

HazInfo, Sahana, Biosurv, etc

LIRNEasia at Five Years Beyond Typical Early Warning

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Taj Samudra, Colombo, Sri Lanka

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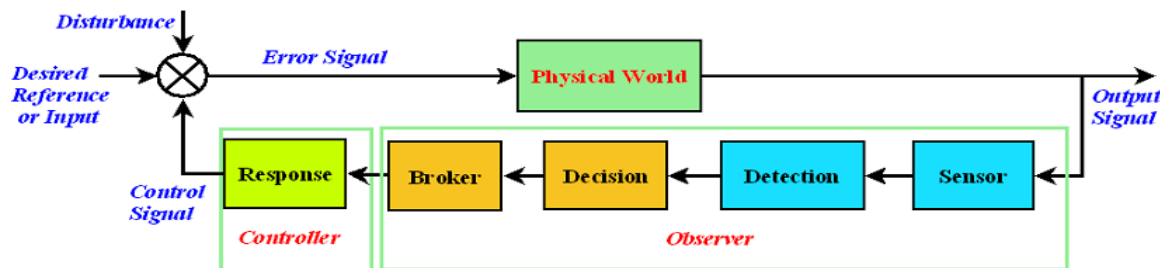
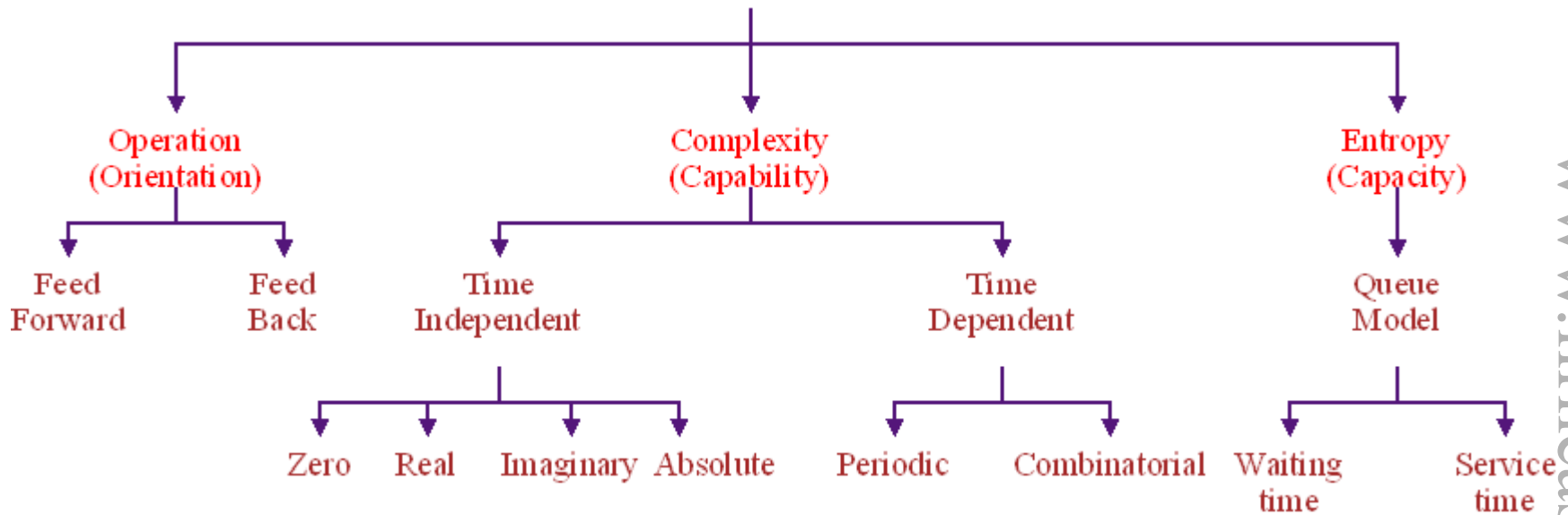
LIRNEasia

Learning Initiatives on Reforms for Network Economies

www.lirneasia.net

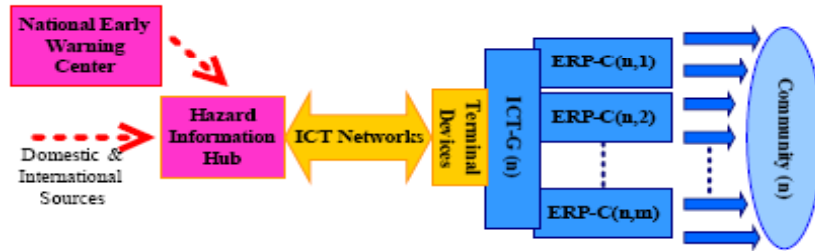
Towards a Typology of Integrated Functional Early Warning Systems

Definition [EWS] A chain of information communication systems comprising sensor, detection, decision, and broker subsystems, in the given order, working in conjunction, forecasting and signaling disturbances adversely affecting the stability of the physical world; and giving sufficient time for the response system to prepare resources and response actions to minimize the impact on the stability of the physical world.



