



SAS027 Analysis of Smaller Scale Contingencies



Examples of Measures of Merit and their use in Analysis of Small Scale Contingency Operations

Presentation by

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MOD UK - SAS 027 Panel

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Quote

-“Although most people however reluctantly, take some interest in war, precious few bother their heads about organising for war in peacetime. It is a subject like dental care, both dull and mildly repellent.....”
 - Prof Sir Michael Howard: “Every Club in the Bag.” London Review of Books 10 Sept 1992, in “Whitehall and the State”



Key points

- Small Scale Contingencies
- Scenario Based Planning
- Examples of Measures
- Conclusions

Long Term Defence Planning SSC's: NATO Operational Types and Broad Scales of Effort

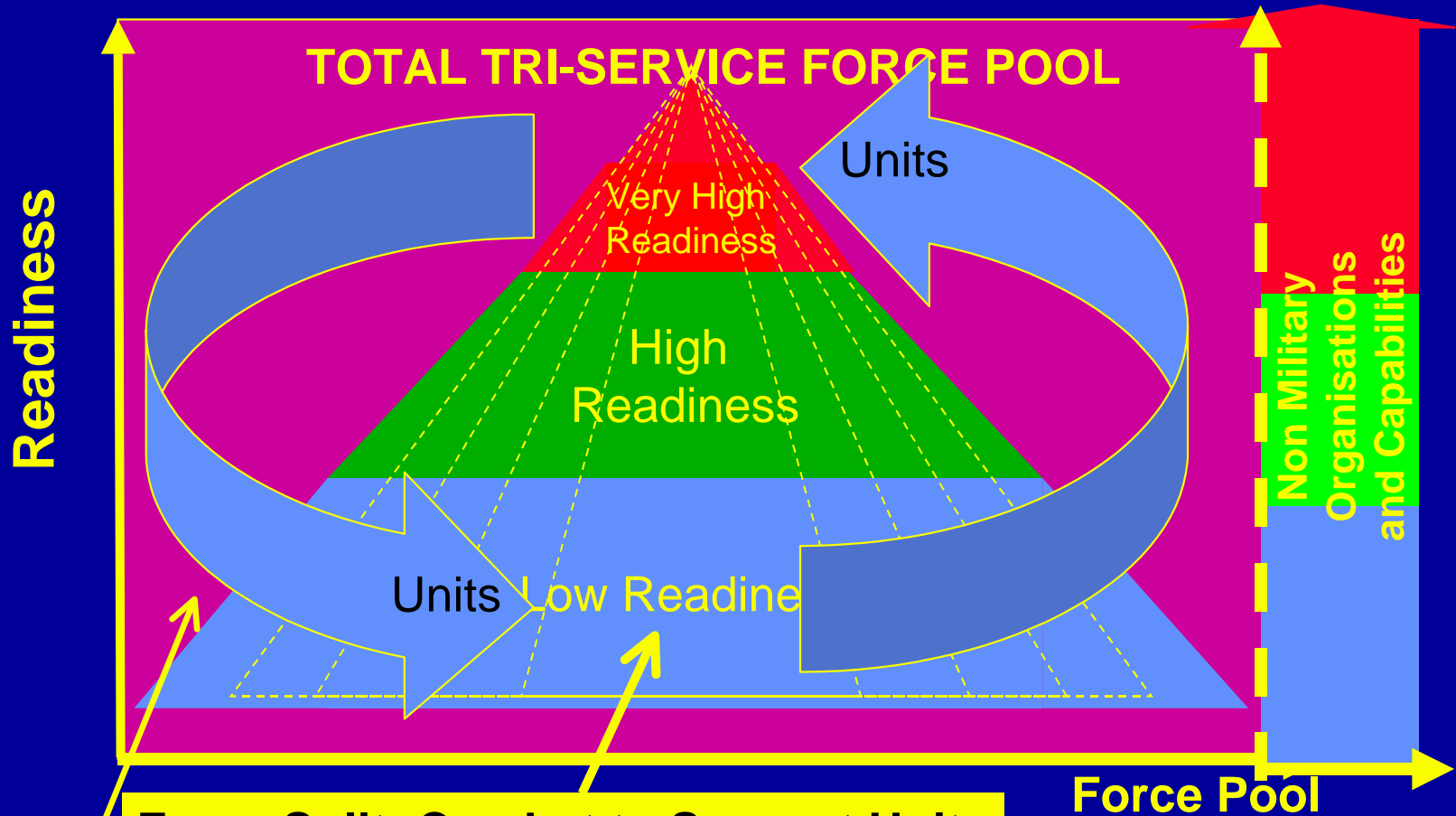




Small Scale Contingency Operations

- In SSCs the POLITICAL, ECONOMIC and SOCIAL mission components often have at least an equal weighting to the MILITARY MISSION.
- The Military mission in isolation will not necessarily deliver success as it does not have the full spectrum of capabilities

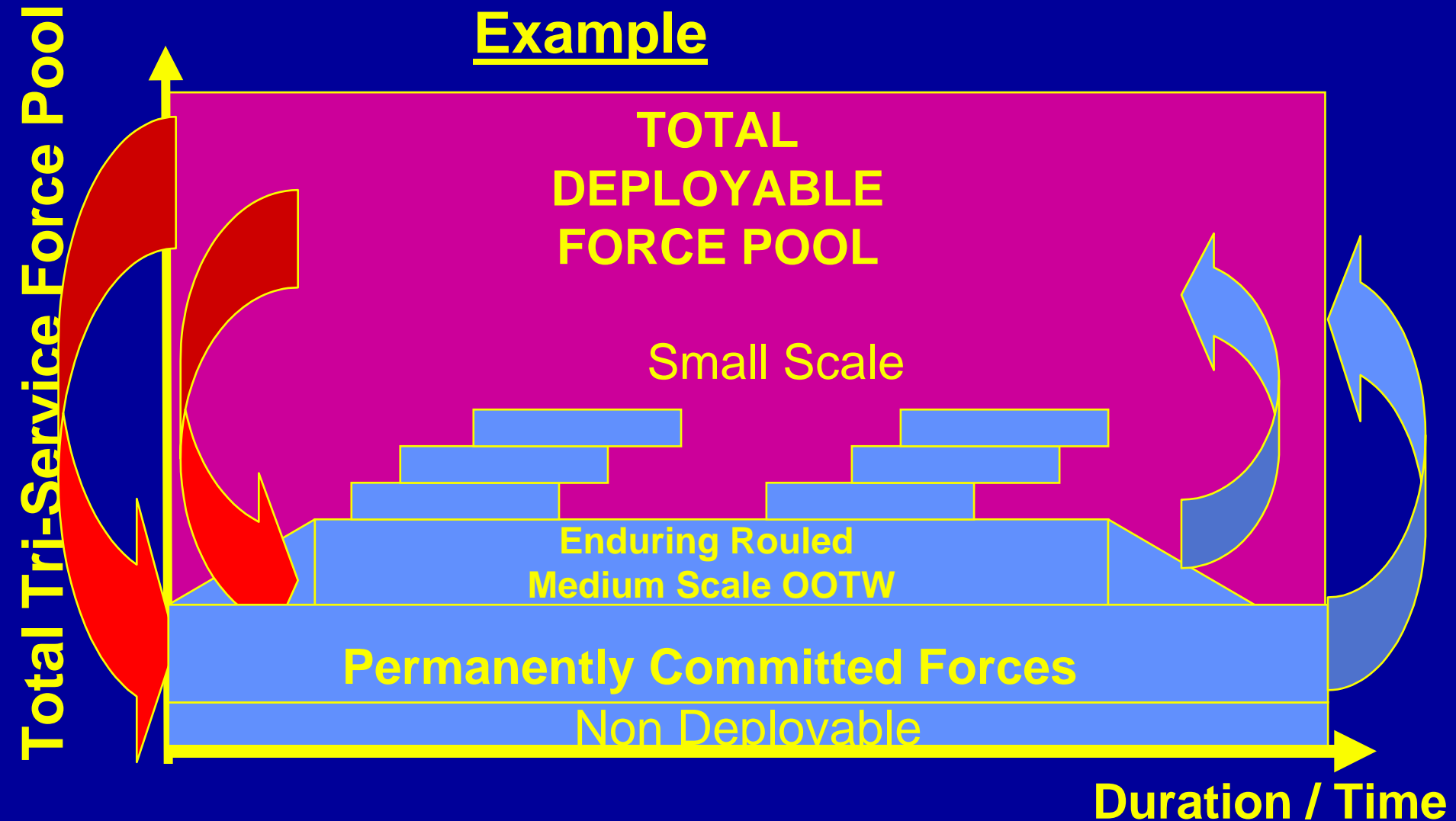
Readiness of Forces Elements and Capabilities



