of clear, standardized message handling during high-volume emergency communications. While teams operated professionally under pressure, opportunities were identified to further enhance efficiency and consistency.

1. RSSL recommends adopting a single, nationally recognized emergency message template aligned with Incident Command System (ICS) principles.

   Introduce tiered message priority levels to improve traffic management:

   - **Priority 1:** Life-threatening / Immediate action required
   - **Priority 2:** Urgent operational or logistical matters
   - **Priority 3:** Situational updates and general information

2. Develop and distribute standardized message forms in both printed and digital formats to support field and coordination station use.

3. Assign dedicated message-logging operators at coordination centres to ensure accurate and consistent record-keeping.

4. Conduct post-event reviews after major deployments to capture lessons learned and update procedures accordingly.

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13. SUPPORT RSSL

Strengthening Sri Lanka's national emergency communication capacity is essential to safeguarding lives and coordinating effective disaster response. Over several decades, and most recently during tsunamis, floods, cyclones, and nationally coordinated preparedness exercises, the Radio Society of Sri Lanka (RSSL) has consistently demonstrated that amateur radio remains a critical and resilient communication asset when conventional systems fail or become overloaded.

Through the dedication of trained volunteer operators and the deployment of portable HF/VHF systems, RSSL has provided reliable communication links between affected communities, government authorities, and national coordination centres during periods of severe infrastructure disruption.

With continued support from IARU member societies/governments, emergency communication partners, and international donors, RSSL is positioned to significantly expand Sri Lanka's emergency communication resilience. Such support will enable faster deployment, wider geographic coverage, improved interoperability, and sustained operations during prolonged emergencies.

RSSL looks forward to strengthening partnerships in service of the global humanitarian mission of amateur radio, ensuring that, when disasters strike, vital communication channels remain available to protect lives and support coordinated response efforts.

To enhance national emergency communication readiness for future crises, RSSL respectfully seeks assistance in procuring the following essential equipment.

Note:
The below list given in Appendix A represents critical baseline requirements to support nationwide HF/VHF voice and digital emergency communications, repeater resilience, and off-grid field deployments. Final quantities and models may be adjusted in consultation with donors, regulators, and operational partners to align with availability and evolving operational needs.

Multiple equipment options from different vendors have been added for comparison purposes; not all of them need to be purchased.

APPENDIX A – URGENT EQUIPMENT REQUIREMENTS

Amateur Radio Equipment for Emergency Communication					
Specimen Equipment List					
Description	**Make**	**Model**	**QTY**	**Price (USD)**	**Reference Link 1**
HF amateur radio transceivers	Yaesu	FT-710 AESS	10	1150.00	https://www.dxengineering.com/parts/ysu-ft-710-aess
	Icom	IC-7300MK2	10	1810.00	https://www.icom.co.jp/lineup/products/IC-7300MK2/
	Kenwood	TS-590SG	10	1900.00	https://www.kenwood.com/usa/com/amateur/ts-590sg/
VHF/UHF amateur radio base stations (Analogue FM)	Yaesu	FTM-150ASP	15	350.00	https://www.dxengineering.com/parts/ysu-ftm-150rasp
	Icom	ID-5100D	15	560.00	https://www.dxengineering.com/parts/ico-id-5100a-d
	Alinco	DR-735T	15	300.00	https://www.dxengineering.com/parts/alo-dr-735t
Hand-held VHF/UHF radios (HTs)	Yaesu	FT-65	30	110.00	https://connect.yaesu.com/indivisual/items/ft-65/
	Icom	ICOM ID-50E Handheld	30	430.00	https://www.wimo.com/en/icom-handheld-transceiver-id-50e
	Kenwood	Kenwood TH-D75E D-Star handheld radio	30	1023.00	https://www.wimo.com/en/th-d75e
Antennas	Diamond	X300A Dual Band Antenna	10	150.00	https://www.dxengineering.com/parts/dmn-x300a
	Diamond	F22 VHF Antenna	5	115.00	https://www.dxengineering.com/parts/dmn-f22a
	Yaesu	Yaesu YA-30 Broadband HF Folded Dipole Antennas	10	300.00	https://www.dxengineering.com/parts/ysu-ya-30
VHF FM Repeater	Yaesu	Yeasu DR-2X Repeater	4	1800.00	https://www.dxengineering.com/parts/ysu-dr-2x-lan
	Kenwood	Kenwood Nexedge NXR-1700E Repeater	4	2750.00	https://www.bhphotovideo.com/c/product/1837366-REG/kenwood_nxr_1700e_repeater_analog.html

