4.2 OVERVIEW OF THE NORTH AMERICAN MONSOON EXPERIMENT (NAME)

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ABSTRACT

Recent progress on the North American Monsoon Experiment (NAME) is reviewed, with emphasis on plans for a NAME Field Campaign during the NH summer of 2004. NAME is an internationally coordinated, joint CLIVAR-GEWEX process study aimed at determining the sources and limits of predictability of warm season precipitation over North America. It hypothesizes that the North American Monsoon System (NAMS) provides a physical basis for determining the degree of predictability of warm season precipitation over the region. NAME employs a multi-scale (tiered) approach with focused activities in the core monsoon region (Tier 1), on the regional-scale (Tier 2) and on the continental-scale (Tier 3). NAME's objectives are to promote a better understanding and more realistic simulation of: warm season convective processes in complex terrain (Tier 1); the intraseasonal variability of the monsoon (Tier 2); and the response of the warm season precipitation pattern to slowly varying oceanic and continental boundary conditions (Tier 3). NAME Science is managed by a Science Working Group (SWG) made up of scientists from the U.S., Mexico and Central America, both university and government. NAME has an eight year life cycle (2000-2008) including build-up, field, analysis and modeling phases. The NAME program has strong links between the VAMOS element of International CLIVAR, US CLIVAR Pan American research, and the GEWEX Americas Prediction Project (GAPP). An online version of the NAME Science and Implementation Plan is available at http://www.joss.ucar.edu/name

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1. OBJECTIVES AND RELEVANCE

The North American Monsoon Experiment (NAME) is an internationally coordinated, joint CLIVAR-GEWEX process study aimed at determining the sources and limits of predictability of warm season precipitation over North America. It focuses on observing and understanding the key components of the North American Monsoon System (NAMS) and their variability within the context of the evolving land surface-atmosphere-ocean annual cycle. It seeks improved understanding of the key physical processes that must be parameterized for improved simulations and predictions with coupled models. NAME employs a multi-scale (tiered) approach (Fig. 1) with focused monitoring, diagnostic and modeling activities in the core monsoon region, on the regional-scale and on the continental-scale. NAME is part of the CLIVAR/VAMOS program, US CLIVAR Pan American research, and the GEWEX Americas Prediction Project (GAPP).

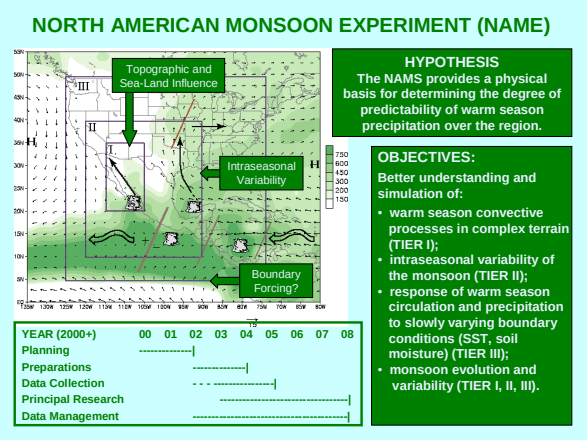

Figure 1. Schematic Illustrating the multi-tiered approach, timeline and objectives of the North American Monsoon Experiment (NAME).

The scientific objectives of NAME are to promote a better understanding and more realistic simulation of:

- $ warm season convective processes in complex terrain (Tier 1);
- $ intraseasonal variability of the monsoon (Tier 2);
- $ the response of the warm season atmospheric circulation and precipitation patterns to slowly varying, potentially predictable surface boundary conditions (e.g. SST, soil moisture) (Tier 3);
- $ the evolution of the North American monsoon system and its variability;

To accomplish these objectives, planning has proceeded with the intent of developing:

- $ empirical and modeling studies that carry forward the joint US CLIVAR/GEWEX Warm Season Precipitation Initiative (2000 onward), and initiate new elements;
- $ a NAME Enhanced Observing Period (JJAS 2004) including build-up, field, analysis and modeling phases.