Force Split: Combat to Support Units

Units Cycle Through Readiness Levels

Policy Development: Concurrency Example





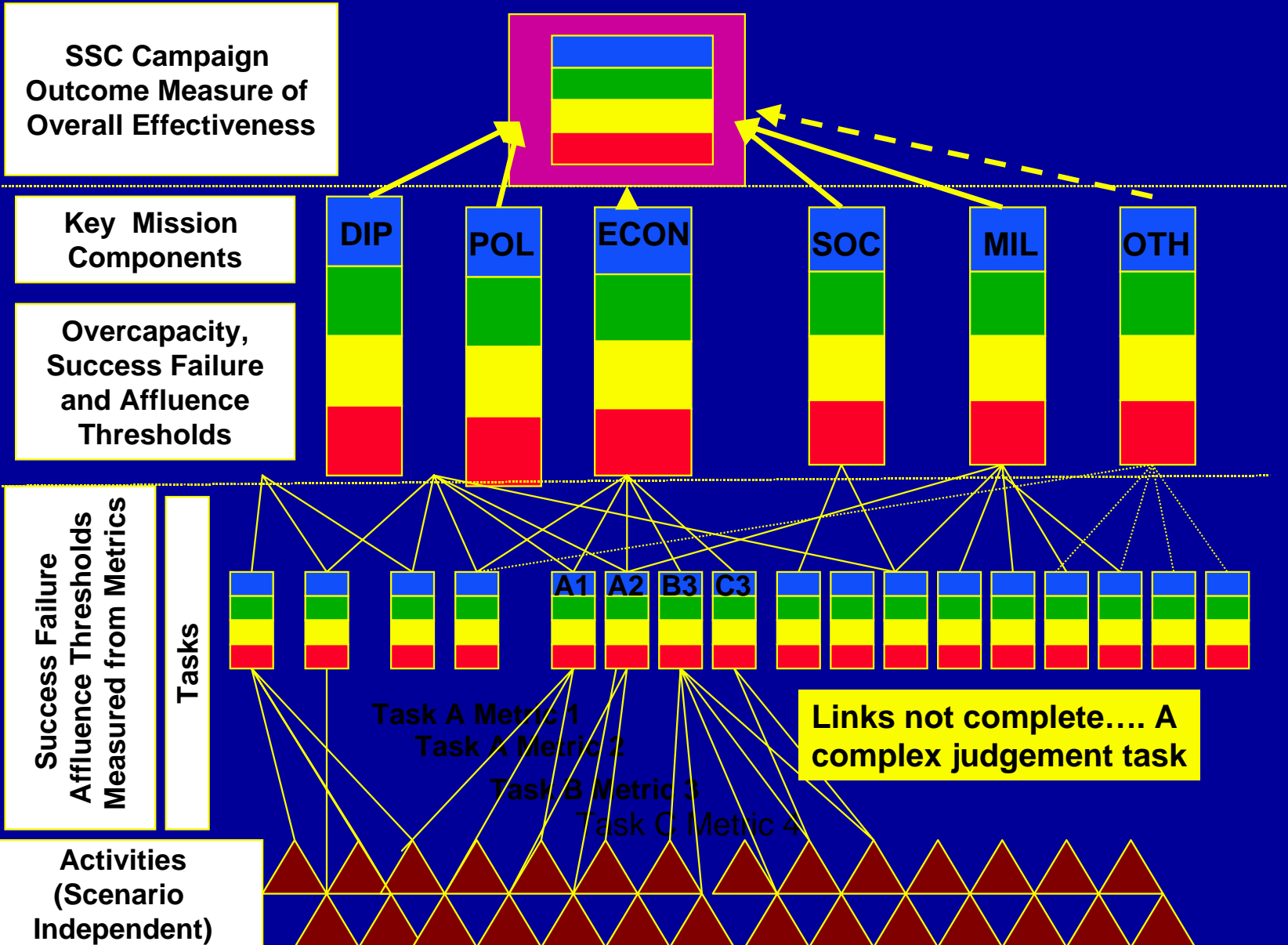
Measures of Effectiveness

- High level aggregated measures of performance describing progress of a Small Scale Contingency Operation to meeting its goals
- In context of:
 - Geopolitical Scenario Based Planning



Measures of Effectiveness

- The performance of the MoE may be assessed directly from the aggregation of lower level task metrics / pairs
- Measuring the **Military** mission alone will not provide sufficient data with which to assess overall SSC performance; the full **Key MoE** set must also cover the
 - Diplomatic,
 - Political and
 - Economic
 - Humanitarian
 - Social missions
- But, metrics at lower levels within Key MoE may be compared across scenarios





Metrics

- METRIC: A low level measure of performance directly attributable to at least one task. Each task may have more than one metric and the combination of these metrics describes the overall performance of that task. A metric should be directly measurable, verifiable and based on physical changes in a system.
- Relate only to the progress of the task with which associated. War criminals arrested, no fly zones violations and vessels searched per day.
- Some metrics straightforward to measure.



Metrics

✿ Metrics Categories:

▣ Aspects of task or environment:

- Number of displaced civilians 'x thousand'

▣ End State:

- Number of Displaced Civilians returned to homes: 'x thousand of total y thousand' or 'x percent of total'

▣ Trends or progress to Date:

- Rate of return of displaced civilians: 'x hundred per day'

▣ Metric Subdivision

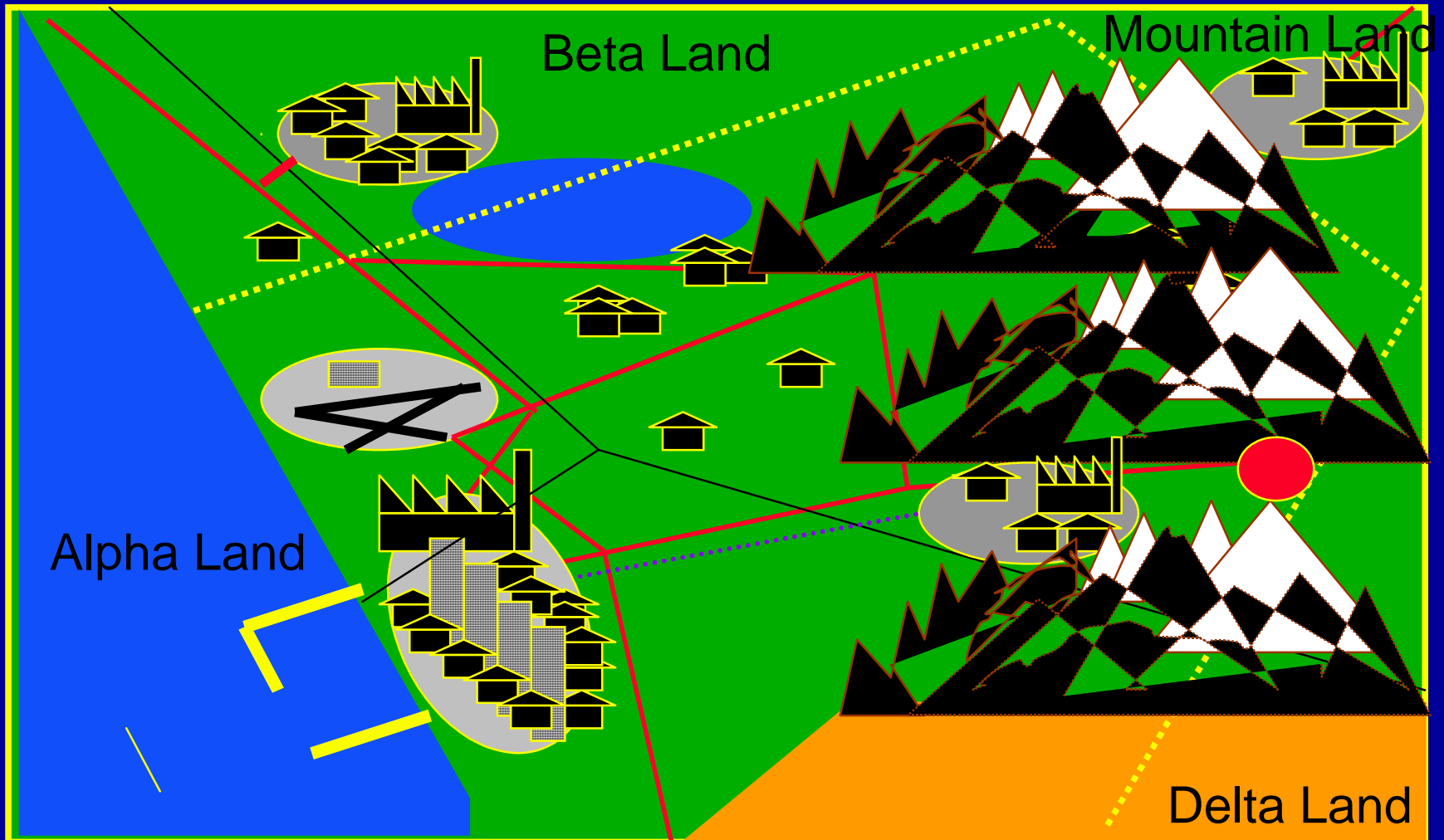
- Resource Environment Metrics
- End state Metrics
- Trend and Progress Metrics