Duplexer	Sinclair	Sinclair Q202GR-2 VHF Duplexer	4	3000.00	https://www.sinctech.com/products/duplexer-base-station-q-circuit-4-cavity-rack-mount-132-148-mhz
	Telewave	Telewave TPRD-1444CM	4	4000.00	https://www.telewave.com/wp-content/uploads/2025/03/TPRD-1444C-1444CM-TWDS-6005-250123.pdf
Repeater Accessories	Yaesu	Yaesu WIRES-X HRI-200 High Performance Digital and Analog Internet Linking Interfaces HRI-200	4	125.00	https://www.dxengineering.com/parts/ysu-hri-200
Power Supply units for HF and VHF transceivers	Astron	13.8V 30-40A Power Supply (230V input)	20	200.00	https://www.dxengineering.com/parts/alo-dm-430tr
Coaxial Cables	Field	RG213	300m	1300.00	https://www.dxengineering.com/parts/dxe-213u-1000
	Repeater Site	1/2in Heliax Andrews Coax	400m		
Solar Panels	Offgrid power	Portable solar panels for off grid power			https://www.dxengineering.com/parts/bip-bsp-100-lite
Batteries and Generators		12 V Deep Cycle, LiFePO4 batteries, and Gasoline Generators for Field Operation,	15	300.00	https://www.dxengineering.com/parts/fmn-w03082 https://www.dxengineering.com/parts/ult-9012-021
Antenna masts	Field deployment	Telescopic antenna masts for easy transport and field deployment	10	385	https://www.wimo.com/en/telescopic-mast-portable-transport-length-150cm#?816=7464&817=13306

APPENDIX B – Operator List

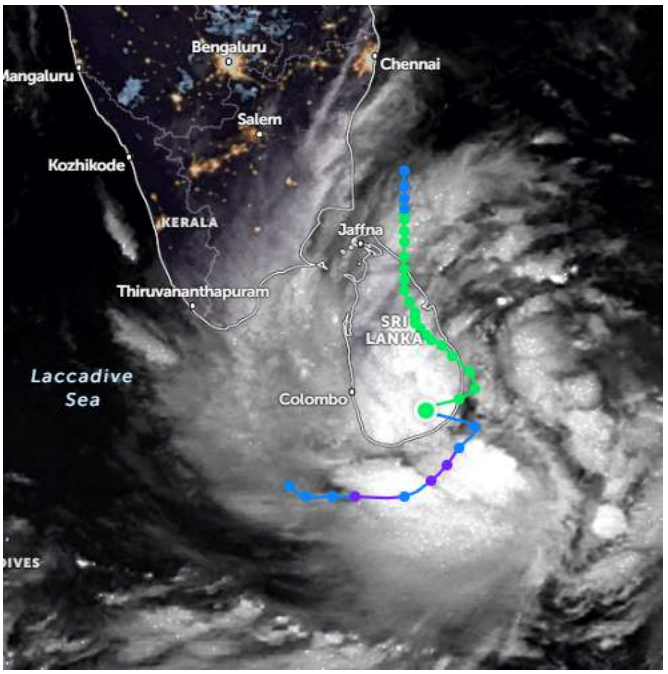
Operator	Callsign
Victor	4S7VK
Mahinda	4S7PA
Prarthana	4S7PL
Iresha	4S7NYL
Dammika	4S7DF
Rampala	4S6RML
Mike	4S5MST
Tithira	4S6TKA
Ruwan	4S7RWN
Ifthar	4S6MIR
Dimuthu	4S7DZ
Manjula	4S7MAN
Singhe	4S6LEO
Chamindu	4S6CMU
Siri	4S7SA
Ron	4S7RO
Jaliya	4S7JL
Hemantha	4S7HP
Kamal	4S7AB
Yohan	4S6YTM
Varuna	4S6VNN
Tharanga	4S6TMP
Ravindu	4S6RVD
Aruna	4S6AJA
Jayantha	4S5SC
SWL	Timothy
SWL	Thevjan
SWL	Buddhila

Special Mentions

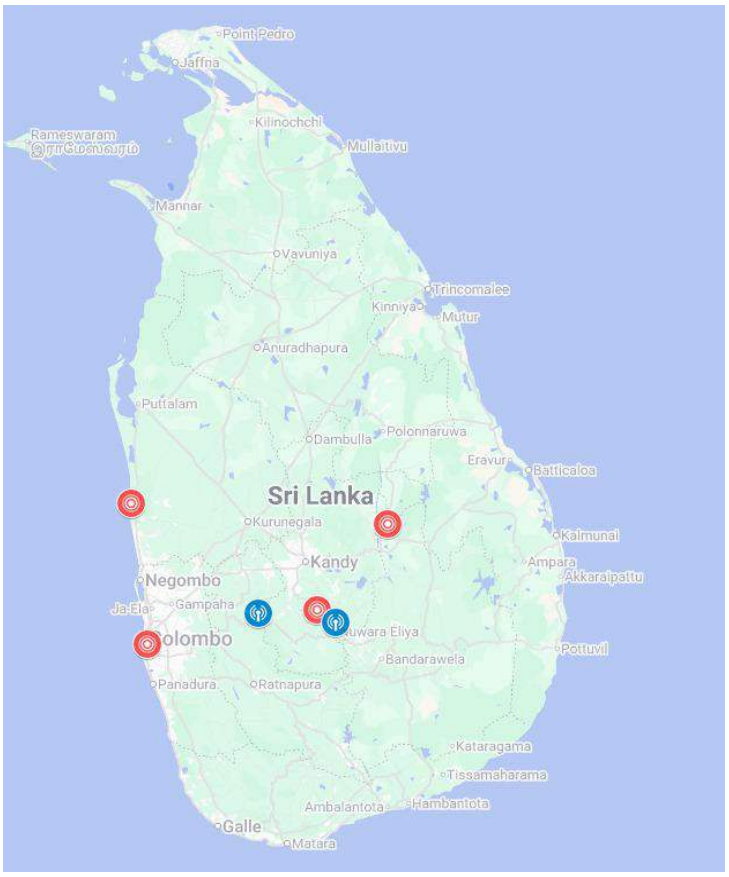
1. Mr. Waruna Sri Dhanapala - Secretary, Ministry of Digital Economy
2. Mr. S. Gunanandana - Director, Spectrum Management, TRCSL
3. Mrs. Augusta Gayanthini - Asst. Director, Director, Spectrum Management, TRCSL
4. Mr. Davishka Hasaranga - TRCSL
5. Mr. Denuka Chamath - TRCSL
6. Mrs. Indu Jayathilake - DMC
7. Dr. Upendra Peiris - CEO Orel IT
8. Mr. Hisham Sally - Orel IT
9. Mr. Malith Galketiya - Orel IT
10. Mr. Vishwa Liyanapathirana - Orel IT
11. Air Vice Marshal Dammika Dias - SLAF
12. Wing Commander V. Silva - SLAF

