Planning emergence via sustainable partnerships in urban Ethiopia

A climate change adaptation lens

Tendayi Gondo
Department of Urban and Regional Planning, University of Venda, Private Bag X5050, Thohoyandou 0950, Limpopo Province, South Africa.
Email: tendayi.gondo@univen.ac.za OR gondotee@gmail.com
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Introduction and Background

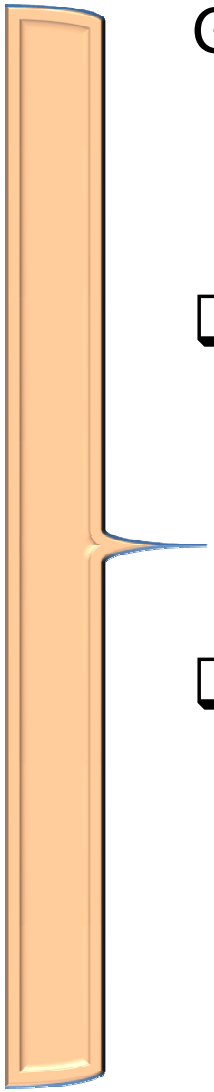
- For years, partnerships between actors in environmental governance issues have formed a common means of providing infrastructure and services where state funds or expertise were found lacking (Forsyth, 2005).
- With climate change high on the agenda, recent years have seen this role expand.
- In addition to this traditional role, partnerships have now become sites where norms of climate change concern and political accountability are formulated and replicated.
- The need for such a much diversified role of partnerships has seen international groupings such as the United Nations (UN) calling for a greater adoption of partnerships in development policy through the Global Compact, Millennium Development Goals, and 'Type 2' partnerships proposed at the World Summit on Sustainable Development in Johannesburg in 2002.

Partnerships at the Urban Planning scale

- The multiplicity of actors that shape and are affected by climante change outcomes has led to a renewed interest in the implementation of sustainable partnerships at the urban scale.
- Because the effects of climate change are so encompassing and far reaching, an integrated effort of governmental, non-governmental and private individuals. Academic think tanks and CBOs is required (Nath and Behera, 2011) is required.
- It is beleived that a much more cohesive and closely knitted approach from stakeholders is very important in underdeveloped countries where resource crunch is a major hurdle in the path to adaptation (Nath and Behera, 2011).
- Such a partnership stance is however underesearched and underdeveloped for most urban areas in developing countries (Mani et al. 2008). Yet most scholars agree at least in principle that a number of factors ranging from scientific uncertainty, through to the current state of technology, the availability of financial resources and short time horizons - which mostly constrain effective adaptive planning (Smit and Pilifosova, 2001; Lorenzoni et al., 2000a, b; West and Gawith, 2005; EEA, 2005; EU, 2007) can be overcome through the adoption of inclusive and sustainable partnerships.

The problem???