Use of Measures within Scenarios and Operations

- Phases
 - Different Measures for varying phases of the campaign
 - Different targets for varying phases of the campaign
- Low Level v High Level
 - Number of Patrols without incident V Regional Security
- Measure Instances V Abstract Quantity
 - Refugees repatriated v Desired and state
- Tangible v Intangible
 - Murder rate v Fear of Violent Crime
 - Input v Output supply of engineering expertise v freedom of manoeuvre

Scenario: A war torn country called Alpha Land...representative of...



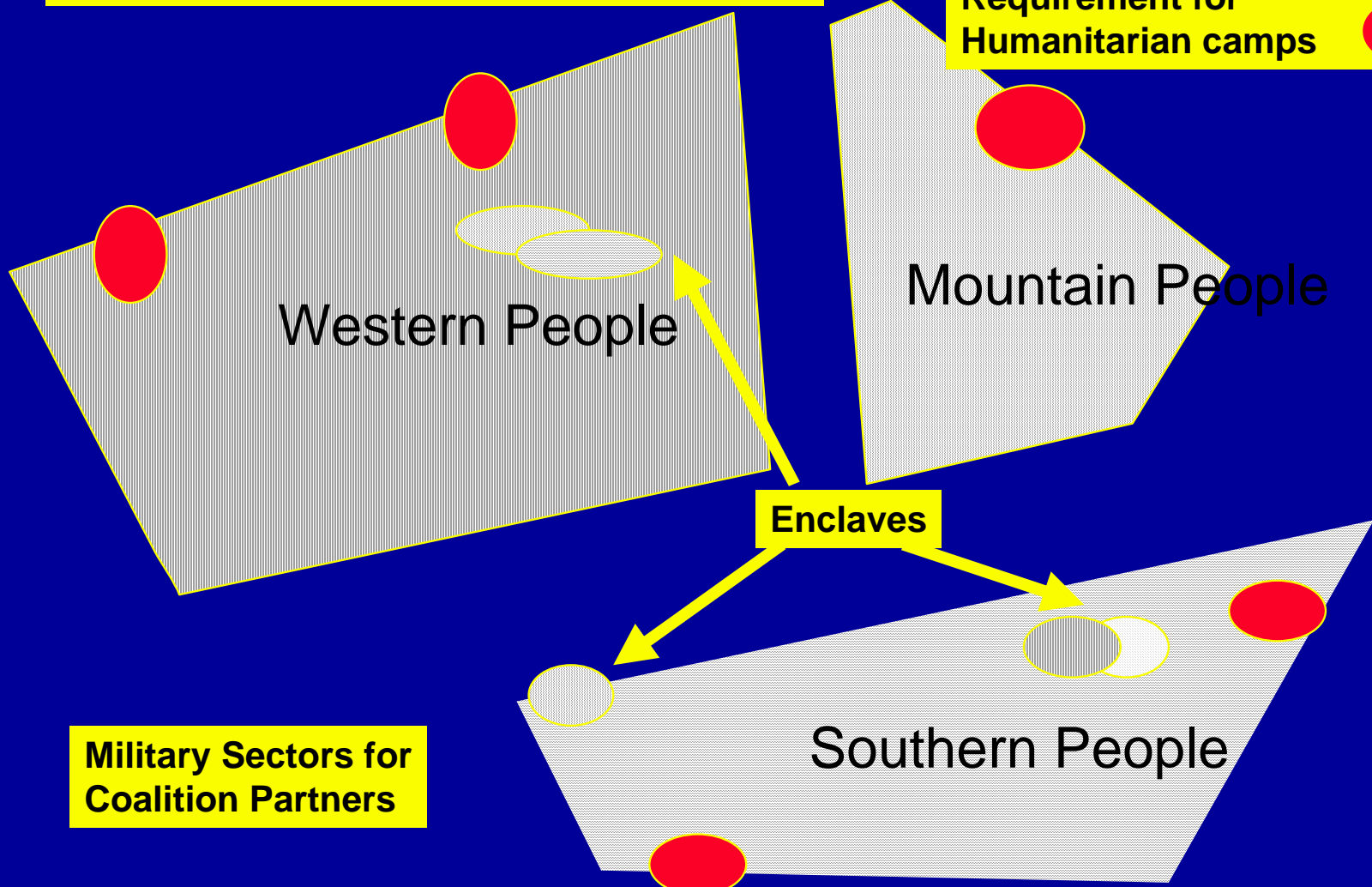


Alpha Land: Setting the Scene

- Warring Factions in Alpha Land
 - Western People
 - Mountain People
 - Southern People
- All factions are armed with personal weapons, light patrol vehicles. Some 'old' heavy armour and light air support but not very mobile.
- Supplies from abroad
- All desire independence and local rule, despising other factions. Conflict ongoing for 6 months before Coalition Deployment
- Surrounded by
 - Sea,
 - Beta Land, Mountain Land and Delta Land
- Rugged interior terrain with seasonal variation

Secure Key Points
Ports/Communications/Storage Sites/LoC's

Major concentrations of Displaced People /Refugees
Requirement for Humanitarian camps



