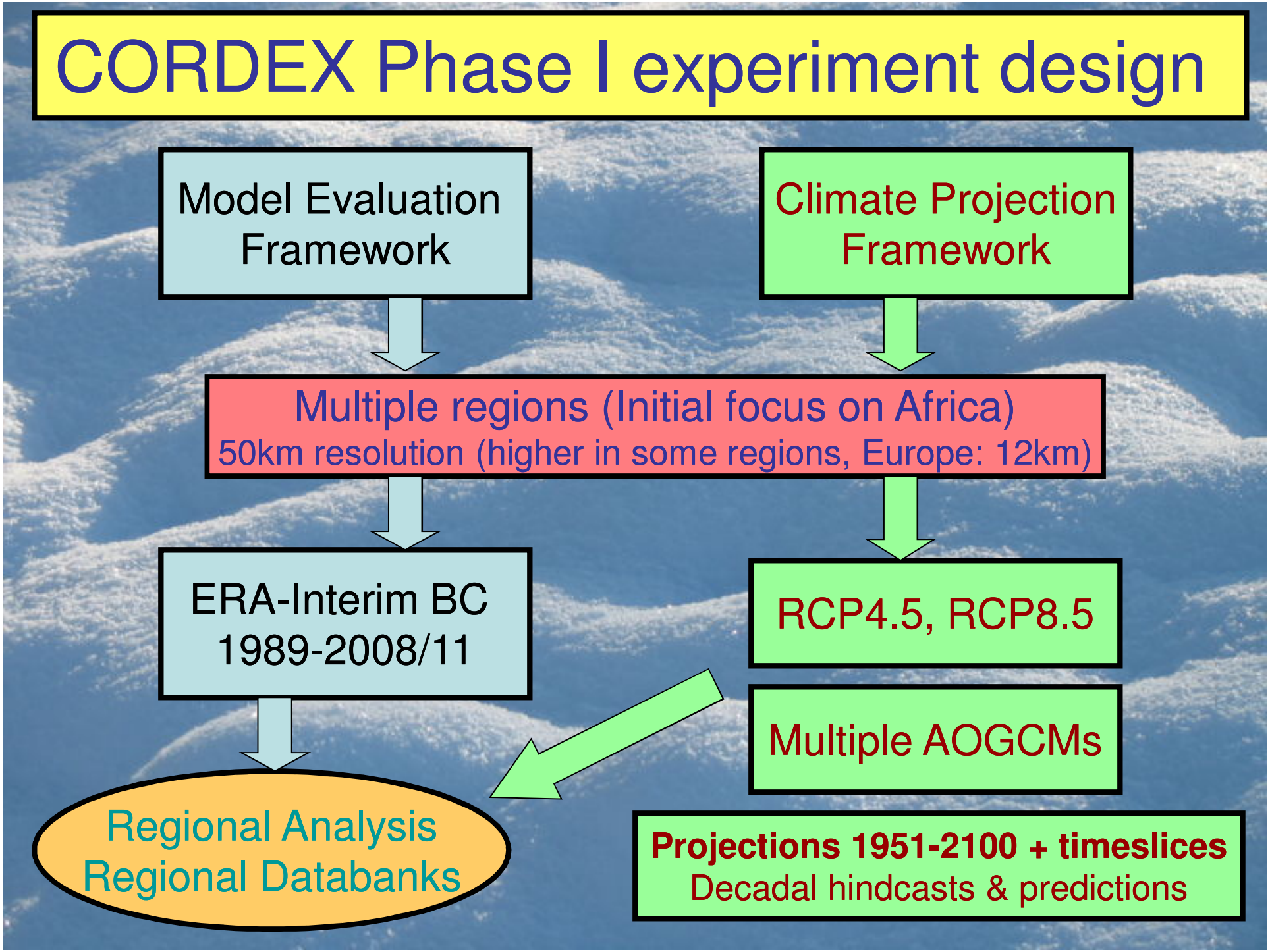

CORDEX Phase I experiment design
Model Evaluation Framework
Climate Projection Framework
Multiple regions (Initial focus on Africa)
50km resolution (higher in some regions, Europe: 12km)
ERA-Interim BC 1989-2008/11
RCP4.5, RCP8.5
Multiple AOGCMs
Regional Analysis
Regional Databanks
Projections 1951-2100 + timeslices
Decadal hindcasts & predictions

Collaboration allows for an increased number of common RCM projections to be available to all groups, helping to better understand and quantify uncertainty of future climate conditions : Ensembles/PRUDENCE projects.

