



MARITIME DOMAIN AWARENESS FOR MARITIME SECURITY



ARF WORKSHOP
INTERNATIONAL
COOPERATION IN MDA

INTEGRATED HEADQUARTERS OF THE MINISTRY OF DEFENCE (NAVY)
DTE OF NETWORK-CENTRIC OPERATIONS



Scope

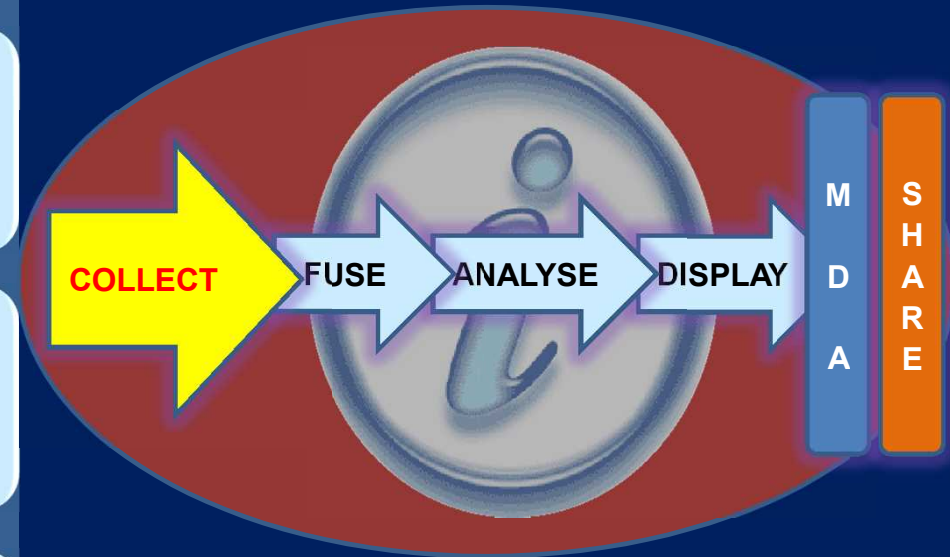


Maritime Challenges

Existing Setup

Future Developments

Conclusion





Maritime Environment in IOR



Region marked by conflicts, growing radicalisation, fragmentation & terrorism

Nations in the region are competing against each other to safeguard their interests

Significant extra-regional presence (Approx 120 Ships)



Other Challenges



Floating armouries with private security guards

Smuggling, Gun and Drug

R

Fragile environment necessitating constant Maritime Surveillance & Domain Awareness

Illegal Unreported & Unregulated Fishing

Natural Disasters





Maritime Terrorism - IOR



From the sea

**Indirect/ Direct attacks
ashore from sea**

At sea

**Indirect/Direct attacks
against ships at sea**



**MV LIMBURG
OCTOBER 2002
YEMEN
(AL-QAEDA)**



**SUPERFERRY 14
FEBRUARY 2004
PHILIPPINES
(RAJAH SULAIMAN
MOVEMENT)**





Accurate real-time information on all legitimate activities is necessary to filter out, identify and locate illegitimate operators amongst legitimate ones

Illegitimate operators hidden amongst legitimate ones



- Terrorists, pirates, drug & human traffickers
- Gun-runners, smugglers & marine poachers

Response to Challenges



Limited resources and gaps in information availability impinge upon overall maritime security, which includes offshore and coastal security

Indian Navy is institutionalising mechanism of available information sharing by integrating multiple agencies and sources