An online version of the NAME Science and Implementation Plan is available from the NAME Web site at UCAR Joss: http://www.joss.ucar.edu/name/

1.1. Key questions, issues and/or hypotheses the study will address

NAME hypothesizes that the North American Monsoon System (NAMS) provides a physical basis for determining the degree of predictability of warm season precipitation over the region. NAME emphasizes the role of the land surface (e.g. topographic influences on precipitation; hydrology and water resources; land surface memory processes), the role of low-level jets (e.g. relationships between the Gulf of California LLJ, moisture surges and the diurnal cycle of precipitation) (Fig. 2), and the role of oceanic forcing of continental climate anomalies (e.g. remote versus local SST's; antecedent influences; influence of the leading patterns of climate variability, including ENSO, MJO, PDO).

NAME's scientific questions are motivated by the current warm season predictive capabilities, science issues and observational needs of the global and regional modeling communities. To make progress, NAME has organized two Teams that preserve the modeling-observations linkage for both communities (see section 4). The Teams consist of NAME observationalists, process modelers, and physical parameterization specialists at the US national climate modeling and prediction centers. Some key questions to be addressed by the NAME Teams include:

- $ How well is the life cycle of the monsoon (onset, maintenance and demise) simulated and predicted?
- $ What is the nature of the interactions between the diurnal cycle and the evolution of the North American summer monsoon system?
- $ How well do models simulate convective processes in complex terrain?

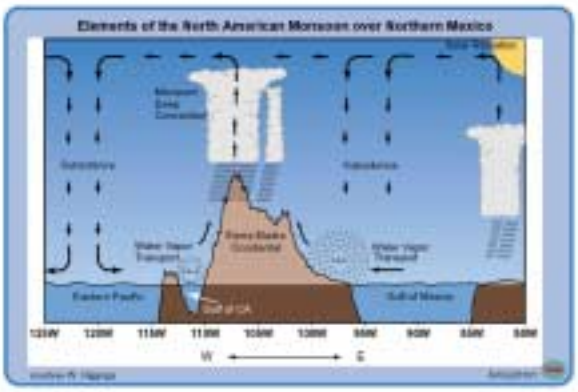

Figure 2. Schematic vertical (longitude-pressure) cross section through the North American Monsoon System at 27.5N. Topography data was used to establish the horizontal scale and NCEP/NCAR Reanalysis wind and divergence fields were used to establish the vertical circulations.

- $ What is the connection between synoptic variability over nearby oceans (e.g. easterly waves) and the development of Gulf surges and continental precipitation?
- $ What are the links, if any, between the strength of the monsoon in SW North America and summertime precipitation over the central US?
- $ How is the evolution of the warm season precipitation regime related to the seasonal evolution of continental and oceanic boundary conditions?

$ Can models reproduce the observed summertime precipitation in average years and
years with ENSO influence?

Addressing these questions will yield a better understanding of what physical processes need to be included in climate models in order to reproduce the monsoon system. Consideration of these questions will also help to identify needs for additional observations.

1.2. Responsiveness of the process

NAME is directly responsive to CLIVAR science goals. In May 2001 the Pan Am Panel recommended that US CLIVAR join with US GAPP and VAMOS to implement NAME as a warm season process study of the North American monsoon built around an Enhanced Observing Period during 2004. US CLIVAR's primary interests and contributions to NAME were listed in the meeting report. These interests would lead to the following CLIVAR-NAME deliverables:

$ improved coupled climate models capable of predicting North American monsoon variability months to seasons in advance;
$ more comprehensive understanding of North American summer climate variability and predictability;
$ infrastructure to observe and monitor the North American monsoon system;
$ contributions to the assessment of climate variability and long-term climate change in the North American monsoon region;
$ strengthened multinational scientific collaboration across the Americas.

2. PROCESS STUDY PLANS

2.1. Overall approach in addressing the science, answering questions, & testing hypotheses

The NAME Project has a 3-pronged structure:

$ NAME Science Working Group (science focus)
$ NAME Project Office (field implementation, data management, logistics)
$ NAME Program Management (funding agencies)

NAME science is managed by a SWG that has been approved by the CLIVAR/VAMOS and CLIVAR Pan American panels in consultation with U.S. GEWEX. The SWG develops and leads research to achieve NAME objectives.

