Overview of Latest Version of POAMA

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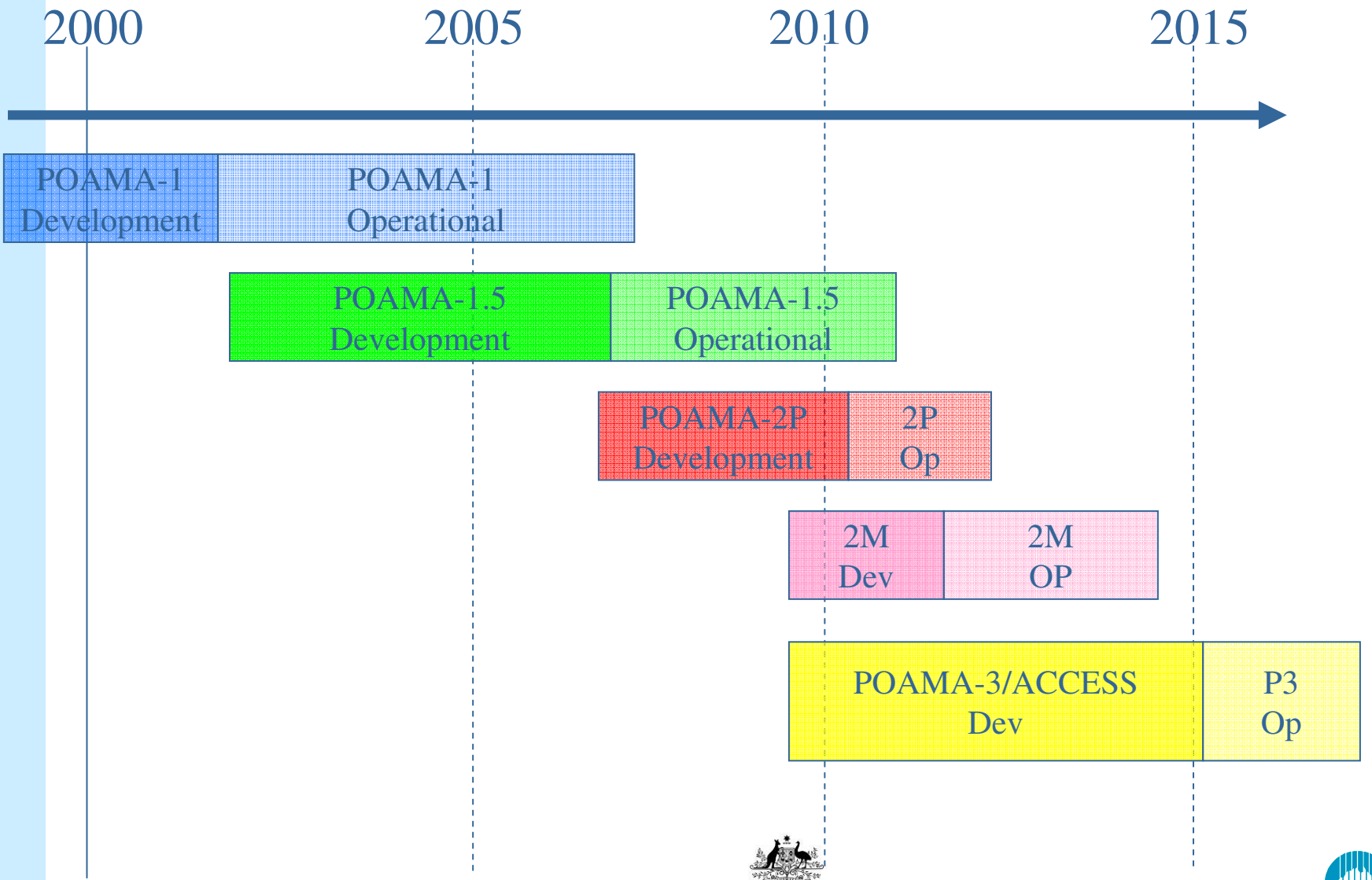
Timelines



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POAMA-2M

Operational Configuration

- 33 member ensemble every week (starting on Thursdays)
- Seamless products from weeks to seasons (experimental web-site)
- Officially replace 2P mid 2013 (most experimental products already based this version)

Hind-casts (for skill evaluation and calibration)

- 33 member ensemble 3 times per month (1st, 11th, 21st)
- 1981-2010 (~35,000 hind-casts)
- Each forecast 9 month lead
- Same system as real-time

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Distinguishing Features

- State of the art method for intialising with ocean observations
- Inclusion of new ocean data (salinity)
- A Pseudo multi model approach (3 different versions)
- **A state of the art method for generating ensembles**
- **A new real-time strategy (weekly ensembles)**