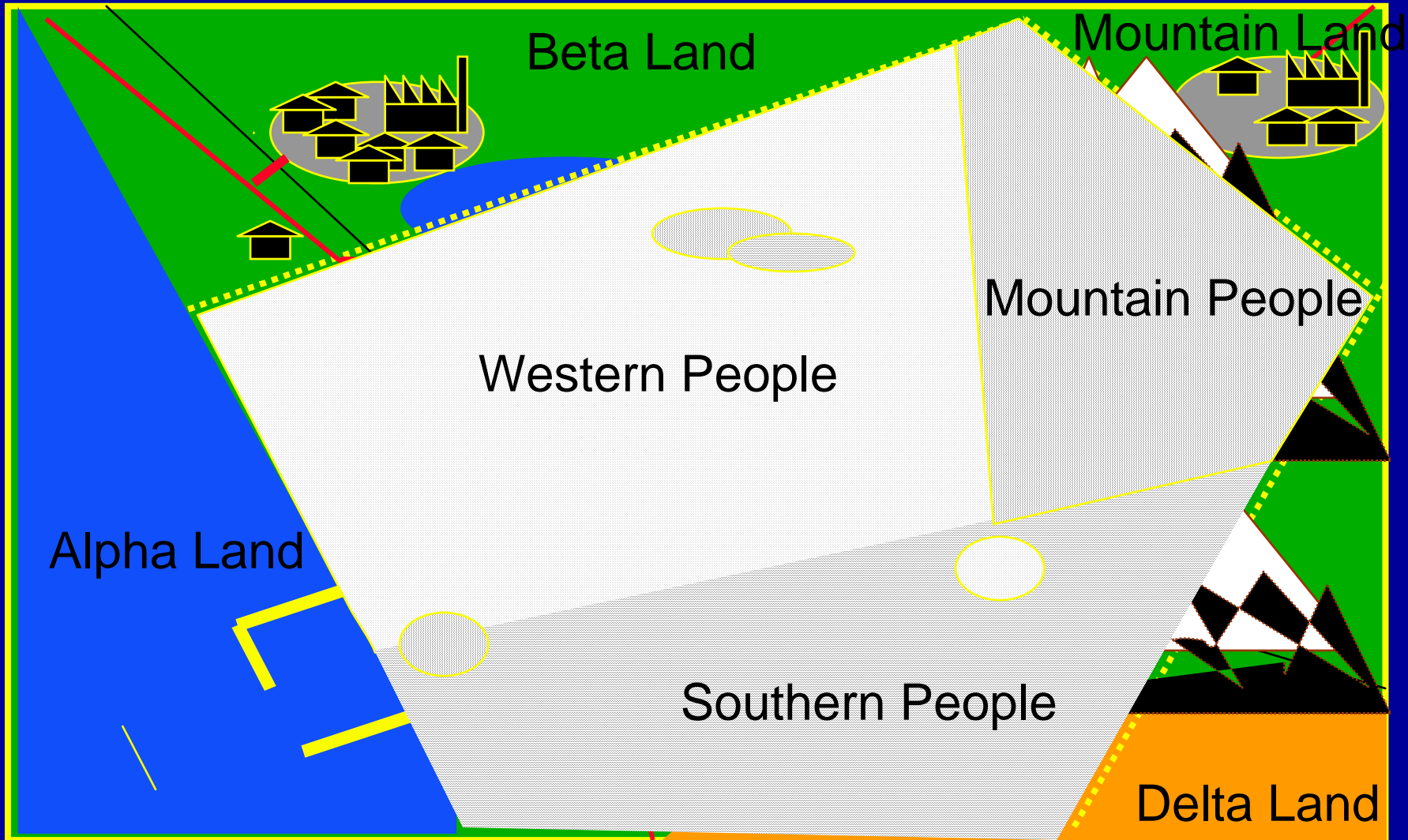
Western People

Mountain People

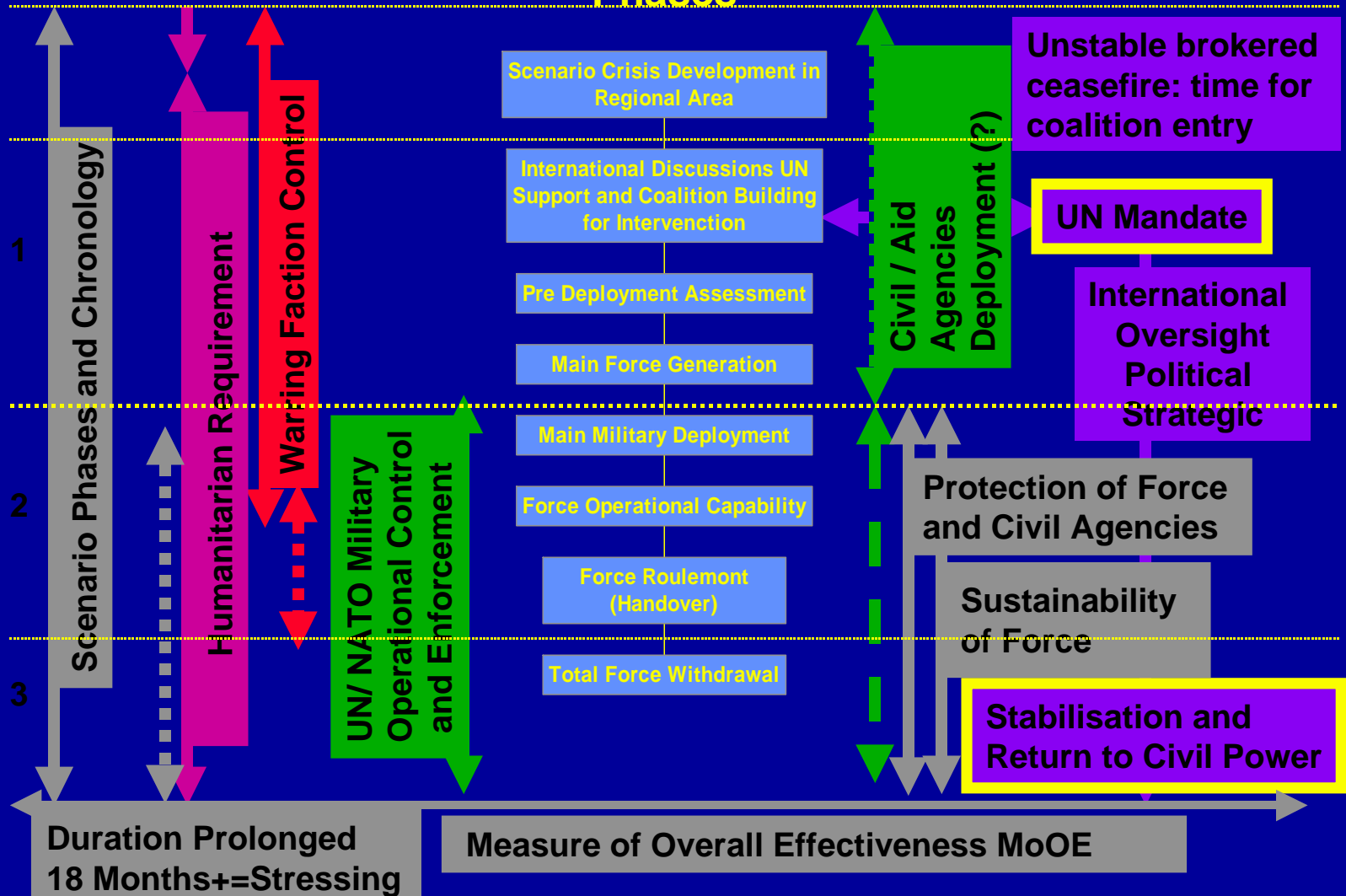
Enclaves

Southern People

Military Sectors for Coalition Partners



Broad SSC PE/PK Operational Phases





International 'UN' Mandate for Coalition Force:

● Phase 1:

- to deploy, secure the region and enforce cease-fire/ peace between conflicting factions (Military Capability)
- to provide and enable provision of humanitarian aid food/water/basic shelter/medical care to civilian population displaced and in-situ
- to disarm warring factions

● Phase 2:

- To provide or ensure policing function
- to ensure stable civil environment and freedom of movement for return of displaced persons/refugees

● Phase 3:

- ensure stable geopolitical environment to allow transition to 'democratic' civil government



International Coalition Force:

● Phase 1:

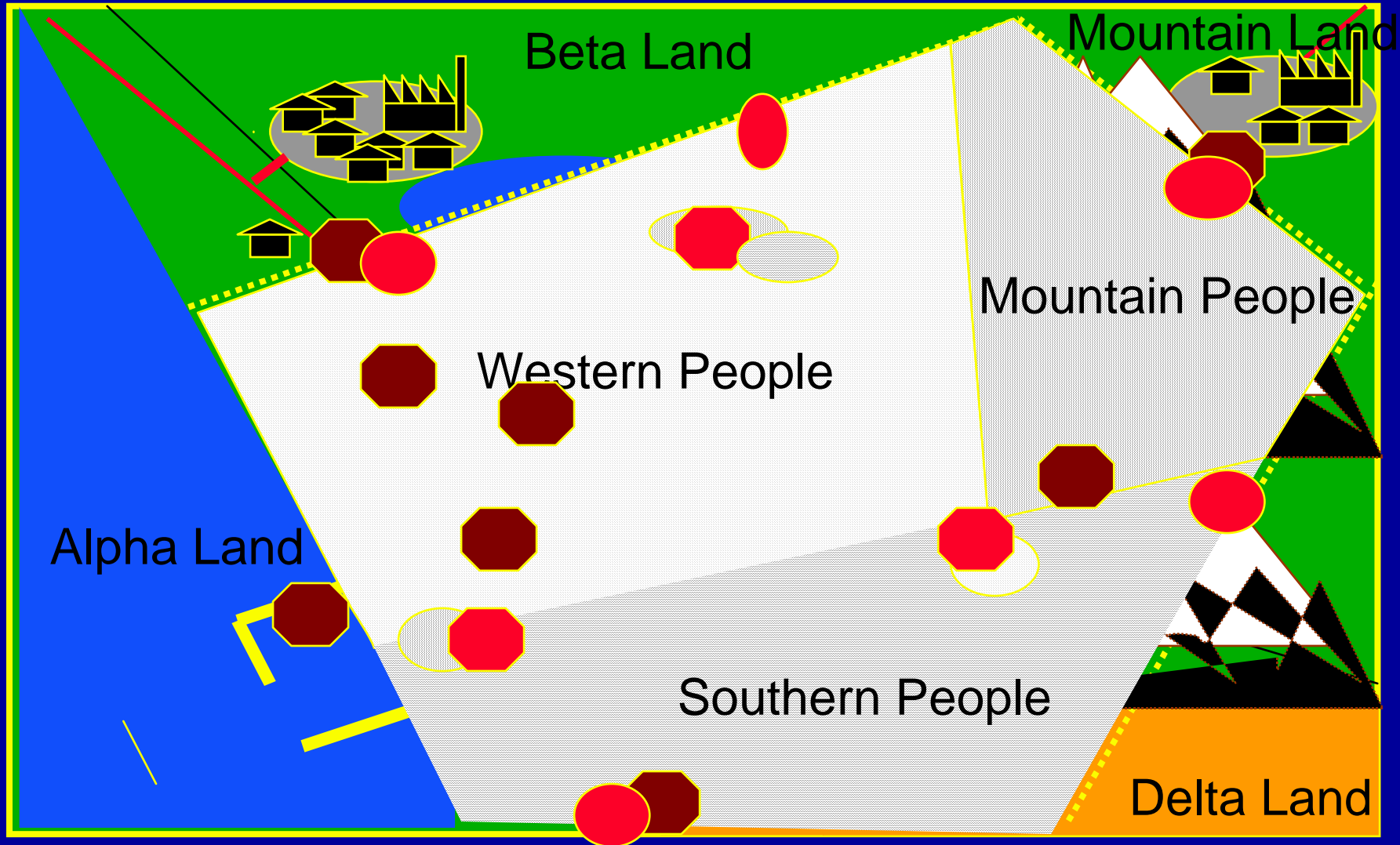
- Force Package
 - Heavy Military Coalition Force Packages at medium / large scale (Armour/Fast Jets)

● Phase 2:

- Force Package
 - Reduced Military force packages at Medium Small Scale (Risk acceptance)

● Phase 3:

- Force Package
 - Small Scale - move towards supporting paramilitary police and reduction to civil advisors





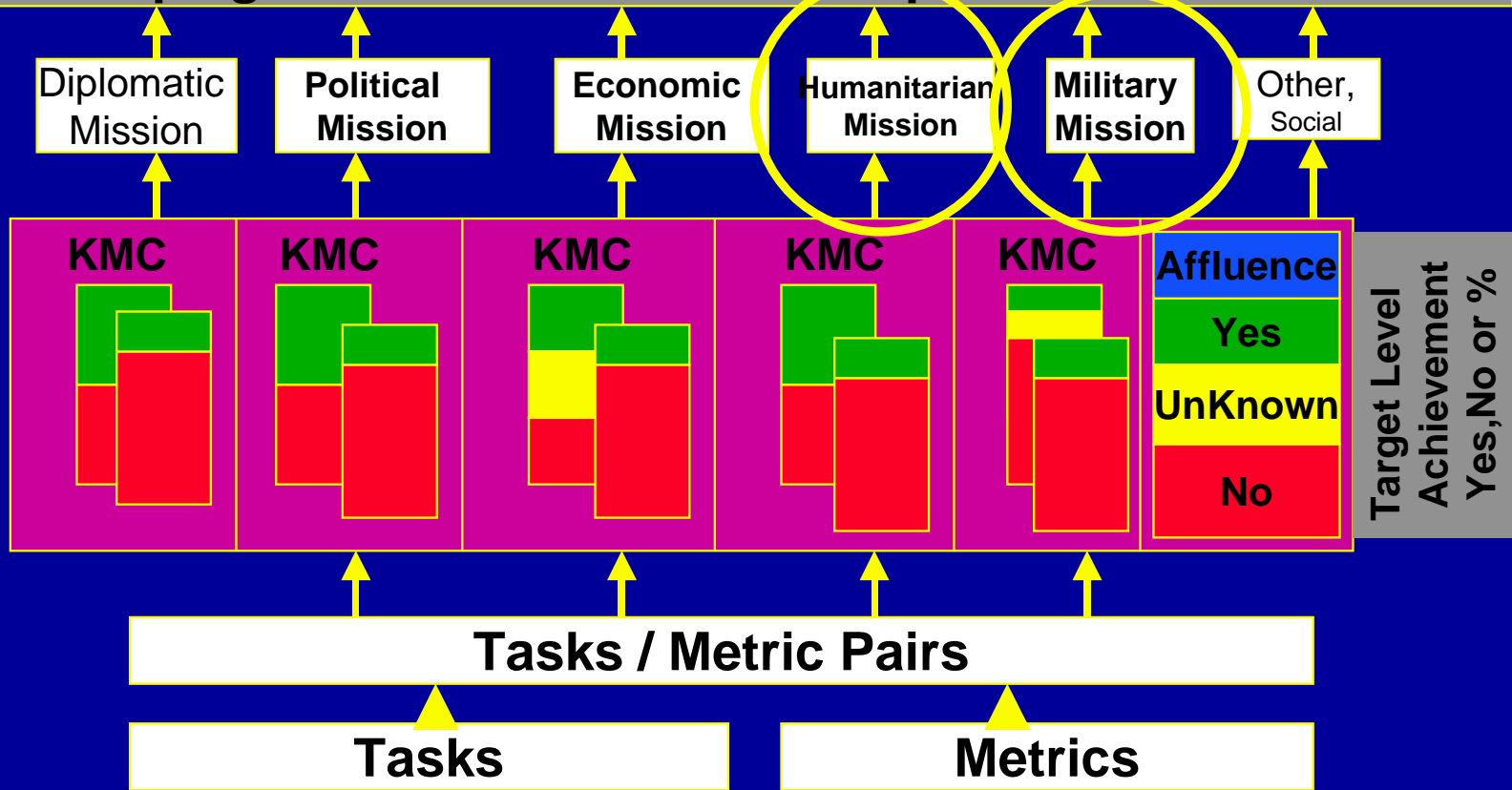
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Examples of Measures of Effectiveness in line with mandate

The Methodology
To Secure the Regional area
To Ensure Humanitarian Assistance
Capability Assessment