The NAME Project Office at UCAR/JOSS, led by Dr. C. B. Emmanuel, is responsible for the following NAME functions:

$ *Program Planning and Field Implementation*: Provide the infrastructure for effective design and implementation of the NAME EOP, including management of field operations.
$ *Scientific Data Management*: Provide all facets of data collection and dissemination of information for the NAME Program.
$ *Logistics:* Provide specialized logistics support specifically for the effective implementation of the NAME EOP, including administrative support, workshop coordination and outreach (e.g. webpage, logo).

The NAME science objectives will be addressed by a symbiotic mix of diagnostic, modeling and prediction studies together with enhanced observations (all approved by the NAME SWG). NAME employs a multi-scale (tiered) approach with focused monitoring, diagnostic and modeling activities in the core monsoon region (Tier 1), on the regional-scale (Tier 2) and on the continental-scale (Tier 3).

To accomplish NAME science objectives, planning has proceeded with the intent of developing:

$ Empirical and modeling studies that carry forward the joint US CLIVAR/GEWEX Warm Season Precipitation Initiative (2000 onward), and initiate new elements.
$ A NAME Enhanced Observing Period (JJAS 2004) including build-up, field, analysis and modeling phases (2000-2008).

The NAME teams (see section 4) will help specify the "ramp-up" strategy for the EOP, provide guidance on needs and priorities for NAME field observations, identify sustained observational requirements for climate models, and identify

additional process studies necessary to reduce uncertainties in climate models.

2.2. Timeline

The Pan American Panel has endorsed the timeline for implementation of NAME, V/EPIC, PLATIN and SALLJ shown in Fig. 3.

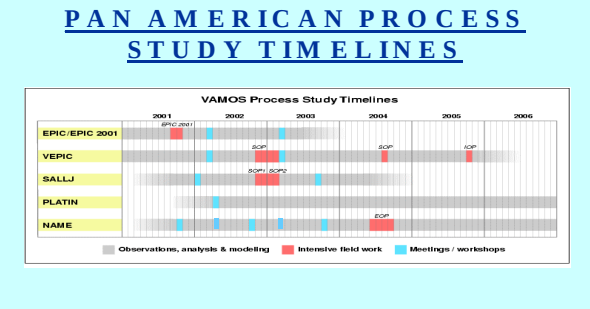

Figure 3. Pan American process study time lines.

NAME activities include planning, preparation, data collection and principal research phases during an eight-year "life-cycle". These activities are focused toward the NAME EOP during JJAS 2004. A schedule divided into major phases during an eight-year "life-cycle" is as follows:

2.3. GEWEX/GAPP Interests and Contributions to NAME

A major component of the GEWEX/GAPP Program is "Predictability of Monsoonal Systems". GAPP has 2 summer Monsoon circulation study areas (Fig. 4).

NAME is included in the GAPP Science and Implementation Plan as a North American contribution to this component of the Program. At the recent GCIP/GAPP Mississippi River Conference (May 2002), a "Warm Season Precipitation" Working Group recommended that the NAME-GAPP linkage emphasize enhanced understanding, modeling, and predictive capability of

$ the topographic influences on precipitation;
$ hydrology and water resources;
$ land-surface memory processes.

More specifically, the Working Group identified the following NAME contributions to GAPP:

$ fine resolution, gauge-only precipitation products, especially for LDAS, Regional Reanalysis and model validation studies;
$ fine resolution merged precipitation data sets based on a combination of gauges and remotely sensed data;
$ increased density of daily observations of rainfall in north-central Mexico;
$ the role of land in the onset and intensity of the monsoon;
$ improved understanding of the role of the monsoon in the variability of the water budget components over the GAPP summer monsoon study areas;
$ improved understanding of summer orographic precipitation processes.

In addition, the Working Group identified the following GAPP contributions to NAME:

$ documentation and investigation of the cause of variations in rainfall-runoff relationships;
$ quantification of the temporal and intensity statistics of rainfall in the NAME Tier 1 region;
$ improved access to historical Mexican hydrological data;
$ NAME-specific, LDAS-type activity in Tiers 1 and 2;
$ creation and calibration of a "PRISM-like" methodology to allow for topographic variations in precipitation in the NAME study area;
$ creation and distribution of a historical set of LDAS-type forcing data to be used in coupled modeling studies for soil moisture "spin up";
$ land memory process studies in NAME Tiers 1 and 2 (to better specify required future GAPP-related activity in this region);
$ improved land surface and coupled land-atmosphere models for diagnostic and predictability studies of the North American monsoon.

