

Globální datové prostorové projekty – Přednáška 7A 25.11. 2020

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Situational awareness, information and analysis of complex humanitarian emergencies

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Guiding Questions

- What are key characteristics of a *complex humanitarian emergency*?
- What is *Situational Awareness* and how does this define analytical needs?
- What *approaches* does the HIU use in managing the flow of information and analytical products?
- What role do *Networks* of professionals play in this process?
- What general *conclusions* may be drawn for geospatial sciences in Africa?



Definition of Complex Humanitarian Emergencies

Standard definitional components:

- Breakdown in civil authority
- Besieged or displaced populations
- Impediments to delivery of assistance
- Social, political, or economic activities impeded

Also:

- Confluence of social, economic and natural shocks to livelihoods
- Cross-border elements



Context:

- Natural disasters,
- Economic crisis,
- Civil strife,
- Failed states



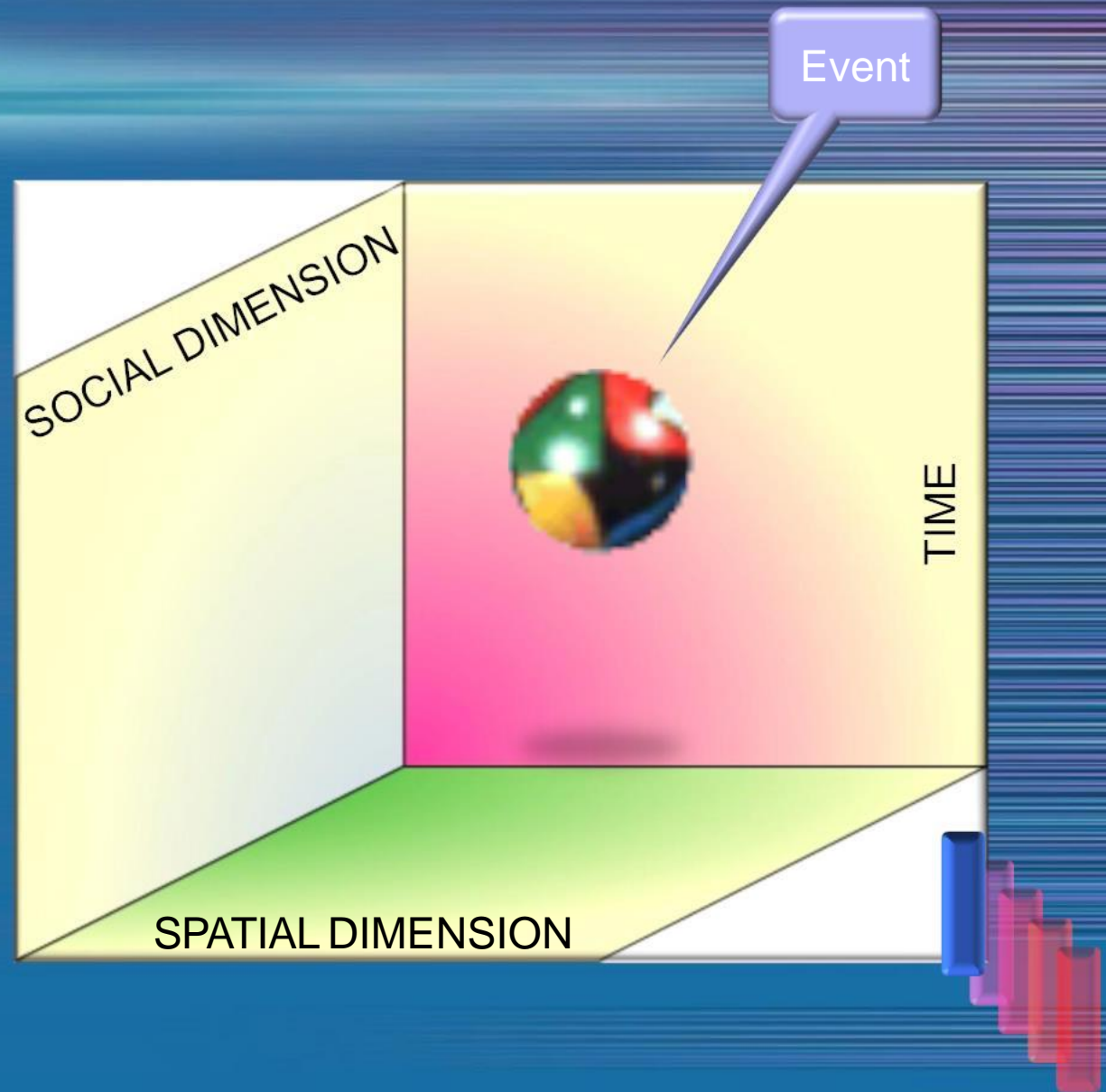
State failure and individual family insecurity

- Displacement
- Food insecurity
- Risk of life



Events and different levels of emergency

- Space
- Time
- Social status
 - Ethnic
 - economic



The time dimension

ADVENT

ONSET

RELIEF

RECOVERY

Information Needs:

Threats and Risks

Status of Human
Welfare

Economic activities

Key Infrastructure for
response

The time dimension

ADVENT

ONSET

RELIEF

RECOVERY

Information Needs:

- Key Event Locations
- Population and Demographic Characteristics
- Damaged Infrastructure
- Location of Response facilities
- Transportation and Logistical Infrastructure

The time dimension

ADVENT

ONSET

RELIEF

RECOVERY

Information Needs:

- Location of Humanitarian Response Efforts
- Location of Displaced Populations
- Categorization of Populations and Livelihoods at Risk
- Location of Relief Supplies and Support Facilities

The time dimension

ADVENT

ONSET

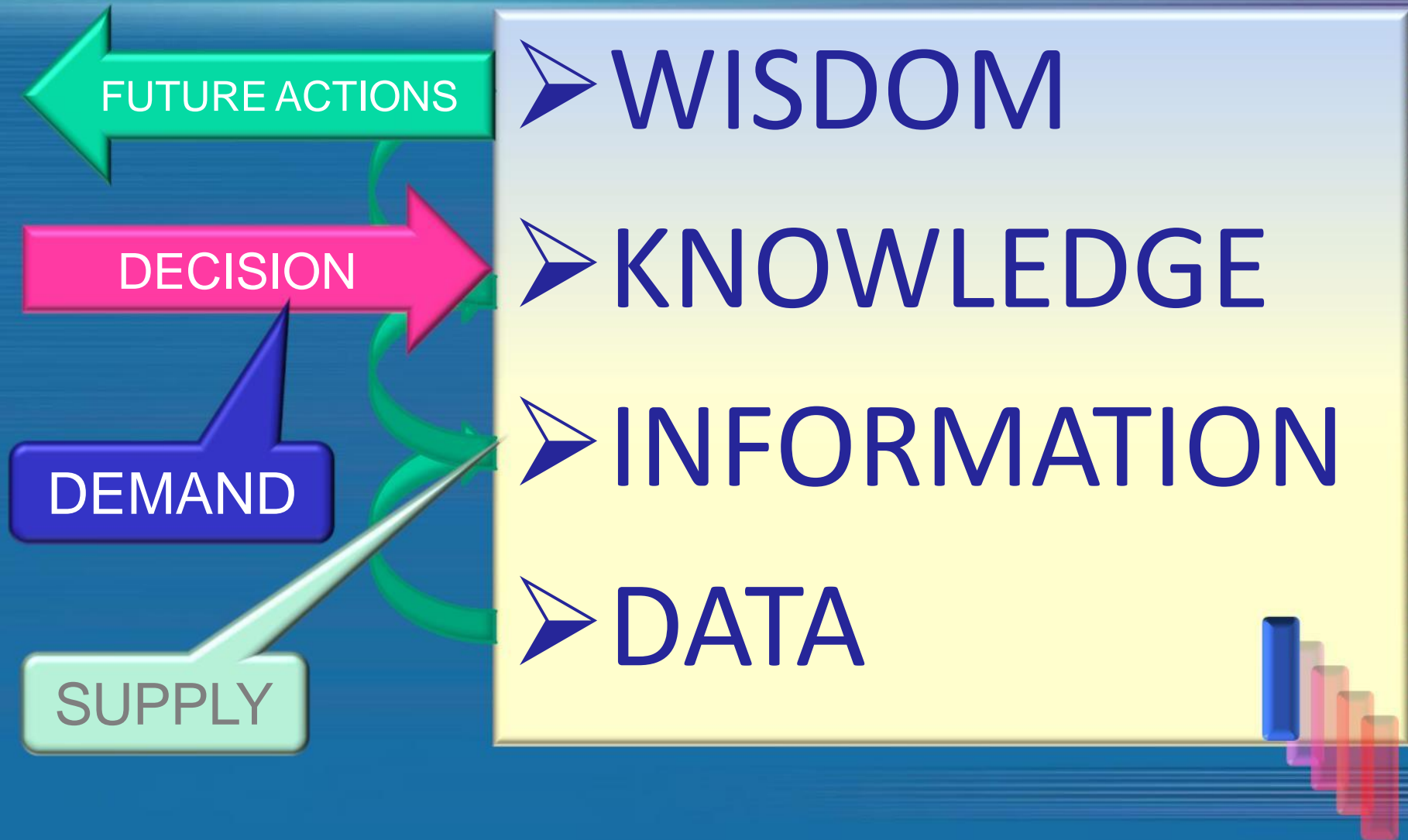
RELIEF

RECOVERY

Information Needs:

