



Climate & Disaster Risk Solutions

Managing natural disaster risk more effectively



Weather Risk and Poverty

- **The livelihoods of the world's most vulnerable populations are closely linked to variations in weather patterns**
 - Climate change and the increased potential for natural disasters will affect them more adversely than others
- **The international system for responding to natural disasters is not as timely or equitable as it could be**
 - Funding is secured on a largely after disaster strikes and only then can relief be mobilized toward the people who need it most
- **Lives and livelihoods are lost, assets are depleted, and development gains experience significant setbacks**
 - Forcing more people into chronic destitution in the world's least developed countries

To manage this food security risk better we have to understand it

Improving the Disaster Response System

- **World Food Programme:**
 - Delivers three-quarters of all emergency food assistance
 - Operates in almost 80 countries
 - Attributes about half of its expenditures to weather-related causes
- Climate & Disaster Risk Solutions **is a standard-setting methodology for how multiple sets of data and fields of study can interact in a powerful way to manage weather-related food security risk at the national, regional and global levels:**
 - To understand the current risk faced by vulnerable populations
 - Monitor this risk in real time
 - Stress this risk for future climate scenarios or investment plans

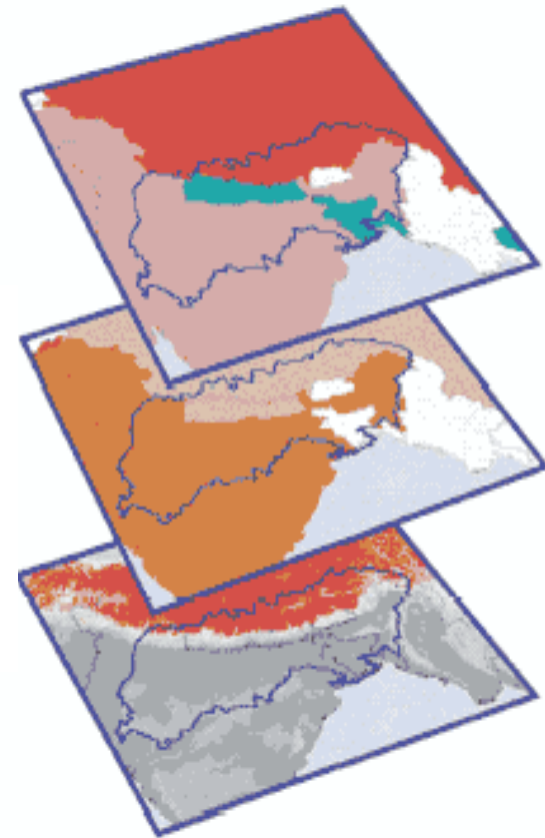
Selects and interprets information for decision-makers and managers

Briefing Overview

- **Quantifying Risk**
 - From Data to Dollars
 - *RiskView* Software Development
 - Portfolio Construction
- **Portfolio Management**
 - Annual cycle of risk
 - Informed decision-making
- **Project Timeline & Collaborations**

From Data to Dollars

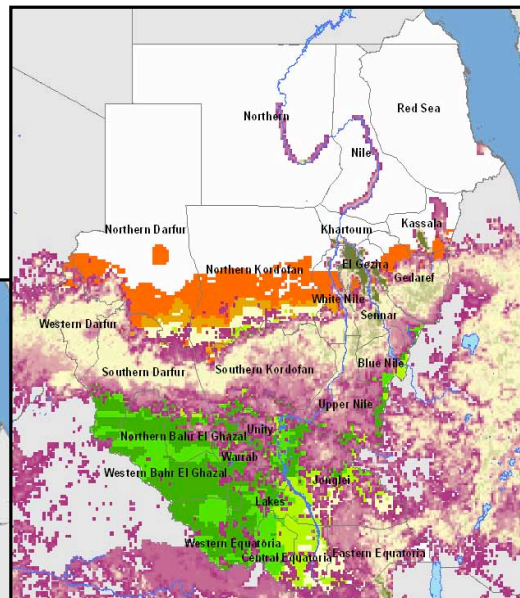
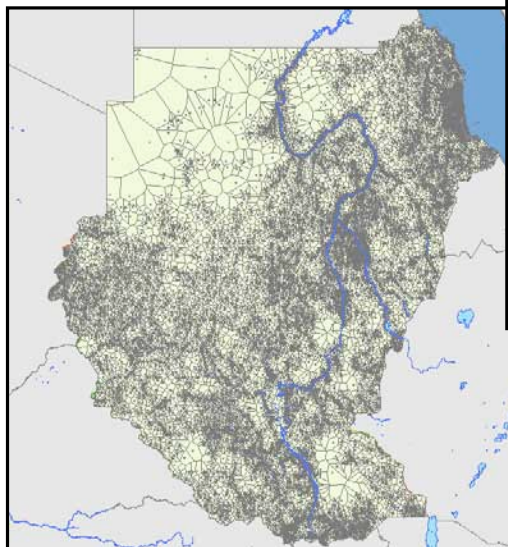
- **Step 1: Weather Indicator Maps**
 - Weather Data (rainfall, PET)
 - Soil & Crop Growth Data (crop types, calendars, water requirements, soil types)
 - Geographic Boundaries (river basins, growing areas, elevation)
- **Step 2: Maps & Profiles of Vulnerable Populations**
 - WFP/Partner Surveys, Analyses and Data
 - Population Datasets
 - Administrative/Livelihood Boundaries
- **Step 3: Operational Costs per Beneficiary**
 - WFP Historical and Current Operational Data
 - Forecasts and Pipelines