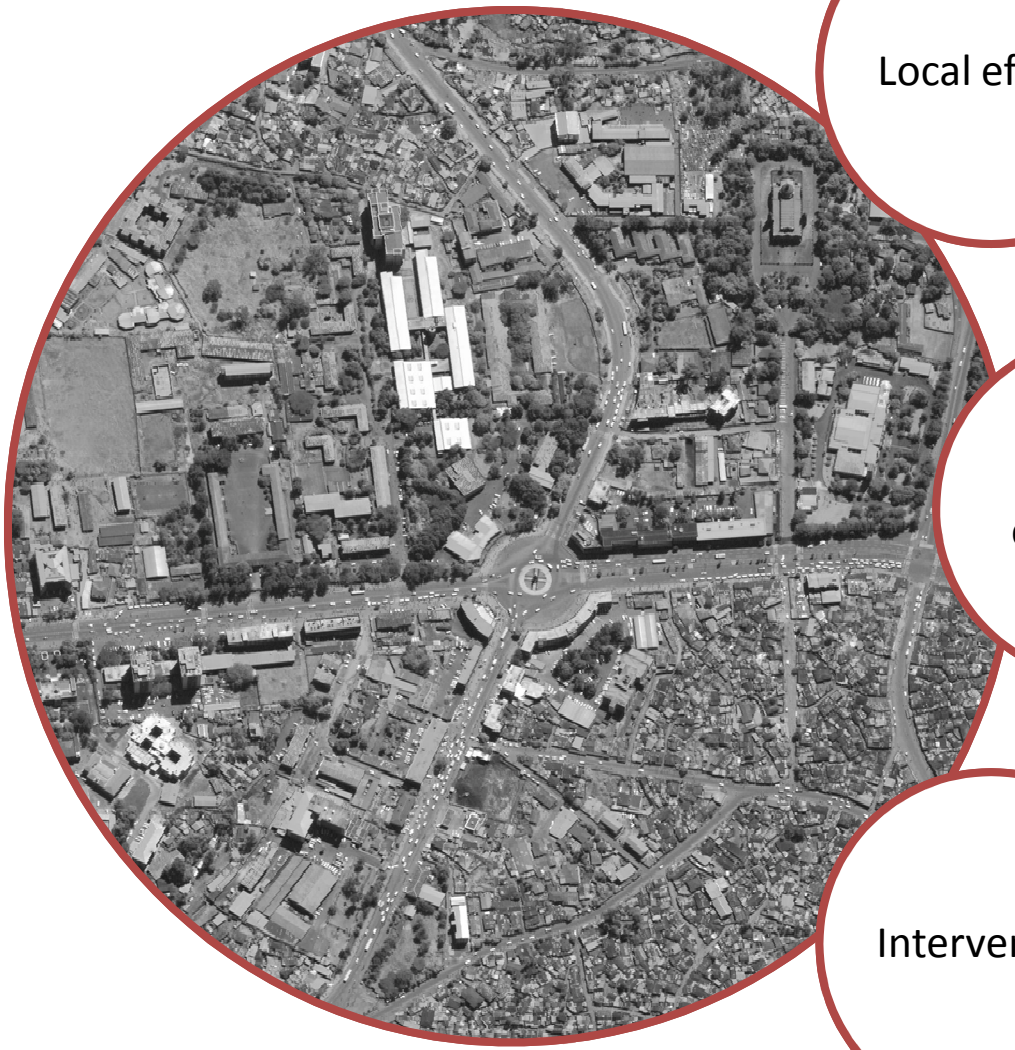
- Most climate change partnerships are launched by governments and international governments. Such partnerships tend to be regional or global in scope and reach and are aimed at supporting the practical implementation of climate change initiatives as defined by the Intergovernmental Panel on Climate Change (IPCC), the United Nations Framework Convention on Climate Change (UNFCCC) and other related international groupings (Craik, 2011).
- The discussion of 'climate policy integration' through partnerships has however tended to focus on mitigation decisions mostly taken at the international and national levels (Urwin and Jordan, 2008).
- It is therefore apparent that a more locally focussed adaptation dimension to climate policy integration has not been explored (Urwin and Jordan, 2008).
- There is therefore an urgent need to 'glocalise' partnerships so as to facilitate the effective implementation of adaptation decisions at the city or local scale.



Glocalized partnerships will help find answers to;

- ❑ What type of partnesrhips are ideal for climate change adaptation?
- ❑ What factors are likely to limit the adoption / pursuence of such partnerships?

THE NEED FOR A CITY BASED STRATEGY



Local effects

- Climate change effects are manifested locally.
- They affect city wide systems (economic, water, infrastructure e.t.c)

Local conditions

- Vulnerability and adaptive capacities are determined by local conditions.

Intervention

- Adaptation activities are often observed at the local level and it is therefore easy to tailor actions to the specifics of a particular city

Study purpose

(1)

- **To first develop a conceptual model of sustainable partnerships for climate change adaptation.**
- **To evaluate the extent to which urban planning authorities are engaged in sustainable partnerships to boost their adaptive capacities under a climate change scenario.**

(2)

- **To identify factors that might limit the adoption of sustainable partnerships by some municipalities.**

Climate change projections???

Resilient Cities 2012

- For the IPCC mid-range (A1B) emission scenario, the mean annual **temperature will increase** in the range of **0.9 -1.1 °C by 2030**, in the range of **1.7 - 2.1 °C by 2050** and in the range of **2.7-3.4 °C by 2080** over Ethiopia compared to the 1961-1990 normal.