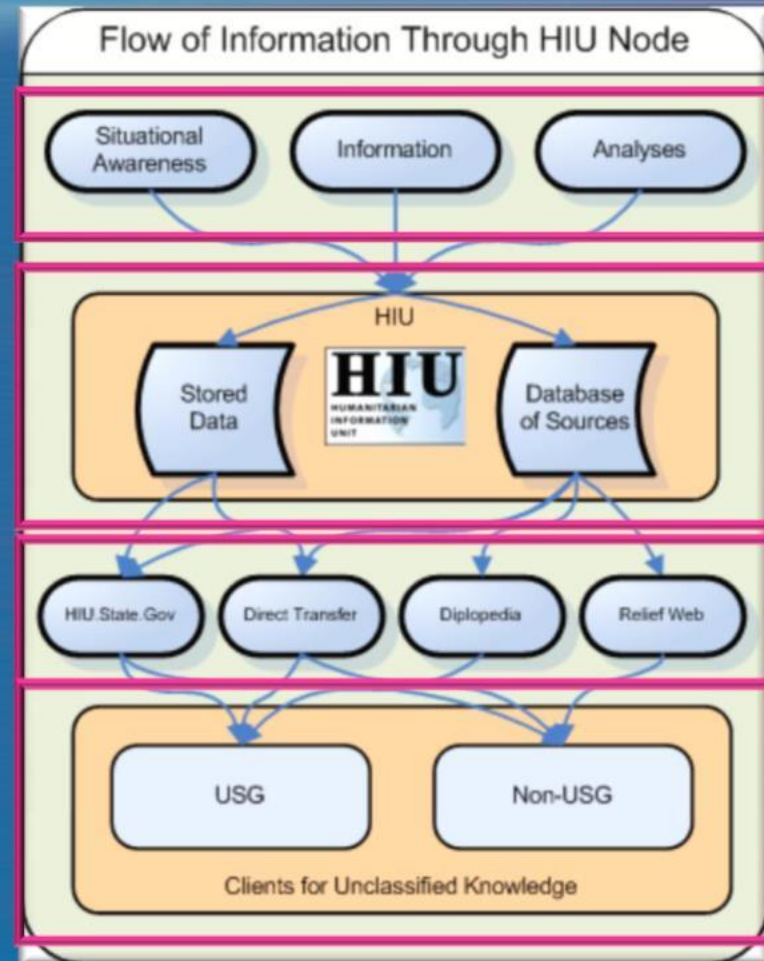
- Economic Data for Impact and Trend Analysis
- Population Movements & Resettlement Trends
- Livelihood Dynamics in Areas of Concern
- Climatic and Environmental Trends
- Recovery Program Characteristics and Zones of Coverage

Information to Decision-Making: Knowledge as a production function



Discovery, access, distribution: A Knowledge Map

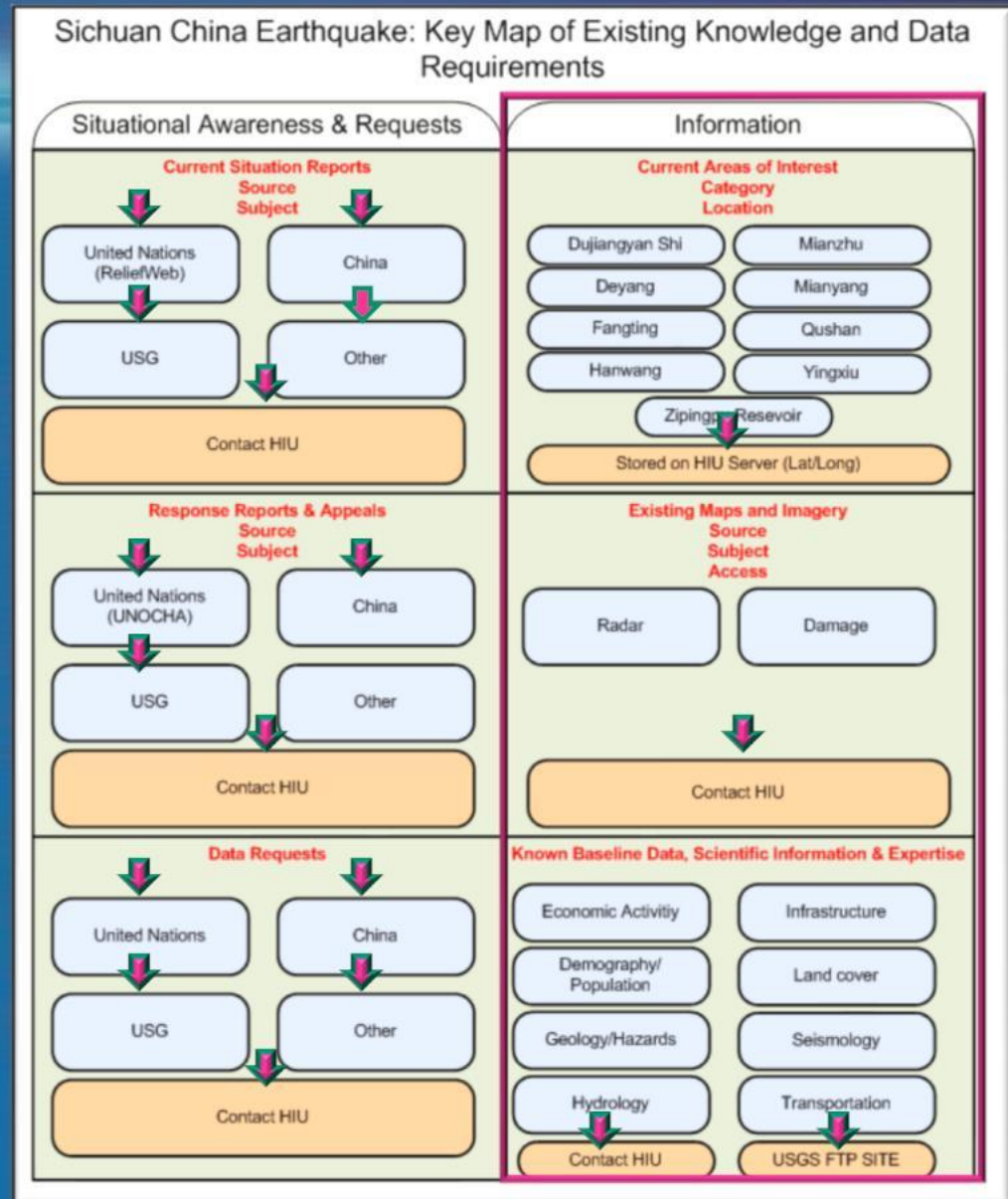
- Types of information products
- HIU as a node to access information
- Distribution Channels for information products
- Clients for information products



A Knowledge Map

Identifies:

- Actors & Information Sources
- Types of Information
- Means of Access to Data & Information



Situational Awareness

Definition: “The perception of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future.”

For the Analyst:

- Questions in a Time Frame
- Levels of analysis,
- Types of data,
- Types of products

