Workshop on Emergency Telecommunication for Disaster Management in Sri Lanka

Colombo, 23 March 2006
What is an Emergency?

By definition, an *Emergency* is a situation requiring urgent response. Depending on the circumstances, initial response will be provided by whoever is present, using whatever means are available.

Any other additional intervention deemed necessary can be mobilized through *Telecommunications*.

An emergency situation might develop into a *Disaster*, either due to its nature, or as a consequence of insufficient response to the initial event.
ITU Constitution:
ITU shall “promote the adoption of measures for ensuring the safety of life through the cooperation of telecommunication services”.
Working Method

• Introduction of participants

• Presentations

• Discussions
  clarifications and items
  from the presentations
  Needed actions and concerns

• Conclusions and Recommendations
  Action Items, Next Steps
Participant Groups

• ITU / ADPC
• Government Institutions / Ministries
• Telecom Operators
• NGOs
• TRCSL
Work Method

- Visits and discussions with relevant agencies
- Gathering and study of relevant information
- Field visit (Habantota)
- Fusion of conclusions and recommendations
- Writing the report
Tsunami Experiences

• Unharmed public systems were congested
• Power / Fuel, the main concern after repair
• Informal cooperation between operators
• Radio Amateurs opened service
Institutional Framework

Sri Lanka Disaster Management Act.

Parliament Select Committee on Natural Disasters

Road Map for Disaster Risk Management by DMC
NGOs
Red Cross
  - Big player, building own NDMC

Sarvodaya
  - Local presence

LIRNEasia
  - Use their expertise

UN
  - Use UNDP as umbrella
Leading Thoughts:
- Rely on proven established technologies!
- Enhance GSM and backbone infrastructure!
- Adapt solutions to the country!
- Cost of Ownership, include O/M!
- Standardized solutions are cheaper!
DICOM Team
Disaster COmmunication Management Team

Assure emergency comm. for selected users
Promote resilient public telecommunication
Liaise with Emergency and Disaster organizations
Initiate Workgroups to create solutions
Identify and Educate ICT Technicians and Radio Operators

Use Radio Amateurs education packages

Assign responsibilities to the individuals

Regular Communication Drills
Satellite Phones
Possible roaming

Emergency Alert via Broadcasting
Remote activation of alerts and messages

Police Radio Channels
More efficient use
Operator Recommendations

- Contingency Initiatives
- Establish Priority!
- Advocate Secure SMS
- Service Level Agreements
- Enable National Roaming
Multi Hazard Early Warning System
Retreiving Sensor Information
Real Time ??????

Dissemination of Warnings to the Public
Parallel systems
Broadcasting
Television
SMS/Cell Broadcast
Police’s Radio Systems
Red Cross / UN
Elements of an Early Warning System

Observation

Data analysis

Prediction

Risk assessment

Warning formulation

Dissemination to at-risk communities

Community response

Emergency response plans
Public education/ awareness
Mitigation programs
All information available...Ok?
Information Fusion ...
Sharing the information ...
**Swedish telecoordination group**

| Post- och telestyrelsen       | Banverket       |
| Telenor                       | TDC Song        |
| TeliaSonera fast nät          | TeliaSonera mobilnät |
| Tre                           | Tele2           |
| Vodafone                      | Teracom         |
| Stokab                        | Stadsnätsföreningen |
USA Wireless Priority System 2002

Department of Homeland Security

National Communications System

Agency users

forced marketing

subscriptions

Service agreements

CSC/Dyncorp

T-mobile

AT&T Wireless

Cingular

Nextel

Investment

Operations

Priority upgrade projects

Wireless priority feature development contract

Turn-key contract

Equipment upgrade

GSM Vendors
Differential Channel Allocation

- Reserve TCHs for high prio subscribers
Efficient Priority Handling (Preemption)

- Prio subscribers can remove lower prio subscribers from a cell
- Makes 2 attempts to handover eligible calls to other cells
- On the 3rd attempt, the first found eligible call is disconnected
Roaming

"combined capacity"
Roaming

Individual capacities