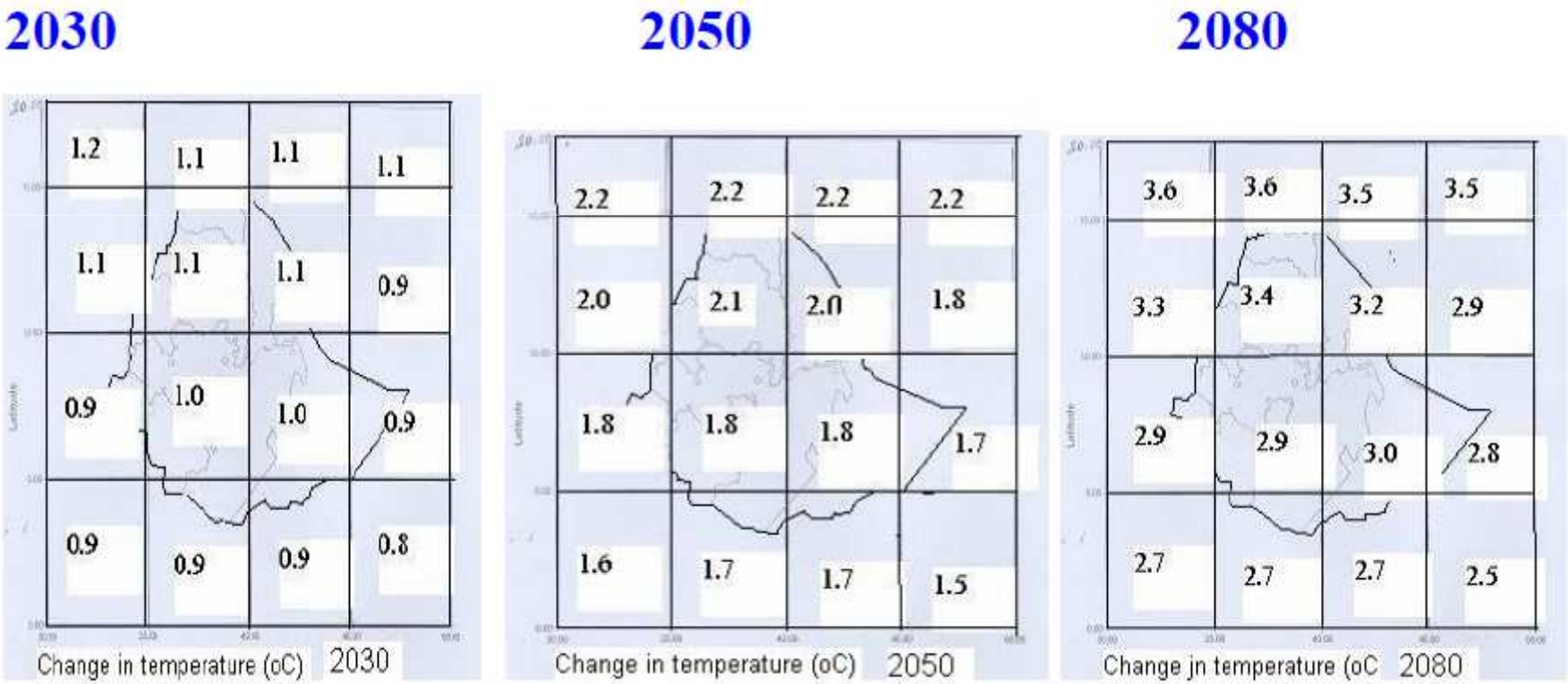


Figure 1: Composite (average of 19 GCMs) change in temperature (oC) relative to 1961-1990 normal for A1B emission scenario.

Climate change projection ???

Resilient Cities 2012

A small increase in annual precipitation is also expected over the country (Figure 2).