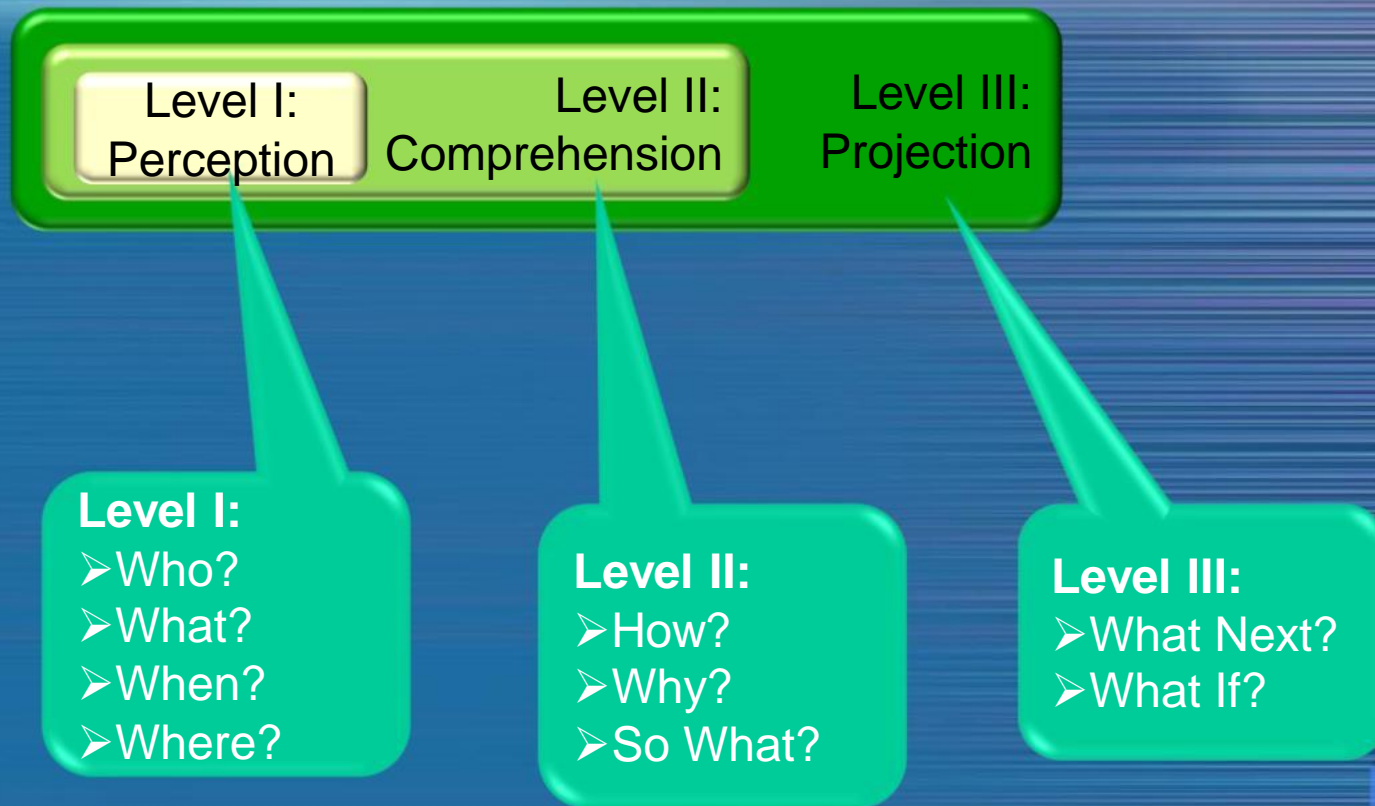


Situational Awareness

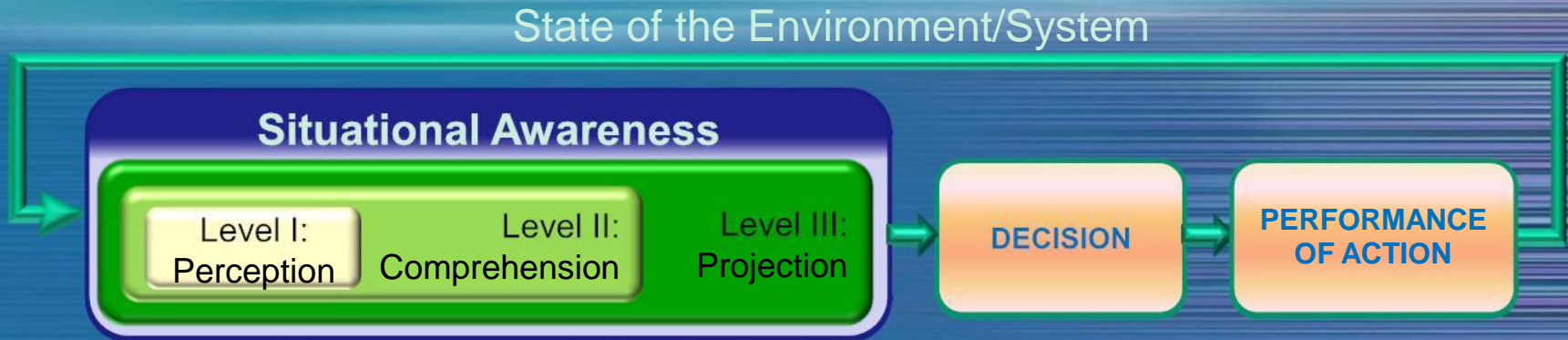
- Level I: Perceiving critical factors in the environment
- Level II: Awareness understanding what those factors mean, particularly when integrated together in relation to the decision maker's goals
- Level III: An understanding of what will happen with the system in the near future.



Situational Awareness



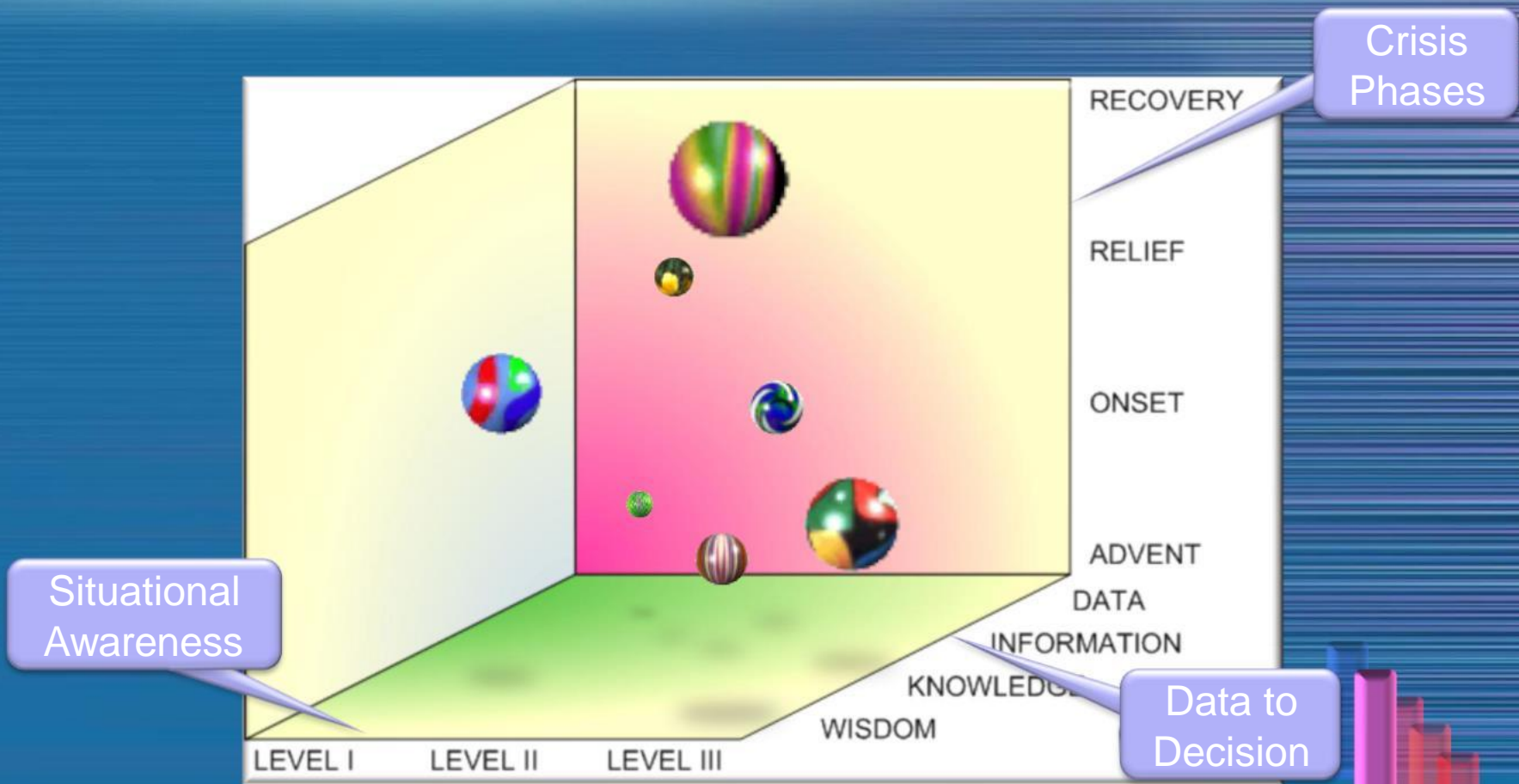
Situational Awareness



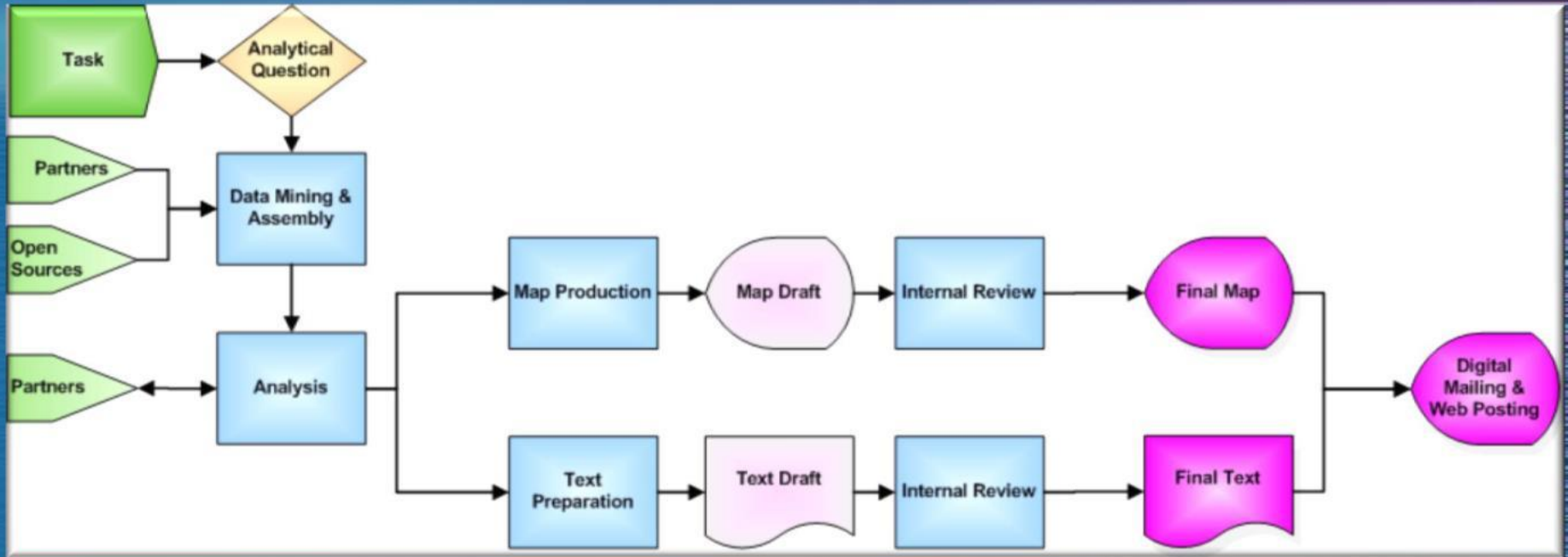
- Each Level of Situational Awareness Linked to a Decision
- Essential to Understand the Decision-making context
- Timeframe
- Scale (Social and Spatial)
- Format of Information