Table 2: The first step WP2B.1 GCM/RCM matrix and relationship with current proposals from WP3.3

GCM's	RCM's												
	METO-HC	MPIMET	CNRM	DMI	ETH	KNMI	ICTP	SMHI	UCLM	C4I	GKSS	MetNo	CHMI
METO-HC	1950-2100				1950-2050			*1950-2050*	1950-2050				*1950-2050*
MPIMET	1950-2100	1950-2100		*1950-2050**		1950-2050	1950-2050			1950-2050			
FUB													
IPSL		*1950-2050*									*1950-2050*		
CNRM			1950-2050	1950-2050*									
NERSC								1950-2050				*1950-2050*	

'Contractually-obliged' simulations currently proposed by WP3.3

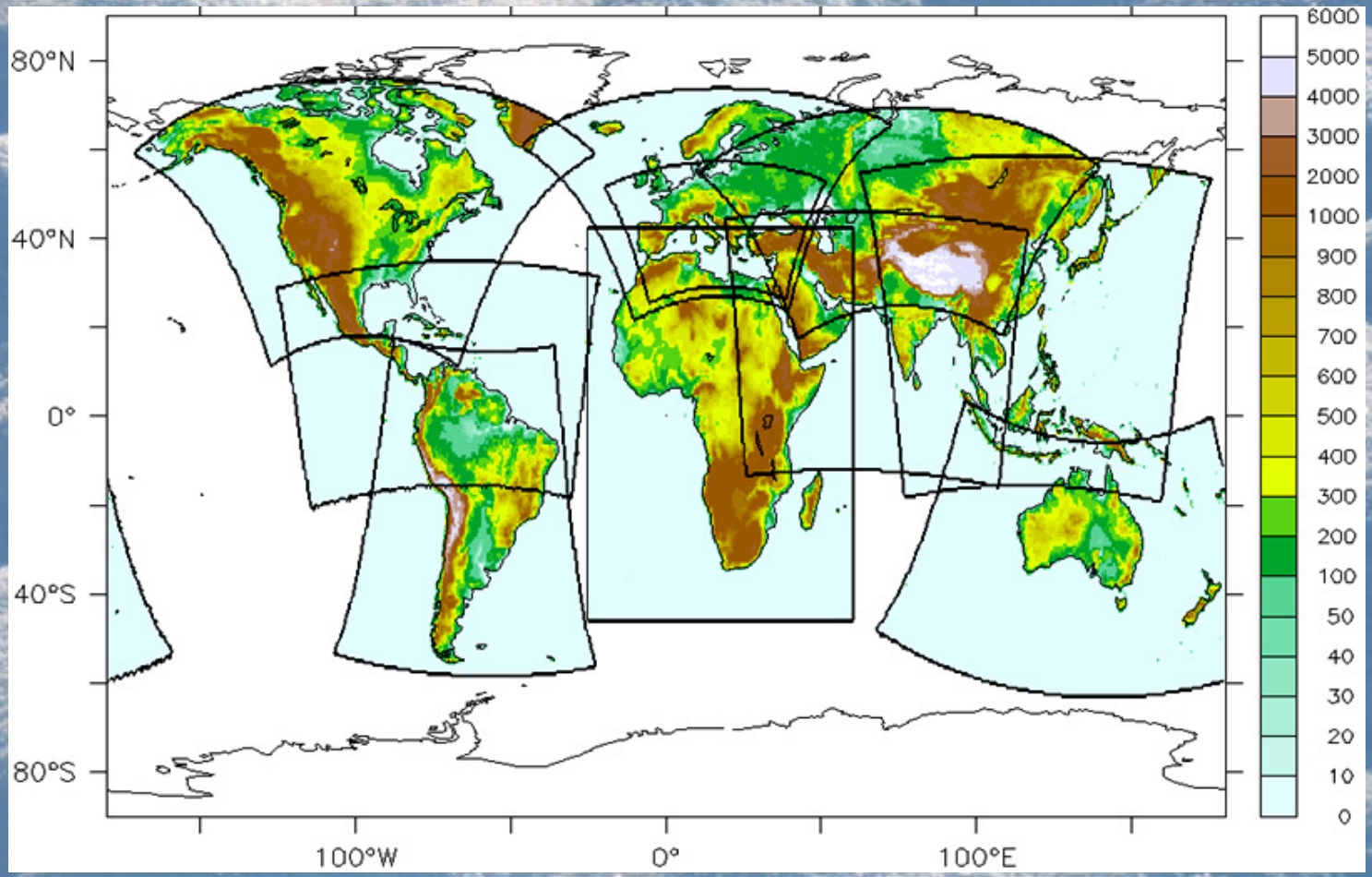
'Non-contractually-obliged' simulations currently proposed by WP3.3