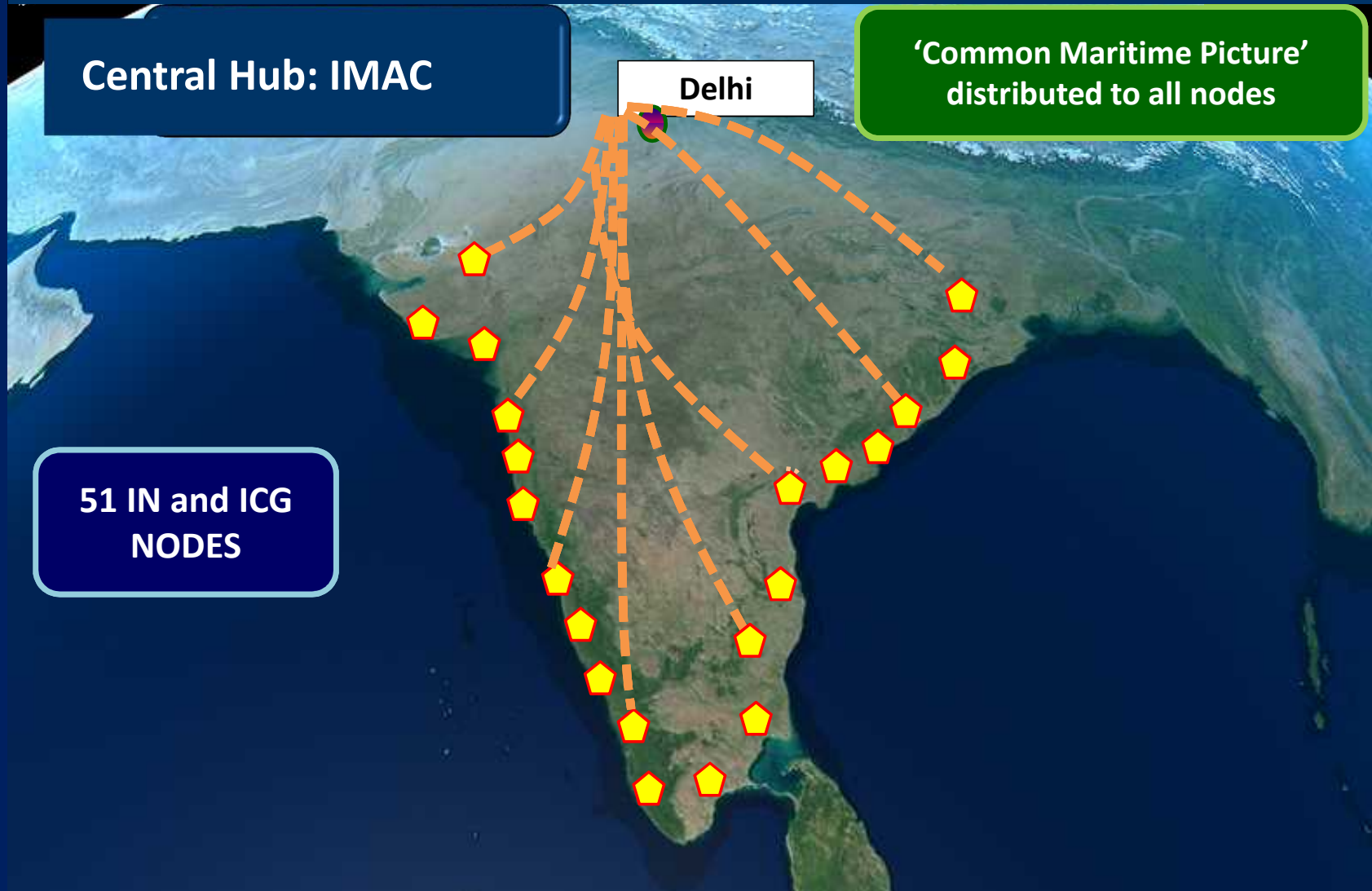
Analysed information disseminated to decision makers to anticipate threats and respond appropriately