Case studied used in classification problem

Community-based Last-Mile Hazard Warning System (HazInfo)



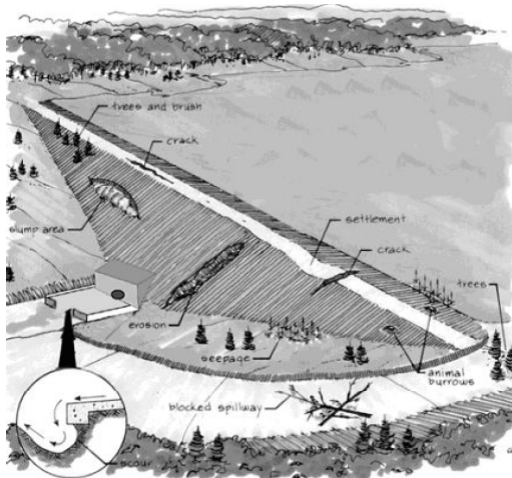
Samarajiva et al, 2005 - 2008

Traceability of Agriculture Markets (TraceAM)



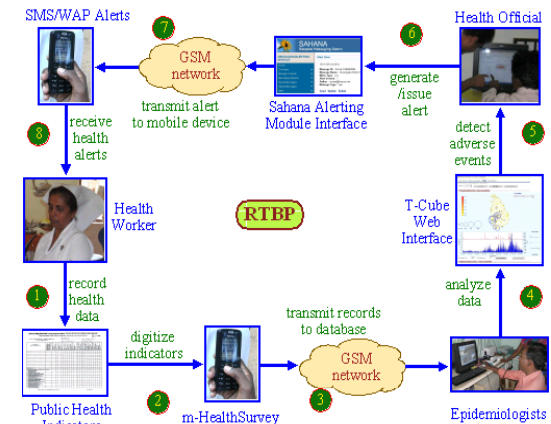
De Silva et al, 2007-2008

Dam Failure EWS (Dam-FEWS)



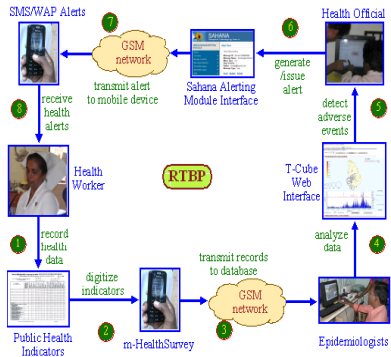
Goswami et al, 2005 - 2007

Real-Time Biosurveillance (RTBP)