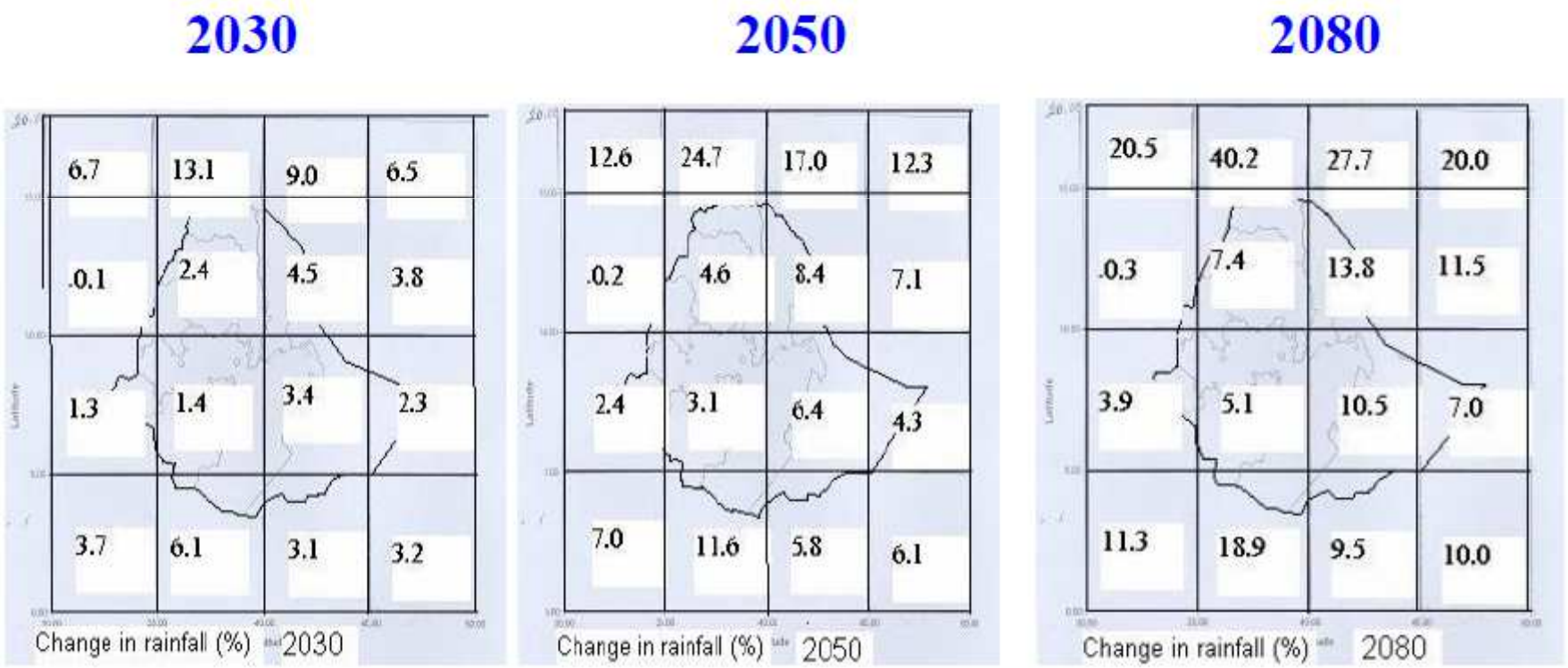
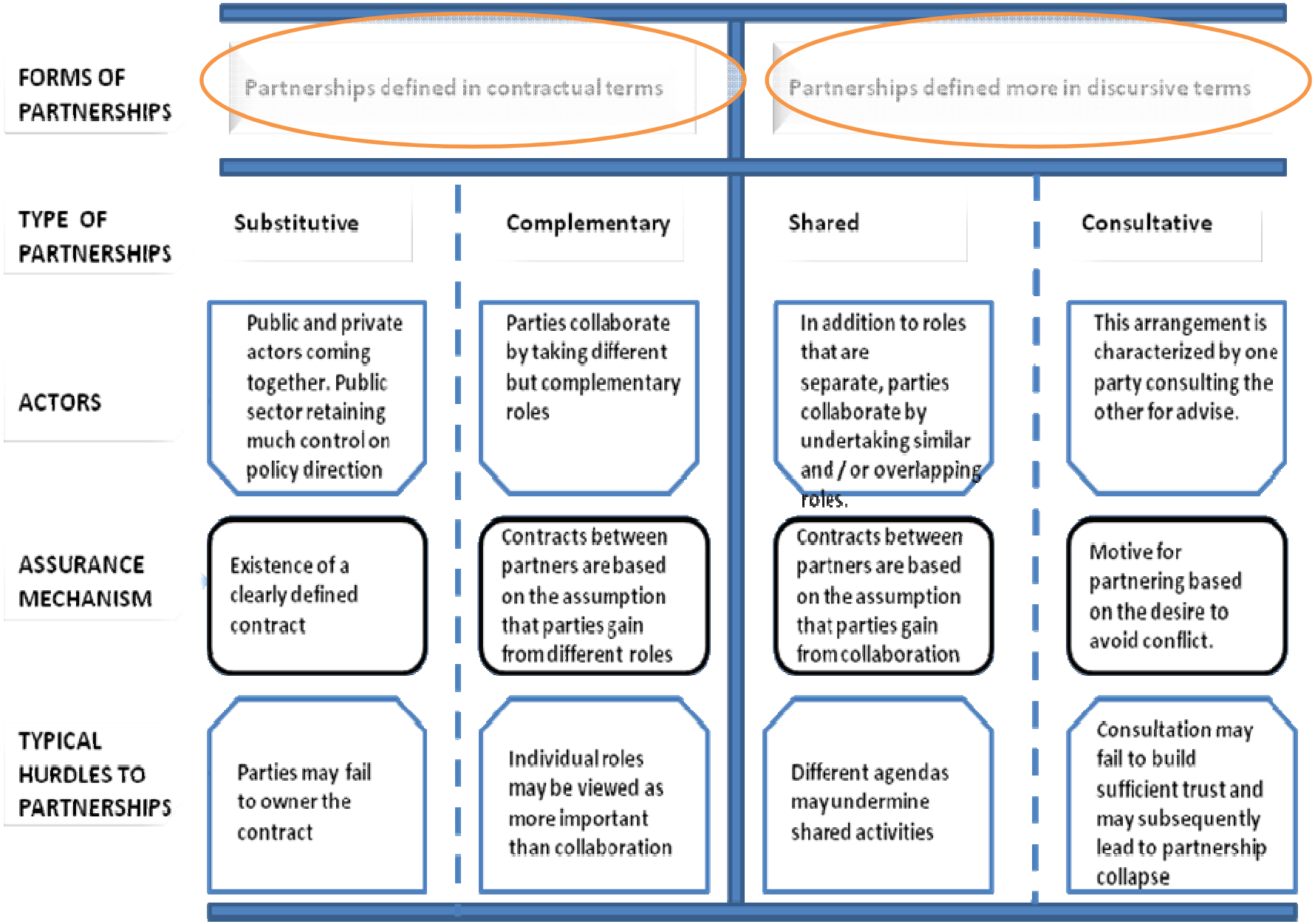