APPENDIX C – Photos and Images

- Cyclone track map



- Field Deployments



- TRCSL HQ operations room

- Field deployment photos
    - Chilaw

- Girandurukotte

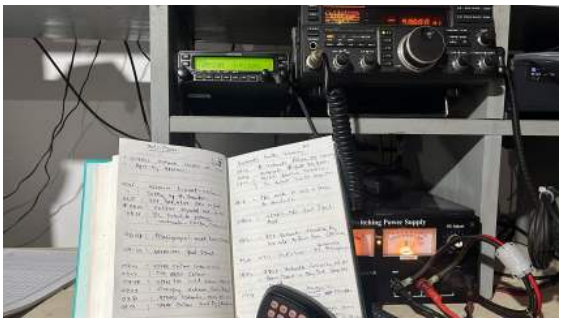



- Kotmale





- Operators Monitoring and log keeping from home



APPENDIX D – DMC Situation Report

Disaster Management Center

Current Situation Report on 2025.12.16 at 0600 hrs

No.	Districts	Families	Persons	Deaths	Missing	Fully House damage	Partially House Damage	Safety center Details		
								No of Safety centers	Families	Persons
1	Puttalam	77,432	275,501	36	4	637	8,789	4	41	121
2	Badulla	26,793	91,041	88	11	596	8,070	155	6,038	21,474
3	Monaragala	1,549	5,336	4	-	38	517	-	-	-
4	Matale	7,288	25,813	29	8	247	3,773	42	1,334	3,938
5	Colombo	86,150	330,464	9	1	88	5,574	3	25	87
6	Batticaloa	12,469	37,389	4	-	11	787	-	-	-
7	Kegalle	25,348	87,854	32	39	265	13,681	91	2,503	7,197
8	Trincomalee	27,337	90,489	-	-	47	1,287	-	-	-
9	Anuradhapura	22,813	75,182	13	-	245	3,058	-	-	-
10	Mullaitivu	22,918	67,340	-	-	32	1,268	-	-	-
11	Kilinochchi	9,125	28,725	-	-	1	447	-	-	-
12	Ampara	6,942	23,781	8	-	111	509	-	-	-
13	Jaffna	1,199	3,678	3	-	2	462	-	-	-
14	Polonnaruwa	11,994	42,183	3	-	157	4,124	2	29	114
15	Kandy	51,598	175,305	237	73	2,013	14,798	218	5,739	16,317
16	Rathnapura	19,253	74,829	2	-	6	7,537	4	9	28
17	Kurunegala	27,447	93,318	61	11	603	4,715	19	389	1,256
18	Nuwara Eliya	19,501	62,394	89	35	767	3,748	192	6,225	19,719
19	Matara	-	-	-	-	1	462	-	-	-
20	Hambantota	-	-	1	-	5	285	-	-	-
21	Galle	-	-	1	-	1	976	-	-	-
22	Kalutara	2,746	9,660	2	-	1	1,323	-	-	-
23	Mannar	23,704	77,694	4	-	70	1,517	-	-	-
24	Gampaha	16	46	17	1	256	8,838	1	16	46
25	Vavuniya	-	-	-	-	-	-	-	-	-
	Total	**483,622**	**1,678,022**	**643**	**183**	**6,200**	**96,545**	**731**	**22,348**	**70,297**

***Source**: National Disaster Relief Services Centre*

Cl R.D.Dalugoda
Disaster Management Center
For Director General

Link:
https://www.dmc.gov.lk/images/dmcreports/Situation_Report_at_0600hrs_on_2025__1765845711.pdf

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