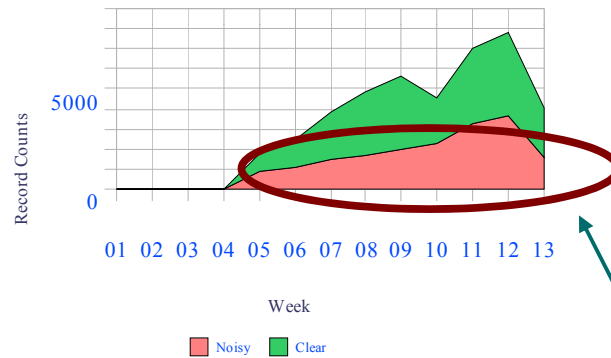
Waidyanatha et al, 2008 - 2010

Real-Time Biosurveillance Program

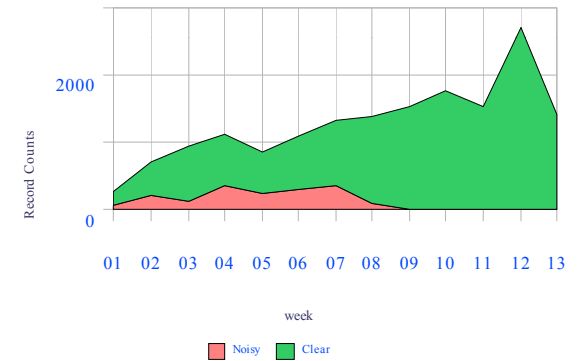


Clean/Noisy Data

Sri Lanka

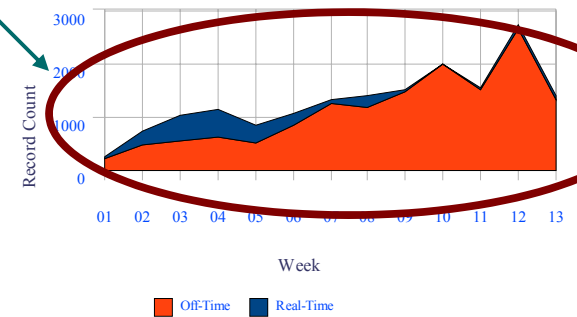
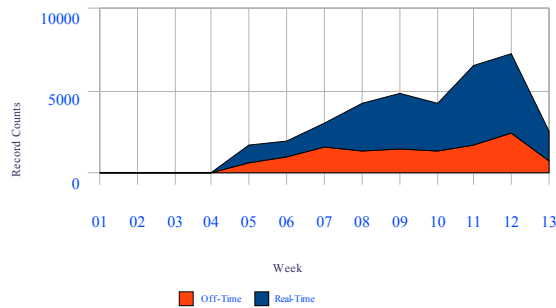


India

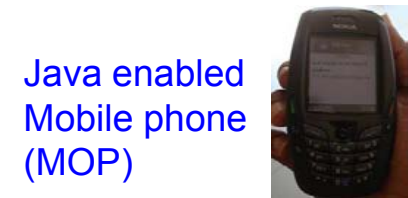
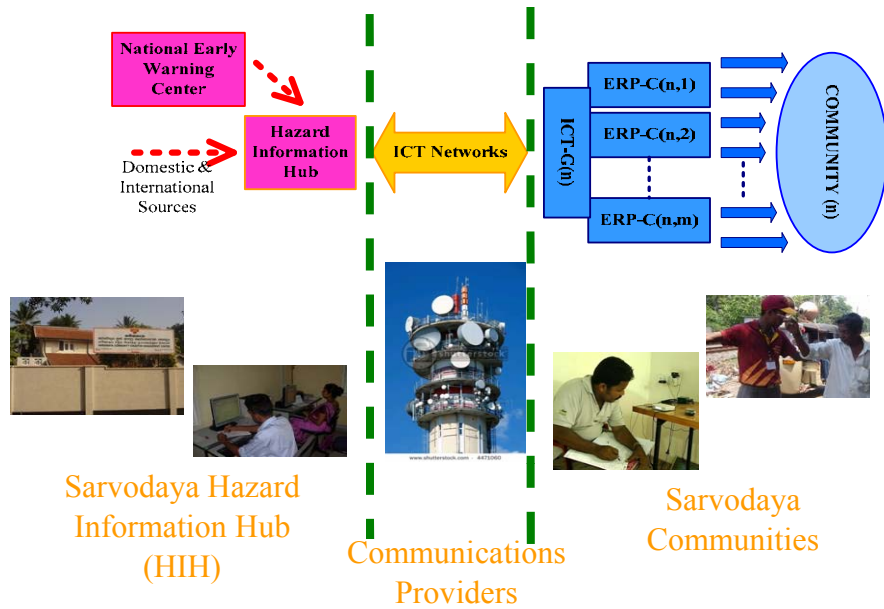