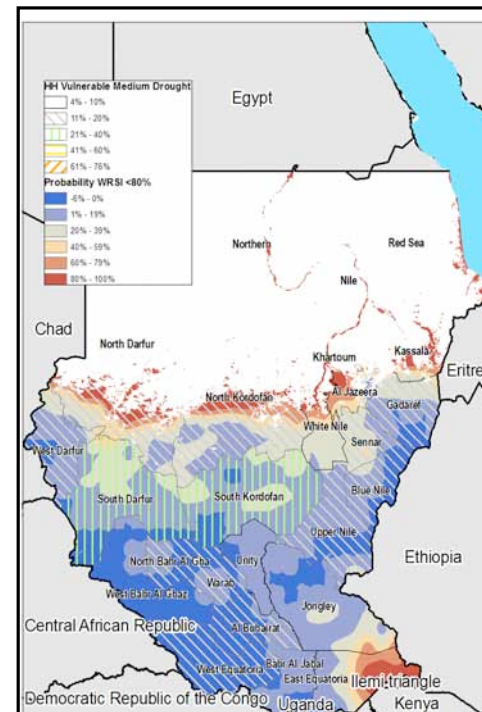
Example from Sudan

Croplands

Population Distribution

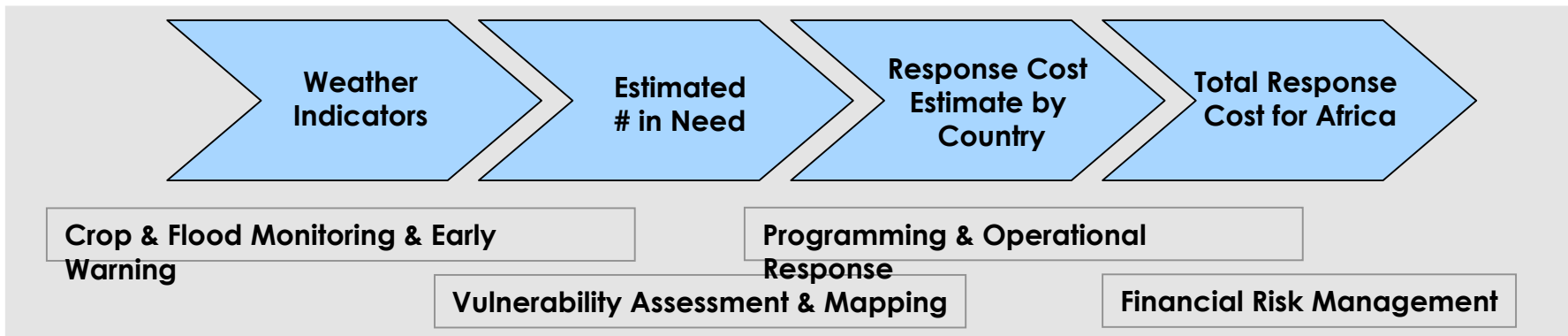
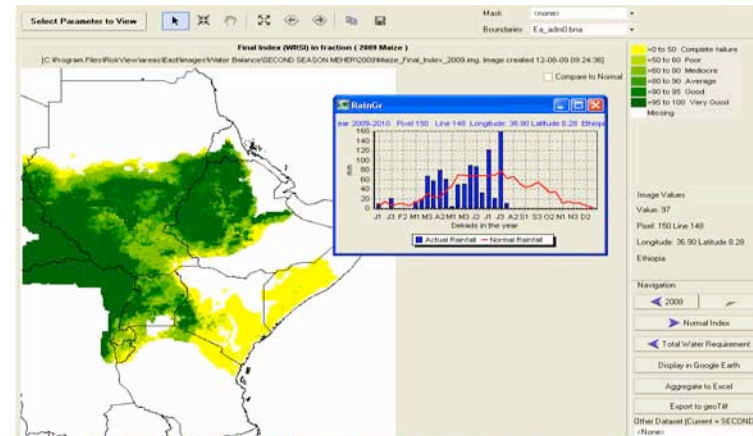
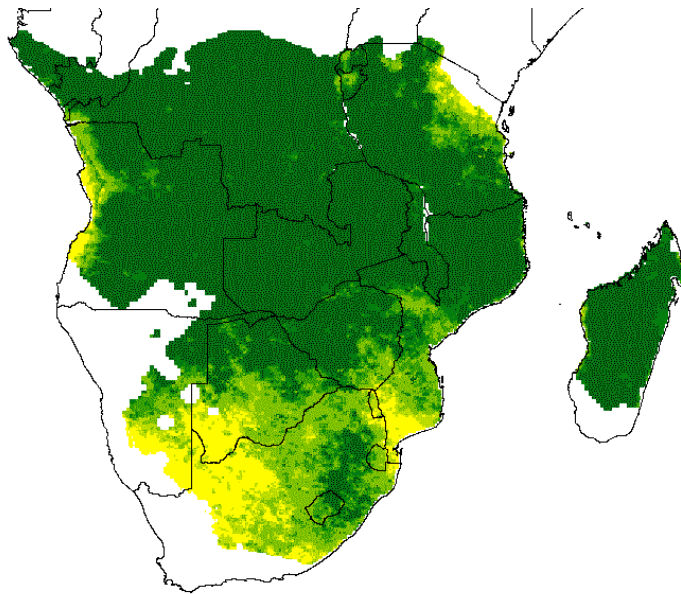