DEPLOYMENTS

**GREATER
DOMAIN
AWARENESS**

**COLLABORATIVE
MECHANISMS**

National Command, Control, Communication and Information Network



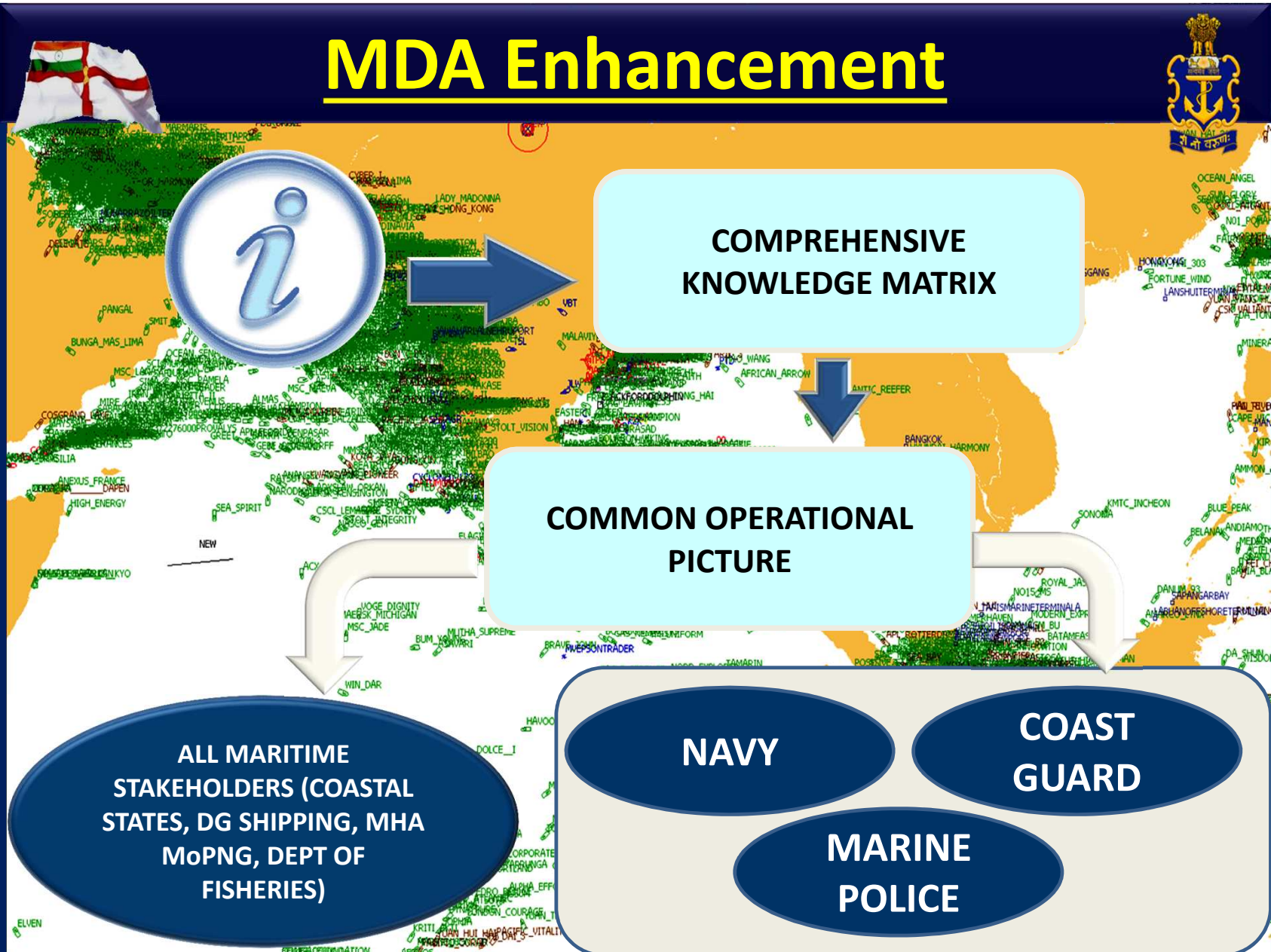
National Command, Control, Communication and Information Network