Need to solve

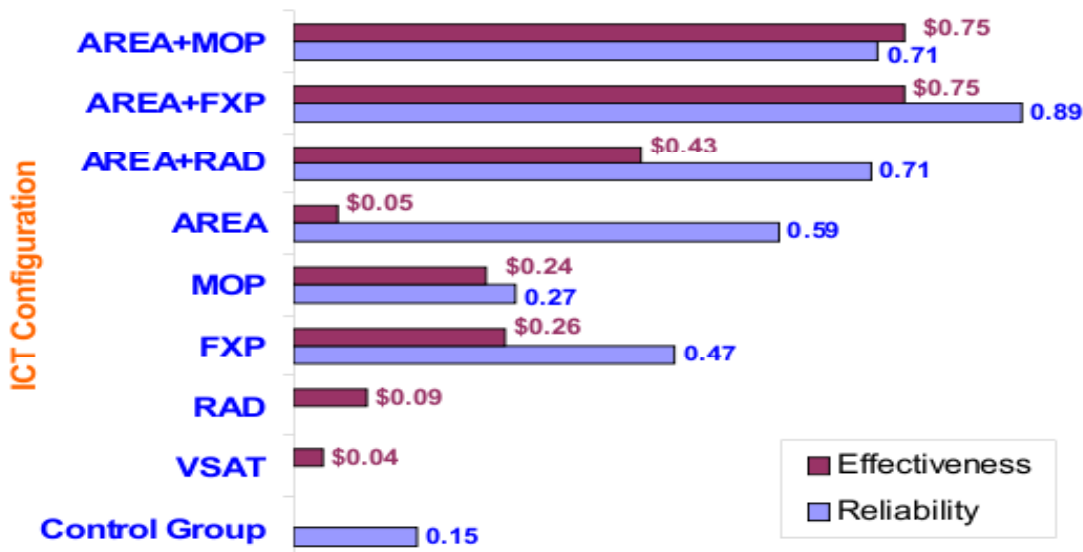
Real-Time/Off-Time



HazInfo – community based hazard warnings



Comparison of Reliability and Effectiveness of ICT as a Warning Technology in a LM-HWS



PPP Hotel Certification Project



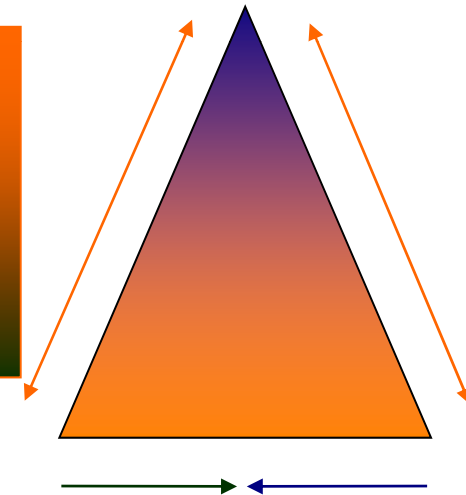
**Sarvodaya
(NGO)**

Sarvodaya: provides training and technology to build community disaster primed-resilient
Villages: provide local hazard information to HIH

Villages

Sarvodaya: provides training, technology and certification to hotels
Hotels: provide a sustainable income generation

Hotels



**Villages and Hotels are
disaster primedresilient**



Sahana Messaging/Alerting Broker

MESSAGING/ALERTING MODULE

- Home
- Consoles
- Manage Contacts
- Messaging Reports
- Survey Messages
- Stored Messages
- Alert
- New
- View
- Remove
- Templates
- Common Alerting Protocol

SAHANA MAIN

- Sahana Home
- Messaging/Alerting Module
- User Preferences

Logged In
User: sahana
[Logout](#)

Alert Information Resource Area

Message Identifier: Actual-1246440944

Sender: pdhs@nw.health.gov.lk

Status: Actual ? HELP

Message Type: Alert ? HELP

Source: Wayamba PDHS

Scope: Restricted ? HELP

Language: English

Category: Health Add

Event: Disease Outbreak

Priority: Low

Sender Name: Dr. Lukshman Edirisinghe

Headline: A Dengue outbreak is in eff

Description: A dengue outbreak is in effect for Kurunegala District of Sri Lanka. All Medical Officers are Advised to execute preventive measures.

Recipient List

Contacts

- [-] Groups
 - [-] Respere
- [-] Individuals
 - [-] Mifan
 - [-] Nuwan_W
 - [-] Mifan_M

Select Contacts

nuwan@lirneasia.net, +94773710394,
lukshman.edirisinghe@yahoo.com.au,
+947775551212

Select Delivery Type

Delivery Category	Delivery Type	Select
Short Text	SMS	<input checked="" type="checkbox"/>
	HF	<input type="checkbox"/>
	RDF	<input type="checkbox"/>
Long Text	Email	<input checked="" type="checkbox"/>
	Web	<input type="checkbox"/>
Voice Text	VoiceXML	<input type="checkbox"/>
	IVR	<input type="checkbox"/>

- Single input multiple output engine; channeled through multiple technologies
- Manage publisher /subscribers and Standard Operating Procedures
- Adopt global standards: EDXL/CAP
- Do direct and cascading alert, intra and inter jurisdictional alerting
- Designing short, long, and voice text messages
- Addressing in multi languages with natural language parsers

www.lirneasia.net



Proposal: Sahana data over HF spectrum

- ❑ Network outage
- ❑ Network congestion
- ❑ Leverage Nat'l HAMs
- ❑ For emergency coordinators
- ❑ Always on and ready to use
- ❑ Short, medium, & long range comm
- ❑ Frequency harmonization
- ❑ Content standards
- ❑ Constraints