Runs currently proposed by WP3.3 for partners not formally involved in WP2B.1

WP2B.1 first-step runs

* One of the DMI runs will be extended to 2100

CORDEX DOMAINS (plus Arctic & Antarctica)



- 12 domains with a resolution of 0.44° (approx. 50x50km²)
- Focus on Africa
- High resolution ~0.11°x0.11° for Europe (by some institutions)

Procedure for CORDEX South Asia Activity:
Recommendations from WCRP and the CORDEX co-chairs.

1. **Make ERA-interim driven runs and provide selected data to a regional evaluation team (May 2012)**

2. **Form a regional S.Asia CORDEX evaluation team, identify metrics and collect suitable observations (May 2012)**

- **Evaluation should consider means etc, but more importantly target aspects RCMs might provide as added-value and regionally relevant impact-adaptation variables/phenomena**

N.B. For Points 1 and 2: it is important these activities be inclusive not exclusive, to engage RCM groups from Indian sub-continent region (in 1) and a number of potential evaluation groups (in 2).

ADB: This is an opportunity to fund practical climate change research as a regional collaboration venture.

3. **Publish first evaluation findings (Sept 2012)**

4. Identify and interact with regional IAV communities India, Pakistan, Bangladesh, Nepal, Bhutan, Burma, Maldives +++ June 2012

5. Make GCM-driven historical runs and provide data in CORDEX format (Sept 2012)

6. Make GCM-driven projection runs and provide data in CORDEX format (Dec 2012)

7. Evaluation and documentation of historical and projection runs and publication of results (Oct 2012-Apr 2013)

8. Archive and distribute GCM-RCM projection data to regional IAV communities and work with them in application of data (March 2013……..) + development & distribution of climate indices (March 2013……..)

9. Iterations on science aspects/collaborations mid 2012…….
e.g. Increased model resolution, more projections, improved models, coupled models, process evaluation etc

Groups that will contribute simulations:

IITM (India): LMDz**, RegCM*

IIT/Delhi (India) : RegCM4*

Hadley Centre (UK) : PRECIS* and HadGEM3-RA*

MPI/CSC (Ger): REMO*

Frankfurt: COSMO-CLM* (Ger)

Bjerknes Centre (Nor) : WRF* tropical Channel

Rossby Centre/SMHI (Swe): RCA4*

CAWCR (Aus): CCAM**

MRI (Japan): MRI GCM***

- RCM, ** Variable resolution AGCM, ***AGCM

6 RCMS, 2 AGCM-var, 1 AGCM

To get the most out of a collaborative venture, requires some intelligent filling of a 3D multi: RCP, GCM, RCM matrix

GCM	RCP	Had RCM	PRECIS	RegCM	RCA	WRF	CLM	REMO	LMDZ	MRI	CCAM
HadGEM	8.5/4.5/2.6										
MPI-ESM	8.5/4.5/2.6										
EC-Earth	8.5/4.5/2.6										
ARPEGE	8.5/4.5										
IPSL-CM	8.5/4.5										
NorESM	8.5/4.5										
MIROC	8.5/4.5										
CCSM	8.5/4.5										
GFDL-ESM	8.5/4.5										
CSIRO	8.5/4.5										
CanESM	8.5/4.5										

Regional Collaboration is the key to success

Timeline

Commitments

Responsibilities

Evaluation metrics

Observations

Data distribution

Outreach and engagement