IMAC

- Nov 2014, IMAC at Gurgaon

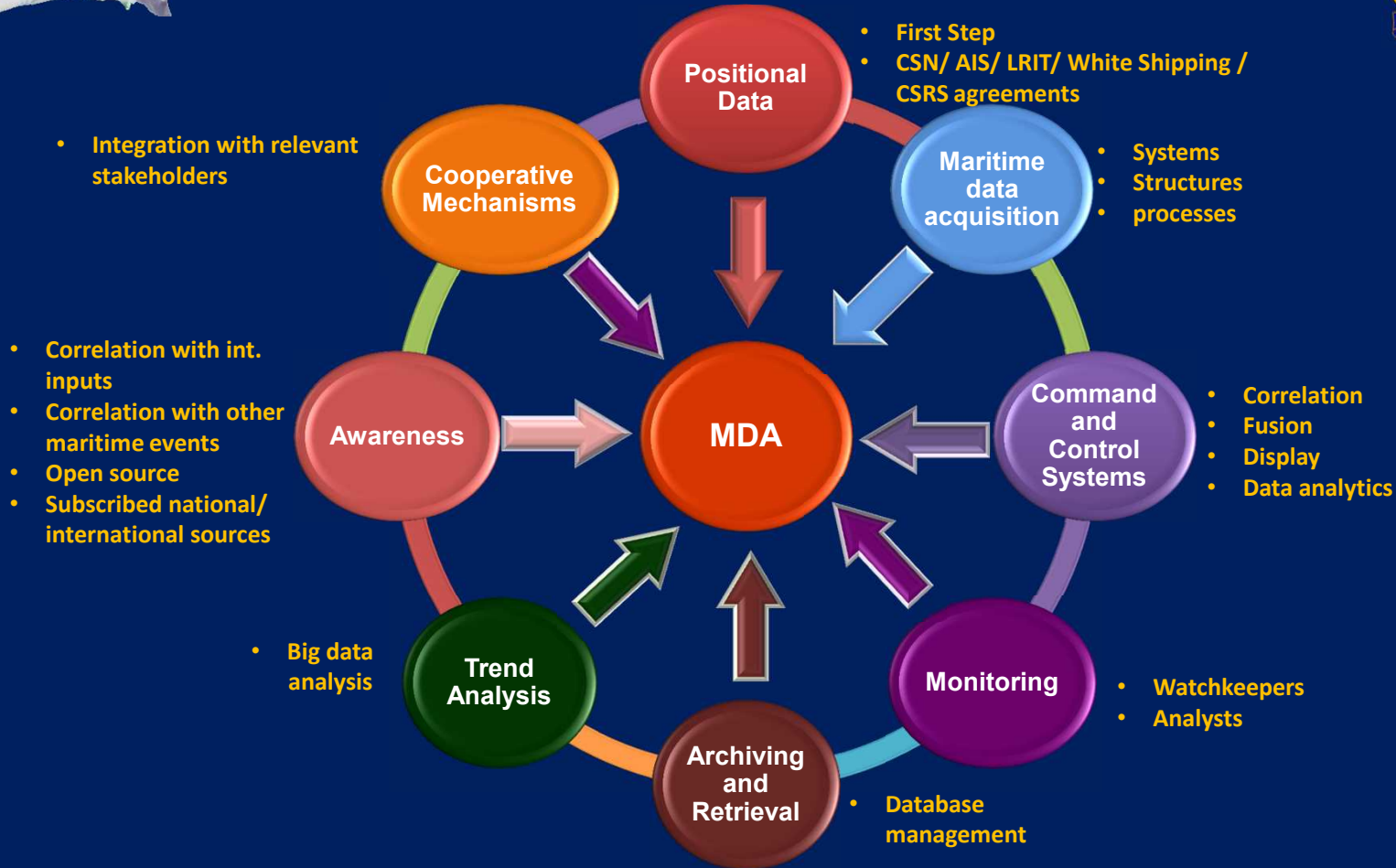


MDA Enhancement





MDA Development



TRANS NATIONAL COLLABORATION

Trans National nature of Maritime Domain

75 % of world maritime trade & 50% of world's daily oil consumption passes through int. straits bordering the rim of Indian Ocean.