But still the same underlying model as in POAMA-1.5, this will be upgraded with the ACCESS model in POAMA-3

Approx 250km x 250km grid

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Taking Advantage of Weekly Forecast Cycle (POAMA-2M)

Experimental products aggregate forecasts over the last 1-2 weeks

Seasonal Forecasts

•Based on 99 members (using forecasts over last 3 weeks)

Monthly Mean Forecasts

•Based on 66 members (using forecasts over last 2 weeks)

Multi-week forecasts

•Based on 33 members using this weeks forecasts

Advantages

•Increased reliability (more spread)

•Slightly increased skill

•Reduced flipping from one week to the next

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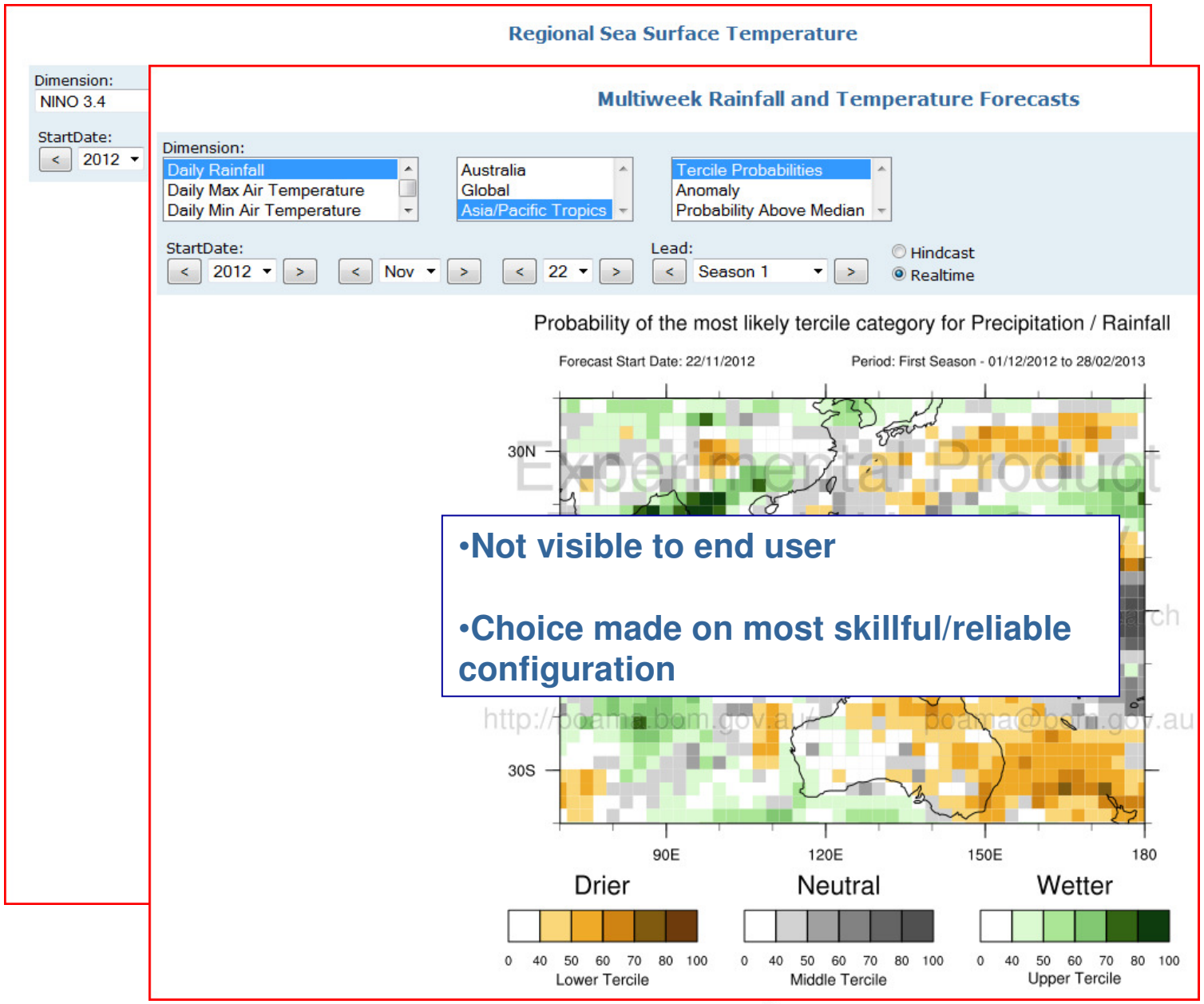
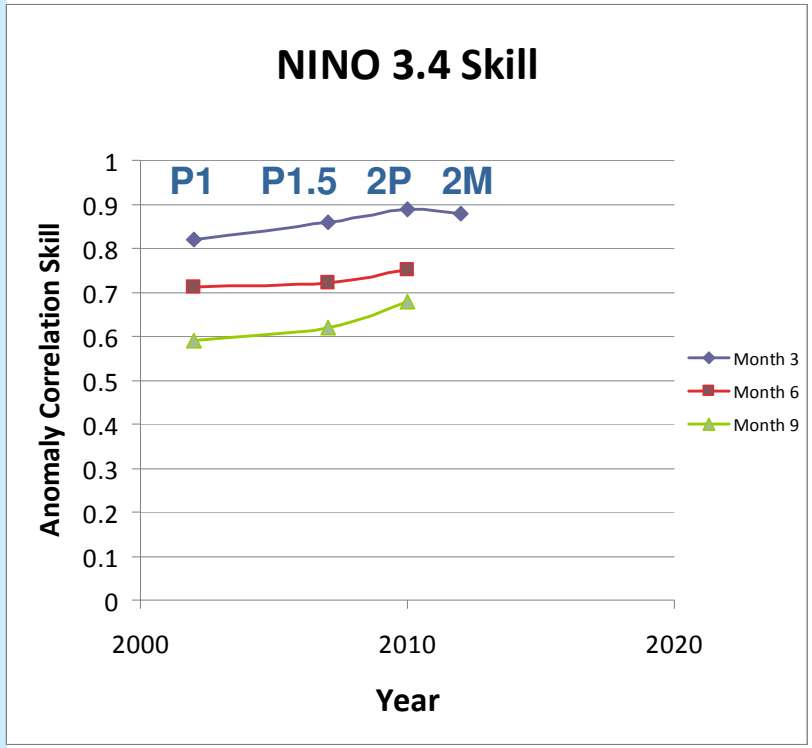
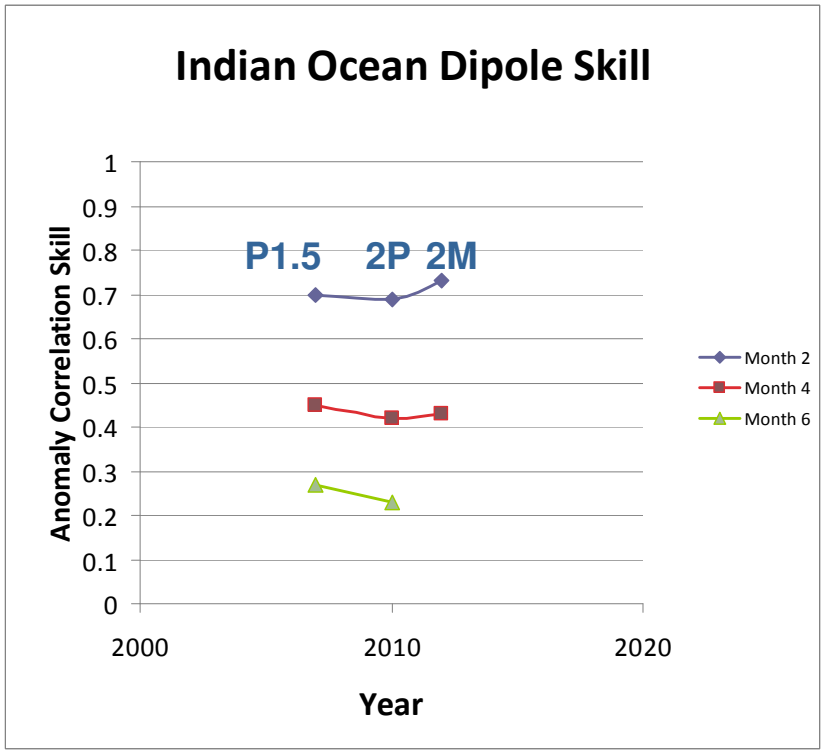
POAMA-2M 99-Member Seasonal Products