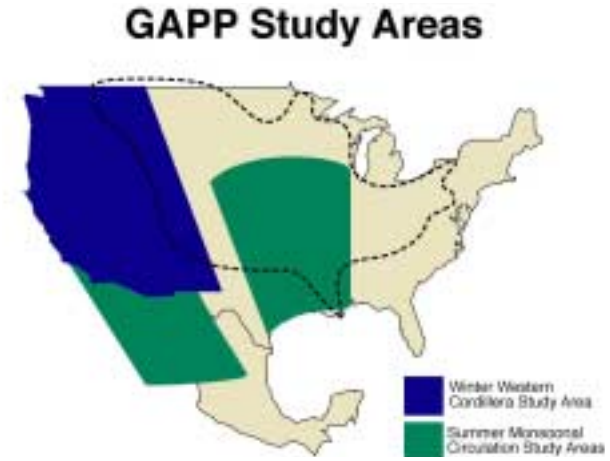

Figure 4. GEWEX/GAPP Large-Scale study areas.

The Working Group endorsed the idea of a NAME Regional Modeling - Observations Team (see section 4) that is tasked with providing better understanding of the topographic influences on convective precipitation and on improving parameterization of this feature in models. Activities will be tightly constrained, and should include investigations of within-model variability (through ensemble prediction studies) and year-to-year variability (through studies of different years). There was also a recommendation that this team not only compare existing parameterization schemes and models using NAME observations for validation, but that they re-evaluate and, to the extent possible, improve parameterizations in model components that influence the simulation of convective precipitation, with focus on defining the relationship of such parameterizations to topography.

3. OBSERVATIONAL ELEMENTS

Key aspects of the activities leading up to and contributing to the NAME Enhanced Observing Period (JJAS 2004), are summarized below.

3.1 NAME Enhanced Observation Period

3.1.1 Build-up Phase

$ Establish VAMOS / NAME Project Office for design and implementation of the NAME Field Campaign, data management, and logistics support.

$ Establish NAME cooperative teams for global model-observations and regional model – observations linkages.

$ Plan, integrate and implement NAME networks and conduct site surveys. "Ramp-up" activities in the region.

$ Build National and International NAME Partnerships.

$ Develop an effective education and training program in the region (US activities, International activities).

3.1.2 NAME Intensive Observation Period

$ Operate for a period of 4 summer months (JJAS 2004) to coincide with the peak monsoon season and maximum diurnal variability.

$ Conduct Intensive Observing Period (IOP) of up to one month (mid-July to mid-August) within the EOP during which time all networks are operational.

3.1.3 Proposed Field Observation Enhancements

Proposed NAME observational elements include raingauges, radiosondes, pilot balloons, wind profilers, radars, NOAA Research Vessel Ron Brown, NOAA P-3 aircraft and Suominet. A number of these efforts are regional enhancements (i.e. NAME Tier 1), while others are aimed at the broadscale context (i.e. NAME Tiers 2 and 3). It is intended that all of these networks operate during portions of the NAME EOP (JJAS 2004) and that all of them operate for the entire NAME IOP (mid July-mid August, 2004). Some of the activities (e.g. SMN radiosondes; simple raingauge network) are enhanced monitoring activities that will operate before, during and after the NAME EOP. A brief summary of each NAME observational element is provided below. NAME is in the process of integrating these activities to maximize use of observing systems currently operated by the Mexican Weather Service (SMN) and to augment these with research systems currently maintained by U.S. agencies where appropriate.

(1) Raingauge

Instrumentation: 90 new event logging gauges in SW-NE transects to sample gradients in rainfall from the GOC to the SMO.
Objectives: To improve estimates of the diurnal cycle

and topographic variation of precipitation in the core region of the NAM; to facilitate hydrologically relevant diagnostic studies; to facilitate modeling studies that use the new data to investigate, validate and improve the parameterization of convective precipitation processes in models.