Exponential rise in Container Traffic

Impossible for nations to monitor individually

Collaboration between countries essential





WHITE SHIPPING INFORMATION EXCHANGE



Mandate for execution of WSIE agreements/ MoUs

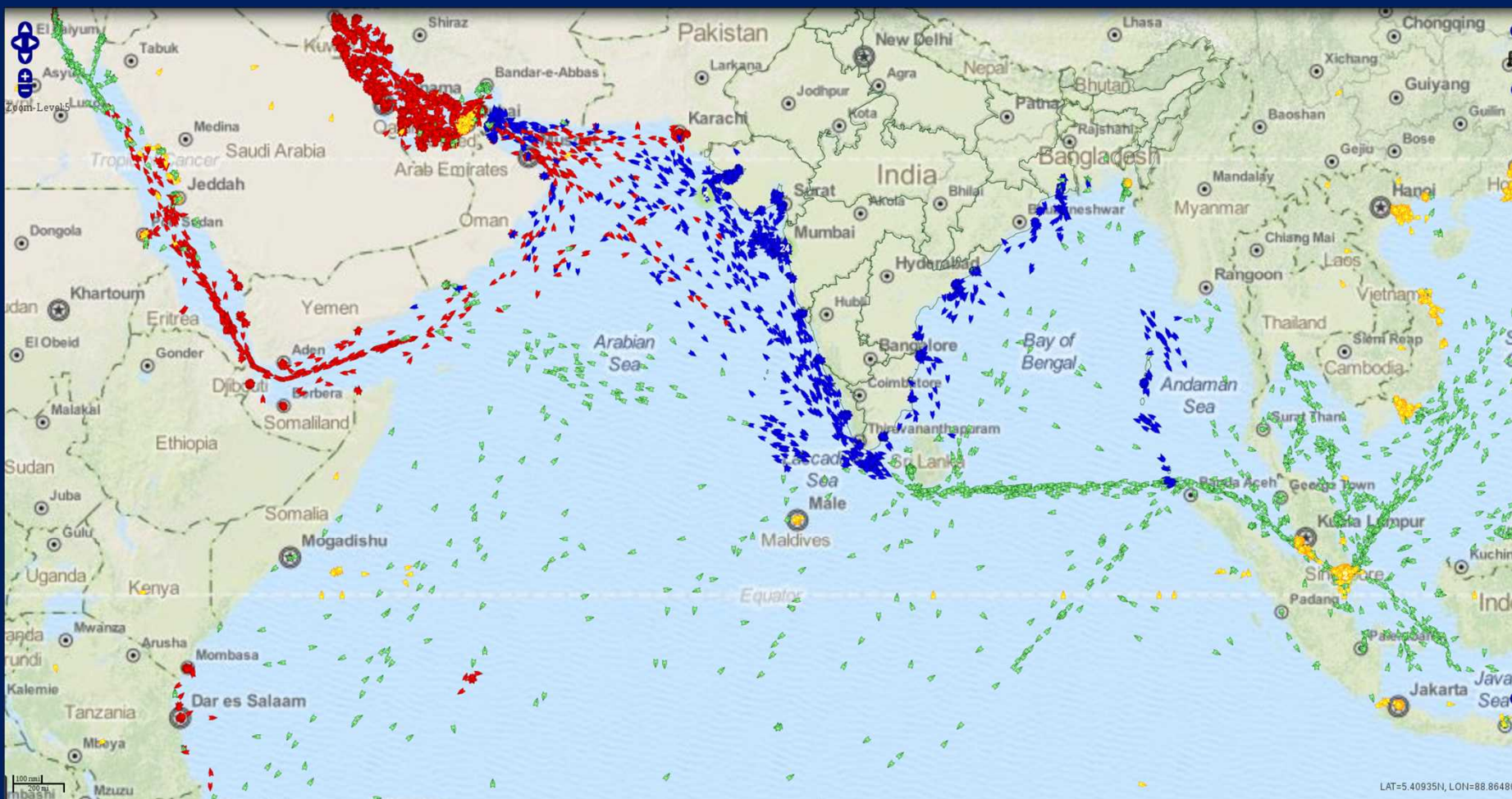
More than 35 countries identified for exchange of information

Agreements with a number of countries including the US, UK, France, Australia and some ASEAN nations; operationalized

MSIS being used



MERCHANT SHIP INFORMATION SYSTEM





UNCLASSIFIED NETWORK - MSIS



Web based Portal

Collation and Display of merchant ship information

Predominantly AIS based

Multiple other sources



UNCLASSIFIED NETWORK - MSIS



Website hosted on internet using Linux

Based on open source CMS – Drupal

Secured using Secure Sockets Layer (SSL)

Live Chat



UNCLASSIFIED NETWORK - MSIS





MSIS ANALYSIS TOOLS



Real time
Anomaly
Detection

Analytics

Long term
Trend
Analysis

Predictive
Analysis



VIRTUAL INFORMATION FUSION HUB



Hub for collation, fusion, analysis and exchange of maritime security related information in the IOR

Strong collaborative structure with partner nations

Will be co-located with IMAC

Operationalisation of Initial version by Oct 2018



CONCLUSION



Indian Navy's vision is to ensure safety and security of the waters around us and assist partners, by :-

- Synergy between stakeholders
- Tools for identifying threats
- Developing and disseminating an accurate Common Operational Picture through various means including information exchange mechanisms



Thank You