- **Not visible to end user**
- **Choice made on most skillful/reliable configuration**

POAMA Progress – SST Skill





Improvements due to

- Increased supercomputing
- Improved forecast system (model, physics, initialisation strategy)
- (New observing networks ?)

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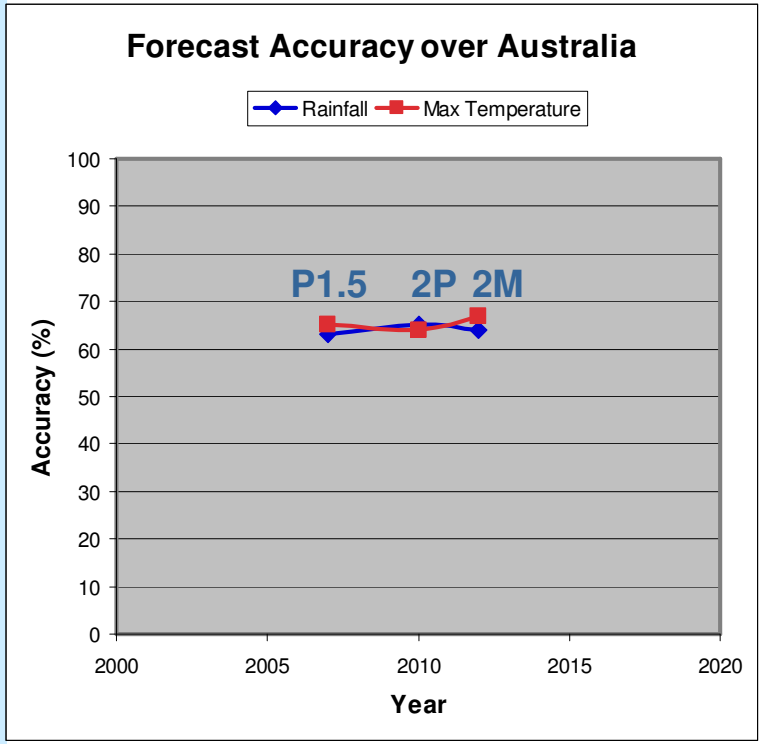
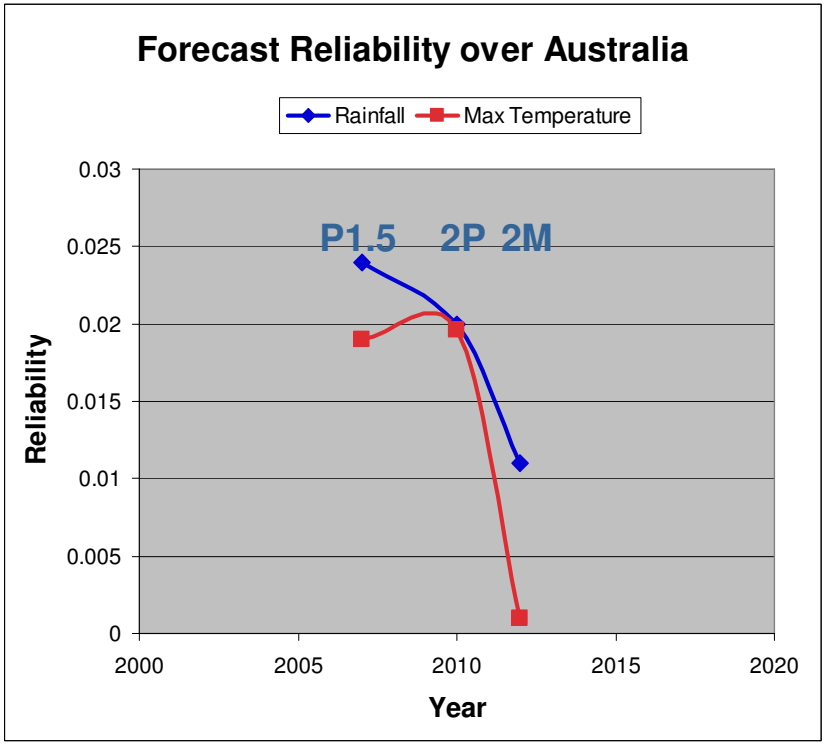
POAMA Progress – Regional Skill





First Seasonal Rainfall/Max temperature – skill scores for upper tercile forecasts

Products

SST: NINO, IOD, Modoki (Operational)

Reef Bleaching Risk (Operational)

Hydrological Stream Flow (Pre Operational)

Pacific Islands Temp/Rain (Pre Operational)

Above Median Probabilities Rainfall/Temperature (Pre Operational)

Sophisticated rainfall temperature + global e.g. Tercile probs, distributions, etc (Trial)

Wet season onset (Trial)

Multi-week rainfall/temperature (Trial)

MJO (Trial)

SAM (Trial)

Application specific Trial Products (e.g. Tuna, Salmon, etc)

Raw gridded forecasts and hind-casts are available on an open-DAP server

Research into Applications

General: Temperature and Rainfall (– e.g. for agriculture, etc)

Farming applications (1 presentation)

Hydrological Streamflow prediction (3 presentations)

GBR Reef Bleaching Risk (1 presentation)

Marine: Tuna, Salmon, Prawns (1 presentation)

Pacific Islands (temperature, rainfall, sea level, bleaching risk, TCs) (3 presentations)

Multi-week and heat extremes prediction (2 presentation)

User presentations (10 presentations)