Instrumentation: 1400 simple raingauges in NW Mexico (transects parallel to the Gulf of California) and in North Central Mexico.
Objectives: To improve the network of simple raingauges in data sparse areas of NW Mexico; to implement a web data base with a server for data dissemination; to contribute to a NAME-specific, LDAS-type activity; to validate precipitation from global and regional models; to improve estimates of components of the atmospheric moisture budget; to resolve GOC surge-precipitation relationships.

(2) Radiosonde

México:

(i) operate once-daily observations (12 UTC) at all 17 sites in the country (2003-2004) [currently 5 sites operate at 00 UTC, eleven sites operate at 12UTC, and Mexico City operates at 00UTC and 12UTC];
(ii) operate twice-daily observations (May-Nov) at 8 sites (2003-2004);
(iii) operate 2 additional sites (Altamira and Tapachula) (2003-2004);
(iv) maintenance of the upper-air sounding network; Observer training (2003-2004)

(3) Pilot Balloon

Instrumentation: 6 US PIBAL sites and 25 Mexican PIBAL sites (beyond PACS SONET) to operate up to 8 times daily
Objectives: To describe the mean circulation over the northern GOC and resolve the vertical structure of surge events; to describe the variability of the circulation associated with the lower-tropospheric heat low; to estimate east-west variations in the mean wind (to help estimate Q-flux fields); to specify the lower-tropospheric flow from the eastern tropical Pacific into lower GOC; to describe the flow across central Mexico; to resolve the winds from the northern SMO into the southern Rockies at mid-tropospheric levels.

(4) Wind Profiler / Radar

Instrumentation: UHF wind profilers (with Radio-Acoustic Sounding System (RASS) capabilities); Virtual Integrated Sounding Systems, VISS (co-located SMN sounding + UHF profiler); NCAR Integrated Sounding Systems, ISS, (UHF profiler + RASS + rawinsonde); SMN 5 cm Doppler radars (4) (Obregon, Gusave, Cabo San Lucas, and Palmito)**;** SMN sounding sites in Tier 1 (5) (Obregon, Mazatlan, Torreon, Chihuahua, and La Paz); 10cm Doppler-polarimetric radar (NASA –POL); The Ron Brown shipboard platform (VISS, 5 cm Doppler radar, surface fluxes, etc.); NOAA/ETL shipboard flux system (on a TBD Mexican research vessel)
Objectives: To describe the daily evolution of "ordinary" convective rainfall over the SMO, the Gulf of California coastal plain, and the southern Gulf region; to clarify the relationship of convection on east and west slopes of the SMO and water vapor transport from the Gulf of Mexico and the Gulf of California; to describe the location and amplitude of "organized" mesoscale rainfall systems within the diurnal cycle; to diagnose the principal mechanisms that force or maintain mesoscale rainfall systems so that the effects of these may be adequately represented in models; to clarify the relationship of southerly surges/jets to the forcing, organization and northward propagation of convectively-generated precipitation.

(5) Ships

R/V Ron Brown:
Instrumentation: Radar (Scanning C-band Doppler; Vertically pointing Ka-band Doppler)
Rawinsonde, 915 MHz wind profiler, DIAL/Mini-MOPA LIDAR, Multi-spectral radiometers,
Air-sea flux system, Meteorological observation (T,RH, P), rain gauges and ceilometer,
Oceanographic measurements including SST, CTD and ADCP
Objectives: To quantify the diurnal cycle of precipitation and convective structure near the mouth of the Gulf of California; to specify the lower-tropospheric flow from the eastern tropical Pacific into the lower GOC; to describe surge origins, including sources of moisture; to quantify surface sensible, latent and radiative heat fluxes; to describe ocean / atmosphere coupling in the lower GOC.

Low Cost Ocean and Atmosphere Ship Measurements during NAME

Instrumentation: XBT's, radiosonde and surface meteorology aboard daily ferry-boat cruises from La Paz-Mazatlan, La Paz-Topolobampo and Santa Rosalia-Guaymas.

Objectives: to make daily measurements (XBT, radiosonde, surface meteorology) aboard low cost ferry-boats; to extend a ten year XBT program; to aid the development of an operational short and medium range forecast model (version of MM5) for NW Mexico and an ocean model (POM) for the Gulf of California and nearby waters.