SSC Campaign Success Measures of Operational Effectiveness

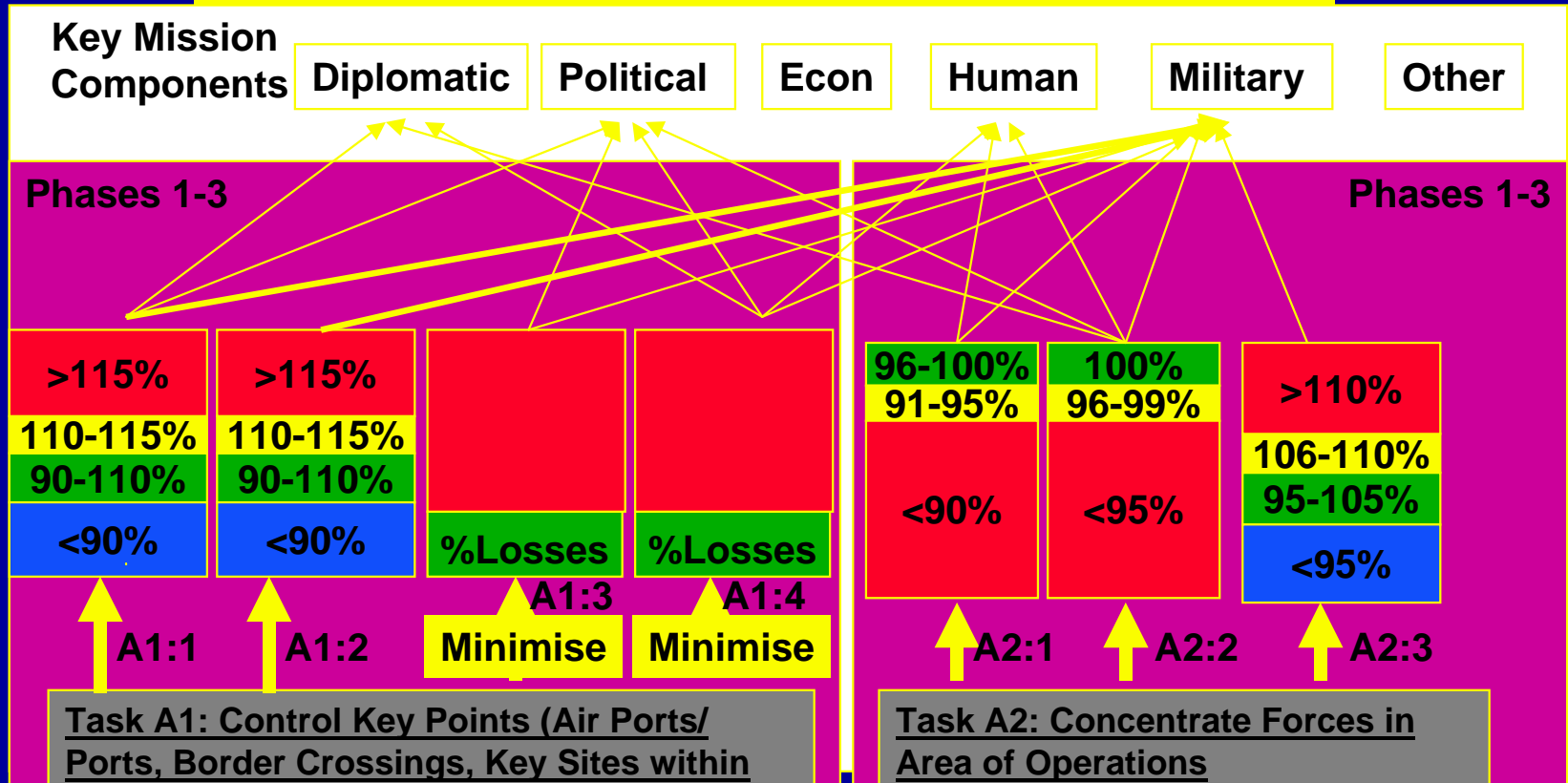


Lower Level Activities Support multiple Tasks at Higher Levels

At the Key Mission Component level satisfactory performance must be achieved in every component for mission success

Performance scores inserted at any level

Task: To Secure the Regional Area



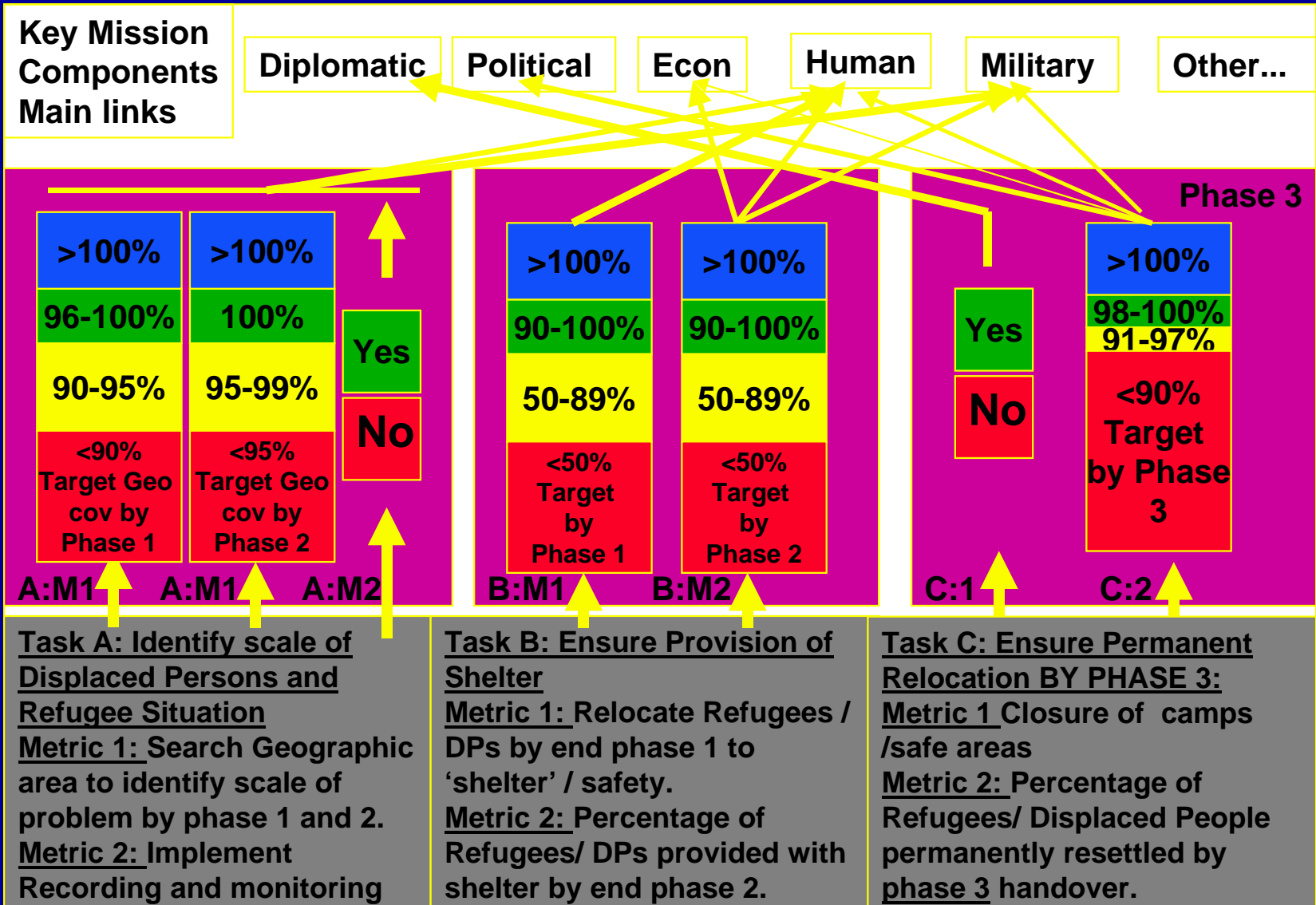
Task A1: Control Key Points (Air Ports/ Ports, Border Crossings, Key Sites within target time:

- Metric 1:** Time to secure main points (hrs)/days against target time. (100%)
- Metric 2:** Time to secure all points phase 1.
- Metric 3:** Personnel and Platform Losses
- Metric 4:** Minimisation of collateral damage non-combatant losses