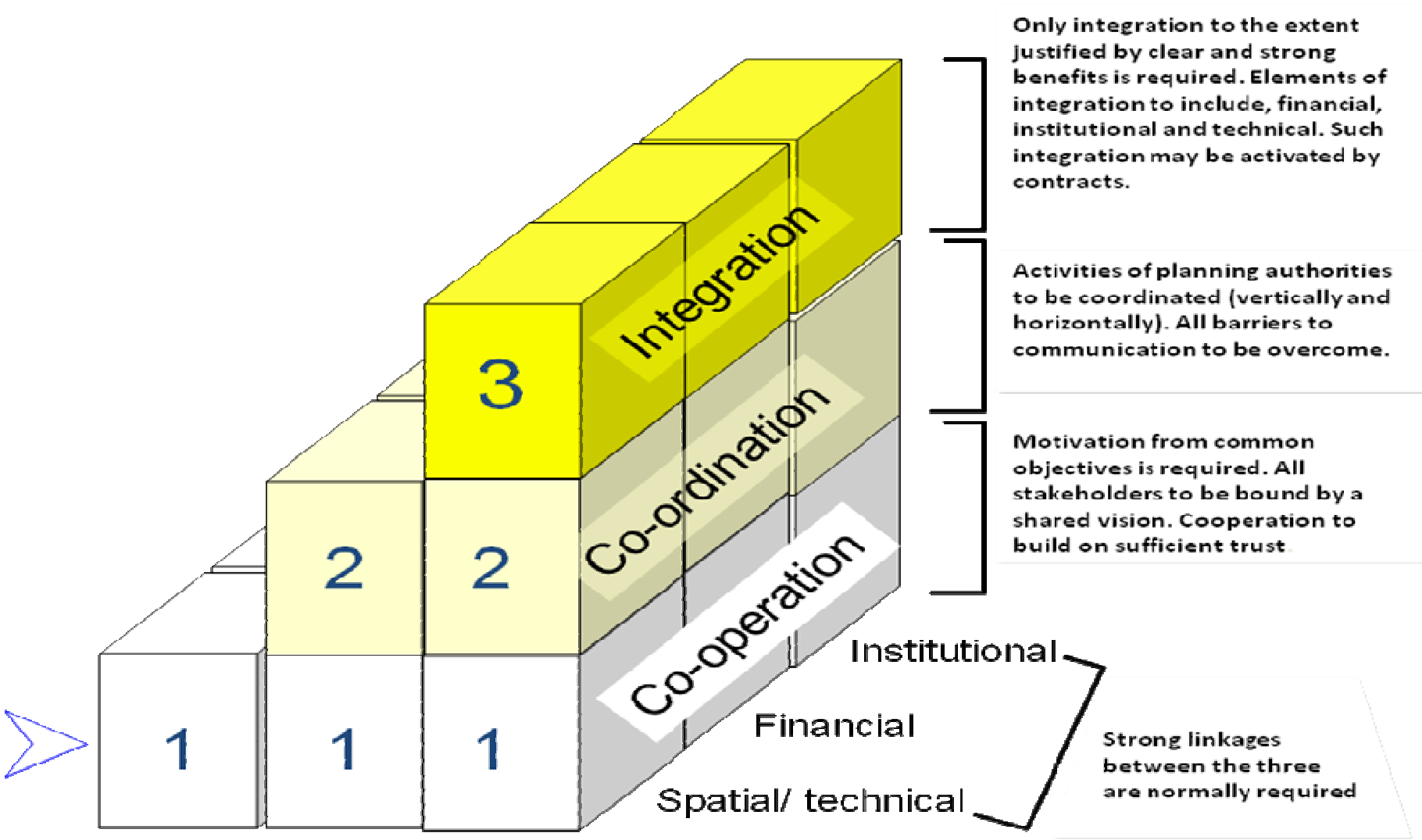