People At-Risk to Food Insecurity due to Drought



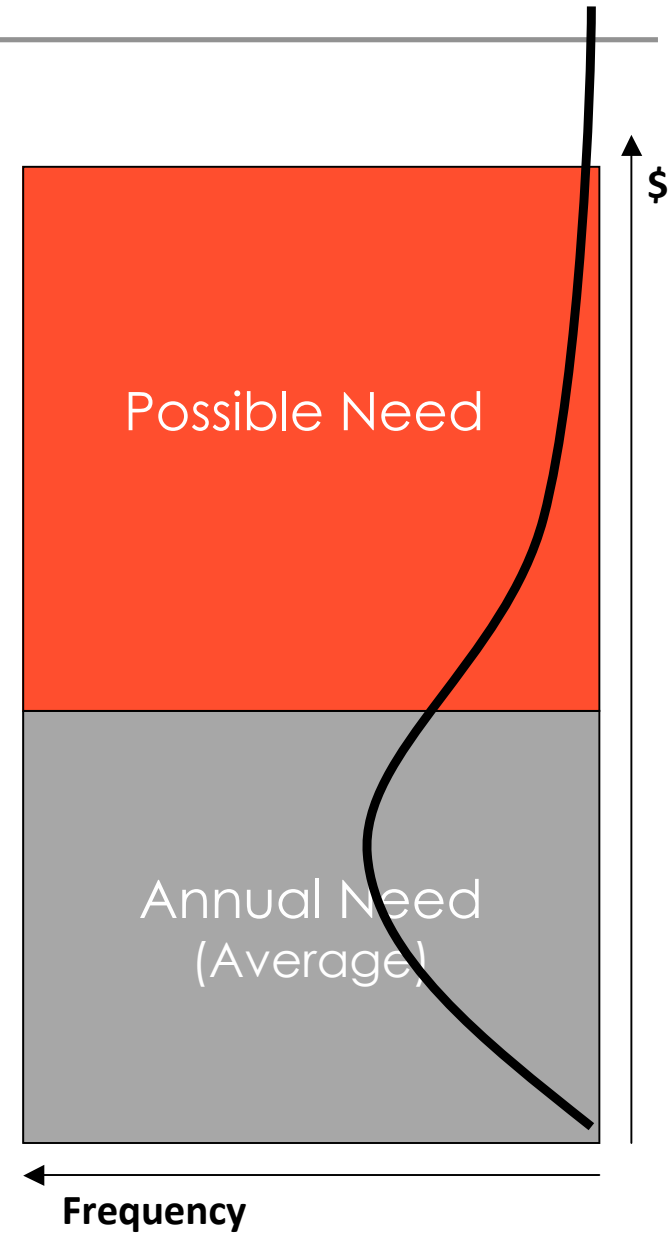