“NEME” SPACE



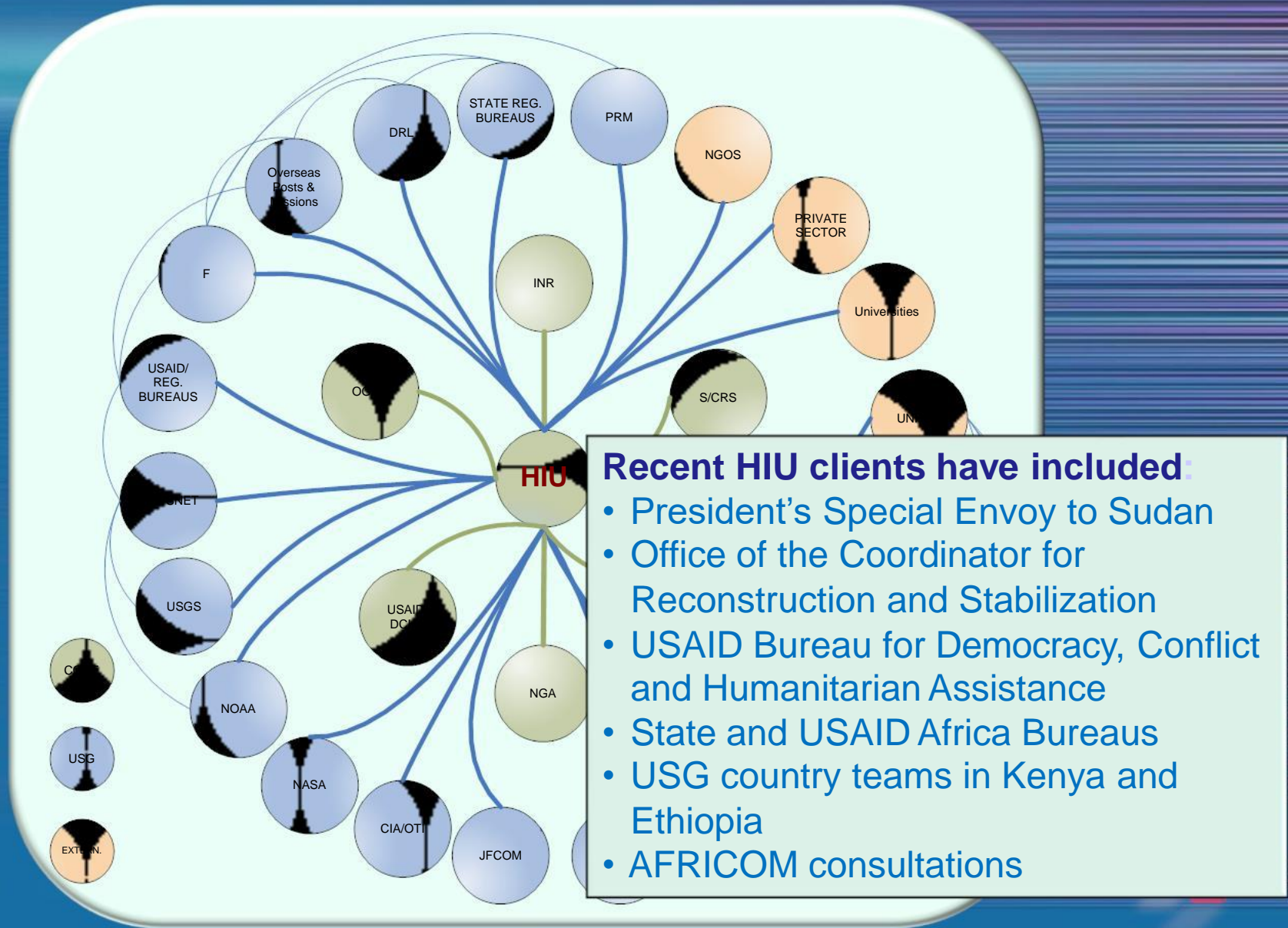
HIU Business Model



- Outlines Production Process
- Identifies the Types of Inputs Required
- Defines the Product and Communication Channels