Figure 2: Composite (average of 19 GCMs) percentage change (%) in rainfall relative to 1961-1990 normal for A1B emission scenario.

Developing a conceptual model for understanding sustainable partnerships

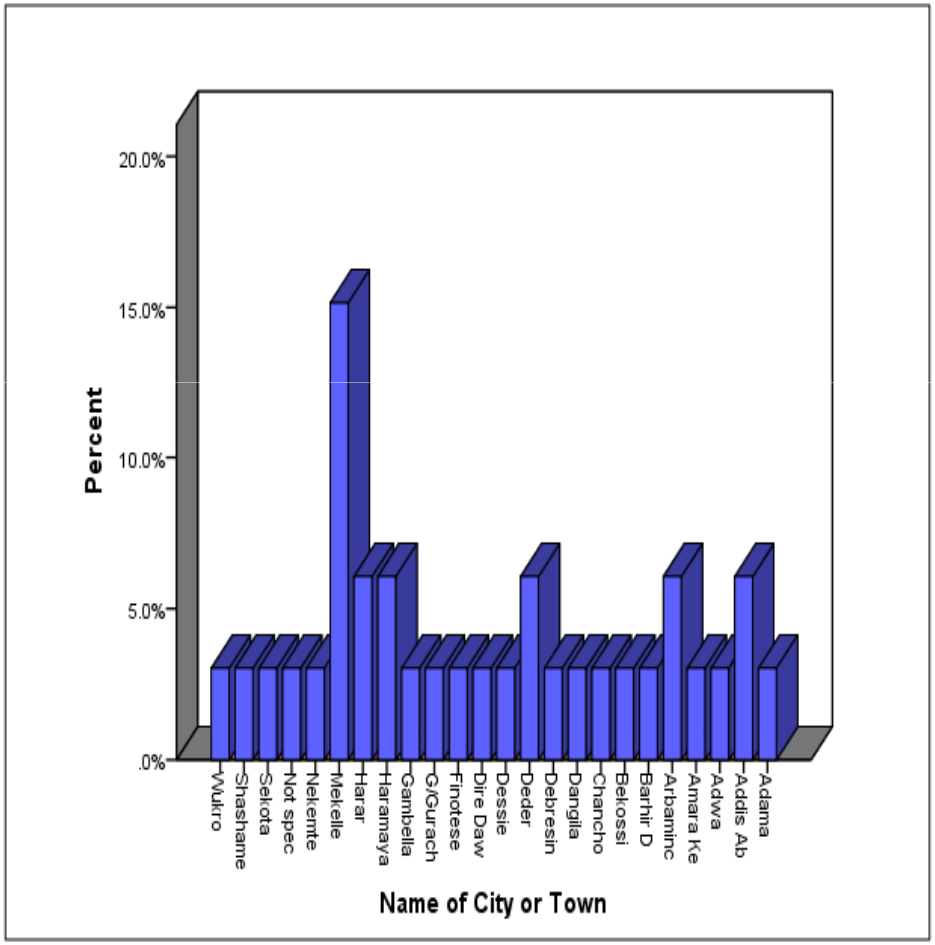




- Drawing on the different forms of partnerships ranging from discursive through to contractual forms of partnerships and integration, three important levels – including cooperation, co-ordination and integration may be defined as important phases that can define the path towards sustainable partnerships for city authorities in developing countries.