(6) Research Aircraft (NOAA P-3, RPV's)

Plans for NAME Research Aircraft Operations are currently under development. Nominally, NAME will request a NOAA P-3. The NAME Project Office will ensure that appropriate documents are filed and that the time table is adhered to. Some objectives of NAME Research Aircraft Operations in the core monsoon region include: to measure horizontal gradients associated with low-level circulation features; to measure along-flow and cross-flow variations of mesoscale diurnal variations; to provide over-ocean depiction of the synoptic-scale conditions associated with moisture surge generation; to sample orographic modulation of precipitation.

(**7) GPS (SuomiNET)**

***Instrumentation*:** Develop the university-based GPS network at 3 institutions in NW Mexico

Objectives: to provide integrated water vapor estimates along west-east sections across the GOC (e.g. Baja ridge to Puerto Peñasco).

(8) Additional Opportunities

Role of the Satellite Observing System in NAME / Potential NAME Role in TRMM/GPM:

NAME has an opportunity to play an important role in the TRMM and GPM programs. The observing system and scientists committed to NAME means that NAME is a "campaign of opportunity" for NASA TRMM and GPM validation of satellite retrievals of precipitation in complex terrain. In particular, TRMM/GPM can leverage NAME observations for algorithm development. TRMM/GPM PI's require additional observations that sample the orographic influence on precipitation [gauges, radar], and that include radar estimates of precipitation over the Gulf of California and nearby areas of the Pacific [shipboard radars]. The NAME observational elements described above would provide these data**.**

Moisture Budget of the Intra-Americas Sea / North American Monsoon Regions:

NAME observational efforts should also emphasize the broad-scale (Tier 3) context. NAME has an opportunity to improve estimates of the components of the moisture budget over the Intra-Americas Sea / North American Monsoon domain. PACS/GAPP has financially endorsed a study of the moisture budget of the Intra-Americas Sea that exploits a network of 2x daily radiosondes around the periphery of the IAS region. These data are routinely available from NOAA/NHC during the warm season. These estimates can be combined with new estimates over the core (and peripheral) monsoon regions (based on the additional in situ soundings described above) to improve estimates of the components of the moisture budget over the entire region.

4. MODELING ELEMENTS

Since the predictive capabilities, science issues and observational needs of the global and regional/hybrid modeling communities involved in NAME are somewhat different, NAME has organized two Teams that preserve the modeling-observations linkage for both communities. This is a strategy to integrate modeling needs for improved warm season precipitation prediction into the planning for NAME observational efforts. The Teams consist of observationalists, modelers and physical parameterization specialists with vested interests in specific *high-priority* issues. These teams are flexible and can evolve with the "Climate Process Team" concept.

4.1. Scope of related modeling/data assimilation

Global Climate Models

GCM's exhibit some worthwhile predictive ability in the core monsoon region, but with significant shortcomings. The basic science issue is to understand why some models give predictability in

the core monsoon region, and to diagnose / correct weaknesses to the physical parameterizations (especially convection and planetary boundary layer). There are needs for additional observations that document the basic climatology of the region at appropriate spatial / temporal scales (including the mean diurnal cycle) and that give guidance on current weaknesses in convective / boundary layer parameterizations [e.g. from radar /radiosondes/profilers].
In response to these needs, NAME has organized a Team that links NAME observational efforts to climate model development at GFDL/NASA/NOAA. This team forms the core of a "Climate Process Team".

The initial focus is on the warm season diurnal cycle over the US and Mexico in AGCM's. The basic strategy is as follows: (i) assess the quality of the diurnal cycle in several AGCMs; focus on convective / PBL parameterizations; (ii) examine relationships between the diurnal circulation and precipitation; (iii) assess the impact of resolution; (iv) carry out process-oriented sensitivity experiments to assess the role of the convective and planetary boundary layers in shaping the diurnal cycle; (v) exploit observations from NAME (especially profile information) to validate parameterizations; (vi) define new observational requirements for improving the parameterizations. As the Team effort matures it will remain tightly constrained and focused on key NAME science questions (section 1.1).