Task A2: Concentrate Forces in Area of Operations

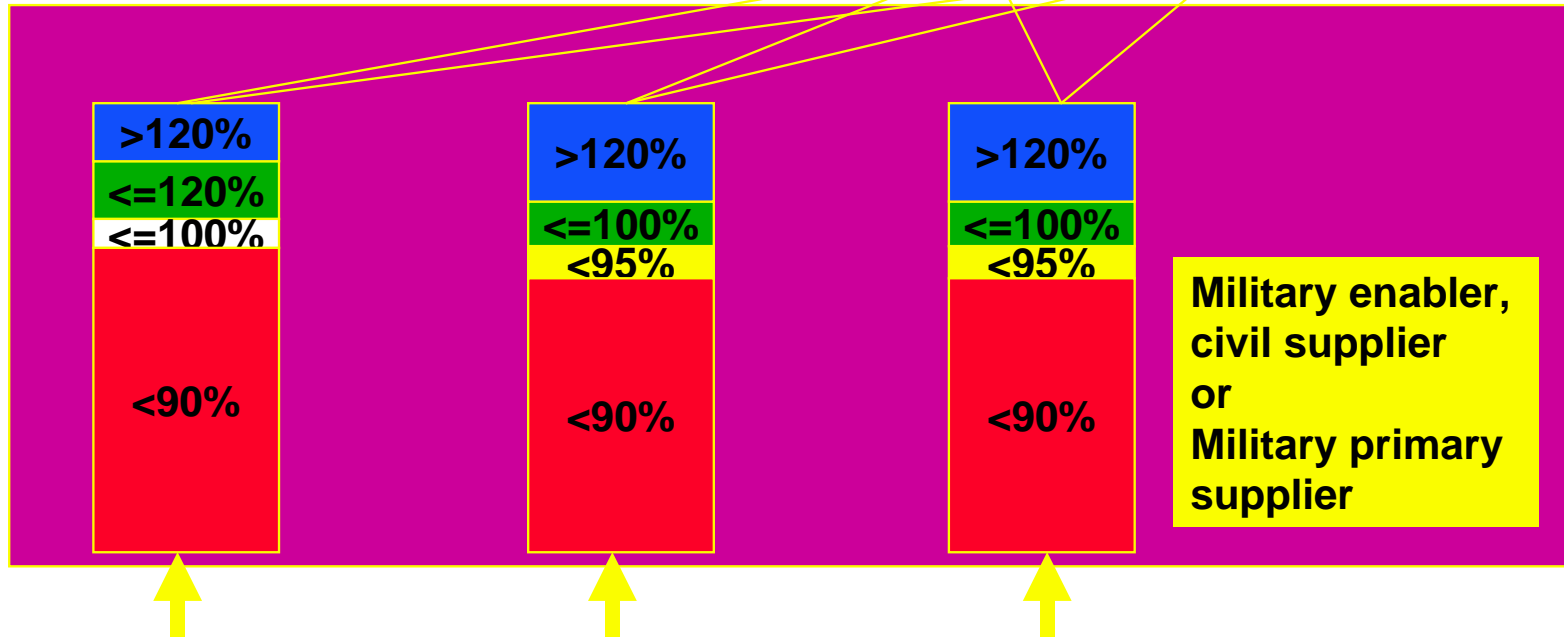
- Metric 1:** % of total force concentration requests met
- Metric 2:** % of total reactions that were appropriate
- Metric 3:** Time (from target time) to effective response for required operation

To Ensure Humanitarian Assistance: Refugees/DPs



Task: To Ensure Humanitarian Assistance

Key Mission Components



Task D: Ensure Provision of Food and Water.

Metric 1: Maintain Stock Level to 120% of requirement at dispersed distribution centres.

Metric 2: Ensure delivery to distribution points.

Metric 3: Number of 'Meals' distributed to civil population as a proportion of minimum (estimated) daily requirement.



Mission Orientated Analysis -Adverse links

- Achieving the military/civil mission of providing secure supply of food could have longer term adverse consequences
 - Military Mission / Humanitarian mission to ensure supply of food
 - Undermines Economic Development

Military Mission:
Ensure Security of
Food distribution



Humanitarian Mission:
Ensure Supply of Food



Economic Mission:
Ensure trade and food
production

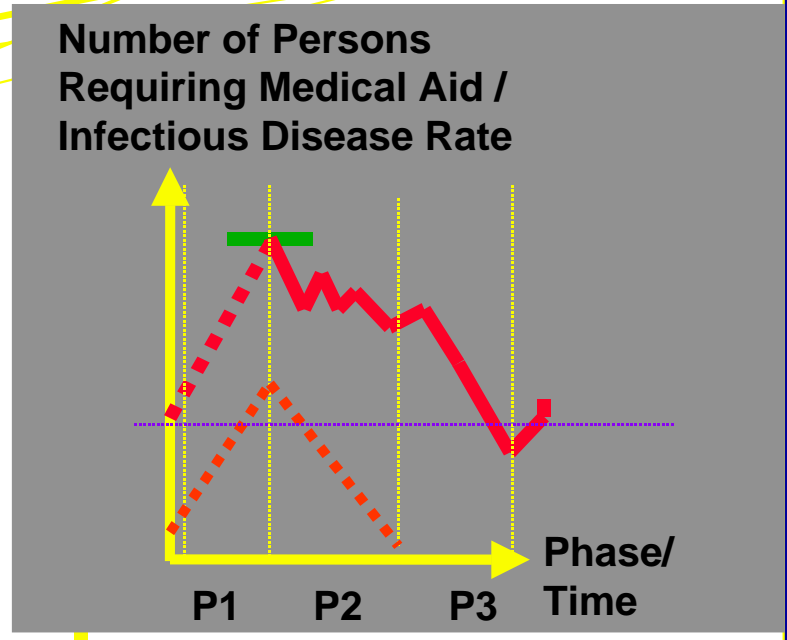
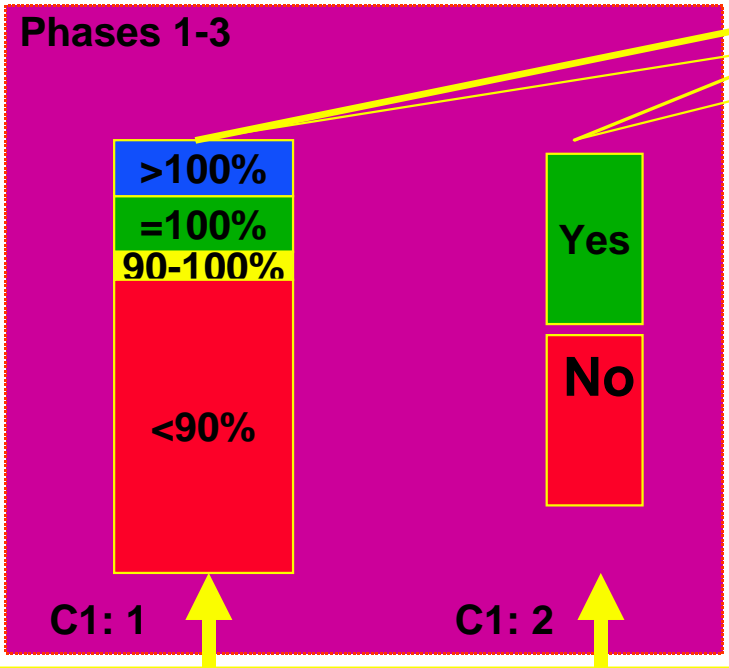


Economic Development may be delayed as individuals become reliant on Aid. Once scenario stabilised, transition from aid to supporting development of self sufficiency in food - support reintroduction of farming by phase 3...other agencies required to support...

Task: To Ensure Humanitarian Assistance (Medical)