Materials and methods

- Empirical evidence presented relate to a Delphi study conducted in 2009 in which 64 urban planners from 23 cities / town were surveyed.
- The proportion of the sampled officials from each city / town is shown on figure. The share of each city / town reflects the number of completed questionnaires that were returned.
- The binary logistic regression model was employed to decipher some of the factors that explained the adoption and / or non-adoption of sustainable partnerships by some planning authorities



Empirical model specification

The adopted model assumed the following statistical formula;

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + ui$$

Y = Probability of an expert drawn from a municipality that is engaged in sustainable partnerships (i.e. probability Municipality / engaged in Partn. = 1)

X_1 = Perceved level of financial capacity (1 = better; 0 = poor)

X_2 = Perceived benefits of partnering (1 = Yes; 0 = No)

X_3 = Perceived level of technical capacity (5 point likert scale: 1 = poor; 5 = Excellent)

X_4 = Perceved level of climate science integration in municipal affairs (5 point likert scale: 1 = poor; 5 = Excellent)

X_5 = Level of uncertainty about climate policy context (5 point likert scale: 1 = low; 5 = high)

X_6 = A general concern for the poor (5 point likert scale: 1 = lowest score; 5 = highest score)

X_7 = Perceived level of institutional capacity (0 = better; 1 = poor).

Model Evaluation

❑Parameters in logistic regression model were estimated using the maximum likelihood method. The statistical significance of each coefficient was evaluated using the Wald test. The enumerated regression coeficients represent the change in the logit of the probability from a unit change in the associated predictor, assuming other factors are constant . The goodness-of-fit test of the regression model in this study was analyzed using;

1. The **Omnibus test**, which is a likelihood ratio chi-square test that test whether the coefficients of the variables in the model are all jointly equal to zero.
2.The **Hosmer & Lemeshaw (H-L)** goodness-of-fit test, which examines the null hypothesis that the model adjust well to the data and
3. The **Cox and Snell (1989) and Nagelkerke (1991)** – two descriptor measures that reveal the amount of variation in the outcome variable that is explained by the models (Long, 1997; Hosmer and Lameshaw, 2000).