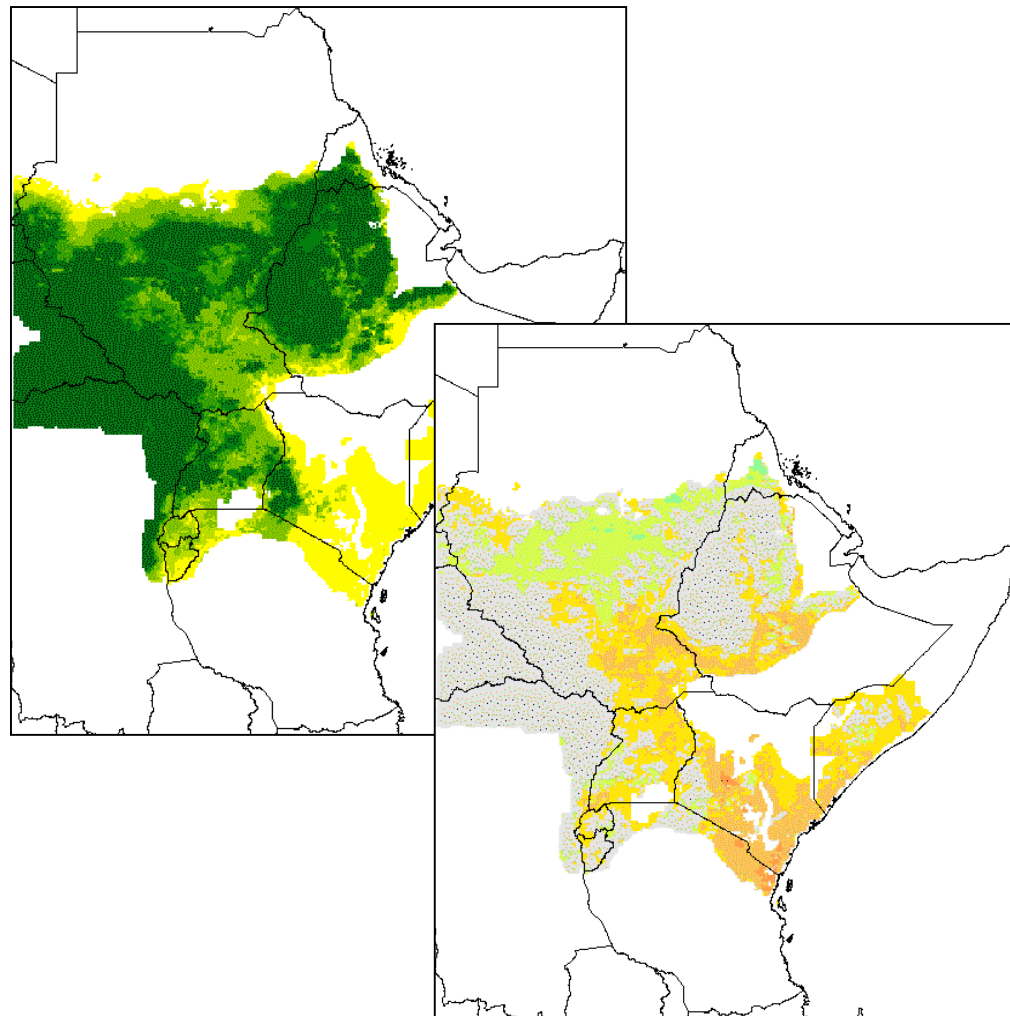
Vulnerability