Key Mission Components

Diplomatic Political Econ Social Military Other

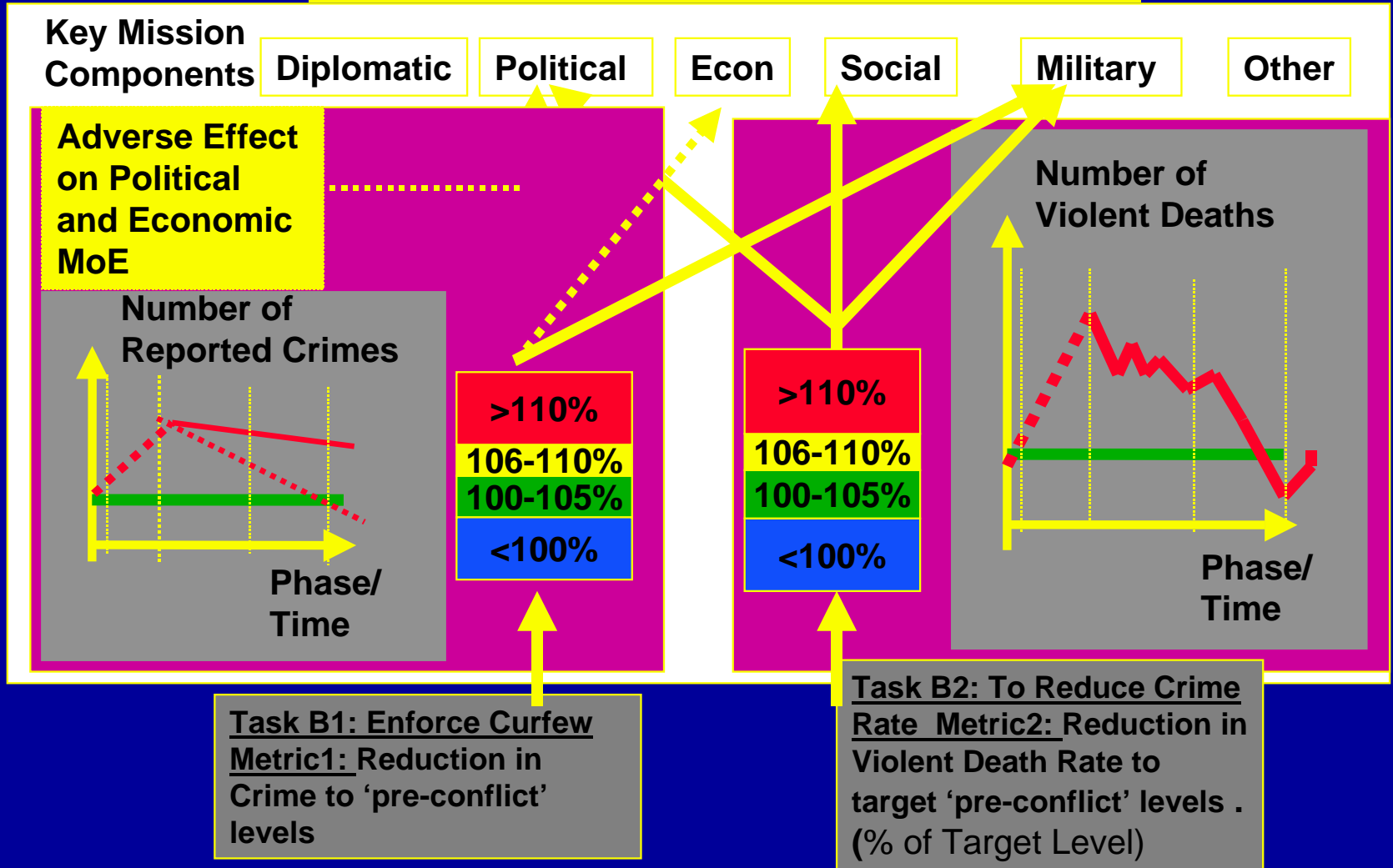


Task C: Ensure Provision of Medical Care directly or through agencies:

- Metric 1: Percentage of Persons requiring medical assistance treated. (Targets in phases 1,2,3.)
- Metric 2: Eradication of 'infectious' diseases by phase 3. (Improvement in living conditions)

Military System or Military acting as an enabler to allow others to provide assistance

Task: To Reduce Crime Rate



Validation Problems: real data required



Mission Orientated Analysis -Adverse links (2)

- Failing to Achieve the military mission can undermine one or more of the non military components of an SSC
 - Military Mission / Task to ensure a curfew to ensure security of civilian population
 - Undermines other KMC freedom of movement

**Military Mission
Enforce Curfew**



**Social Development
Allow Free Association**



Route by which Key Mission Component leads to failure may be different from the way in which success measure aggregates up



Assessment of Competing Capability or Force Elements

- Gather Data on Options
- Assess within a Scenario context the utility of the Capability or Force Element in conducting the required range of tasks and effects.
- Scenario creates 'Demand' - Metrics measure performance within tasks
- Use Aggregated Measures of Performance if possible to Assess Utility of Force Element or Capability
- Assess across other Scenario types

Capability / Force Element Assessment

**Capability Solution 1 /
Force Element 1
(Current Equipment)**

**Capability Solution 2/
Force Element 2
New Highly Versatile
Air Platform**

**Capability Solution 3 /
Force Element 3
New Highly Versatile
Ground Platform**

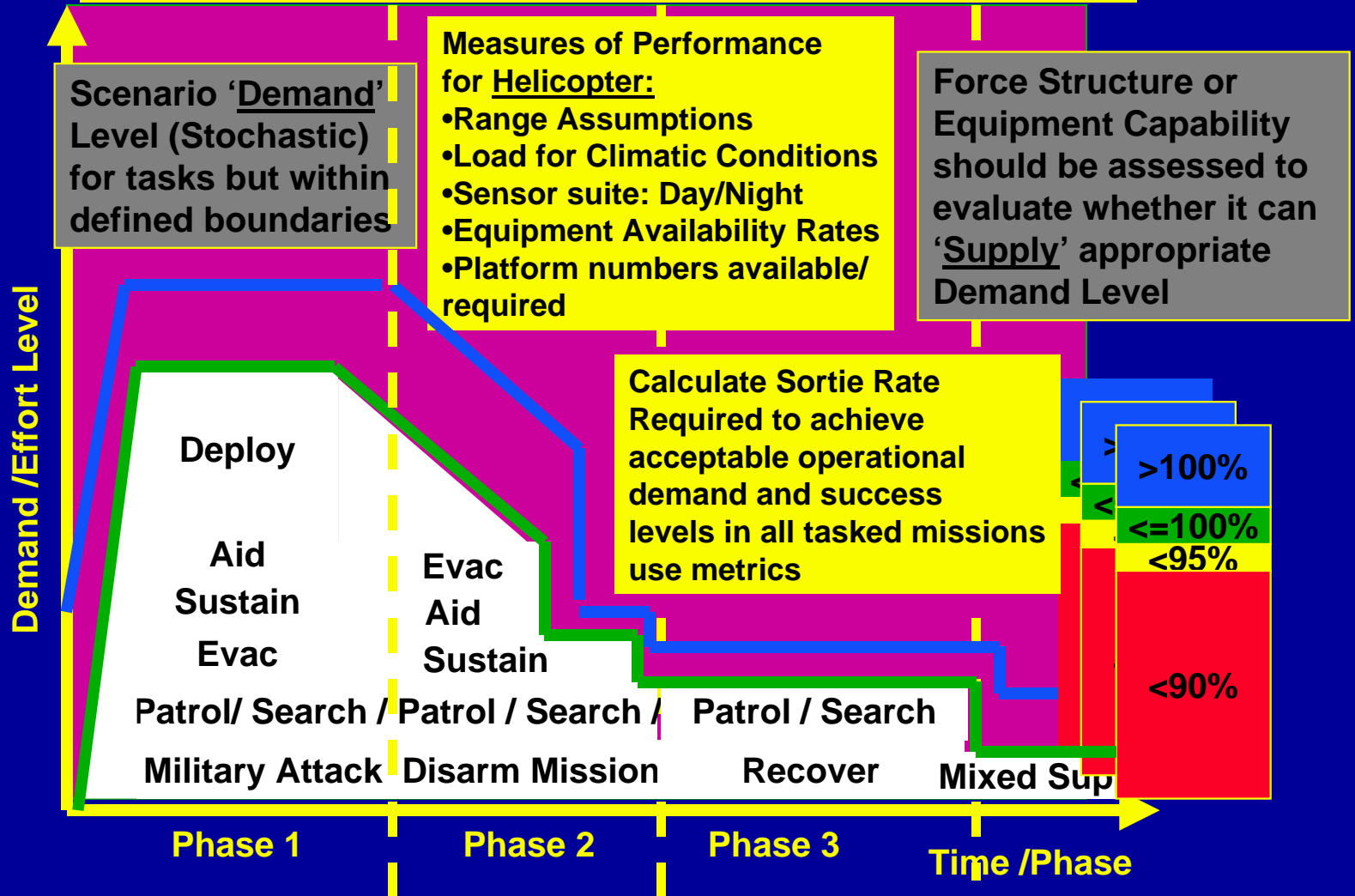
**Using Technical Specifications Doctrine and the
Fixed Scenario Demand Requirement**

**Assess Measures of Performance using metrics and Subsequently
Effectiveness within the Scenario. Test each Capability / Element
against the same range of activities, tasks, demands and threats over time.**

**Cross Scenario Mission Type Assessment to ensure
Utility across War and Non Warfighting**

**Cost Effectiveness
Investment Appraisal**

Activity Demand Level To Evaluate Force Component / Capabilities





Assessment of Competing Capability or Force Element

- ❖ Cannot 'add up' Measures of Performance in tasks within Key Mission Components to a single Measure of Effectiveness for a Scenario
- ❖ Can use Measures of Performance at a lower level within certain KMC and compare results across scenarios
- ❖ Judgement in interpretation



Conclusions: Measures of Effectiveness

- For Scenarios:
 - Measures of effectiveness for Military and Humanitarian objectives well defined
 - For Diplomatic, Political, Economic, linkages, causes and effects are less well defined. Further work is required before integrated additive model solutions are accepted
 - Use metrics at appropriate level for comparison of utility of capability or force element



The End
Discussion and Questions