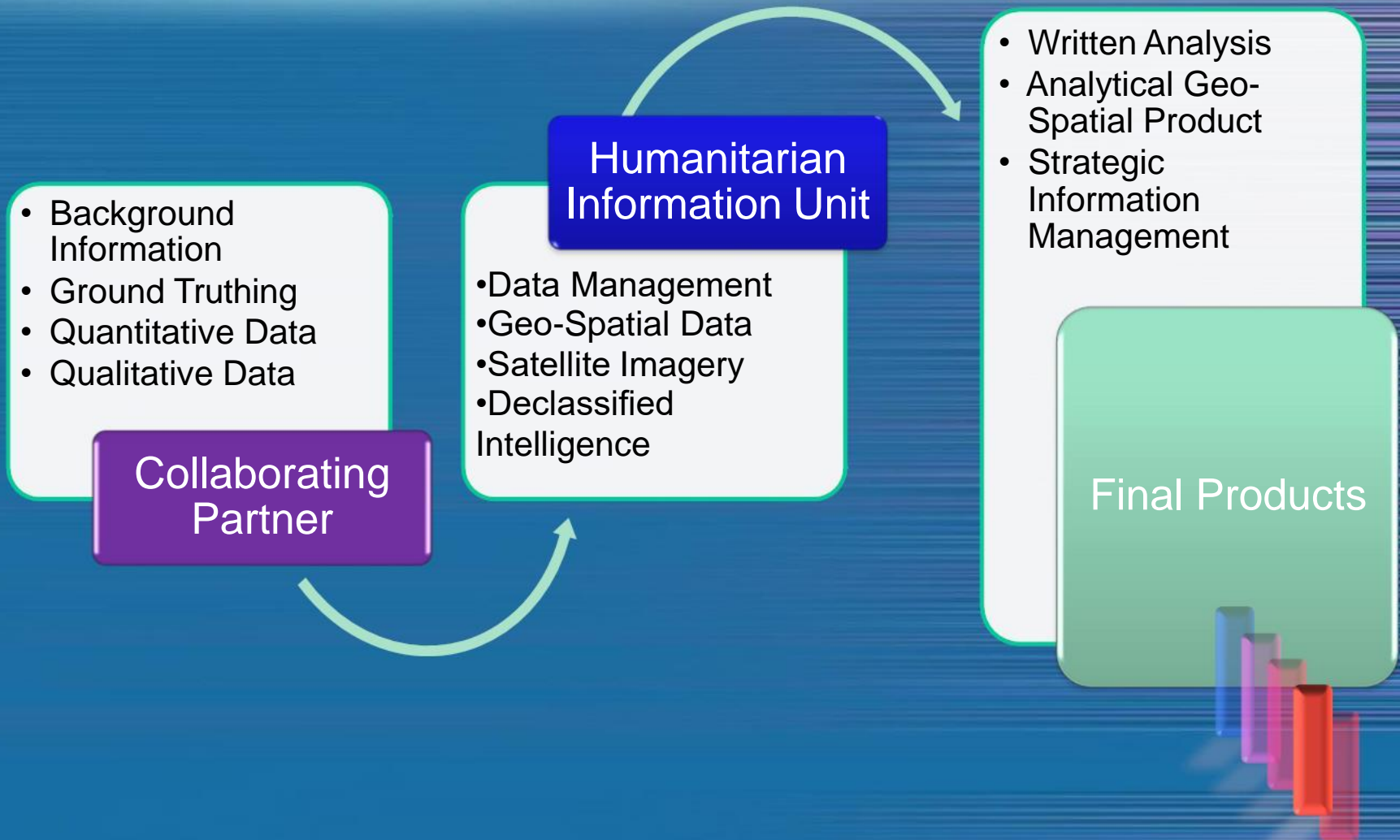
HIU Partners and Clients



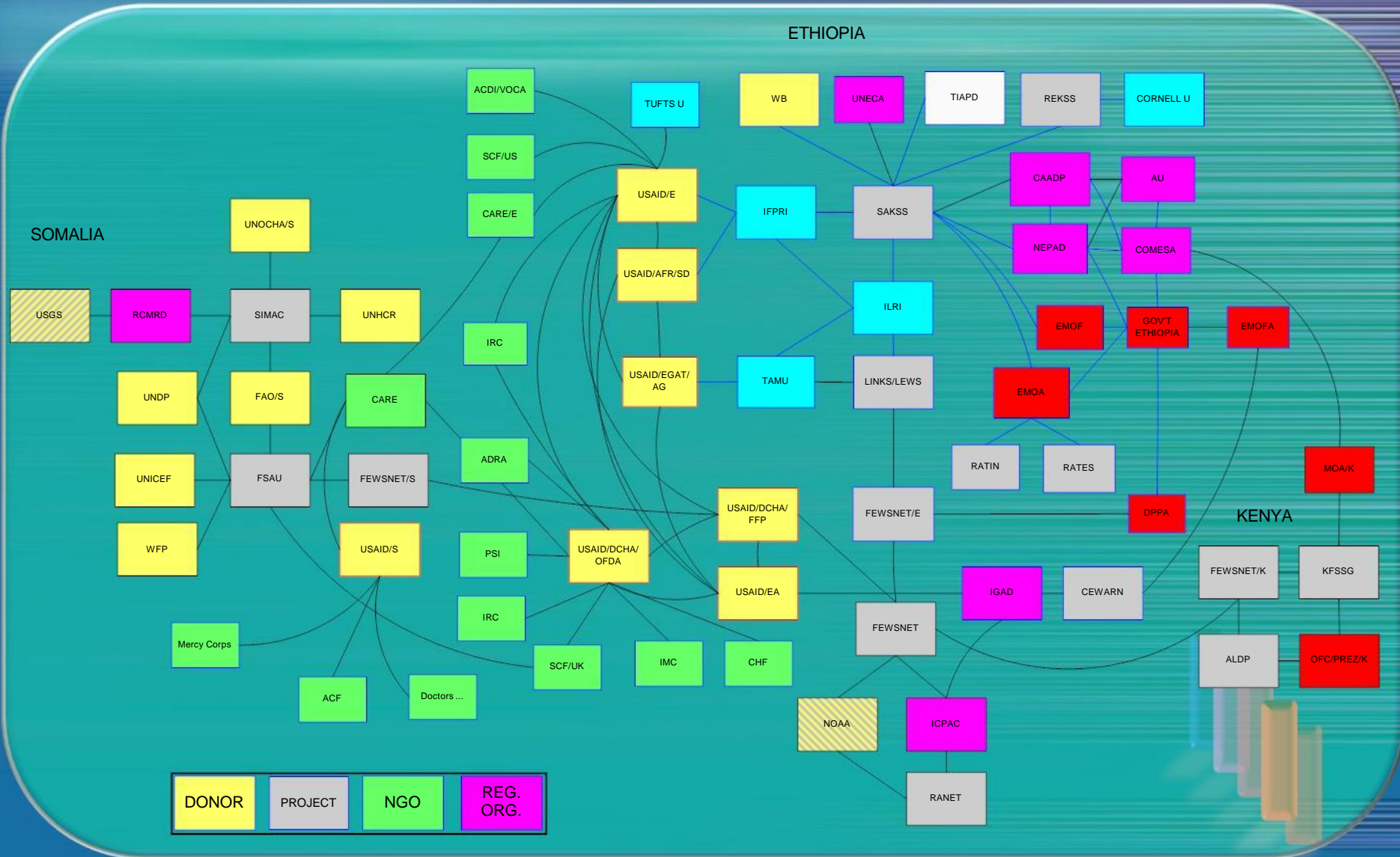
Recent HIU clients have included

- President's Special Envoy to Sudan
- Office of the Coordinator for Reconstruction and Stabilization
- USAID Bureau for Democracy, Conflict and Humanitarian Assistance
- State and USAID Africa Bureaus
- USG country teams in Kenya and Ethiopia
- AFRICOM consultations

Data Management: Process



Partial Network of Actors in HOA Pastoral Domain



Examples from the HIU: Questions define products

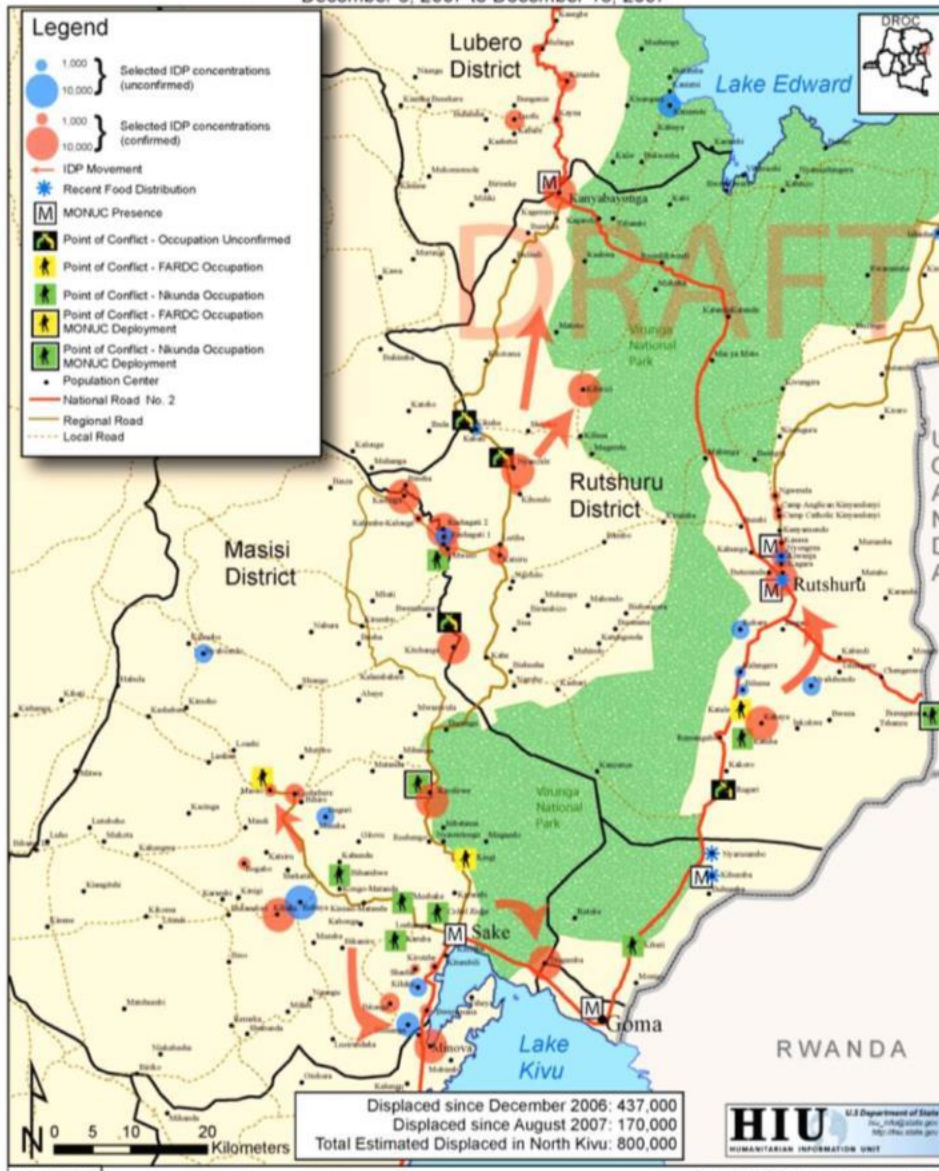
- Client Served by the Product/Analysis
- Level of Situational Awareness Served by the Product
- Distribution Channels Used to Disseminate the Product



DRC

North Kivu, Democratic Republic of Congo: Selected Internal Displacement and Military Operations December 6, 2007 to December 18, 2007

UNCLASSIFIED



*Client: Office of
Population
Refugees and
Migration*

SA Level: I

*Decision Supported:
Relief and policy
efforts*

Distribution

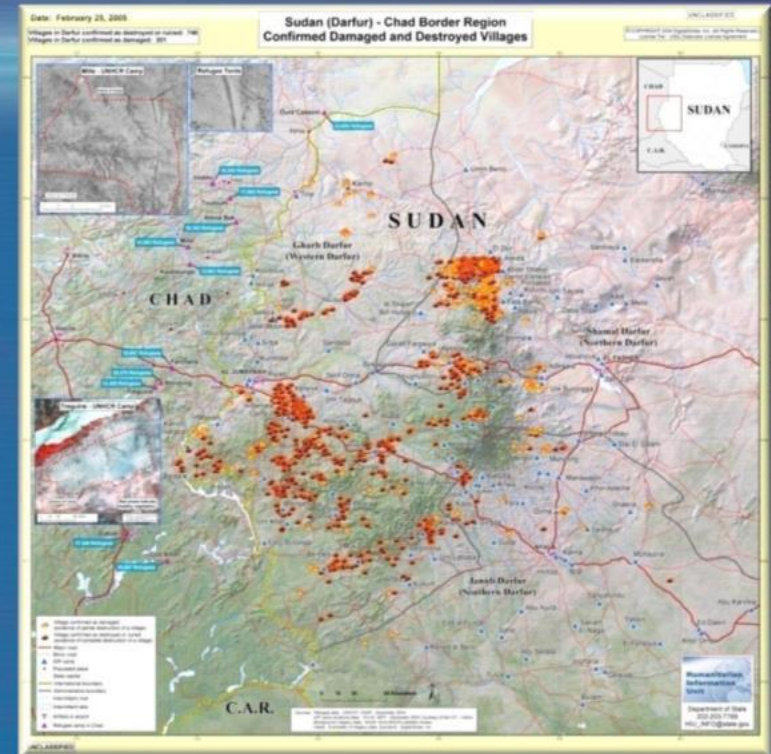
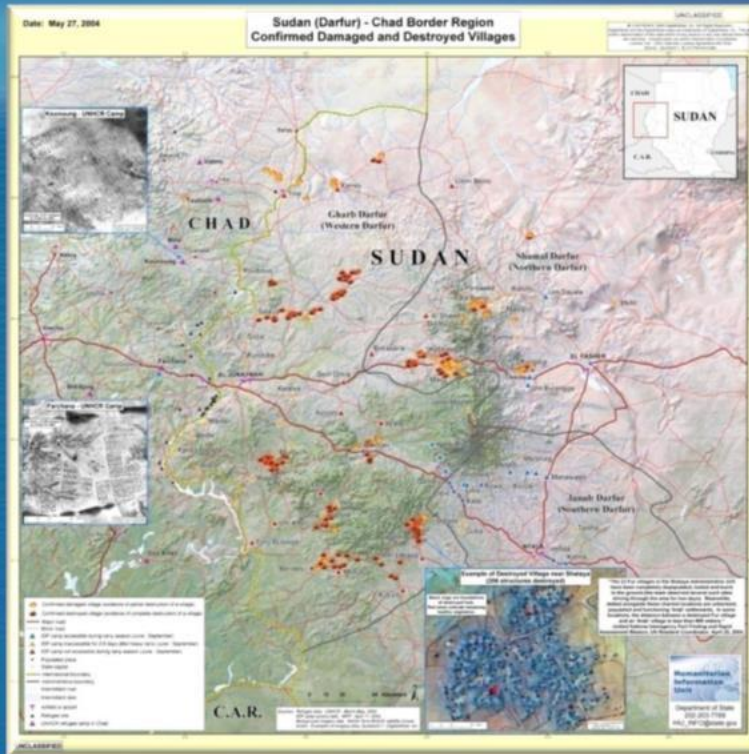
*Channels: HIU
Website*