RiskView Software: A Fund Management Tool

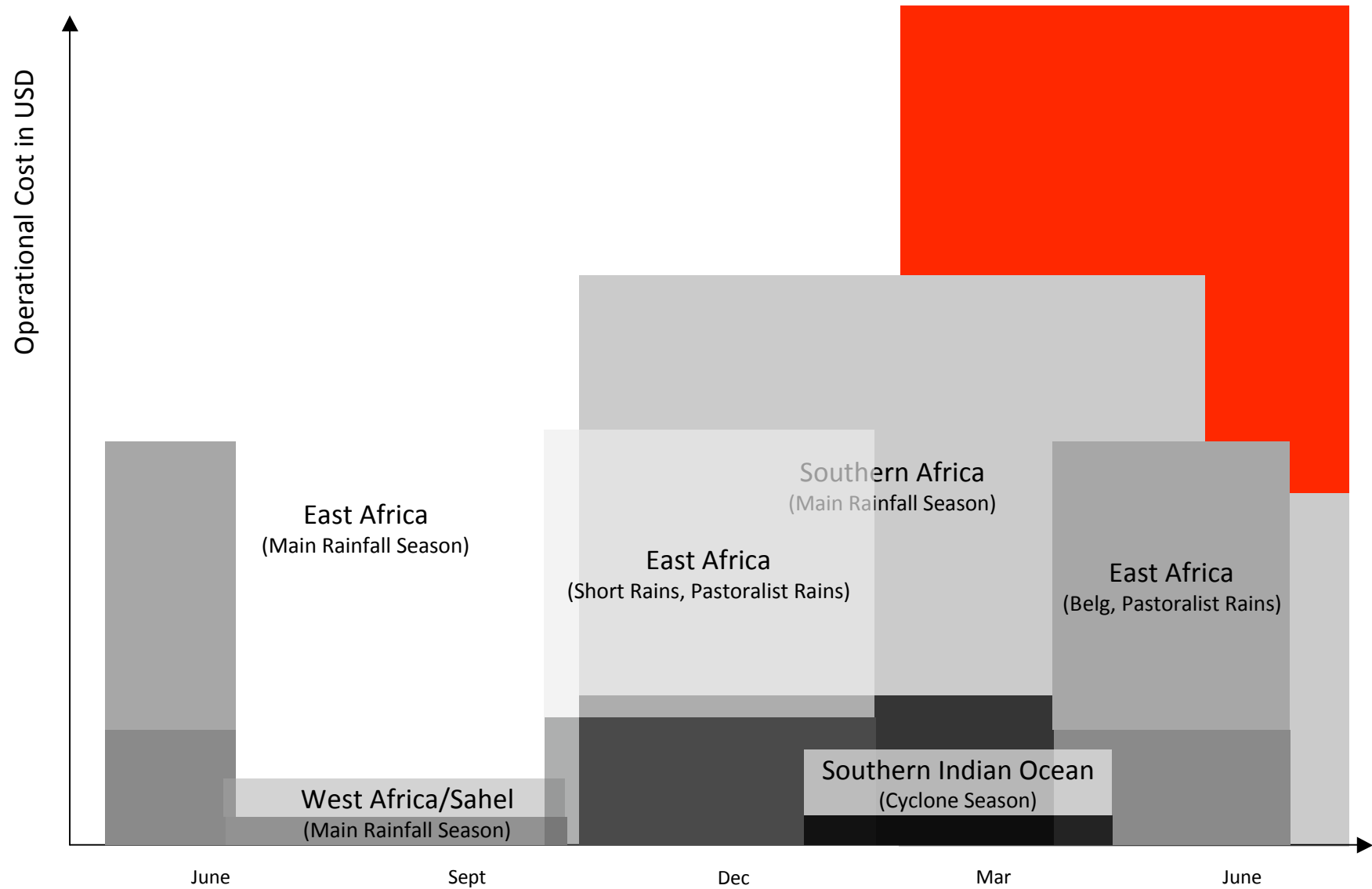


Philosophy is to leverage proven technologies of each discipline

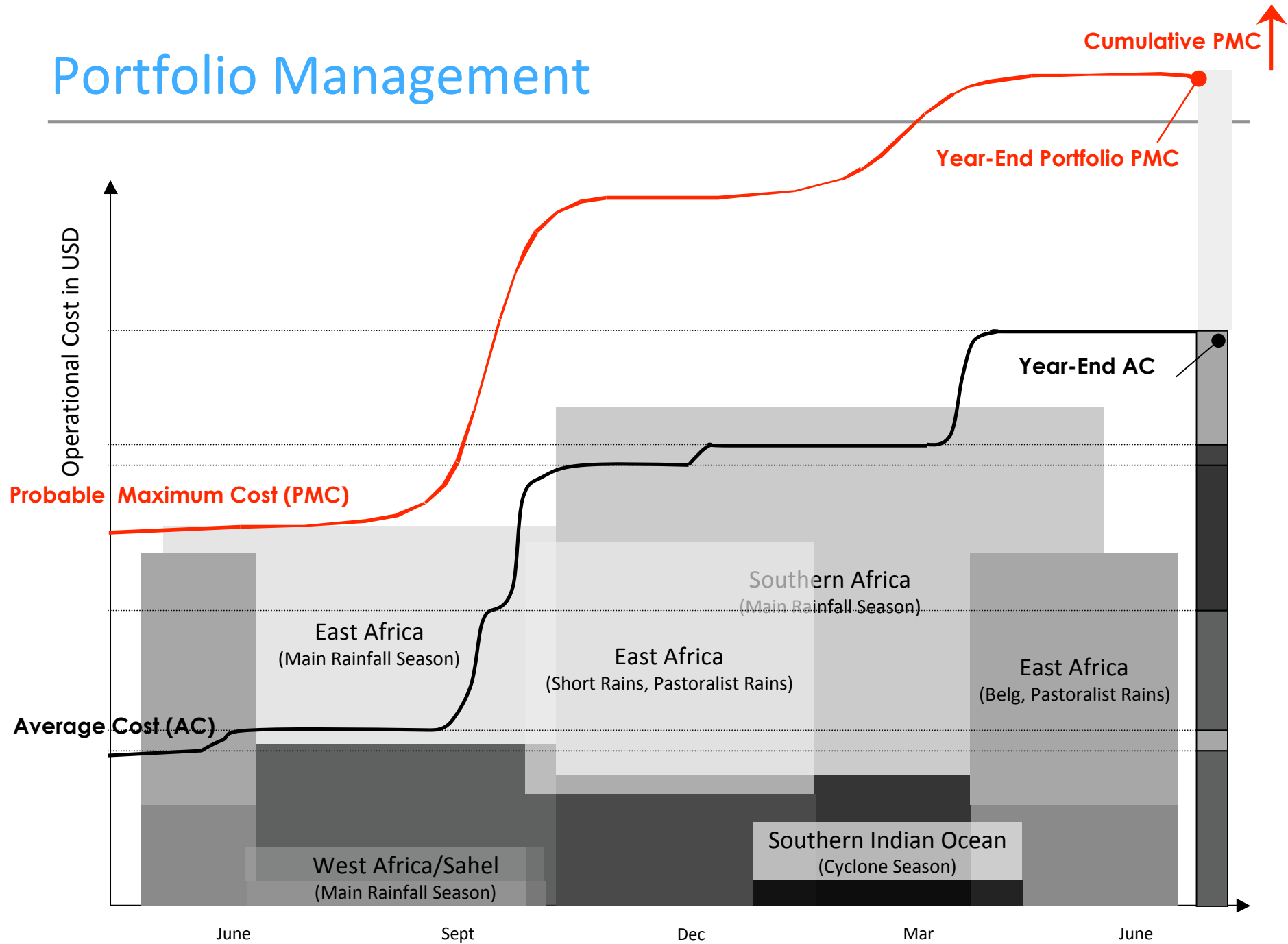
Constructing the External Aid Portfolio



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Portfolio Management



Informed Decision Making

- **Understanding how risk evolves during a given year allows for more efficient:**
 - Fund Management and Resource Allocation
 - Fund Raising
 - Emergency Preparedness and Contingency Planning
- **Understanding today's risk also helps us and the international community to understand the future:**
 - How might climate change impact future operational costs?
 - Where are the potential hot-spots?
 - Where should investments be directed for increasing productivity and catalyzing market development?
 - Establishing benchmarks for investments in disaster risk reduction

Project Timeline

- **RiskView Version 1.0 (December 2009)**
 - Drought, flood, cyclone
 - Seasonal forecasts potentially incorporated
- **First WFP Africa Portfolio Analysis (March 2010)**
 - Expected and variable emergency cost estimates by Country, Region, Africa-wide
 - Monthly portfolio monitoring bulletins
- **Contributions to Global Framework for Climate Services**
 - Share findings from historical analyses and predictive modelling with GFCS taskforce (ongoing as needed)
 - Share findings from climate change simulations (September 2010)
- **Contribution to Secretary General's Global Impact & Vulnerability Alert System (GIVAS)**
 - Climate Risk Solutions index products will contribute information on food security risk to GIVAS (2010)

Project Collaborations

- **Current and Potential Data Sources, Technical* Partners:**
 - USGS-FEWSNET
 - ITHACA, Politecnico di Torino
 - FAO (GIEWS and NRCB)
 - JRC
 - IRI, Earth Institute, Columbia University
 - ENEA-ASC
 - NOAA
 - WMO
 - IPCC
 - Meteosat
 - UN OCHA

* Weather and crop monitoring, early warning