Results and discussion

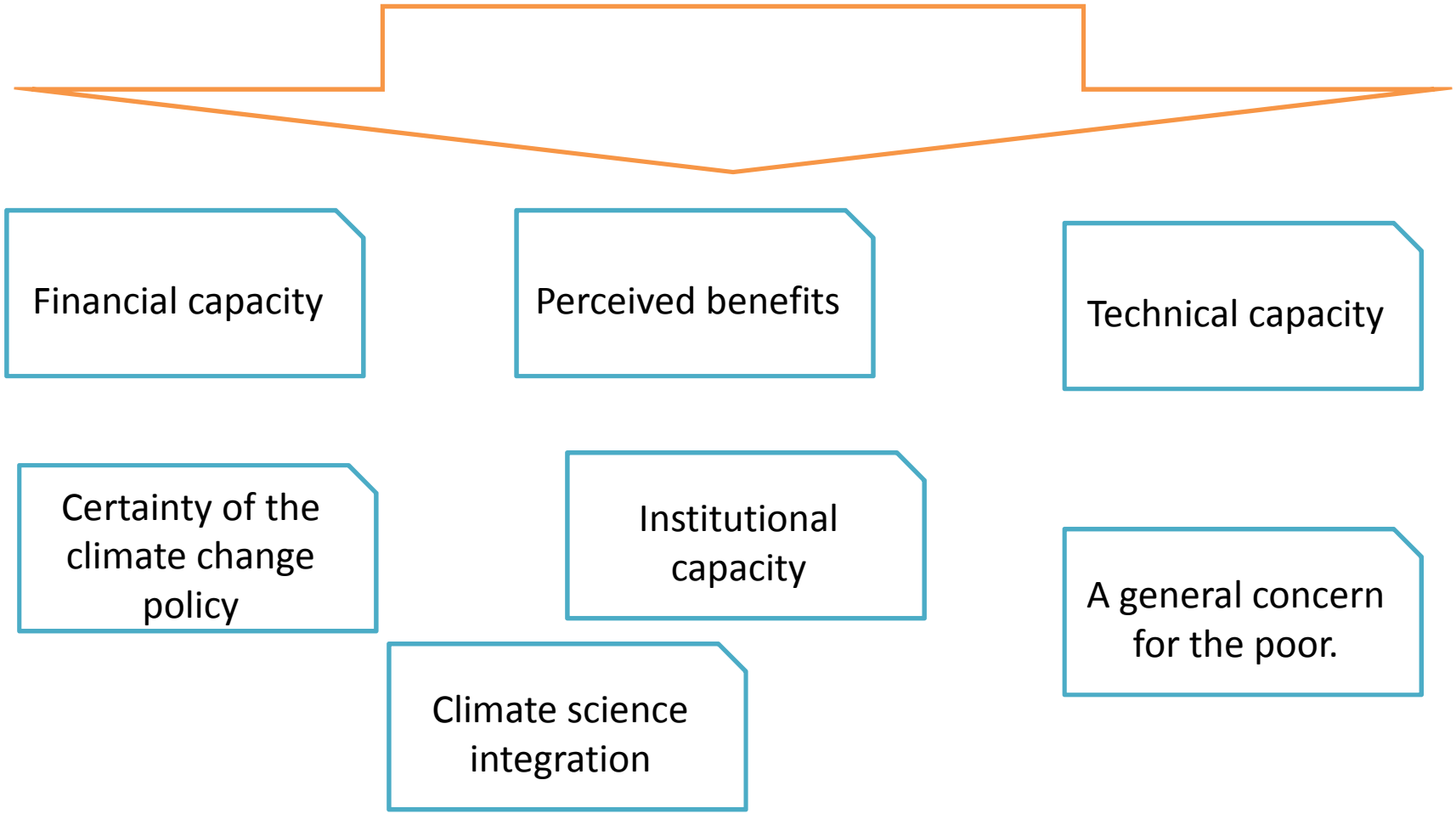
- Results suggests that 26% of the sampled municipality can be characterised as being on the path towards sustainable partnerships.
- Such partnerships were however found to be limited to discursive arrangement that existed between the concerned municipalities and largely unorganized community groupings, the private sector, and to some extent the respective regional governments.
- Such partnerships were generally on the lower end of the path towards sustainable partnerships. They are mostly cooperative partnership arrangements that are based on what other scholars refer to as ‘reactive’ adaptation rather that ‘proactive’ adaptation to climate change. No evidence of contractual agreements through such means as the signing of MOUs were discerned.

Results and discussion

Variable	B	S.E.	Wald	df	*p-value*	Exp(B)
Financial capacity	**.091**	2.408	.001	1	**.970**	**1.095**
Perceived benefits	**.839**	.546	2.365	1	**.124**	**2.314**
Technical capacity	**-.581**	.714	.662	1	**.416**	**.559**
Climate science integration	**2.422**	.991	5.975	1	**.015**	**11.263**
Uncertainty about the climate policy context	**-.396**	.546	.525	1	**.469**	**.673**
A concern for the poor	**-2.617**	1.172	4.987	1	**.026**	**.073**
Institutional capacity	**-4.231**	1.714	6.090	1	**.014**	**.015**
Constant	**4.305**	3.413	1.591	1	**.207**	**74.043**

Results and discussion

The ability of the sampled municipalities to engage in sustainable partnerships varied according to a number of variables.



Concluding remarks

- Using a delphi study that pitted 64 urban planners from 23 cities and / towns of Ethiopia, the analysis revealed that adaptation efforts by most local authorities have not benefited much from forging of working partnerships at various planning scales.
- Both vertical and horizontal collaboration were found to be limited owing to weak technical, financial and institutional capacities of the concerned municipalities.
- Major hindrances included on one hand absence of credible participatory structures and on the other hand the general divide that exists between the environment and planning institutions.
- Efforts that strive to build proper participatory structures, bridge the current divide and reconcile climate science and practice would go a long way in fostering sustainable partnerships for improved adaptation

THANK YOU FOR YOUR ATTENTION!!!