Sudan-Darfur

May 2004

February 2005



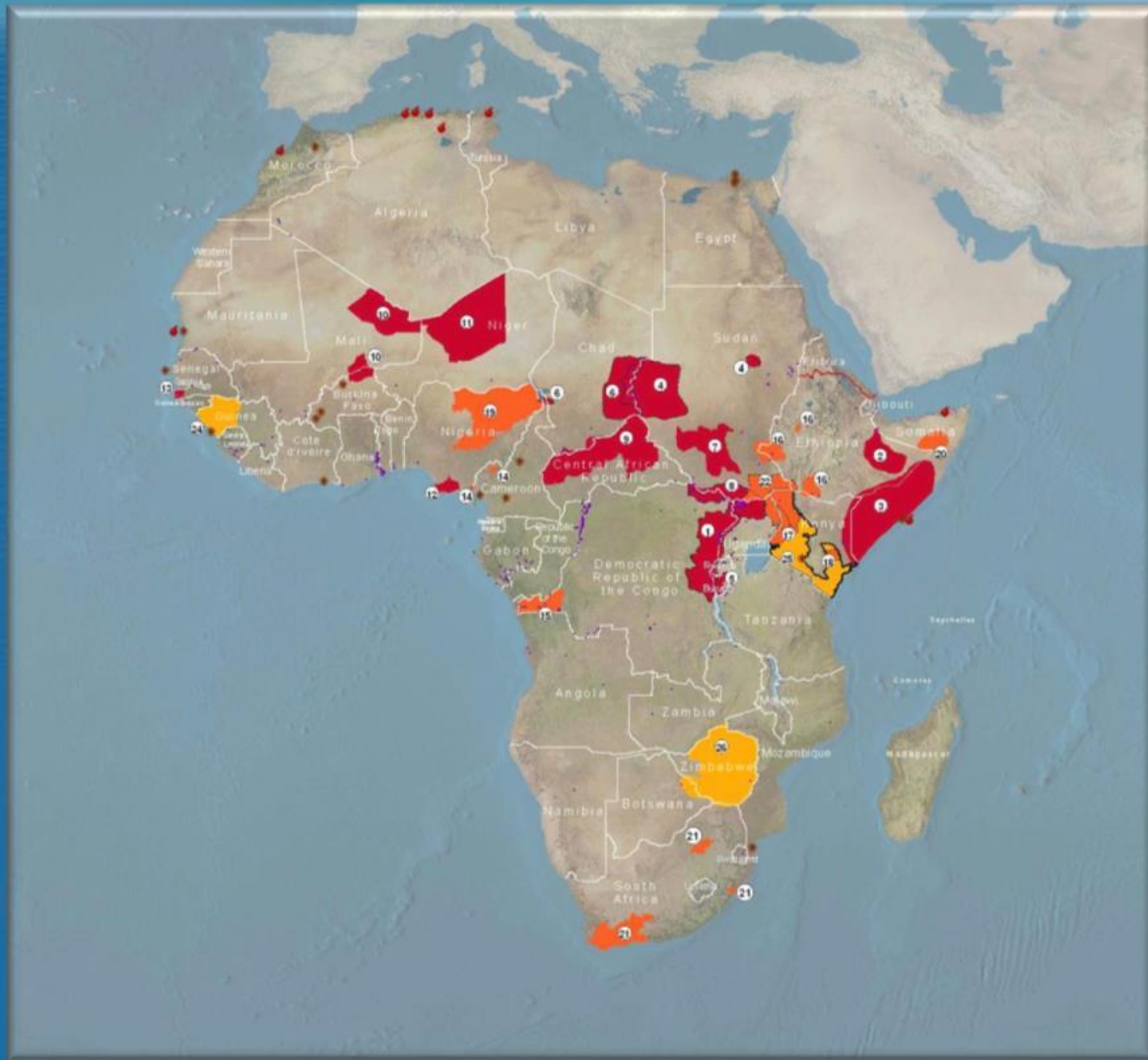
Client Supported: Secretary of State

SA Level: I

Decision Supported: Genocide Declaration

Distribution Channels: HIU Website, Google Earth—Through U.S. Holocaust Museum

Conflicts Without Borders in Africa



Client:

Coordinator for
Reconstruction
and Stabilization

SA Level: II

Decision

Supported:

Programming of
efforts

Distribution

Channels: HIU
Website, US
Wikis

Dynamics of the World Food Crisis

Client: USAID

SA Level: II

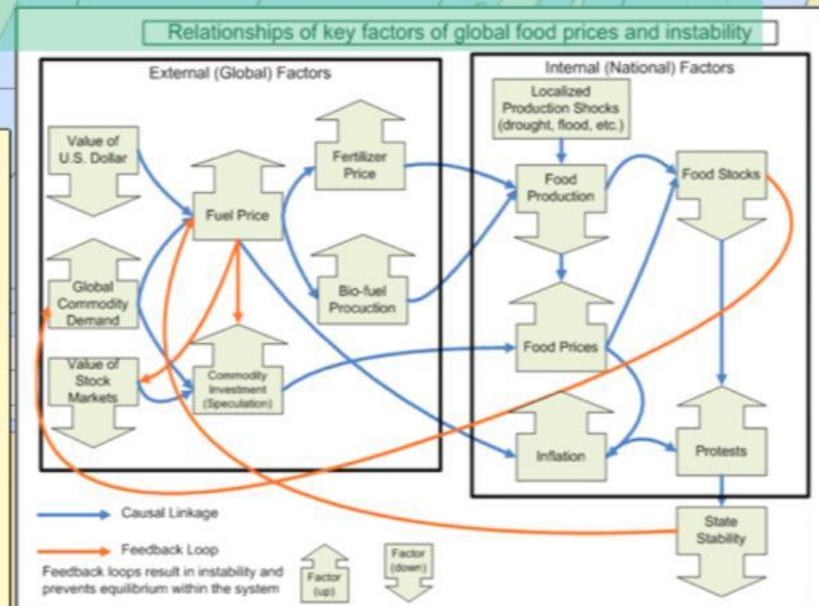
Decision Supported: Programming of AID, global food policy support

Distribution Channels: HIU Website



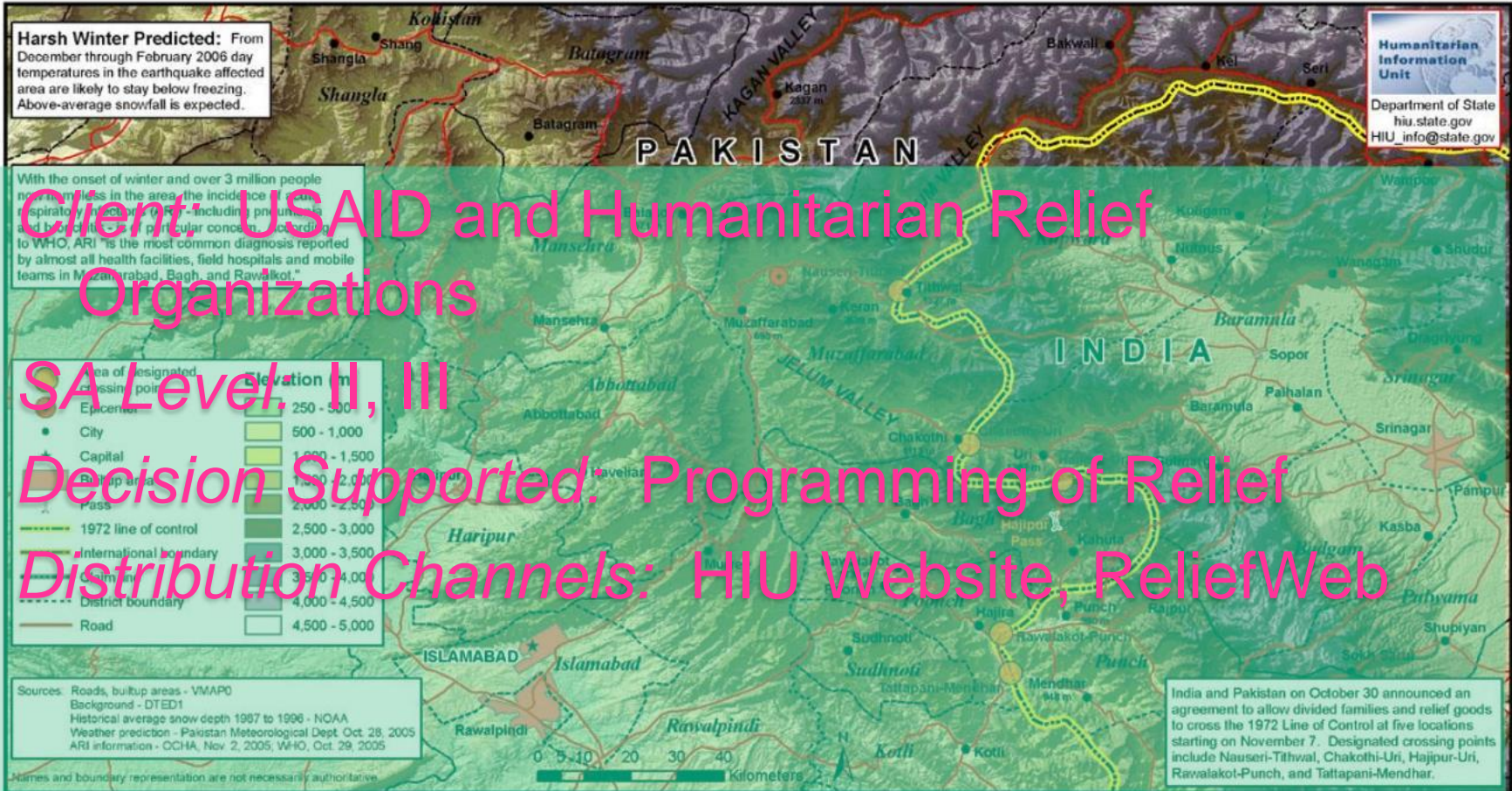
Sources: FAO, Reuters, Financial Times, BBC