Regional/Hybrid Models

These models have significant descriptive / predictive ability in "predictive" mode, but even more substantial ability to document the NAM when operating in "analysis" mode. The basic science issue is to improve the representation of convective precipitation in complex terrain. There are needs for additional precipitation observations [gauge, remote sensing] that resolve the diurnal cycle, that sample the topographic influence and that are distributed and integrated. In addition, investigations that document topography-induced circulations [radar] and the low-level wind / moisture fields [radiosondes 4-6 times per day] are needed.

In response to these needs, NAME has organized a second Team that links NAME observational efforts to regional/hybrid models. The basic strategy is as follows: (i) document ability of models to simulate the life cycle and intensity of the monsoon - NAMAP; (ii) examine topographic influence on convective precipitation in the core monsoon region; (iii) investigate within-model variability of this relationship through year-to-year variability studies and ensemble prediction studies; (iv) compare existing parameterization schemes and models using NAME observations for validation; (v) improve physical parameterizations (e.g. convection/boundary layer) that influence precipitation, with a focus on defining relationships of such parameterizations to topography; (vi) define new observational requirements for improving the parameterizations.

As an initial strategy the team has organized a North American Monsoon Assessment Project (NAMAP). NAMAP Phase I will document the ability of models to simulate the evolution of the monsoon system during JJAS 1990. Protocols (domain, boundary conditions, output format, simulated variables) were defined by the modeling community during 2001. NAME is hosted by the NAME Project Office at UCAR/JOSS: http://www.joss.ucar.edu/name/namip. NAMAP is voluntary. The focus is on the ability of models to capture the diurnal cycle of convection in complex terrain.

5. FEASIBILITY AND READINESS

The observational and modeling elements described above demonstrate the level of commitment by NAME scientists. The NAME project structure (SWG, Project Office) is in place and operating. NAME "build-up" activities are well under way. NAME international partnerships are strong (see section 6). At this time some portions of the NAME observing system have been partially funded by NOAA. Additional coordination and support from U.S. agencies and international partnerships is required for full deployment of the NAME observational, analysis and modeling efforts.

6. NATIONAL AND INTERNATIONAL LINKS AND PARTNERS

NAME will be part of the CLIVAR/VAMOS program, US CLIVAR Pan American research, and the GEWEX America

Prediction Project (GAPP). As such it will enjoy synergy with many other programs, ongoing and planned, including MESA, SALLJ, PLATIN, V/EPIC, GAPP, and CEOP. NAME objectives are closely linked with those of the PACS/GAPP Warm Season Precipitation Initiative, in particular through mutual interest on understanding the mechanisms associated with warm season rainfall and its potential predictability. NAME will also contribute to the goals of the U.S. Global Water Cycle Initiative, by addressing questions specific to that initiative, namely "What are the underlying causes of variations in the water cycle on both global and regional scales?" and "To what extent are variations in the global and regional water cycles predictable?".

NAME has developed international partnerships with several institutions in Mexico and Central America for coordinated observations, joint planning and execution. Refer to the NAME Science and Implementation plan and the NAME Workshop Report from the 5th CLIVAR VAMOS Panel Meeting for details:

$ Mexican Weather Service

-Meteorological Infrastructure (79 synoptic stations;16 radiosonde sites; 60 automated weather stations (15 more in 2003); 12 radars (4 in northwestern Mexico))

- Historical and real-time data
- Working group during NAME (meteorologists, technicians)

-Joint Forecast Center

$Universities and Institutions in NW Mexico (Univ. of Vera Cruz, Univ. of Guadalajara, UNAM, IMTA, CICESE)

Equipment, personnel, transportation, data collection, research

$ Central American Collaborative Interests

Costa Rica-USA (CRUSA) Foundation supports bilateral projects

6.2 Joint Mexico-US Forecast Center

Discussions are proceeding with the intent of organizing a Joint Mexico-US Forecast Center that would have both a short term focus (e.g. briefings for the NAME Field Campaign) and a long-term focus (e.g. joint forecast and monitoring products). Current discussions are focused on location (e.g. collocated with existing radar), products (e.g North American seasonal outlooks, drought monitor), other functions of the center (e.g. training, personnel exchange) and affiliation.