May 27, 2008





Pakistan/India Earthquake Affected Area and Surrounding Region Winter Weather and Elevation



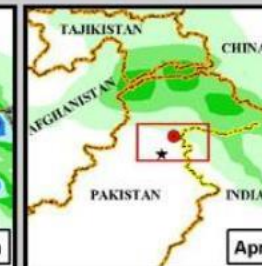
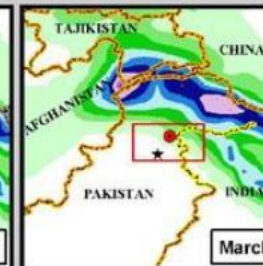
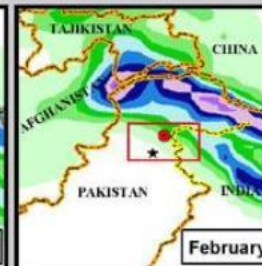
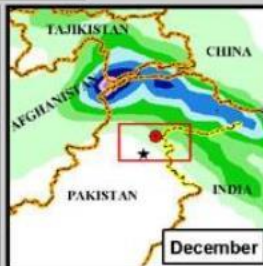
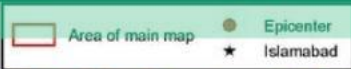
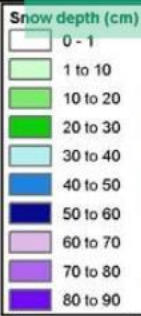
Client: USAID and Humanitarian Relief Organizations

SA Level: II, III

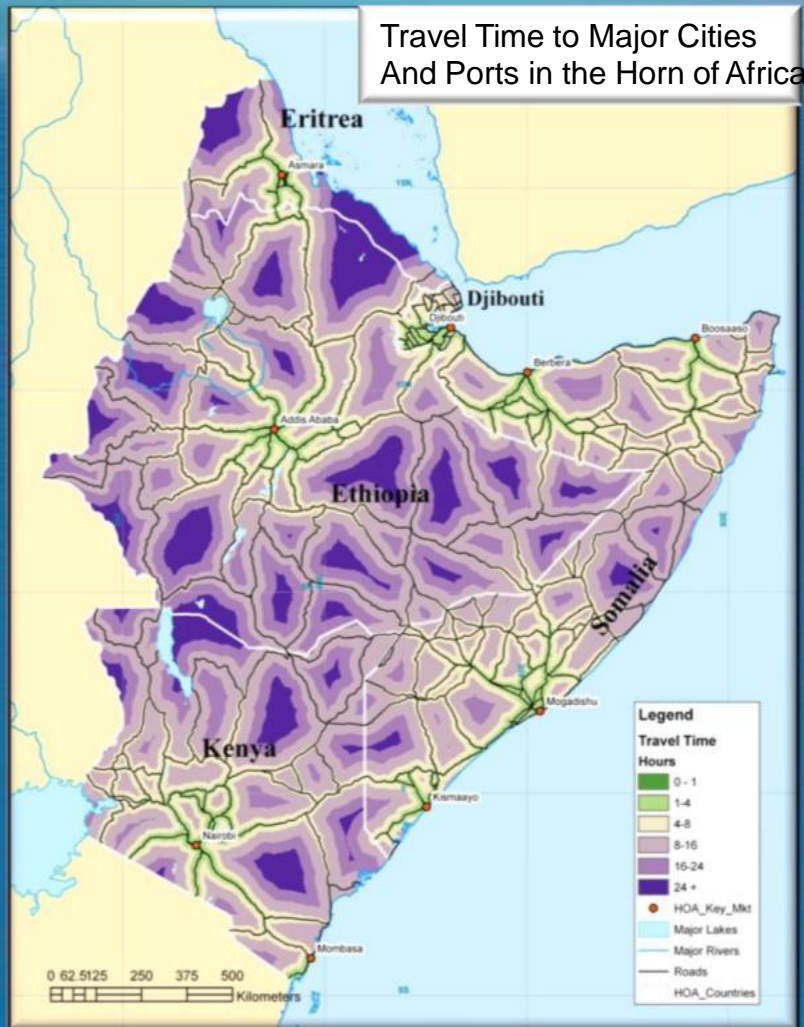
Decision Supported: Programming of Relief

Distribution Channels: HIU Website, ReliefWeb

Average Monthly Snow Cover and Snow Depth (November to April)



Horn of Africa



Client: USAID, NGOs

SA Level: III

Decision Supported:

*Infrastructure and
Market*

Development

Distribution Channels:

HIU website

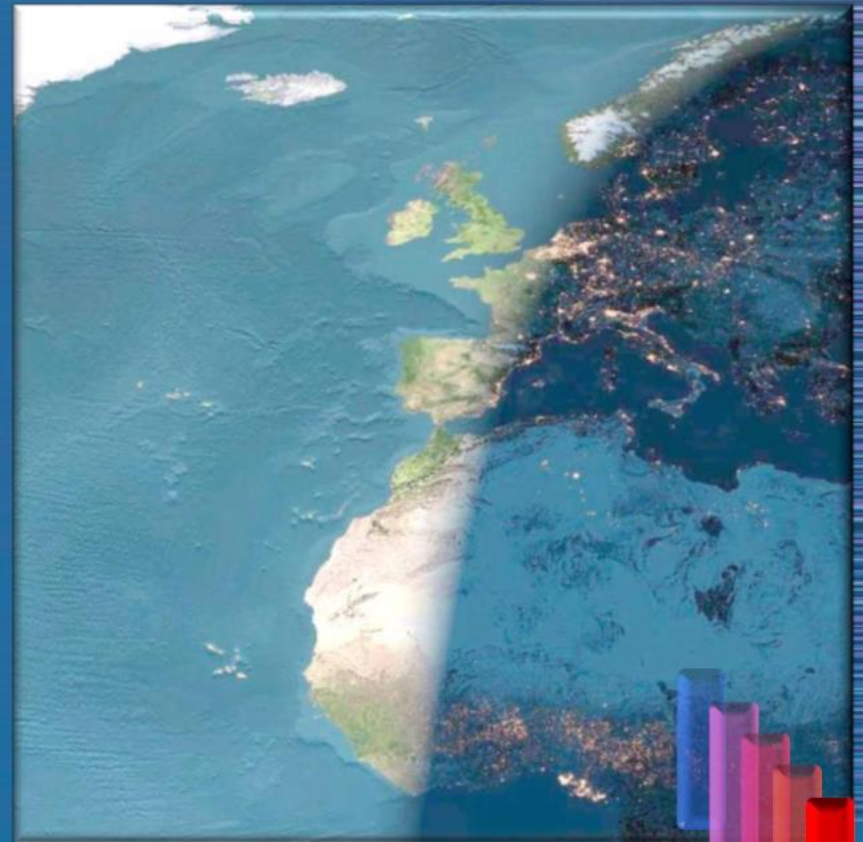
GDEST—Geospatial Science and Technology for Sustainable Development In Africa

Themes:

- Observing Africa
- Analysis of regional challenges to Africa
- The Africa Data Stream

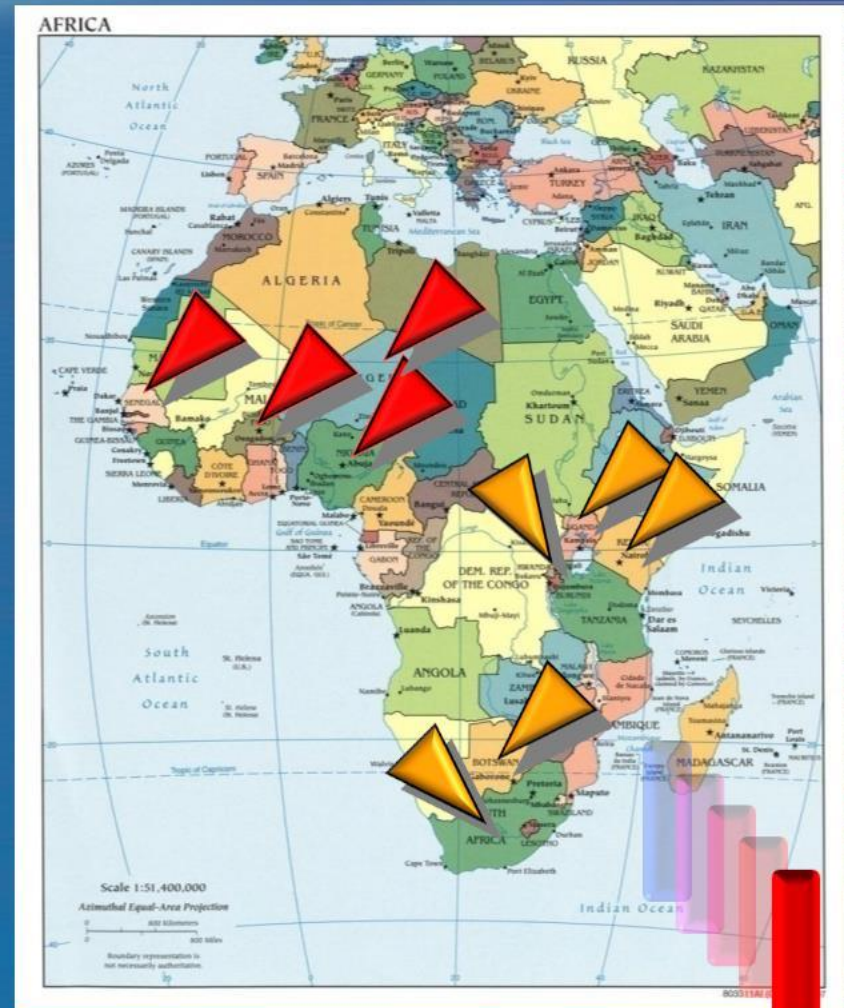
Activities:

Series of Site Visits
Conference



GDEST Countries Visited

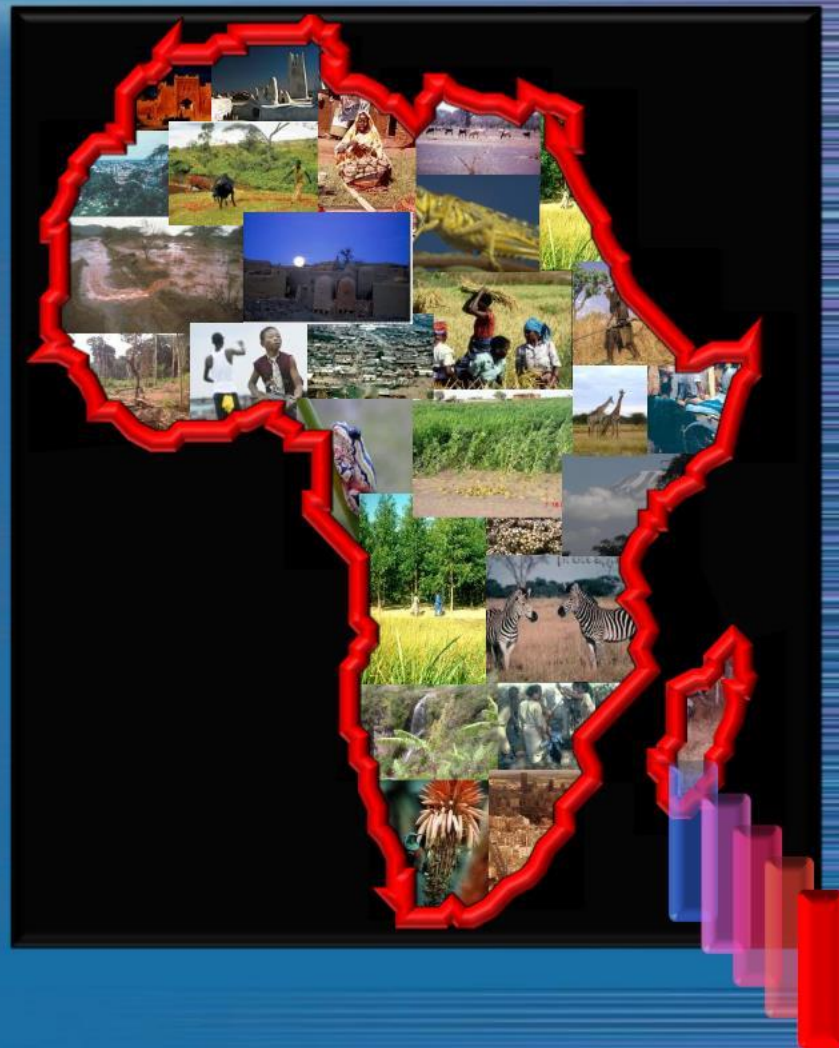
- Countries represent range of socio-economic conditions
- Countries represent range of level of Geo-spatial application
- Reasonable spatial distribution
- Visit regional leading institutions
- With a couple of constraints



GDEST Findings

Findings from the Site Visits and Conference:

- Capabilities exist within Africa that can be enhanced;
- Great enthusiasm for collaboration
- Collaboration Should be Consensus-based with African partners
- Focus on the needs of the users of the information
- Local capacity development is critical
- Universities play a key capacity development role



GDEST & Beyond

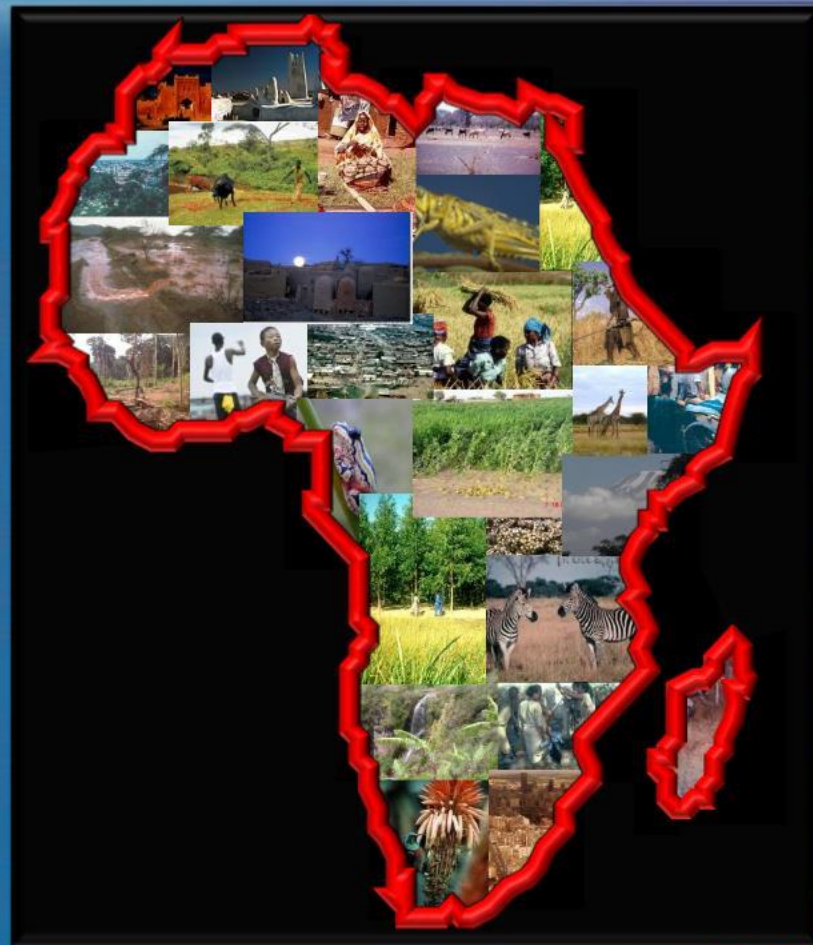
On-Going Results:

State Dep. Grant to AAG &
EIS-Africa

State Dept. support to use
data and imagery from the
UNEP Africa Atlas.

AGS and University
Collaboration

Maintain the Dialogue
through posting of reports
and participation in
regional conferences.



Conclusions

Key Points

- Understand context
- Understand client
- Understand changing product needs over time
- Create networks of partners and users

Subtext

- Define the problem and its dimensions in space, time and society
- Define the Scale of the crisis along its dimensions
- Identify critical data needs according to the analysis conducted



Conclusions

Key Points

- Understand context
- Understand client
- Understand changing product needs over time
- Create networks of partners and users

Subtext

- Understand the Responsibilities and Motivations of the Client
- Understand the Decision Timeframe
- Be precise in the Questions Required for Decisions
- Don't Answer Foolish Questions!



Conclusions

Key Points

- Understand context
- Understand client
- Understand changing product needs over time
- Create networks of partners and users

Subtext

- Link Analyses to Specific Situational Awareness Levels
- Be Attentive to Scale in the Analysis
- Recognize Types of Decisions and Data Required Change with Phases of the Crisis



Conclusions

Key Points

- Understand context
- Understand client
- Understand changing product needs over time
- Create networks of partners and users

Subtext

- Networks Depend Upon Collaboration and Trust
- Networks Remain Relevant for Future Action
- Look for Gaps in the Network
- Networks Help You to Be Prepared





Thank You



BartelPP@State.Gov

**POKRAČOVÁNÍ
ČÁSTÍ PŘEDNÁŠKY - 7B**

SAMOSTATNĚ ULOŽENA V ISu